PENRITH
CITY COUNCIL

MAJOR ASSESSMENT REPORT

Application number:	DA21/0691
Proposed development:	Construction of Boarding House containing 69 Boarding Rooms & Manager's Room with Two Levels of Basement Parking & Associated Works
Property address:	10 Railway Street, WERRINGTON NSW 2747 11 Railway Street, WERRINGTON NSW 2747
Property description:	Lot 5 DP 1605 Lot 6 DP 1605
Date received:	22 September 2021
Assessing officer	Pukar Pradhan
Zoning:	SEPP WSA - Affected by Obstacle Limitation SEPP WSA - Affected by Wildlife Buffer Zone Zone R3 Medium Density Residential - LEP 2010
Class of building:	Class 1b
Recommendations:	Refuse

Executive Summary

Council is in receipt of a development application for construction of a four storey building with 2 levels of basement parking spaces for a Boarding House containing 69 boarding rooms at 10 - 11 Railway Street, Werrington. The site is zoned R3 Medium Density Residential zone under Penrith Local Environmental Plan (LEP) 2010 and the development is defined as a boarding house and is a permissible land use in the zone with Council consent. The development proposal is also permissible within the R3 Medium Density Residential zone under State Environmental Planning Policy (Affordable Rental Housing) 2009 (SEPP ARH).

Key issues identified for the proposed development and site include:

- The proposal is non-compliant with the maximum allowed building height of 8.5m under Clause 4.3 of Penrith LEP 2010 for the site. The proposed height ranges from 11.6m up to 12.25m representing a variation to development standard of 36.5% and 44% respectively. The application was supported by a written request to vary the standard under the provisions of Clause 4.6 of Penrith LEP 2010. The written request has failed to demonstrate that the proposal will result in a better outcome for the site. The proposal's non-compliance with the maximum allowed building height standard reflects that the scale of the development is inappropriate for the site, being an over development of the site. Compliance with the standard is considered both reasonable and necessary in this instance.

- The proposal is non-compliant with key controls under the SEPP ARH, particularly relating to local character requirements;

- The proposal does not provide sufficient information to demonstrate that the site does not contain hazardous materials onsite and the requirement of the SEPP 55.

- The proposal is non-compliant with key built form, character and amenity controls under Penrith Development Control Plan (DCP) 2014. Notably, the proposal is of a bulk, scale and design that is not compatible with the existing buildings of the area.

- Insufficient information being provided to assess the noise impacts.

- The design of the basement has not demonstrated that it provides sufficient area for garbage trucks to manoeuvring in to the site, collect wastes and leave in a forward direction, and being non-compliant with Penrith DCP and Australian Standard AS2890.1.

- The proposed stormwater management design unsatisfactory and is non-compliant with Penrith DCP 2014.

- The Department of Planning, Industry and Environment (DPIE) has exhibited a new policy, State Environmental Planning Policy (Housing) 2021, which consolidates several State Planning Policies including State Environmental Planning Policy (Affordable Rental Housing) 2009. The Explanation of Intended Effect outlines the changes to key boarding house controls which includes the definition of a boarding house to include the requirement of all boarding houses to be managed by a not-for-profit community housing provider and be provided as affordable housing. The making of the plan is imminent. This proposal is inconsistent with exhibited SEPP (Housing) 2021.

The application has been notified to adjoining properties and exhibited between 11 and 25 October 2021 in accordance with relevant legislation. Three submissions were received in total and two in support of the proposal and one raised concerns of increase in noise, traffic along the street, loss of privacy and solar access, this is discussed later in the report.

The application has been referred to the Local Planning Panel for determination, as the application proposes a variation to a development standard of greater than 10% (being up to 44%).

An assessment under Section 4.15 of the Environmental Planning and Assessment Act 1979 has been undertaken and the application is recommended for refusal.

Site & Surrounds

The site is rectangular in shape with a north south orientation and is located on the southern side of Railway Street. The width of the site is 30.48m with a depth of 45.72m, with a site area of 1393.50m². The site falls gently to the rear and it is generally cleared with only one tree located in the north-western part of the site.

The surrounding area is predominantly residential, containing a high mixture of single storey dwellings and two storey townhouse developments. There are two small apartment developments in the area, both are a maximum of three stories in height.

The immediate surrounds of the site contains development of one and two stories. To the north of the site there is a vacant strip of land adjacent to the Rail Corridor, Werrington Train Station is located 160m to the north west of the site. Great Western Highway is located 950 m to the south of the site.

More broadly to the south and west of the site is the South Werrington Urban Village Precinct which was recently approved by the Sydney Western City Planning Panel. The approved development was a residential subdivision and will predominately contain single dwelling houses and terrace style developments with a maximum three storey height limit at the interface of open space areas.

Proposal

The proposal is for the construction of a four (4) storey building to include 69 boarding rooms with two (2) level of 36 basement parking spaces. Details of the development is as follows:

	Descriptions	Boarding rooms	Others
1	Level 2 Basement		20 vehicles; 8 motorcycles & 12 bicycles
2	Level 1 Basement		
3	Ground level	12 boarding rooms (2 accessible) 1 Managers room	16 vehicles (7 accessible, 1 managers space); 6 motorcycles; 2 bicycles and waste rooms
4	First floor	19 boarding rooms (2 accessible)	
5	Second floor	20 boarding rooms (2 Accessible)	
6	Third Floor	18 Bording rooms (1 accessible)	
7	Total	69 Rooms	36 car parking spaces (7 accessible spaces); 14 motorcycles & 14 bicycles

- Associated excavation works for 2 levels of basement parking provisions.
- Drainage and landscaping works.

Background

A pre-lodgement meeting was held with Council on 1 April 2021. The applicant was advised during the meeting that the the built form and the excessive building was out of character and would not be supported. Other technical matters were discussed including the requirement of an easement to drain water and provision of waste services compliant with Council's waste policies.

The applicant submitted an amended design on 20 July 2021 attempting to address the above concerns. The amended design was examined by Council and the applicant was advised that the design was of poor quality and building height was non-compliant. The proposal remains inconsistent with the bulk, scale and design of surrounding developments and is out of character of the area. Specifically, the applicant was advised that the proposed variation would not be supported.

Plans that apply

- Local Environmental Plan 2010
- Penrith Local Environmental Plan 2010
- Development Control Plan 2014
- State Environmental Planning Policy (Affordable Rental Housing) 2009
- State Environmental Planning Policy (Western Sydney Aerotropolis) 2020
- State Environmental Planning Policy No 55—Remediation of Land
- Sydney Regional Environmental Plan No.20 - Hawkesbury Nepean River

Planning Assessment

- ## Section 4.15 - Evaluation

The development has been assessed in accordance with the matters for consideration under Section 4.15 of the Environmental Planning and Assessment Act 1979, and having regard to those matters, the following issues have been identified for further consideration:

Section 4.15(1)(a)(i) The provisions of any environmental planning instrument

State Environmental Planning Policy (Affordable Rental Housing) 2009

The proposal has been assessed against relevant provisions under State Environmental Planning Policy (Affordable Rental Housing) 2009 (SEPP ARH). Overall, the proposal is non-compliant with key standards and objectives of SEPP ARH, as outlined below.

SEPP ARH, DIVISION 3 BOARDING HOUSES

Clause 29 Standards that cannot be used to refuse consent

2(a) Building Height
A consent authority must not refuse consent on the grounds that "if the building height of all proposed buildings is not more than the maximum building height permitted under another environmental planning instrument for any building on the land,"

The proposal breaches the Maximum Building Height of 8.5m permitted on the site under Penrith LEP 2010. The proposal involves a building height of 11.6m and 12.25m to the top of the lift shaft. This is a variation of 36.5% and 44% to maximum allowed height in the zone. The proposal was supported by a Clause 4.6 Request to Vary Development Standard, which on balance is not supportable. Refer to discussion in this report under 'Clause 4.6.'

2(b) Landscaped Area
A consent authority must not refuse consent on the grounds that "if the landscape treatment of the front setback area is compatible with the streetscape in which the building is located,"

Penrith DCP requires that a front setback that is the average front setback distance of the two adjoining properties, or a minimum 5.5m whichever is the greater distance be provided. The adjoining property to the east of the site provides a front setback of approximately 6- 6.5m and the property to the west is vacant. The properties further along West and east a setback of 6m to 8m, however newly developed townhouses have taken a front setback of in average 6m. The proposal provides a front building setback of just over 6.5m.

Whilst the frontage of the site will have deep soil for landscaping for canopy tree plantings, the proposal will lonely contain just over 3m deep soil for planting along the rear boundary and no deep soil planting along both side boundaries. and rear setbacks containing canopy trees with having 6m building setbacks. The front 1.8m high fence located along the front boundary will screen the front plantings and being inconsistent with the prevailing streetscape. The lack of deep soil planting along the rear and side boundaries restricts

opportunity for a suitable landscape treatment and will result in development of this scale to be not compatible with the streetscape in which the building is located.

2(e) Parking
A consent authority must not refuse consent on the grounds that "if-
(ii) in the case of development not carried out by or on behalf of a social housing provider - at least 0.5 parking spaces are provided for each boarding room, and
(iii) in the case of any development - not more than 1 parking space is provided for each person employed in connection with the development and who is a resident onsite."

It is noted that the proposal is not carried out by or on behalf of a social housing provider, as the supporting Statement of Environmental Effects identifies that the boarding house will be provided and managed by a private provider. As such, the car parking standard (ii) and (iii) as outlined above applies. The boarding house contains 69 x boarding rooms and 1x managers room. Using the calculation under the SEPP of 0.5 parking spaces per boarding room inclusive of the manager's room, a total of 35 + 1 = 36 car spaces is required. The proposal provides 36 x car spaces inclusive of 5x accessible space and additional 14 x motorcycle and 14 bicycle's spaces. As such, the proposal provides a satisfactory number of onsite car parking spaces as required by ARH SEPP.

However notwithstanding this, the proposal is considered unsatisfactory for the purpose of Clause (2e), as the proposal provides poor basement parking design arrangements and is likely to cause conflict between pedestrians, vehicles and waste trucks as requirements under Penrith DCP and relevant Australian Standards.

(f) 2 (f) Accommodation size

if each boarding room has a gross floor area (excluding any area used for the purposes of private kitchen or bathroom facilities) of at least—

- 12 square metres in the case of a boarding room intended to be used by a single lodger, or
- 16 square metres in any other case.

All accommodations are 16sqm up to 21 sqm in area and hence compliance.

Clause 30 Standards for boarding houses

1(a) "if a boarding house has 5 or more boarding rooms, at least one communal living room will be provided."

The Architectural Plan shows one communal living room with 30sqm in area is provided, located on ground floor at the front north/western part of the building. However, the proposed communal living area is considered insufficient in size to meet the intention of Clause 30(1)(a). It is noted that Penrith DCP requires boarding houses to provide communal living room area at a total rate of 2m2 per lodgers for boarding houses or 13sqm if less than 6 boarding rooms, Whilst Communal living area of 30sqm is located along the frontage and considered to in an appropriate location, the total area provided falls well short of what is required by the DCP.

The outdoor communal area with a dimension of 3.6m x 12.4m = 45sqm has been provided adjacent to the west of communal living room , Considering the COVID situation and to serve the number of lodgers proposed being from 69 up to138 lodgers and applying 4sqm Covid safe measure the communal outdoor area of 45sqm in area, is inadequate .

Clause 30A Character of Area

Clause 30A requires the consent authority to consider the compatibility of the design with the character of the local area. The local area comprises a mix of traditional single dwellings and medium density townhouse developments including dual occupancies and multi-unit housing/apartments. Existing apartment building developments in the area are all two storey or two storey appearance with external wall height of 8.50m with deep soil landscape planting along the front and rear setbacks and building forms containing deep shadow casting balconies and pitched tile roofing.

The proposed building is four storey with a building height 11.26m which in excess of the allowed 8.5m and

with a flat roofing and large windows along all four elevations.
The surrounding developments in close proximity to the site are single dwellings and two storey townhouses and two storey appearance apartment building with pitched roofing.The character of the local area is defined by deep landscaped setbacks and buildings that are of a scale representative of a two storey dwelling with pitched roofing.

Whilst the surrounding area is in transition to higher densities permissible within the R3 Medium Density Residential zone, the bulk and scale and excessive building height results in a poor design outcome which is inconsistent with the existing developments in the locality and is not considered compatible with the current character and future desired character of the area. The excessive height of the building and density outcome on the site, in addition to the lack of quality landscaping areas on all surrounds of the building is resulting in a poor design outcome and is incompatible with the character of the for the area.

In terms of built form, the development does not complement the existing built form qualities which define the character of the local area and includes greater articulation in the form of veranda's and porches as well as the stepping in of any floors above ground level. The surrounding buildings are not of a uniform shape, with projecting elements in the building design. The surrounding buildings also contain hip and gable roofs. The proposed large block form exacerbates the scale of the development.

The submitted character analysis has failed to recognise more broadly the development of the South Werrington Urban Village which is a residential subdivision. Once developed, this area will contain predominately single dwelling houses. This is a large-scale residential subdivision being managed by one developer.

Noting that Penrith DCP requires buildings to be no longer than 20m to provide relief from built forms. The bulk and scale of the buildings is further exacerbated by the building design and height, noting that upper floors have not been stepped in and the building breaches the maximum height permitted on the site. Further, the northern elevation of the buildings present as a 3-storey building which directly overlooks the adjoining property to the rear. In combination with the height breach, this results in unreasonable privacy impacts and contributes to the building appearing ‘overbearing’ and excessively large.

The proposed built form is therefore, considered incompatible with the character of the local area in terms of building length, height, and design.

State Environmental Planning Policy (Western Sydney Aerotropolis) 2020

The State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 (Aerotropolis SEPP) applies to the site and commenced on 1 October 2020. The subject site is identified to be within a 'wildlife buffer zone' of the Western Sydney Airport site. Under Clause 21, the development does not trigger the requirement for further consideration with regard to wildlife and the operation of the airport.

In addition, the site is identified as being located within the Obstacle Limitation Surface Map area. The approved development does not penetrate the prescribed air space identified under Clause 24, and no concerns are warranted.

Given the above, the proposal does not trigger any additional considerations under the WSA SEPP.

State Environmental Planning Policy No 55—Remediation of Land

State Environmental Planning Policy No. 55 (SEPP 55) aims to provide a framework for the assessment, management and remediation of contaminated land throughout the state. Clause 7(1) of SEPP 55 requires a consent authority to consider whether the land is contaminated.

The site is currently used for residential purposes, which is unchanged as a result of the proposed development. Whilst the applicant has provided excerpts from the Contaminated Lands Public Register, it does not address the concerns that aerial photos show buildings were being demolished in 2015 and demolition materials were on site until 2017. Some piles of materials are still evident on site. It is possible that these buildings contained hazardous materials including leads and asbestos which may have impact on the health of public. The applicant has not provided a Preliminary Site investigation (PSI) to demonstrate that the site is not contaminated.

In consideration of the above, the proposal does not satisfy the requirements of SEPP 55.

Sydney Regional Environmental Plan No.20 - Hawkesbury Nepean River

Sydney Regional Environmental Plan No. 20 - Hawkesbury-Nepean River (No. 2 -1997) (SREP 20) integrates planning with catchment management to protect the Hawkesbury-Nepean river system, requiring the impact of future land use to be considered in a regional context. The application has been assessed against relevant criteria of SREP 20, and is found to be inconsistent with the specific planning policies and recommended strategies relating to total catchment management of SREP 20.

The proposed method of stormwater drainage, into Council's drainage line to the west of the property on Railway Street, constitutes a change in catchment and does not comply with Council requirements for stormwater management. Council's Development Engineer has reviewed the application and has advised that the development must drain to the rear of the site. This will require an easement over downstream properties in order to drain the site.

As such, the proposal has not been designed to suitably mitigate stormwater impacts, and therefore the proposal is considered inconsistent with the requirements of SREP 20.

Local Environmental Plan 2010

Provision	Compliance
Part 2 Permitted or prohibited development	Complies - see Appendix - LEP 2010
Clause 2.3 Permissibility	Complies - See discussion
Clause 2.3 Zone objectives	Does not comply - See discussion
Part 4 Principal development standards	Does not comply - see Appendix - LEP 2010
Clause 4.1A Minimum lot sizes for dual occupancies, multi dwelling housing and residential flat buildings	Complies - See discussion
Clause 4.3 Height of buildings	Does not comply - See discussion
Clause 4.6 Exceptions to development standards	Does not comply - See discussion
Clause 7.1 Earthworks	Does not comply - See discussion
Clause 7.7 Servicing	Complies - See discussion
Clause 7.8 Active street frontages	Complies - See discussion

Clause 2.3 Permissibility

Under Penrith LEP 2010, the subject site is zoned R3 Medium Density Residential. The proposal is defined as a 'Boarding House' which is a permissible land use in the R3 Medium Density Residential zone with consent.

Clause 2.3 Zone objectives

The proposal is not considered consistent with the objectives of the R3 Medium Density zone, specifically those identified below:

To enhance the essential character and identity of established residential areas.

- The prevailing character of development in the area are predominately single and two storey residential dwelling. Where apartments are provided they are limited to three stories with pitched roofs. Whilst, a modern designed building can form part of new developments if it is designed appropriately with a bulk and scale that is compatible with the existing building in the area. The proposed building exceeds the height of building control and will be significantly higher than the buildings which adjoin on all three sides of the site. The built form does not contain any features of traditional housing elements such as balconies and veranda's which are outlined as being an important aspect of existing residential areas throughout the DCP.

To ensure that development reflects the desired future character and dwelling densities of the area.

- The DCP envisages buildings that are of two storey appearance and not higher than 8.50m. The surrounding townhouse developments in close proximity to the site are all of a two storey scale. In an R3 zone the predominate building form is 'multi-dwelling housing' which is typically developed as townhouses. The DCP outlines that any new development should incorporate the traditional configuration of the cottages and cottage gardens featured in existing residential areas.
- The proposed proposed bulk, scale and design of the building being of four storey appearance, with limited articulation on all four sides, in addition to the extent of basement which will limit the opportunity for a quality landscaped outcome does not reflect the 'traditional cottage design' anticipated through the DCP controls.
- The non-compliant height, being a full floor of additional boarding rooms, results in a density which was not envisaged for the site through the planning controls.

To ensure that a high level of residential amenity is achieved and maintained.

- In terms of maintaining residential amenity of neighbouring properties, the proposed large glassed windows along side elevations does not provide any visual screening and whilst it provides a side setback of over 3.5m as there are no deep soil along the side elevation which minimises opportunity to provide suitable screening landscaping of shrubs or trees in order to minimise the loss of privacy.

Clause 4.3 Height of buildings

A Maximum Building Height of 8.5m is permitted on the site. The proposed building is four-stories with a building height which ranges from 11.6m to 12.25m. The development does not comply with the maximum building height control and exceeding the requirement by up to 44%.

The applicant has made a request to vary the maximum building height control in accordance with the provisions of Clause 4.6 of the LEP, this is discussed further below.

Clause 4.6 Exceptions to development standards

Clause 4.6 of Penrith LEP allows the applicant to make a written request to vary the applicable development standard that is contravened. In this case, the proposal seeks to vary the development standard relating to the maximum building height limit contained within Clause 4.3. Clause 4.3 is a principal development standard, and can therefore be varied pursuant to Clause 4.6. Noting that Clause 4.6(2) refers to "a development standard imposed by this or any other environmental planning instrument".

The objective of Clause 4.6 is contained at Sub-Clause (1) and is, "to provide an appropriate degree of flexibility in applying certain standards to particular development"; and "to achieve a better outcome for and from the development by allowing flexibility in particular circumstances".

Proposed Variation:

The subject site is identified on Council's building height Map as limiting building heights to maximum of 8.50m under Penrith LEP 2010. The proposal seeks to construct a building with a height of predominately 11.6m with a point encroachment of 12.25m which relates to the lift over-run. This represents a departure of the development standard by 3.1m and 3.75m respectively. This equates to a 36.5% and 44% increase to the standard.

Written Request to Vary Development Standard:

The Development Application was supported by a written request to seek to allow variation to the building

height limit of 8.5m. The written request has been considered against relevant criteria under Clause 4.6, as detailed below.

Clause 4.6(3) requires the consent authority to consider a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating the following:

(a) That compliance with the development standard is unreasonable or unnecessary in the circumstances of the case; and
(b) That there are sufficient environmental planning grounds to justify contravening the development standard.
Whilst the written request contains the appropriate information, the arguments put forward in the request are not supported. The written request states that a variation to development standard should be permitted in this instance for the following main reasons. Please note, the written request in its entirety has been provided to the Local Planning Panel as an attachment to this report, and the following points have been summarised.

- *strict compliance with the development standard is unnecessary and unreasonable in the circumstances of the case, given there are sufficient environmental planning grounds, and the objectives of the standard are achieved;*
- d*espite the height exceedance, the proposed development achieves consistency with the objectives of the building height development standard and the land use zone objectives.*
- *Given the land use zone and the expected increase in medium to high density residential development within the Werrington area, the proposed building height is contextually appropriate. The existing immediate urban context does not represent the full development of the R3 Zone land use and the remnant single dwelling houses are likely to experience redevelopment for higher order uses such as town houses and apartment blocks.*
- *the proposal generally fits within with the prescribed building envelope of the DCP (refer to Figure D5.4 of Section 5.11). This suggests that the DCP already contemplates greater heights within the R3 zoned land.*
- *the proposal, despite being four stories with a flat roof design is only 1.39m taller than the ridge line, and about 3.5m taller that the gutter line of the existing development at 8 Railway St. This height difference equates to about one level which is generally an acceptable height difference between adjoining developments.*
- *the proposed height exceedance does not result in any unreasonable amenity impacts, such as visual and/or acoustic privacy, view loss impacts, and unreasonable shadows. See shadow diagrams illustrating all adjoining property achieve the minimum solar access.*
- *despite the height variation the building will not be the tallest element in the immediate streetscape.*
- *despite the height variation, the proposed development will be a positive contribution to the existing streetscape, as it is quite baren, but also reflects the desired future character for Werrington being a strategic centre.*
- *the inclusion of a 'green corridor', will provide opportunities for landscape screening to further increase privacy between rear adjoining properties. The addition of appropriate window treatments can also reduce any potential for direct overlooking.*
- *solar access to adjoining properties will be impacted. However, this is not a direct result from contravening the height of buildings development standard. Rather, impacts to solar access of adjoining properties is expected as the site is currently vacant, therefore any development would create solar access impact.*
- *the proposal complies with relevant development controls including setbacks, landscaping, private open space, solar access, visual privacy, car parking, access, stormwater and waste management.*
- t*he proposal is consistent with the existing pattern of development and desired future character of this section of the street and the local area.*

Clause 4.6, Sub-Clause (4) states that development consent must not be granted for development that contravenes a development standard unless the consent authority is satisfied of the following:

(i) The applicant's written request has adequately addressed the matters required to be demonstrated by sub-clause (3); and
(ii) The proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out.

The written request has not demonstrated that the variation to the maximum building height limit standard will result in a better outcome for and from the development. As a result of the non-compliance, the proposed building will result in a development that is out of character to the existing developments in the area and adversely impact the amenity of surrounding residences, and provide a poor level of amenity and streetscape, and unlikely to result in a better design outcome for the local character of the area.

Further, the proposal does not meet the objectives of the R3 Medium Density Residential zone, specifically:

- to enhance the essential character and identity of established residential areas',
- to ensure that development reflects the desired future character and dwelling densities of the area' and
- to ensure that a high level of residential amenity is achieved and maintained.'

In this regard, the proposal is not compatible with the established residential developments of the area, and far exceeds the maximum allowed height of building under Penrith LEP.

In terms of built form, DCP requires that building should be well articulated with design measures that cast deep shadows, external walls to be no longer than 5m between corners, upper floors that incorporates projecting room, shady verandahs and set of a variety roof forms and pitches, the development fails to provide these elements and resulting in a poor design outcome that does not enhance the character and identity of the surrounding area, noting the proposal provides insufficient deep soil along the rear and side setbacks for decent screen planting, inadequate area for waste truck manoeuvring within the site, and unacceptable drainage system, including poor design outcome.

The proposal's non-compliance with the standard reflects that the scale of the development is inappropriate for the site, being an over development of the site. The current proposal is not considered to be in the public interest, and compliance with the standard is considered both reasonable and necessary in this instance. Therefore, the request to vary the standard is not supported.

Clause 7.1 Earthworks
The proposal will involve two level of basement car parking spaces and will involve extensive excavation works. The applicant was required to provide a geotechnical report prepared by a suitably qualified person for the basement car parking areas which addresses, but not be limited to ground water movement, salinity, contamination and potential damage to adjoining public and private infrastructure during construction. The information provided has been examined by Council's development engineer and has advised that the submitted documents are insufficient (and in particular to the earthworks and impact of ground conditions at boundaries) to be able to assess these impacts on adjoining properties or the area.

Clause 7.7 Servicing
The existing services in the area will be available to be connected to this development subject to relevant authorities requirements and approvals.

Penrith Local Environmental Plan 2010

Provision	Compliance

Section 4.15(1)(a)(ii) The provisions of any draft environmental planning instrument

The Department of Planning, Industry and Environment (DPIE) has exhibited a new policy, State Environmental Planning Policy (Housing) 2021, which consolidates several State Planning Policies including State Environmental Planning Policy (Affordable Rental Housing) 2009. The plan was exhibited between 29 July and 9 September 2020.

The accompanying report titled Explanation of Intended Effect for a new Housing Diversity SEPP outlines the reasons behind the intended changes. Of key importance to this proposal is the intended changes to the boarding house provisions which have been identified as requiring amendment due to the following explanation.

Since the introduction of the ARHSEPP, councils and communities have raised concerns about the boarding house provisions in the ARHSEPP. Key community and council concerns have centred around the lack of affordability of boarding house rooms; the use of the boarding house provisions to develop student housing; the excessive scale and bulk of some boarding house developments; the compatibility of boarding house development with low-density residential areas; and the clustering of boarding house development in certain areas.

The key changes to the boarding house controls under the Housing SEPP includes the following;

- definition of a boarding house to include the requirement of all boarding houses to be managed by a not-for-profit community housing provider, and be provided as affordable housing;
- boarding houses will not be mandated in the R2 Low Density Zone; and
- amendments to bonus FSR requirements.

Of relevance to this application is the proposed amendment to the boarding house definition which will require boarding houses be managed by a not-for-profit community housing provider and also the requirement for the development to be provided as affordable housing.

The making of the plan is imminent. The DPIE has indicated that the plan will be finalised in November 2021. The proposal is inconsistent with exhibited SEPP (Housing) 2021 and should not be supported given the imminent nature of the making of the plan.

Section 4.15(1)(a)(iii) The provisions of any development control plan

Development Control Plan 2014

Provision	Compliance
C1 Site Planning and Design Principles	Does not comply - see Appendix - Development Control Plan Compliance
C2 Vegetation Management	Complies
C3 Water Management	Does not comply - see Appendix - Development Control Plan Compliance
C4 Land Management	Complies
C5 Waste Management	Does not comply - see Appendix - Development Control Plan Compliance
C6 Landscape Design	Does not comply - see Appendix - Development Control Plan Compliance
C7 Culture and Heritage	N/A
C8 Public Domain	N/A
C9 Advertising and Signage	N/A
C10 Transport, Access and Parking	Does not comply - see Appendix - Development Control Plan Compliance
C11 Subdivision	Does not comply - see Appendix - Development Control Plan Compliance
C12 Noise and Vibration	Does not comply - see Appendix - Development Control Plan Compliance
C13 Infrastructure and Services	Does not comply - see Appendix - Development Control Plan Compliance
D2.1 Single Dwellings	N/A
D2.2. Dual Occupancies	N/A
D2.3 Secondary Dwellings	N/A
D2.4 Multi Dwelling Housing	N/A
D2.5 Residential Flat Buildings	N/A
D2.6 Non Residential Developments	N/A
D5.1. Application of Certification System	N/A
D5.2. Child Care Centres	N/A
D5.3. Health Consulting Rooms	N/A
D5.4. Educational Establishments	N/A
D5.5 Parent Friendly Amenities	N/A
D5.6. Places of Public Worship	N/A
D5.7. Vehicle Repair Stations	N/A
D5.8. Cemeteries, Crematoria and Funeral Homes	N/A
D5.9. Extractive Industries	N/A
D5.10 Telecommunication Facilities	N/A
D5.11 Boarding Houses	Does not comply - see Appendix - Development Control Plan Compliance

Section 4.15(1)(a)(iiia) The provisions of any planning agreement

No planning agreements apply to the site.

Section 4.15(1)(a)(iv) The provisions of the regulations

The proposal is considered capable of complying with the requirements under the Environmental Planning and Assessment Regulation 2000, subject to conditions that enforce the development to comply with all relevant requirements under the Building Code of Australia. Notwithstanding this, the proposal is recommended for refusal on other planning grounds.

Section 4.15(1)(b)The likely impacts of the development

Streetscape and Local Character

Whilst the surrounding area is in transition to higher densities permissible within the R3 Medium Density Residential zone, the scale and spatial arrangement of the proposed development is not considered compatible with the current character or future desired character of the area. The surrounding area is characterised by mainly two or at most three storey appearance scale of apartment buildings, two storey townhouses and one and two storey residential dwellings.

Noting that further towards the southern side of the site is zoned R4 residential, there have not been any large or high rise buildings but rather two storey townhouse type of development have been recently approved for construction. The proposed building scale and design is greater than existing buildings of the area and building presenting rectangular boxy type of design, lacking stepped/ recessed walls and no balconies, results in the development being larger and not considered compatible with the streetscape and is out of character for the area.

Built Form

The development does not complement the existing built form qualities to define the character of the local area. The proposal provides inadequate shadow casting elements/balconies and recessed walls, horizontal roofing and excessive building height with large block form (containing 32.7m long wall with minimal break) which is considered to further exacerbate the bulk and scale of the development and result in poor design outcome.

The excessive building height will also result in **adverse solar access** as shown in the shadow diagram to immediate adjoining properties to the properties located to the south-western rear and eastern adjoining properties at different time of the day.

The excessive height of the building and density outcome on the site, in addition to the lack of quality landscaping areas on all surrounds of the building is resulting in a poor design outcome and is incompatible with the character of the for the area.

Neighbourhood Amenity

Neighbourhood amenity would be compromised by the proposed development, noting that neighbourhood amenity frequently is considered to be an element of local character. Noting that existing developments adjoining the site area of small single and two storey residential developments, the excessive building height is likely to have overshadowing impacts and lack of deep soil along the side and rear boundaries to include decent screen plating to minimise loss of privacy from the large windows located along all facades. The proposal hence, will result in loss of privacy and overlooking on to the adjoining properties that will result in poor residential amenity for smaller scaled residences located on adjoining properties. This has been raised in one of the submission as of concerns to a residence.

Amenity of Boarding House including Communal Area

Whilst Communal living area is located along the frontage of the building is acceptable, it provides a communal living area of 30sqm to use for the 69 to 138 occupants of this development. The DCP requires indoor communal lliving area of 2m2 per lodgers of , the proposal provides a total area of 30 sqm only whilst requiring 138sqm under the DCP The proposed and 45 sqm are a is inconsistent with the requirements of the DCP 30sqm of living area is much less than required by the DCP.

Outdoor areas are not sufficient to offset pronounced shortcomings of the proposed small living room. The northern-western corner courtyard has a width of 3.6m which is considered quite narrow and unlikely to encourage sitting or informal social interaction. This area could be more usable to have it extended to the frontage of the building with the provision of screen planting to create an inviting atmosphere for the

occupants. The outdoor communal area is considered to be small and is a narrow area that is unlikely to attract extensive use.

Stormwater Management
The site falls to the rear and the applicant was advised by Council engineer in the advice provided in PL21/0022, that as the site falls to the rear and as such the development is required to drain via an easement obtained over downstream properties.The proposed drainage system proposes connection to the Council drainage line to the west of the property on Railway Street which constitutes a change in catchment and is not consistent with Council's requirement. The applicant has not obtained owners consent with this application for any drainage easement proposed over any downstream lot and as such the proposed drainage system is hence inconsistent with the DCP and not supported.

Traffic, Access and Manoeuvring
The proposed car parking and access arrangement has been examined by Council's Development Engineer and have been found to be unsatisfactory for the following reasons:

- Vehicles located at the dead end of basement 2 has not been demonstrated to be able to turn around and exit in a forward direction without making 3 point turn by providing a swept path diagram in accordance with Penrith DCP 2014 and AS2890.1.
- The proposal does not provide swept path to demonstrate that garbage trucks are able to enter and leave the site in a forward direction.
- The parking spaces design have not demonstrated that all vehicles can enter and exit the space without the need to make more than three combined turning manoeuvres, in accordance with Penrith DCP 2014 (i.e. enter in one manoeuvre and reverse out in two or vice versa).
- The motorcycle parking spaces located within the basement parking area spaces numbered 5 to 6, 7 and 10 to 14 all lie in areas which have restricted access and not in accordance with Clause 2.4.7 of AS2890.1.

Acoustic Impacts
The application was supported by an Acoustic Assessment Report Rodney Stevens Acoustics, which has been reviewed by Council's Environmental Management Officer. Based on this review, whilst it is generally acceptable, the Acoustic Assessment provides insufficient information, as the report does not address:

- Noise impact from the trains traveling to the boarding house along the rail line which is located 50m from the site
- Internal acoustic requirements between rooms to ensure the acoustic privacy of each boarding room.
- how it will control and manage the maximum number of visitors allowed on the premises at any one time in the Plan of Management in the noise impact assessment.
- the mechanical ventilation for the basement carpark and show air intake and air discharge points and their noise impact.

As such, Council is unable to be satisfied that the noise levels associated with the use of these areas will not have adverse noise impact to surrounding properties and comply with relevant criteria.

The acoustic assessment should include the noise levels anticipated to be produced by each of these noise sources and the predicted levels that may be experienced by the neighbouring sensitive receivers (ie. properties to the north and east, and residents of the development). The report needs to clearly demonstrate that that the criteria can be achieved, and has formed a reason for refusal of the application.

Social Impacts
The application has been examined by Council's Social Strategy Officer who has advised that the facility would offer a source of low-cost accommodation and flexible housing types in the area for variety of low income people located in close proximity to public transport. However, it fails to provide adequate common living areas and would need to consider providing them each floors and would need to amend the Plan of Management to include house rules, complaint register and emergency management and evacuation plan.

Crime Prevention Through Environmental Design
The ground floor layout of the development provides common lounge area along the frontage of the building and a foyer to enable passive surveillance for the development, the proposal however, has a 1.8m high fence along the front boundary which will significantly impact passive views towards the street and entrance of the building. In addition, the floor plate arrangement contains corridors with points of concealment and entrapment. These aspects do not meet the principals of Crime Prevention Through Environmental Design.

Section 4.15(1)(c)The suitability of the site for the development

The site is considered unsuitable for the development for the following reasons:

- The bulk, scale and design of the building is not compatible with the established development character of the area, and is non-compliant with the maximum allowed building height under Penrith LEP 2010, and lacks design elements in the facades as required under Penrith DCP.
- The proposal does not demonstrate that the proposal is compatible with the existing developments and character of the area.
- The proposal does not provide drainage system in accordance with Council's DCP.
- The proposal does not demonstrate that waste can be satisfactorily collected on site.

Section 4.15(1)(d) Any Submissions

Community Consultation

In accordance with Appendix F4 of Penrith Development Control Plan 2014, the proposed development was notified to nearby and adjoining residents. The proposal was also advertised in the local newspaper and the exhibition period occurred between 11 October 2021 to 25 October 2021. Council received a total of 3 submissions, two (2) in favour of the proposal and one (1) raising concerns of the proposal

The following issues were raised in the submission received raising the following concerns which forms part of the assessment.

Issue Raised	***Comments***
Perceived Social Impacts due to nature of development and safety concerns	Boarding houses are a permissible land use in the zone and provide a type of residential accommodation within the community.Boarding house development is intended to provide low-cost housing options for the community. The development provides an onsite manager who would be responsible for the ongoing operation and safety of the development, and would be required to comply with a plan of management. Notwithstanding, the design is not considered to be incompatible with the existing buildings in the area and with other non compliance with development standards, it is being refused.
Traffic and Car Parking Impacts	The rate of car parking required for the development is determined by the SEPP ARH. Under the SEPP ARH, the proposal provides 36 parking spaces and the proposal has provided sufficient number of car parking spaces Notwithstanding this, the design of the car park area is inadequate/poor and has formed a reason for refusal of the application. The increase in traffic can be accommodated by the existing road network. Notwithstanding, the proposal is recommended for refusal on other grounds, as detailed in this report.
Increased in street parking and traffic	The development provides sufficient on site parking as required under the ARH SEPP. The proposal is considered capable of being accommodated by the local road network. Notwithstanding, the proposal is recommended for refusal on other grounds, as detailed in this report.

Potential Loss of privacy/over looking	The development includes large windows along the side elevations and unable to provide screen planting along side boundaries due tro lack of deep soil, and also does not provide any use of screening fixtures in order to minimise the potential for overlooking on to adjoining properties, Notwithstanding, the application is recommended for refusal on several grounds.
Potential Acoustic/Noise Impacts	Concerns noted. The proposal was accompanied by an Acoustic Assessment addressing potential noise impacts on surrounding residences, and future occupants of the development. The Acoustic Assessment was found to provide insufficient information. Specifically, the Acoustic Assessment did not calculate noise levels associated with the use of the carpark/driveway, mechanical ventilation within the car park area of the development. Insufficient information regarding acoustic impacts has formed a reason for refusal of the application.
Perceived loss of property values	A boarding house is a permissible use on the site. There is no evidence to suggest the development will result in reduced property values.

Referrals

The application was referred to the following stakeholders and their comments have formed part of the assessment:

Referral Body	Comments Received
Development Engineer	Not supported
Environmental - Environmental management	Not supported
Environmental - Public Health	No objections - subject to conditions
Waste Services	Not supported
Social Planning	No objections - subject to conditions

Section 4.15(1)(e)The public interest

The proposal is not considered in the public interest, as the application is non-compliant with key objectives and controls under SEPP ARH, Penrith LEP 2010, and Penrith DCP 2014. The development would set an undesirable precedence in the locality and is inconsistent with the provisions of the imminent Housing SEPP.

Section 94 - Developer Contributions Plans

Penrith City Council's Section 7.11 Contribution Plan applies to the proposal. However, given the application is recommended for refusal on other grounds, contribution fees have not applied in this instance.

Conclusion

In assessing this application against the relevant environmental planning policies, being State Environmental Planning Policy Affordable Rental Housing 2009, Penrith Local Environmental Plan 2010, and Penrith Development Control Plan 2014, the proposal does not satisfy the aims, objectives and provisions of these policies.

- The proposal in its current form, is in-compatible with existing developments of the area and will have a negative impact on the surrounding character of the area, and result in unreasonable amenity impacts to adjoining properties.
- The proposed design does not comply with key development standard, is out of character of the area and is not site responsive.
- Approval of the development would create undesirable precedent and is not in the public interest.

Therefore, the application is recommended for refusal, for the attached reasons:

Recommendation

1. That DA21/0691 for the construction of a boarding house containing 69 boarding rooms and two levels of underground parking spaces and associated works at 10 - 11 Railway Street, Werrington be refused for the following reasons;

Refusal

1 X Special 02 (Refusal under Section 4.15(1)(a)(i) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(1)(a)(i) of the Environmental Planning and Assessment Act 1979 as the proposal is inconsistent with the provisions of Penrith Local Environmental Plan 2010 as follows:

- **Clause 2.3 Zone objectives:** The proposal is inconsistent with the following objectives of the R3 Medium Density Residential zone:
  - To enhance the essential character and identity of established residential areas;
  - To ensure that a high level of residential amenity is achieved and maintained; and
  - To ensure that development reflects the desired future character and dwelling densities of the area.

- **Clause 4.3 Height of Buildings :** The proposal is non-compliant with the maximum height of the building allowed for the site.

- **Clause 4.6 Exceptions to development standards:** The written request to contravene the maximum height of the building as allowed by Clause 4.1 (20 & 4.3 (2) of Penrith Local Environmental Plan 2010 under Clause 4.6 of that Plan provided by the applicant did not demonstrate that exceeding height of the building results in a better design outcome for the local area to support the variation.

State Environmental Planning Policy (Housing Diversity SEPP) 2021.

- In this regard, the proposal does not meet the definition of a 'Boarding House' as per the proposed State Environmental Planning Policy (Housing Diversity SEPP), as the proposal is not proposed to be managed by a registered not-for-profit community housing provider.

2 X Special 03 (Refusal under Section 4.15(1)(a)(ii) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(1)(a)(i) of the Environmental Planning and Assessment Act 1979 as the proposal is inconsistent with the provisions of :

State Environmental Planning Policy (Affordable Rental Housing) 2009 as follows:

- Part 2, Division 3, Clause 29 (2)(a) Building Height
- Part 2 Division 3, Clause 29 (2)(c) Solar Access
- Part 2, Division 3, Clause 29(2)(e) Parking
- Part 2, Division 3, Clause 30A Character of local area

The provisions of State Environmental Planning Policy No. 55 - Remediation of Land as follows:

- the application does not provide sufficient information to demonstrate the contamination status of the site.

3 X Special 04 (Refusal under Section 4.15(1)(a)(iii) of EPA Act 1979)
The development application is not satisfactory for the purpose of Section 4.15(1)(a)(iii) of the Environmental Planning and Assessment Act 1979, as the proposal is inconsistent with the following provisions of Penrith Development Control Plan 2014:

- Chapter C1 Planning and Design Principles
- Chapter C3 Water Management
- Chapter C5 Waste Management and accompanying Waste Management Guideline
- Chapter C10 Transport, Access and Parking
- Chapter C12 Noise and Vibration
- Chapter D2 Residential Development
- Chapter D4 Other Land Uses

4 X Special 07 (Refusal under Section 4.15(1)(b) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(1)(b) of the Environmental Planning and Assessment Act in terms of the likely impacts of the development, including:

- The design and scale of the proposed development is not compatible with the existing and desired future character of the immediate locality.
- The proposal provides inadequate landscaped setbacks to provide quality planting along side boundaries to assist in providing visual buffer and an appropriate landscape treatment of the site which suitably integrates the development into the existing local character, maintain surrounding residential amenity,
- The proposal provides an inadequate design of the car parking areas/driveway being insufficient for proper and safe maneuvering within the development site.
- The development is considered to be an over-development of the site.
- The stormwater drainage design is unacceptable, as the site falls to the rear requiring to provide an easement along the rear adjoining property for drainage to be in accordance with Council requirements.
- The accompanying Acoustic Assessment report provides insufficient information, as the report does not details of internal noise management of the patrons and mechanical ventilation's expected noise levels generation within the basement area of the development. As such, Council is unable to be satisfied that the noise levels associated with the use of these areas will comply with relevant noise criteria.

5 X Special 08 (Refusal under Section 4.15(1)(c) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(1)(c) of the Environmental Planning and Assessment Act 1979 as the site is not suitable for the proposed development.

6 X Special 10 (Refusal under Section 4.15(1)(e) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(1)(e) of the Environmental Planning and Assessment Act as the proposal would create an undesirable precedent and is therefore not considered to be in the public interest.

Appendix - Development Control Plan Compliance

Development Control Plan 2014

Part C - City-wide Controls

The proposal does not meet the objectives and controls under Part C of Penrith Development Control Plan, including:

C1 Site Planning and Design Principles
The ground floor layout of the development provides common lounge area along the frontage of the building and a foyer to enable passive surveillance for the development, the proposal proposes 1.8m high fence along the front boundary which will minimise view to the street and will defeat the intent of the principals of Crime Prevention Through Environmental Design.

C3 Water Management
The site falls gently to the rear of the property and will need to be connected to downstream effected property/s via an easement. The Applicant was advised of this at the pro-lodgement meeting. The proposed system is therefore inconsistent with the DCP requirements and is unsatisfactory.

C5 Waste Management
The proposal was reviewed by Council's Waste Officer, and found to be unsatisfactory, as the proposal is non-compliant with Chapter C5 of Penrith DCP and the accompanying 'Multi-Unit Dwelling Waste Management Guideline.' In this regard, Penrith DCP requires that:

- residential flat buildings are required to install a **dual chute system** for residual and recyclable waste streams,
- Council's waste collection vehicles are required to enter and exit the designated loading bay in a forward direction.
- Swept path models have to be provided illustrating how Council's standard waste collection vehicle will enter, service and exit the site.
- A 0.5m unobstructed clearance is required from all obstructions for the vehicle's ingress and egress manoeuvres.
- For rear-load vehicles an additional 2m unobstructed loading zone is required behind the vehicle for the loading of 660L and 1,100L bins. Additionally, a 0.5m side clearance is required on either side of the vehicle for driver movements and accessibility;

Whilst also providing an integrated large Waste centralised collection area within the basement area, the proposal fails to provide chute system meet the requirements mentioned above as required by the DCP and as such the proposal fails to meet the DCP requirements.

C6 Landscape Design
The density and spatial arrangement of the development provides little opportunity for the provision of quality landscaped areas, particularly along the rear (northern) and side boundary, providing poor edge treatments to neighbouring properties. Screening landscaping should be provided along the rear and side boundaries to mitigate privacy and amenity impacts on adjoining properties. The encroachment of the basement into side setbacks will significantly limit the opportunity to provide a quality landscaped outcome.

C10 Transport, Access and Parking
Whilst the development meets the on site parking requirements of 36 spaces required by the ARH SEPP, the general arrangement of the basement is poor and is likely to cause significant conflicts (at multiple points) between pedestrians, vehicles and waste trucks.

In addition the following technical matters are noted.

- Vehicles located at the dead end of basement 2 has not been demonstrated to be able to turn around and exit in a forward direction without making 3 point turn by providing a swept path diagram.
- The proposal does not provide swept path to demonstrate that garbage trucks are able to enter and leave the site in a forward direction.

- The motorcycle parking spaces located within the basement parking area are not appropriate and are vulnerable to being struck by a manoeuvring car which is not in accordance with Clause 2.4.7 of AS2890.1.

In view of the above, the proposal provides poor basement parking design arrangements and is likely to cause conflict between pedestrians, vehicles and waste trucks.

C12 Noise and Vibration
The application was supported by an Acoustic Assessment Report Rodney Stevens Acoustics, which has been reviewed by Council's Environmental Management Officer. Based on this review, whilst it is generally acceptable, the Acoustic Assessment provides insufficient information, as the report does not address:

- Internal acoustic requirements between rooms to ensure the acoustic privacy of each boarding room.
- how it will controls and manage the maximum number of visitors allowed on the premises at any one time in the Plan of Management in the noise impact assessment.
- the mechanical ventilation for the basement carpark and show air intake and air discharge points and their noise impact.

As such, Council is unable to be satisfied that the noise levels associated with the use of these areas will comply with relevant criteria.

C13 Infrastructure and Services
The proposal fails to demonstrate that waste collection can be carried out safely and efficiently from within the basement area.

D2 Residential Development

An assessment of the built form of the development has been undertaken having regard to comparative built form controls applying to multi dwelling housing development within the R3 Medium Density Residential zone, as is required by the boarding house objectives and controls of section 5.11 (Boarding Houses) of Section D5 Other Land Uses of the DCP.

The anticipated built form for the area within the vicinity of the site (applicable to boarding houses and multi dwelling housing developments) is detailed within this section 2.4.2 of the DCP and includes controls requiring articulation of the built form and the inclusion of deep external side setbacks with an upper storey surrounded by a larger ground floor plan.

2.4.4 Urban Form

One of the requirements under this section is that building should be well articulated with design measures that cast deep shadows, external walls to be no longer than 5m between corners, upper floors that incorporates projecting room, shady verandahs and set of a variety roof forms and pitches. The proposed building is 33m deep and 23m wide, whilst it provides a smaller ground floor area all upper floors are similar of dimension and only provides small break along the side elevation corners but at 7m distance and it does not include any varandhas, or deep shadow casting elements except for glass windows with external frames.

The existing developments in the area have verandahs and shadow casting elements with pitched roofs in the building design. Most of the townhouse developments and apartment type of development are either two storey or three storey appearance. The bulk,scale and design of the proposed building fails to provide these architectural elements and with the building height being 4 storey in excess of the height limit results in the development being bulky and in compatible with existing development and out of character of the area.

2.4.3 Development Site

The site is 30m wide, which is compliant with the 22m lot width control. The proposal represents an over development of the site in relation to the built with a large building mass and inadequate room for deep soil landscaping and storm water drainage infrastructure.

2.4.5 Front and Rear Setbacks

The proposal provides an sufficient front, rear and side setback as required by the DCP, being an average of 6m to 8m in the established setback pattern along the street to the west and east of the site. However, due tot he basement parking except for the front setback a decent a decent deep soil landscaping area which can not be achieved for screen planting.

2.4.6 Building Envelope and Side Setbacks

This section states under clause 2.4.6(7)(a) and (b) that a minimum side setback of 2m is permissible, and the proposal complies. The proposal complies with the numerical control relating to the side setbacks. However, the density of the development and the requirement under the State Policy to provide 0.5 car parking spaces per boarding room is also considered to result in large basement construction resulting in no deep soil for proper planting along side boundaries.

2.4.8 Landscaped Area

The proposal does not meet the minimum landscaped area required by clause 2.4.8 in Part D2 of the DCP, which is 40% of the site area. In calculating the landscaped area, using the Landscape Plan provided the proposal provides a total landscaped area of 555sqm (including the hardstand area above the basement parking areas.), representing a total of 39.84% or rounding it up 40% of the site as landscaped area. HOwever if the hardstand landscaping area is excluded it will resulting in only 19% landscaping area for the development.

The insufficient landscaped area, built form and required car parking area for the scale of development limit the opportunity for suitable landscaped area to contribute and enhance the landscape quality of the site and broader area. Furthermore, whilst it shows that screen planting is provided along the side boundaries, these area will not support decent suitable screening along the western and eastern boundaries to maintain adjoining residential amenity.

D5 Other Land Uses

D5.11 Boarding Houses

The proposal does not meet the following objectives relating to Boarding House developments:

(a) To ensure that boarding houses fit the local character or desired future local character of the area.
(b) To minimise negative impacts on neighbourhood amenity.
(d) To respond to increasing neighbourhood densities resulting from boarding house development.
(e) To ensure that boarding houses operate in a manner which maintains a high level of amenity, health and safety for residents.

- The bulk, scale and design of the development does not adequately respond to the existing or desired future character of the area in the vicinity of the site, as discussed within this report (refer to the local character discussion under the SEPP ARH).
- The excessive height of the building indicates that it is over development of the site and seeks higher density on this site.
- The insufficient information provided with respect to the internal noise within the boarding rooms and mechanical system within basement car parking area is likely to have negative noise impacts to adjoining properties.

10-11 Railway Street, Werrington, NSW 2747

Drawing List

DA000	COVER PAGE	06/10/20	DA303	SECTION C-C	03/03/21
DA001	BASIX	06/10/20	DA401	EXTERIOR FINISHES SCHEDULE	06/10/20
DA002	SITE ANALYSIS	06/10/20	DA501	SHADOW DIAGRAM 21 JUNE 9am	03/05/21
DA100	SITE PLAN	06/10/20	DA502	SHADOW DIAGRAM 21 JUNE 12pm	06/10/20
DA101	BASEMENT LEVEL 2	01/19/21	DA503	SHADOW DIAGRAM 21 JUNE 3pm	03/05/21
DA102	BASEMENT LEVEL 1	02/10/21	DA504	SHADOW DIAGRAM 21 DECEMBER 9am	09/17/21
DA103	GROUND FLOOR PLAN	06/10/20	DA505	SHADOW DIAGRAM 21 DECEMBER 12pm	09/17/21
DA104	FIRST FLOOR PLAN	10/20/20	DA506	SHADOW DIAGRAM 21 DECEMBER 3pm	09/17/21
DA105	SECOND FLOOR PLAN	01/20/21	DA601	3D PERSPECTIVE	06/10/20
DA106	THIRD FLOOR PLAN	02/10/21			
DA107	ROOF PLAN	03/03/21			
DA201	ELEVATIONS	06/10/20			
DA202	ELEVATIONS	02/02/21			
DA301	SECTION A-A	06/10/20			
DA302	SECTION B-B	03/03/21			

Consultants

Energy Consultant	Landscape Architect	Waste Management Consultant	Town Planner	BCA Consultant	Stormwater Enginner	Cost Estimater	Traffic Engineer	Social Impact
Frys Energywise Suite 29, 159 Ridgecrop Dr, Castle Hill NSW 2154 Tel: (02) 9899 2825	Grindstone Landscape 152 Darvall Road, West Ryde NSW 2114 Tel: 0420 761 202	Caverstock Group Level 3, Suite 305, 13-15 Wentworth Avenue, Sydney NSW 2000 Tel: 02 9264 3188	TBA Urban Tel: 0411 965 683	Building Anatomy Tel: 0423 024 960	SMART Structures Suite 2.04, 35-41 Waterloo Rd, Macquarie Park NSW 2113 P: 02 9052 6467	HMS Group Level 35, One International Towers 100 Barangaroo Ave Sydney NSW 2000 Tel: 02 8046 3972	Stanbury Traffic Planning 302/166 Glebe Point Rd Glebe NSW 2037 Tel: 02 8971 8314	Judith Stubbs & Associates The Old Post Office 231 Princes Highway Bulli NSW 2516 Tel: 02 4283 7300

PLANNING REQUIREMENTS COMPLIANCE TABLE

Site Area: 1393.5m²

	Requirements	Proposed
Front Setback	6.5m based on adjoining property	6.5m
Rear Setback	Min 6m - 3 storey building	6m
Side Setback	Min 2m for a max of 50% building length, remainder to be min 3m	3.715m
Landscaping	40% - 557.6m²	40% - 566.1m²
Building Height	Max 8.5m	11.70m
Private open space	Min 20m² for lodgers + 8m² for building manager	39m² coverd area 46m² uncovered area for lodgers 15m² for building manager
Deep Soil	no requirement	16% - 229m²

Project Metrics:

69 Rooms (7 Accessible - 10%)

1 Manager Room

0.5 parking space per room =
35 Parking Spaces (7 Accessible) + 1 Manager Parking Space
= 36 Total Parking Spaces

1 bicycle and 1 motorcycle per 5 rooms =
16 Bicycle Parking & 14 Motorcycle Parking

Bins

General Waste - Number of Units x 0.375
70 Rooms x 0.375 = 26.25
= 27 General Waste Bins (240L)

Recycling - Number of Units x 0.375
70 Rooms x 0.375 = 26.25
= 27 Recycling Bins (240L)

Site Location Plan



Window Schedule

Mark	Height	Width	Area	Orientation	Location
1	2200	4930	11 m²	NORTH	FOYER
3	600	1400	1 m²	EAST	BATH 5
4	600	1400	1 m²	WEST	BATH 10
8	2400	1300	3 m²	NORTH	ROOM 13
9	2400	1300	3 m²	NORTH	ROOM 14
10	2400	1300	3 m²	NORTH	ROOM 15
11	2400	1300	3 m²	NORTH	ROOM 16
12	2400	1300	3 m²	NORTH	ROOM 17
13	1700	700	1 m²	EAST	BATH 17
14	1700	2400	4 m²	EAST	ROOM 18
15	1700	2400	4 m²	EAST	ROOM 19
16	1700	2400	4 m²	EAST	ROOM 20
17	1700	2400	4 m²	EAST	ROOM 21
18	2400	1050	3 m²	EAST	CORR.
19	1700	700	1 m²	EAST	BATH 22
20	1700	2400	4 m²	SOUTH	ROOM 22
21	1700	2400	4 m²	SOUTH	ROOM 23
22	1700	2400	4 m²	SOUTH	ROOM 24
23	1700	2400	4 m²	SOUTH	ROOM 25
24	1700	2400	4 m²	SOUTH	ROOM 26
25	1700	2400	4 m²	SOUTH	ROOM 27
26	1700	700	1 m²	WEST	BATH 27
27	1700	2400	4 m²	WEST	ROOM 28
28	1700	2400	4 m²	WEST	ROOM 29
29	1700	2400	4 m²	WEST	ROOM 30

Window Schedule

Mark	Height	Width	Area	Orientation	Location
30	1700	2400	4 m²	WEST	ROOM 31
31	1700	700	1 m²	WEST	BATH 13
32	2400	1300	3 m²	NORTH	ROOM 32
33	2400	1300	3 m²	NORTH	ROOM 33
34	2400	1300	3 m²	NORTH	ROOM 34
35	2400	1300	3 m²	NORTH	ROOM 35
36	2400	1300	3 m²	NORTH	ROOM 36
37	2400	1300	3 m²	NORTH	ROOM 37
38	1700	700	1 m²	EAST	BATH 37
39	1700	2400	4 m²	EAST	ROOM 38
40	1700	2400	4 m²	EAST	ROOM 39
41	1700	2400	4 m²	EAST	ROOM 40
42	1700	2400	4 m²	EAST	ROOM 41
43	1700	700	1 m²	EAST	BATH 42
44	1700	2400	4 m²	SOUTH	ROOM 42
45	1700	2400	4 m²	SOUTH	ROOM 43
46	1700	2400	4 m²	SOUTH	ROOM 44
47	1700	2400	4 m²	SOUTH	ROOM 45
48	1700	2400	4 m²	SOUTH	ROOM 46
49	1700	2400	4 m²	SOUTH	ROOM 47
50	1700	700	1 m²	WEST	BATH 47
51	1700	2400	4 m²	WEST	ROOM 48
52	1700	2400	4 m²	WEST	ROOM 49
53	1700	2400	4 m²	WEST	ROOM 50
54	1700	2400	4 m²	WEST	ROOM 51

Window Schedule

Mark	Height	Width	Area	Orientation	Location
55	1700	700	1 m²	WEST	BATH 32
56	1900	1200	2 m²	NORTH	ROOM 52
57	1900	1200	2 m²	NORTH	ROOM 52
58	1900	1200	2 m²	NORTH	ROOM 53
59	1900	1200	2 m²	NORTH	ROOM 53
60	1900	1200	2 m²	NORTH	ROOM 54
61	1900	1200	2 m²	NORTH	ROOM 54
62	1900	1200	2 m²	NORTH	ROOM 55
63	1900	1200	2 m²	NORTH	ROOM 55
64	1700	700	1 m²	EAST	BATH 55
65	2400	1050	3 m²	EAST	
66	1700	2400	4 m²	EAST	ROOM 56
67	1700	2400	4 m²	EAST	ROOM 57
68	1700	2400	4 m²	EAST	ROOM 58
69	1700	2400	4 m²	EAST	ROOM 59
70	2400	1050	3 m²	EAST	CORR.
71	1700	700	1 m²	EAST	BATH 60
72	1700	2400	4 m²	SOUTH	ROOM 60
73	1700	2400	4 m²	SOUTH	ROOM 61
74	1700	2400	4 m²	SOUTH	ROOM 62
75	1700	2400	4 m²	SOUTH	ROOM 63

Window Schedule

Mark	Height	Width	Area	Orientation	Location
76	1700	2400	4 m²	SOUTH	ROOM 64
77	1700	2400	4 m²	SOUTH	ROOM 65
78	1700	700	1 m²	WEST	BATH 65
79	1700	2400	4 m²	WEST	ROOM 66
80	1700	2400	4 m²	WEST	ROOM 67
81	1700	2400	4 m²	WEST	ROOM 68
82	1700	2400	4 m²	WEST	ROOM 69
83	2400	1050	3 m²	WEST	
84	1700	700	1 m²	WEST	BATH 52
85	2650	2955	8 m²	NORTH	FOYER
86	2400	1050	3 m²	WEST	
87	2400	1050	3 m²	WEST	CORR.
89	2400	1050	3 m²	EAST	
90	2400	1050	3 m²	WEST	CORR.
91	2400	1050	3 m²	WEST	
92	2400	1050	3 m²	EAST	CORR.
93	2400	1050	3 m²	EAST	
95	2400	1050	3 m²	WEST	CORR.
96	2200	2500	6 m²		
97	2200	1200	3 m²	NORTH	

Door Schedule

Mark	Width	Height	Area	Orientation	Location
1	3390	2400	8 m²	WEST	ROOM 13
3	3390	2400	8 m²	EAST	ROOM 2
4	3390	2400	8 m²	EAST	ROOM 3
5	3850	2400	9 m²	EAST	ROOM 4
6	900	2400	2 m²	EAST	CORR.
7	3580	2400	9 m²	SOUTH	ROOM 5
8	3580	2400	9 m²	SOUTH	ROOM 6
9	3580	2400	9 m²	SOUTH	ROOM 7
10	3580	2400	9 m²	SOUTH	ROOM 8
11	3580	2400	9 m²	SOUTH	ROOM 9
12	3580	2400	9 m²	SOUTH	ROOM 10
13	900	2400	2 m²	WEST	CORR.
14	3580	2400	9 m²	WEST	ROOM 11
15	3390	2400	8 m²	WEST	ROOM 12
16	6570	2400	16 m²	WEST	COMMON LIVING ROOM
17	7500	2400	18 m²	NORTH	COMMON LIVING ROOM
18	1800	2400	4 m²	NORTH	FOYER
34	2800	2400	7 m²	EAST	ROOM 1 + MANAGER

DEVELOPEMENT APPLICATION -- NOT FOR CONSTRUCTION

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10-11 RAILWAY STREET WERRINGTON NSW 2747

construction of a new boarding house

Date	20.07.2021	Project number	200.12
Prepared by	S.L	Scale	
Designed by	M.S		
Designed for	Mr Georges Wehbe		

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DA000

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

1. Commitments for Residential flat buildings - Building1

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✔	✔	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✔	✔
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✔	✔
(e) The applicant must install: (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✔ ✔	✔ ✔
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✔	✔	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✔	
(g) The pool or spa must be located as specified in the table.	✔	✔	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✔	✔	✔

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 7.5 but <= 9 L/min)	4 star	3 star	3 star	no	3.5 star	4 star	-	-	-	-	-	-	-

	Alternative water source							
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
None	-	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✔	✔	✔
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✔	✔
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✔	✔
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✔	✔

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✔	✔	✔
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✔ ✔	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✔ ✔ ✔	✔
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✔	

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

	Cooling		Heating		Artificial lighting						Natural lighting	
Dwellin no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
5, 9, 17, 22, 27, 32, 37, 42, 47, 60, 65, 13-L1	1-phase airconditioning 3.5 Star (old label)	-	1-phase airconditioning 3.5 Star (old label)	-	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	1	no
All other dwellings	1-phase airconditioning 3.5 Star (old label)	-	1-phase airconditioning 3.5 Star (old label)	-	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	electric cooktop & electric oven	3.5 star	no	3.5 star	3.5 star	2 star	no	no

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The development will be a Class 3 building. The applicant must include in the documentation accompanying the application for a construction certificate (or complying development certificate, if applicable), a report demonstrating that the development will meet Section J of the National Construction Code - Volume 1.	✔	✔	✔

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✔	✔
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✔	✔	✔
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✔	✔	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✔	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✔	✔
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✔	✔

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	4 star	3 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	3000.0	To collect run-off from at least: - 380.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 274.0 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site
Fire sprinkler system (No. 1)	-	-	-
Fire sprinkler system (No. 2)	-	-	-
Fire sprinkler system (No. 3)	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✔	✔
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✔	✔
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✔	✔	✔

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Basement 2 Carpark	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	time clock and motion sensors	No
Basement 1 Carpark	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	time clock and motion sensors	No
Lift car (No.1)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.2)	-	-	light-emitting diode	connected to lift call button	No
General waste	ventilation exhaust only	-	light-emitting diode	motion sensors	No
Common living room	ventilation exhaust only	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	No
Accessible toilet unisex	ventilation exhaust only	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	No
Bulk storage	ventilation exhaust only	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	No
Ground floor lobby	no mechanical ventilation	-	light-emitting diode	time clock and motion sensors	No
L1 Lobby	no mechanical ventilation	-	light-emitting diode	time clock and motion sensors	No
L2 Lobby	no mechanical ventilation	-	light-emitting diode	time clock and motion sensors	No
L3 Lobby	no mechanical ventilation	-	light-emitting diode	time clock and motion sensors	No
Basement 1 corridor	no mechanical ventilation	-	light-emitting diode	time clock and motion sensors	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	electric heat pump - air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm)
Lift (No. 1)	gearless traction with V V V F motor and regenerative drive	Number of levels (including basement): 6
Lift (No. 2)	gearless traction with V V V F motor and regenerative drive	Number of levels (including basement): 6

4. Commitments for common areas and central systems/facilities for the development (non-building specific)

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✔	✔
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✔	✔	✔
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✔	✔	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✔	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✔	✔
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✔	✔

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	4 star	3 star	no common laundry facility

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✔	✔
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✔	✔
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✔	✔	✔

Central energy systems	Type	Specification
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 3.0 peak kW

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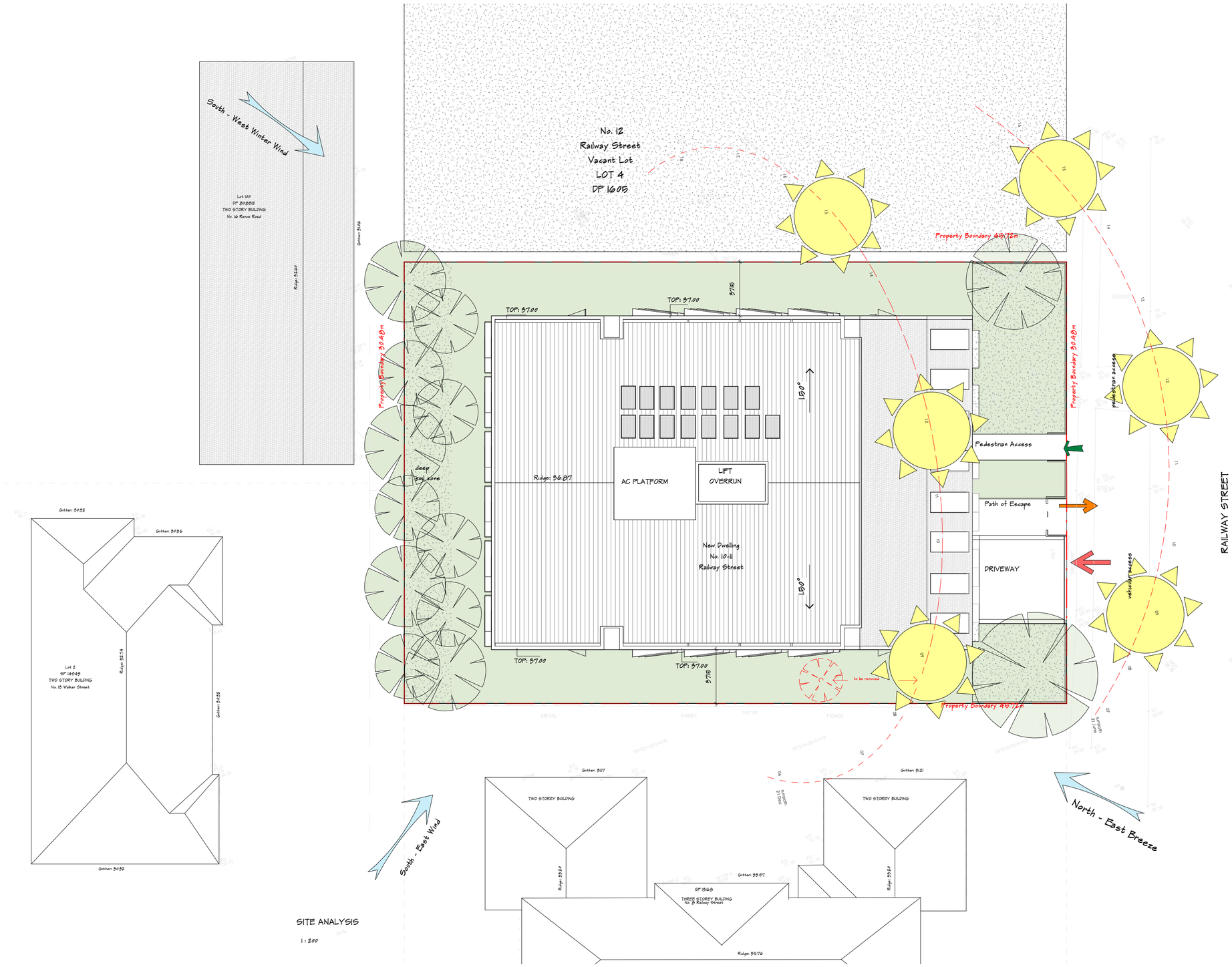
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10-11 RAILWAY STREET WERRINGTON NSW 2747

construction of a new boarding house

Date	20.07.2021	Project number	200.12
Prepared by	S.L	BASIX	
Designed by	Designer	Scale	1 : 1
Designed for	Mr Georges Wehbe	GRAPHIC SCALE 1:25	
			DA001

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



SITE ANALYSIS

1 : 200

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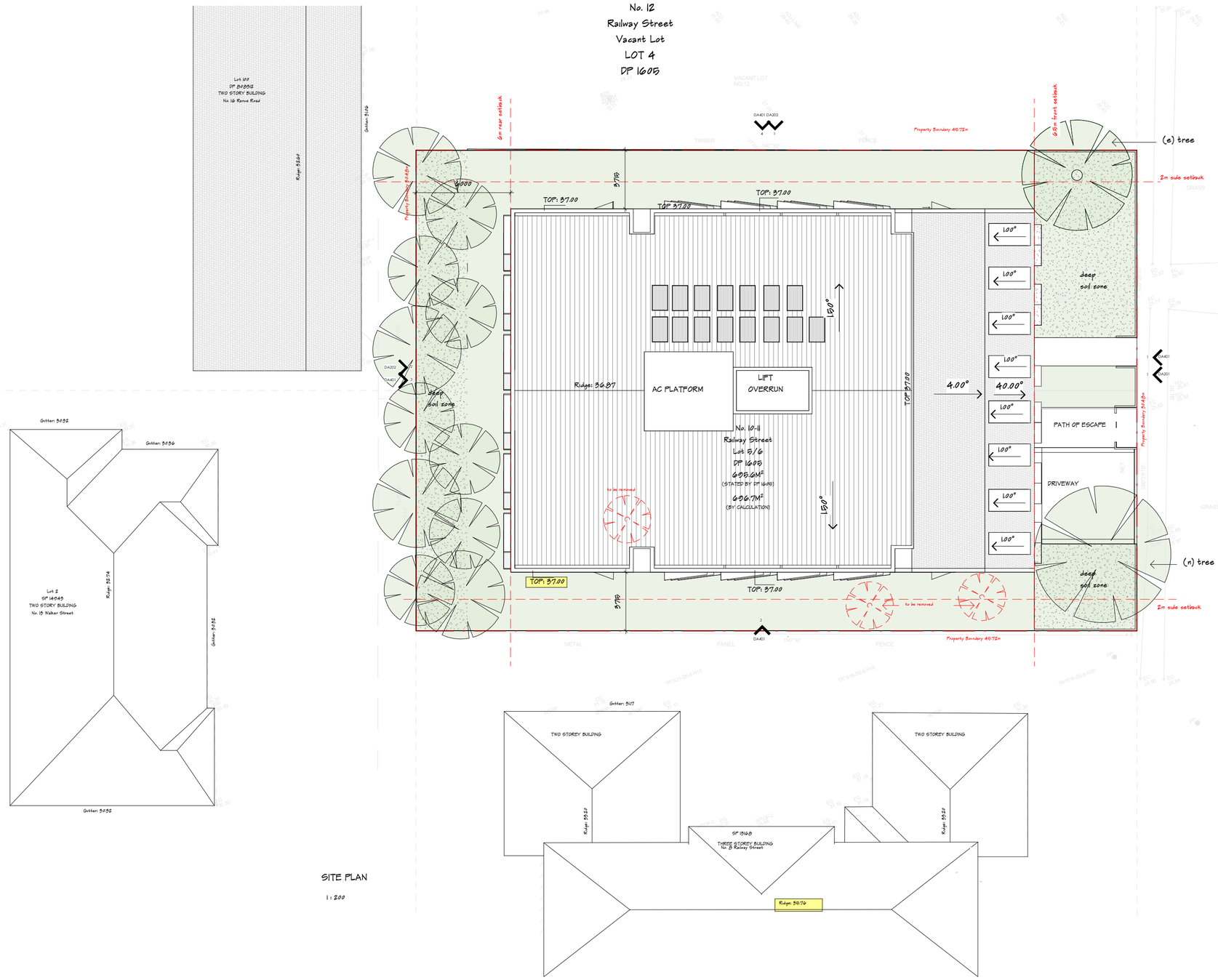
SITE ANALYSIS

Scale As indicated

0 2 4 8 12
SCALE 1:200

DA002

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



SITE PLAN

1 : 200

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construction of a new boarding house

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Prepared by	S.L		
Designed by	M.S		
Designed for	Mr Georges Wehbe		

SITE PLAN

Scale 1 : 200

SCALE 1:200

DA100

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

No. 12 Railway Street

6m rear setback

6.5m front setback

Property Boundary 45.72m

2m side setback

No. 16 Rance Road

Property Boundary 30.48m

4915

basement 1 above

25565

No. 13 Walker Street

Property Boundary 30.48m

2m side setback

Property Boundary 45.72m

No. 8 Railway Street

Railway Street

DA302

DA301

DA303

1

34 35 33 36 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17

1000 2400 2400 300 2400 2400 2400

No. 12 Railway Street

Property Boundary 45.72m

6m rear setback

6.5m front setback

2m side setback

Property Boundary 30.48m

No. 16 Rance Road

No. 13 Walker Street

No. 8 Railway Street

Railway Street

deep soil zone

deep soil zone

Deep Soil

shared zone

Accesible Parking

BULK STORAGE

MECH ZONE

LIFT 1

LIFT 2

STAIR 1

STAIR 2

BUILDING ABOVE

DRIVEWAY

RECYCLING

GENERAL WASTE

Manager parking bay

FFL: 22.90

BASEMENT LEVEL 1

1 : 100

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3	Development Application	21.09.17	Penrith City Council

10-11 RAILWAY STREET WERRINGTON NSW 2747

construction of a new boarding house

Date	20.07.2021	Project number	200.12
Prepared by	S.L		
Designed by	M.S		
Designed for	Mr Georges Wehbe		

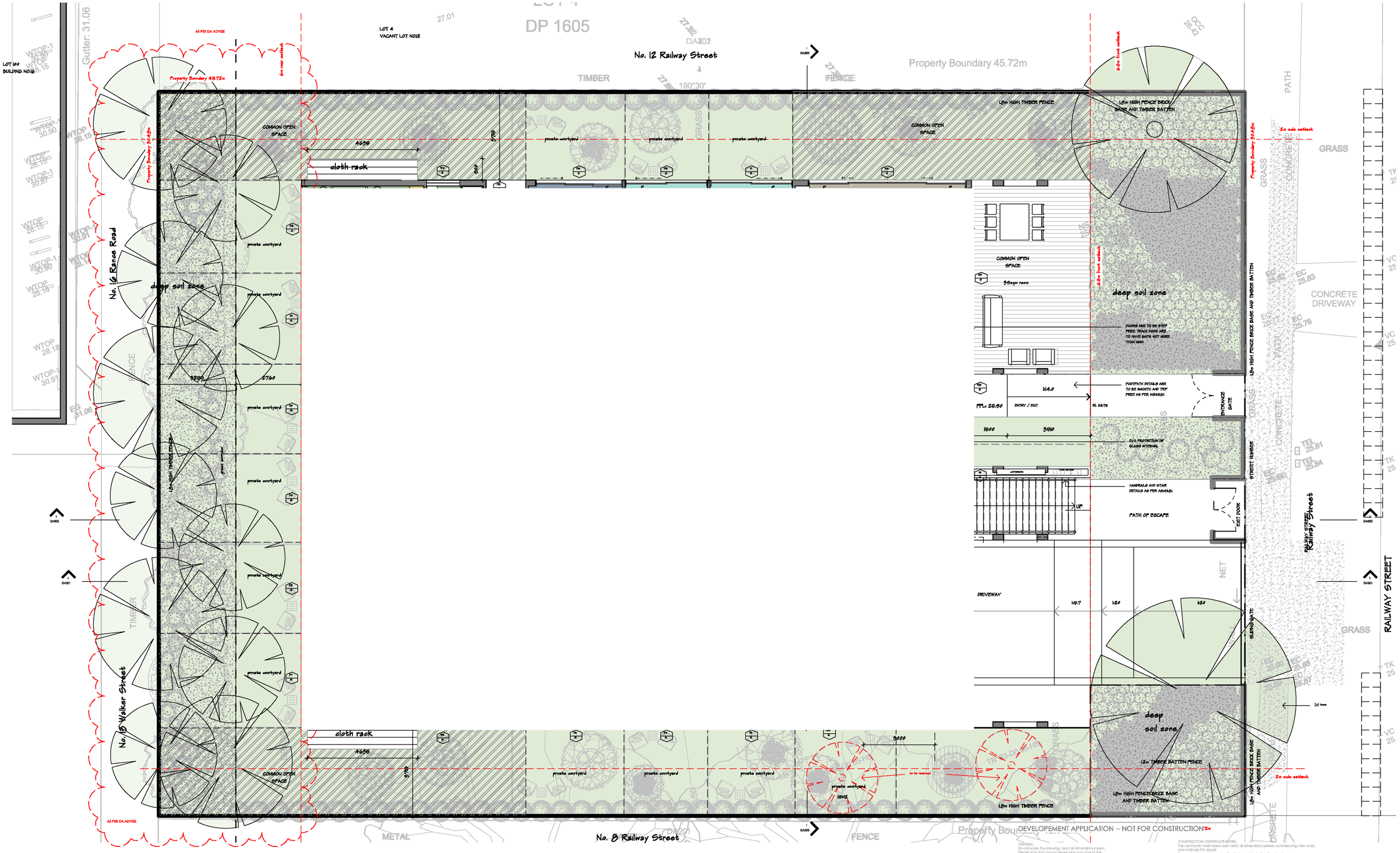
BASEMENT LEVEL 1

Scale 1 : 100

SCALE 1:100

DA102

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



GROUND FLOOR PLAN

1 : 100

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Designed by	M.S		
Designed for	Mr Georges Wehbe		

GROUND FLOOR PLAN

Scale 1 : 100

SCALE 1:100

DA103

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

LOT 1/A
BUILDING NO.16

LOT 4
VACANT LOT NO.12

No. 12 Railway Street

DA304

6m rear setback

Property Boundary 49.72m

Property Boundary 30.48m

6m rear setback

No. 16 Rance Road

window protrusion for façade articulation for façade articulation and privacy to neighbours

AS PER PRE DA ADVICE

6.5m front setback

2m side setback

Property Boundary 30.48m

GLAZING TO BE SMOKE SEALED AS PER GE14

RAILWAY STREET

Railway Street

DA301

DA301

DA301

No. 15 Walker Street

AS PER PRE DA ADVICE

window protrusion for façade articulation for façade articulation and privacy to neighbours

2m side setback

No. 8 Railway Street

DA305

"DEVELOPEMENT APPLICATION – NOT FOR CONSTRUCTION"

Property Boundary 49.72m

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FIRST FLOOR PLAN

1 : 100

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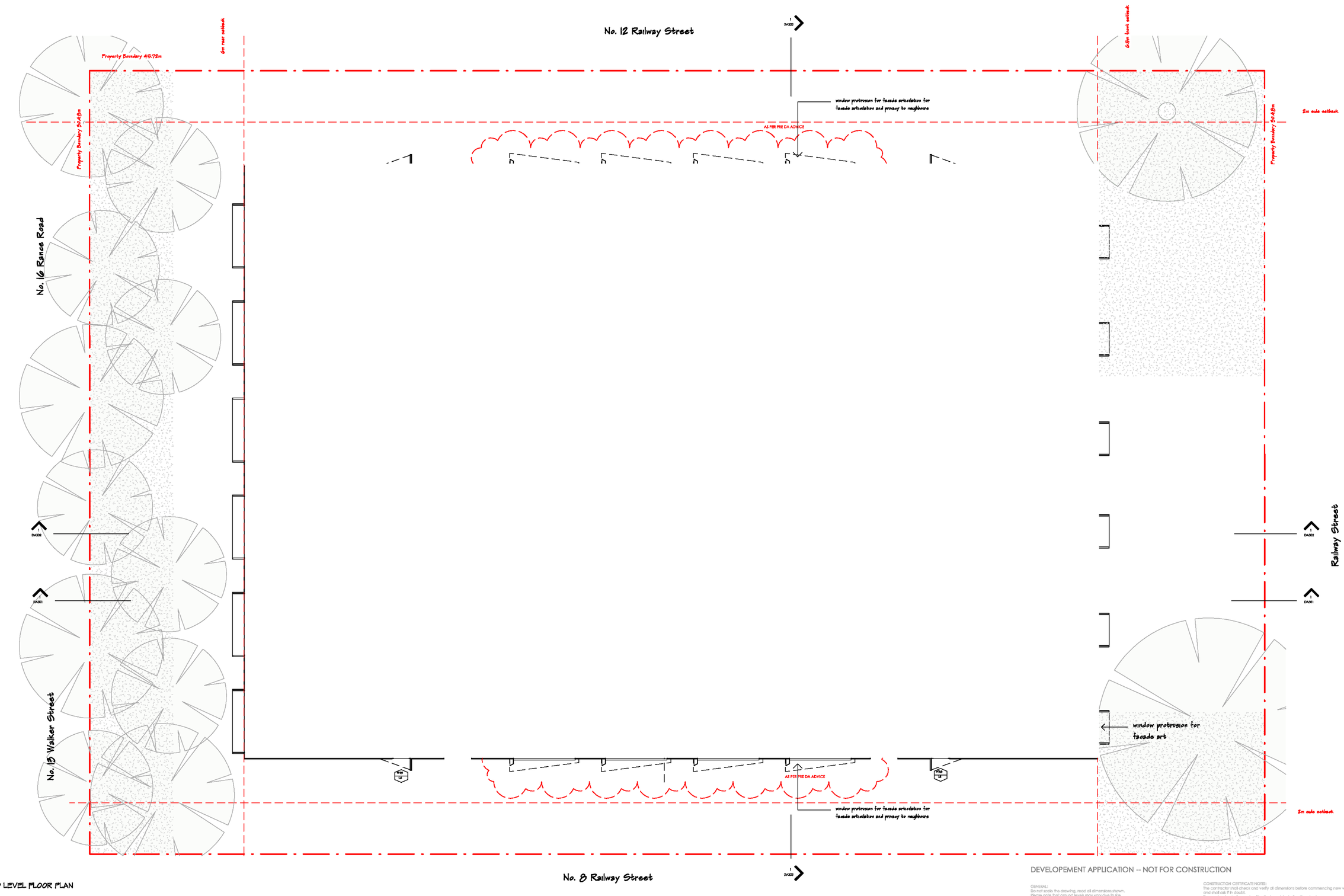
FIRST FLOOR PLAN

Scale 1 : 100

SCALE 1:100

DA104

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SECOND LEVEL FLOOR PLAN

1 : 100

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Designed by			M.S
Designed for			Mr Georges Wehbe

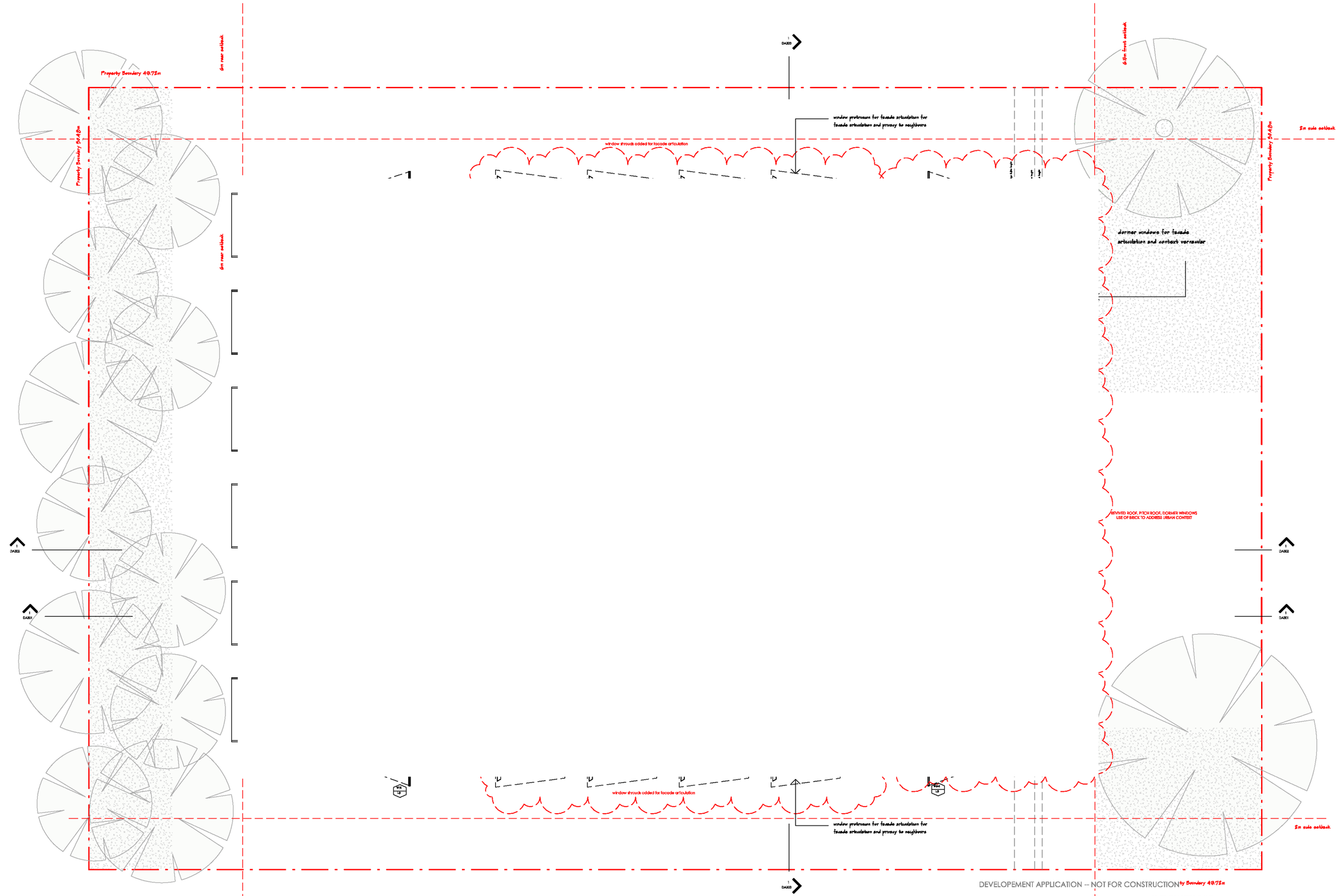
SECOND FLOOR PLAN

Scale 1 : 100

SCALE 1:100

DA105

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



THIRD LEVEL FLOOR PLAN

1 : 100

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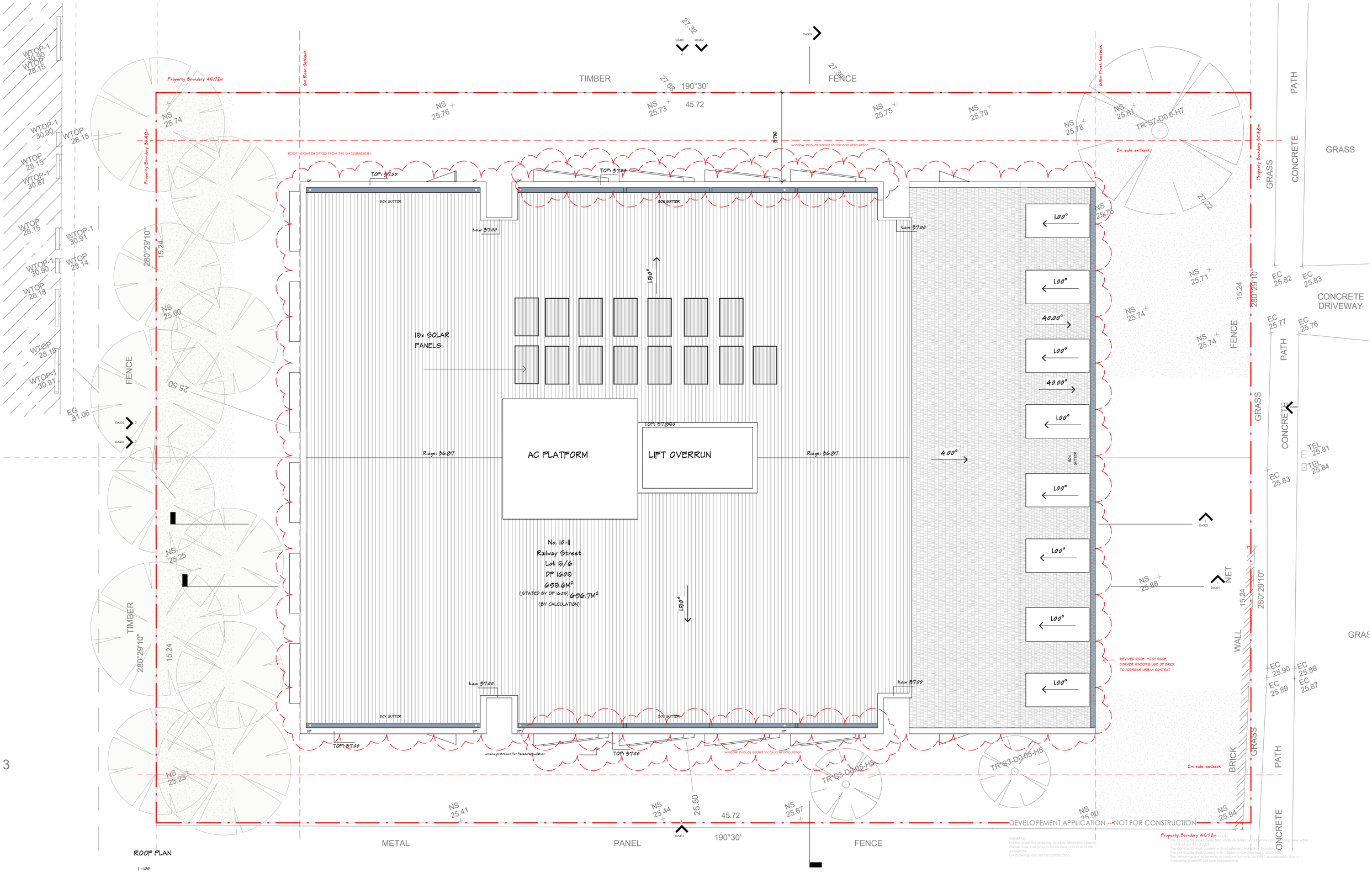
THIRD FLOOR PLAN

Scale 1 : 100

SCALE 1:100

DA106

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ROOF PLAN

1 : 100

3

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Designed by	M.S		
Designed for	Mr Georges Wehbe		

ROOF PLAN

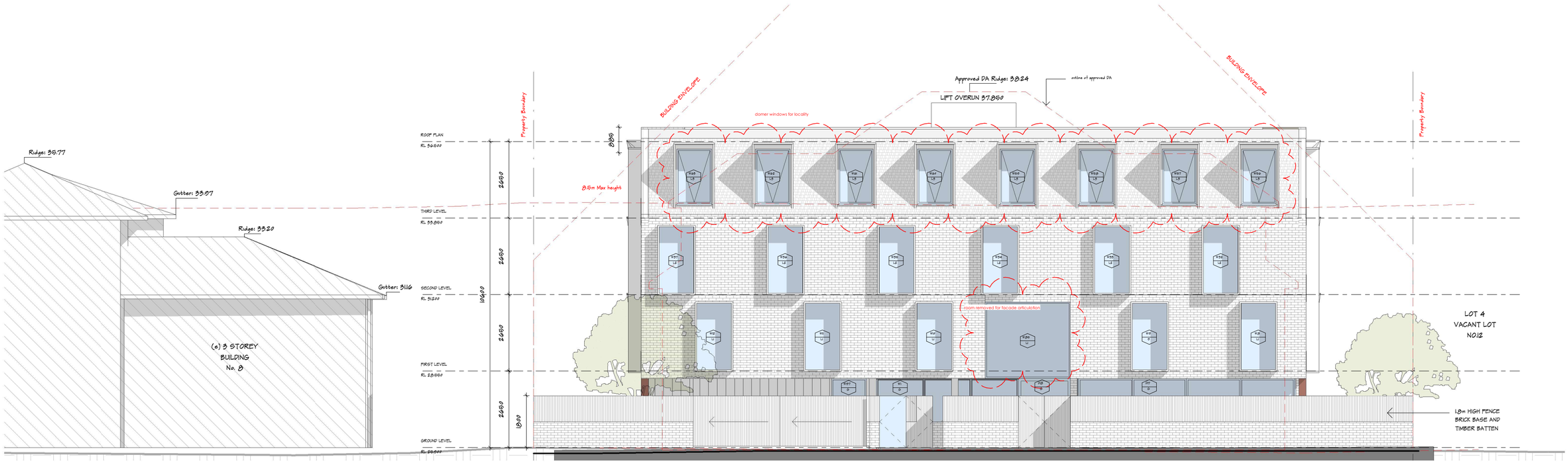
SCALE 1:100

DA107

GENERAL:
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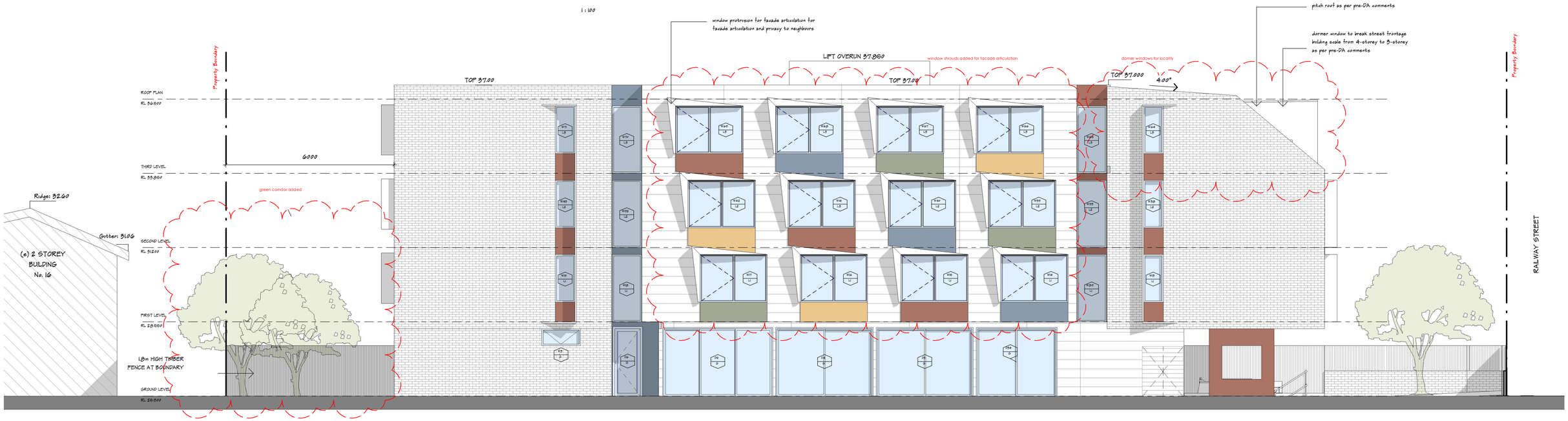
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NORTH ELEVATION

1 : 100



EAST ELEVATION

1 : 100

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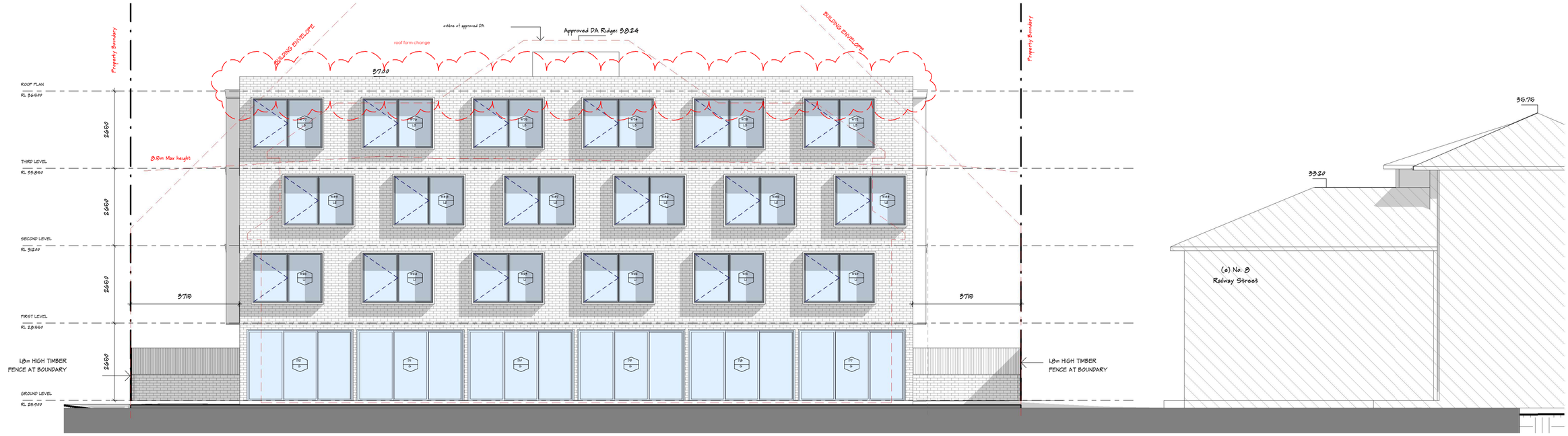
ELEVATIONS

Scale 1 : 100

SCALE 1:100

DA201

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



SOUTH ELEVATION

1 : 100



WEST ELEVATION

1 : 100

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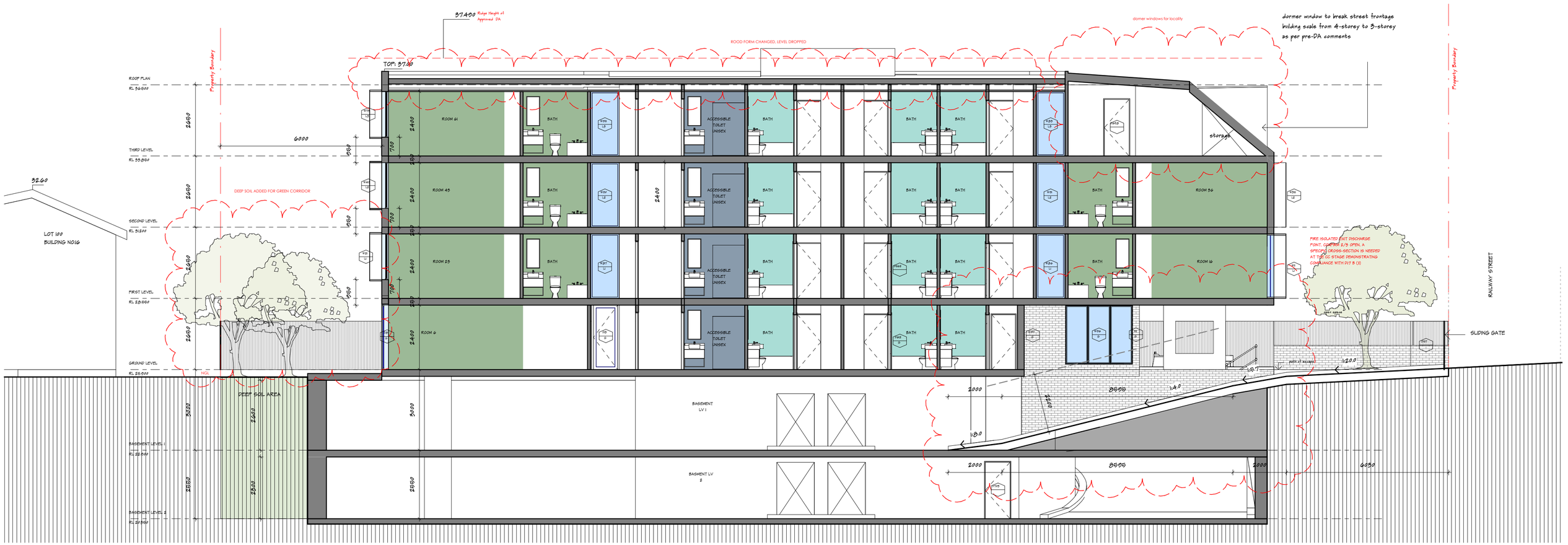
ELEVATIONS

Scale 1 : 100

SCALE 1:100

DA202

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Version: 1, Version Date: 18/11/2021



SECTION A-A

1 : 100

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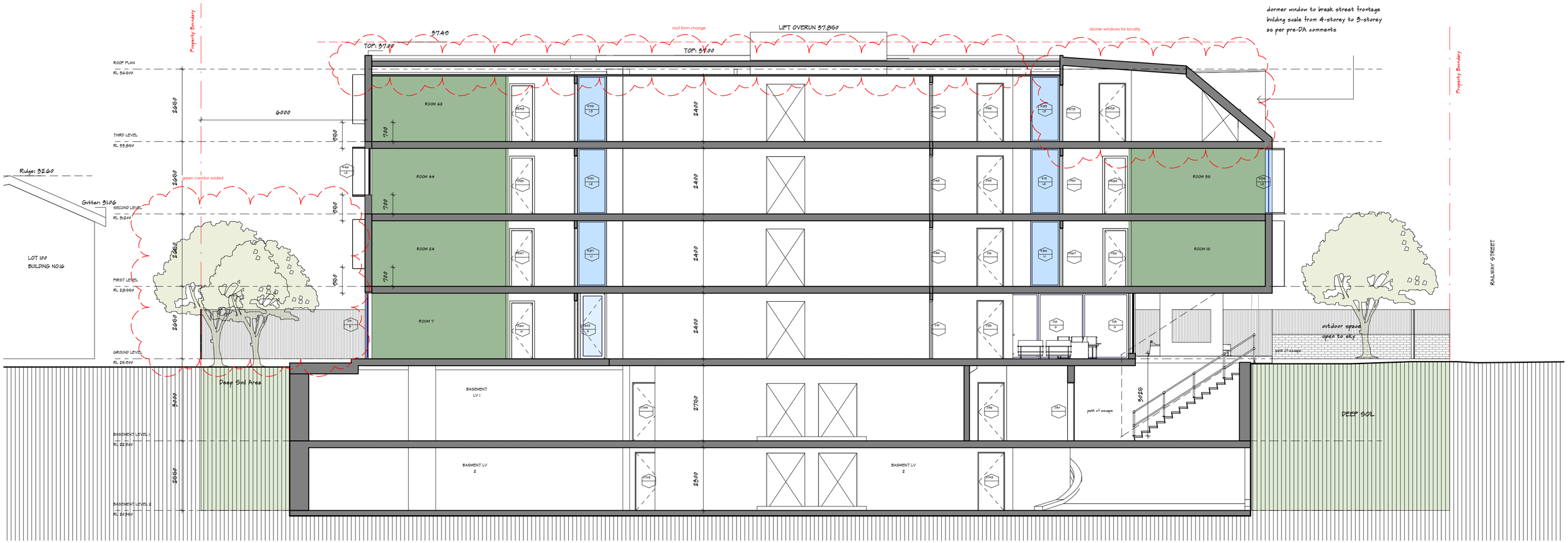
SECTION A-A

Scale 1 : 100

SCALE 1:100

DA301

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



SECTION B-B

1 : 100

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Designed by	M.S		
Designed for	Mr Georges Wehbe		

SECTION B-B

Scale 1 : 100

SCALE 1:100

DA302

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



SECTION C-C

1 : 100

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Prepared by	S.L	Scale	1 : 100
Designed by	M.S		
Designed for	Mr Georges Wehbe		

SECTION C-C

SCALE 1:100

DA303

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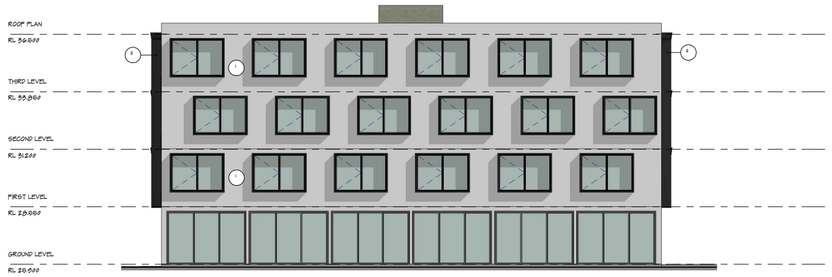
NORTH ELEVATION FINISHES

1 : 200



EAST ELEVATION FINISHES

1 : 200



SOUTH ELEVATION FINISHES

1 : 200



WEST ELEVATION FINISHES

1 : 200



1. PGH BRICK MYSTIQUE



2. BLACK ALUMINUM SHROUD
OR SIMILAR



3. ROOF TILES MONIER
HORIZON CARAWAY



4. FC SHEET JAMES HARDIE
STRIA - RENDERED DULUX
MOROCCAN DUSK



5. CEMBRIT FACADE PANEL
COLOR RANGE SELECTION

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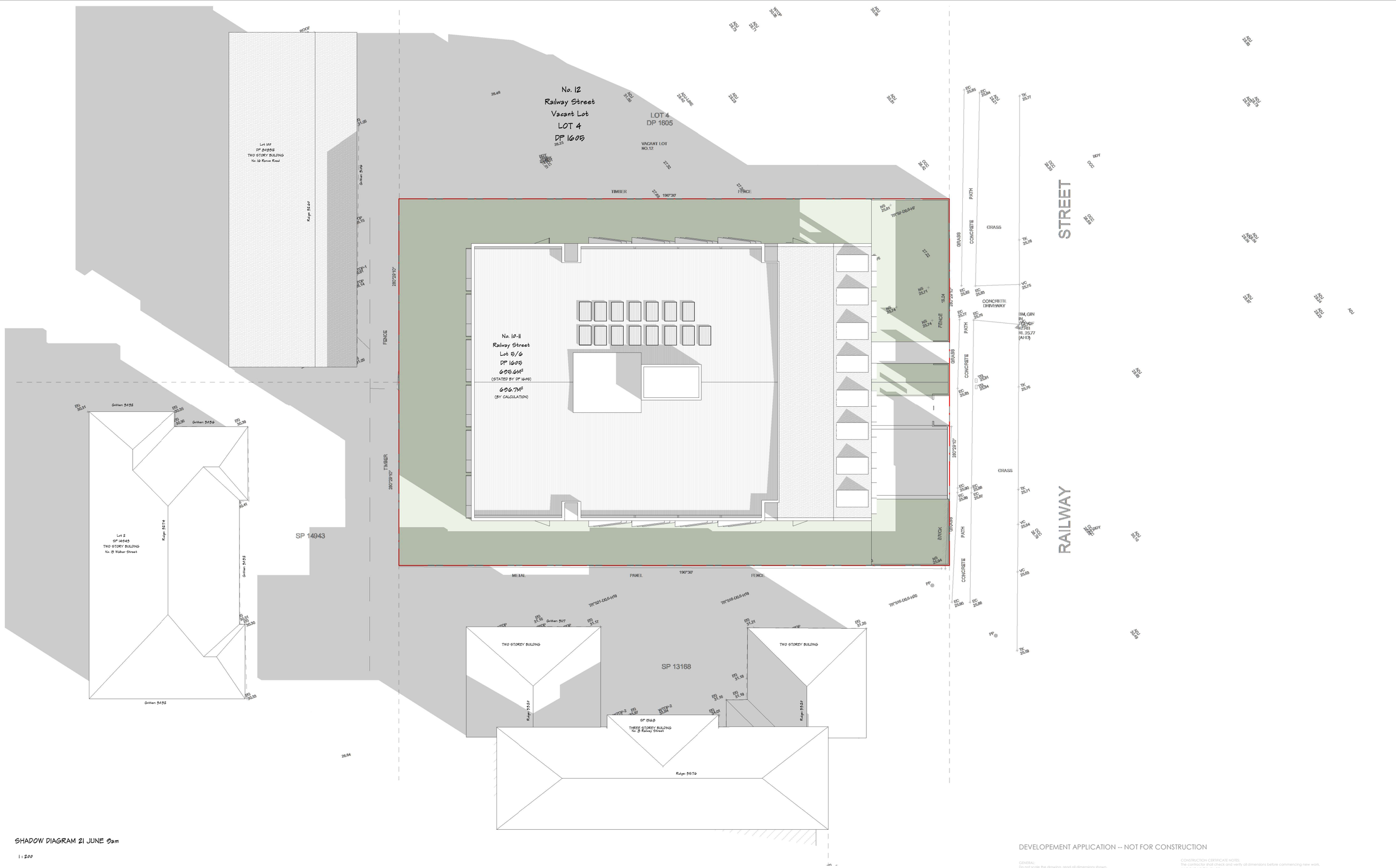
EXTERIOR FINISHES SCHEDULE

Scale 1 : 200

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GRAPHIC SCALE 1:25

DA401

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



SHADOW DIAGRAM 21 JUNE 9am

1 : 200

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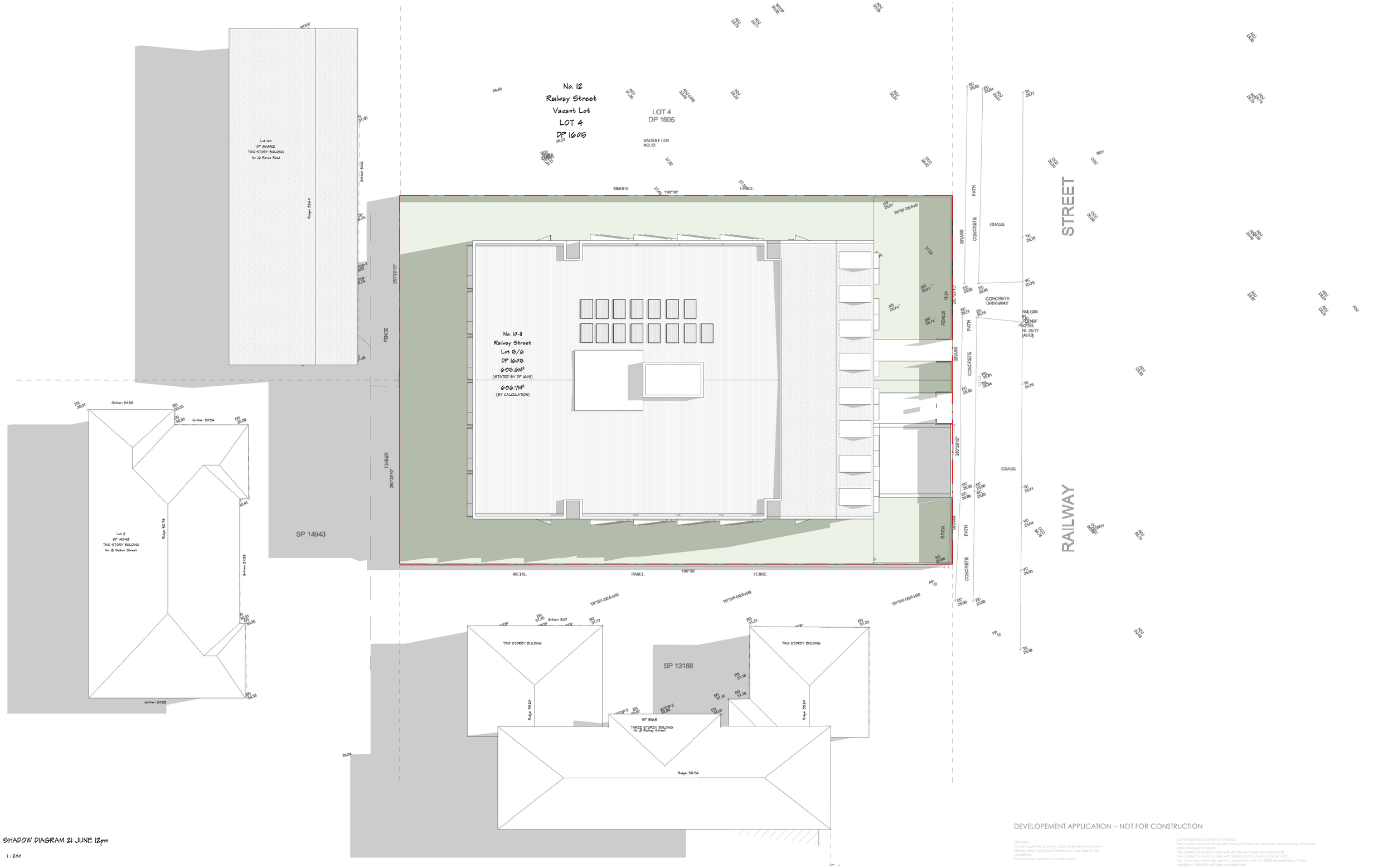
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1	Pre DA Submission	21.05.25	Penrith City Council
2	Pre-DA Revised Scheme	21.06.16	Penrith City Council
3	Development Application	21.09.17	Penrith City Council

10-11 RAILWAY STREET WERRINGTON NSW 2747

construction of a new boarding house

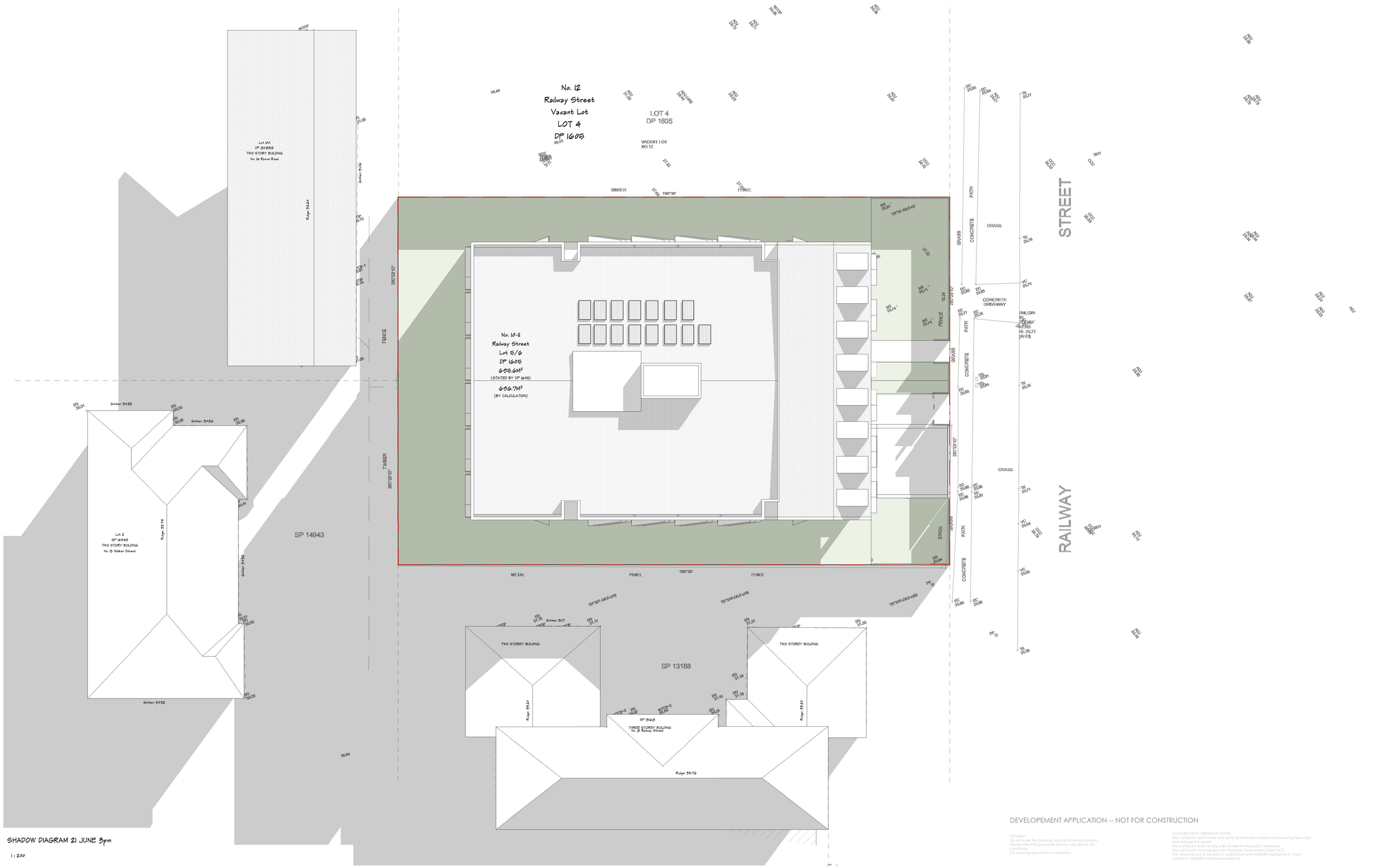
Date	20.07.2021	Project number	200.12
Prepared by	S.L	Scale	1 : 200
Designed by	M.S		
Designed for	Mr Georges Wehbe		

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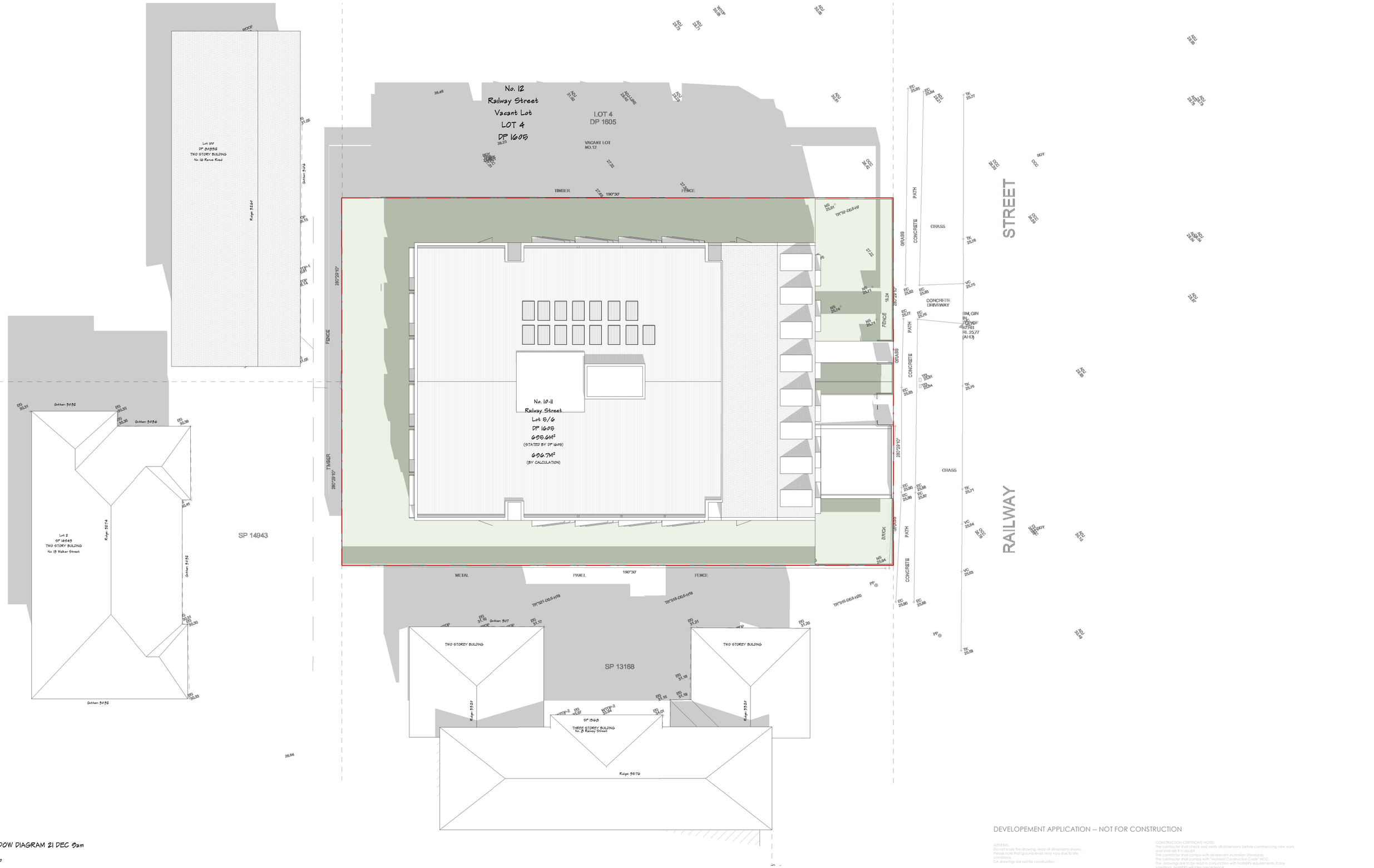
Date	20.07.2021	Project number	200.12
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Designed by	M.S		
Designed for	Mr Georges Wehbe		

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construction of a new boarding house

Date	20.07.2021	Project number	200.12
Prepared by	Author		
Designed by	Designer		
Designed for	Mr Georges Wehbe		

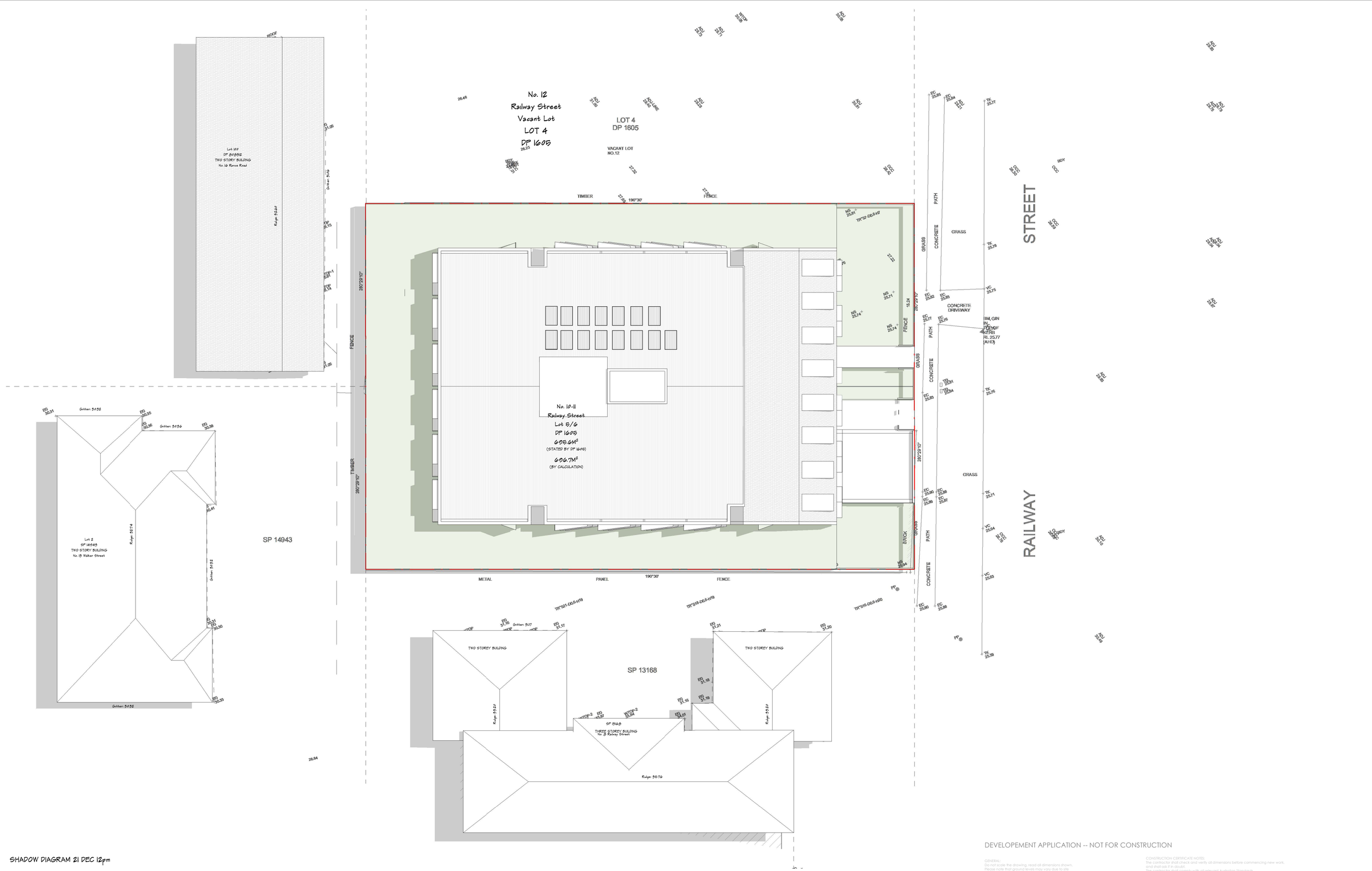
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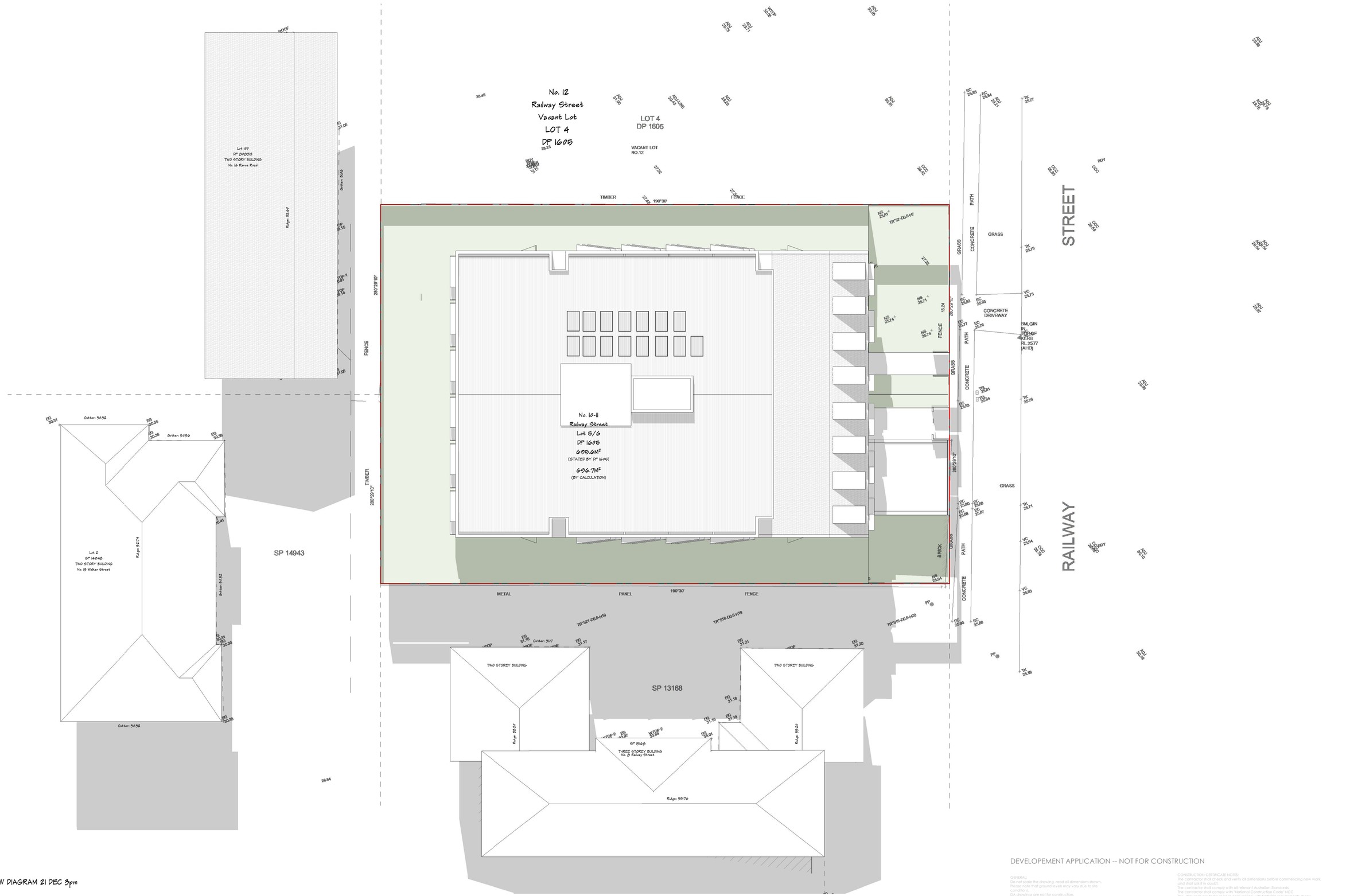
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Designed for	Mr Georges Wehbe		

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DA506

BCA 2019.1 AND ACCESS INDICATIVE COMPLIANCE REPORT FOR DA ASSESSMENT

10-11 Railway Street
Werrington NSW







Prepared for: George Wehbe
C/- Level Architects

Project No.: 20-0175

Date: 20/09/2021

Status: Issue v 2.0

PWA CONSULTING PTY LTD TRADING AS BUILDING ANATOMY
PO BOX 102
SPIT JUNCTION NSW 2088
OFFICE 02 9158 3930
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This report is to be read in conjunction with the BCA and supporting design documentation.

Document History

Date	Issue	Status	Prepared by
21.11.2020	Draft v0.1	Initial document created	Peter Antcliffe
21.07.2021	Draft v0.2	Review comments	Peter Antcliffe
13.09.2021	Client Issue v1.0	Client review comments	Peter Antcliffe
20.09.2021	Client Issue v2.0	Final DA Submission	Peter Antcliffe

Table of Contents

EXECUTIVE SUMMARY 4
DTS DESIGN NON-COMPLIANCES / FURTHER INFORMATION – CC PLANS TO BE UPDATED. 4
1.0. INTRODUCTION 5
1.1. LOCATION AND DESCRIPTION 5
1.2. REPORT PURPOSE 6
1.3. BASIS OF REPORT 7
1.4. REFERENCED DOCUMENTS 7
1.5. LIMITATIONS AND EXCLUSIONS 9
1.6. LEGISLATIVE FRAMEWORK 9
1.7. FORM AND CONTENT OF REGULATED DESIGNS INVOLVING PERFORMANCE SOLUTIONS ... 12
1.8. TERMINOLOGY 12
BUILDING DESCRIPTION – PROPOSED DEVELOPMENT 14
1.9. BUILDING CODE OF AUSTRALIA DESCRIPTION 14
1.10. RISE IN STOREYS (CLAUSE C1.2) 14
1.11. BUILDING CLASSIFICATIONS (CLAUSE A6.0) 14
1.12. EFFECTIVE HEIGHT (SCHEDULE 3 - DEFINITIONS) 15
1.13. TYPE OF CONSTRUCTION (TABLE C1.1)– 'TYPE A' APPLIES. 15
1.14. FLOOR AREA AND VOLUME LIMITATIONS (TABLE C2.2) 15
1.15. FIRE COMPARTMENTS (CLAUSE C2.2) 15
1.16. EXITS (CLAUSE D1.2) 16
1.17. CLIMATE ZONE (CLAUSE A1.0) 17
1.18. LOCATION OF FIRE-SOURCE FEATURES (CLAUSE C3.2) 17
1.19. FIRE PROTECTION AND STRUCTURAL CAPACITY (CLAUSE 143 OF THE EP&A REGULATION) 18
1.20. FIRE BRIGADE REFERRAL (CLAUSE 144 OF THE EP&A REGULATION) 18
2.0. FIRE SAFETY SCHEDULES 20
2.1. PROPOSED FIRE SAFETY SCHEDULE 20
2.2. CERTIFICATION OF ESSENTIAL FIRE SAFETY MEASURES 20
2.3. DRAFT - FIRE SAFETY SCHEDULE 21
3.0. CONCLUSION 26
APPENDIAX A - FIRE RESISTANCE LEVELS 27
APPENDIAX B - REFERENCED DOCUMENTATION 33
APPENDIAX C - CLIMATE ZONE MAP 34
APPENDIAX D - RECOMMENDED DESIGN CERTIFICATIONS. 35
APPENDIAX E - BCA REQUIREMENTS 38
BCA 2019.1 CLAUSE BY CLAUSE ASSESSMENT 39

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Executive summary

In summary, selected upgrade works have been recommended in relation to

- Health and amenity
- Occupant Safety
- Fire resisting construction & separation
- Egress and construction of exits
- Fire services and equipment

DTS Design Non-Compliances / Further Information – CC Plans to be Updated.

The following list are items which specifically required additional information as to how compliance will be demonstrated. Please advise as to the final or intended design to close out these items to the satisfaction of the Certifier. *(**See Appendix E,** for a full Clause by Clause Assessment)*

Table 1. DTS Departures

Item	Description of Clause	Issue	Recommended Solution	CC Plans to reflect
123	**C2.12** Separation of Equipment **and** **E1.3 –** Fire Hydrants	The designer needs to confirm. 1. Pump room location.	1. Confirm form consultants if a pump room is required, if required, provide an additional space within the building. 2. Obtain a Performance Solution to recognise the booster assembly is not in line with the building main entry.	Update TBA
44	**C3.11 –** Bounding construction: Class 2, 3, 4 and 9 Buildings	3 SOU's open onto the foyer part of the building which contain a *Pubic Corridor*, this part of a residential *Pubic Corridor* is also connected to the 'common room' which is not separated from the residential *Pubic Corridor.*	Performance Solution to allow as is with additional Fire Safety	Performance Solution
74	**D1.7 –** Travel via fire-isolated exits	A minor technical non-compliance where the discharge of the isolated exits are not strictly 2/3 open on the level of discharge.	Performance Solution to allow as is with additional Fire Safety	Performance Solution
88	**D2.4 –** Separation of rising and descending stair flights	A Smoke Door is required to separate Rising and Descending Stairs.	Adjust plans to show a smoke door separating rising and descending door. This includes smoke separation within the stair itself between the two (2) separate flights.	CC is to recognise all design requirements.
111 and 112	**D3.1 –** General BuildingAccess Requirements And **D3.2 –** Access to Buildings	As higher end dimensions are not provided for DA plans, it is difficult to confirm compliance.	Final dimensions to all doors and corridors is required, small internal adjustment and the inclusion of Performance Solutions.	CC is to recognise all design requirements or Performance Solution.
123	**E1.3 –** Fire Hydrants	Additional space should be reserved in the building for a pump room with direct access to the fire isolated exits serving the building.	Contractor to confirm the final location of the required Booster assembly.	CC is to recognise all design requirements.
155	**FP1.4 –** Weatherproofing (Performance Requirement)	Full details as to the makeup of the buildings external walls are to be presented.	Performance Solution provided	CC is to recognise all design requirements.

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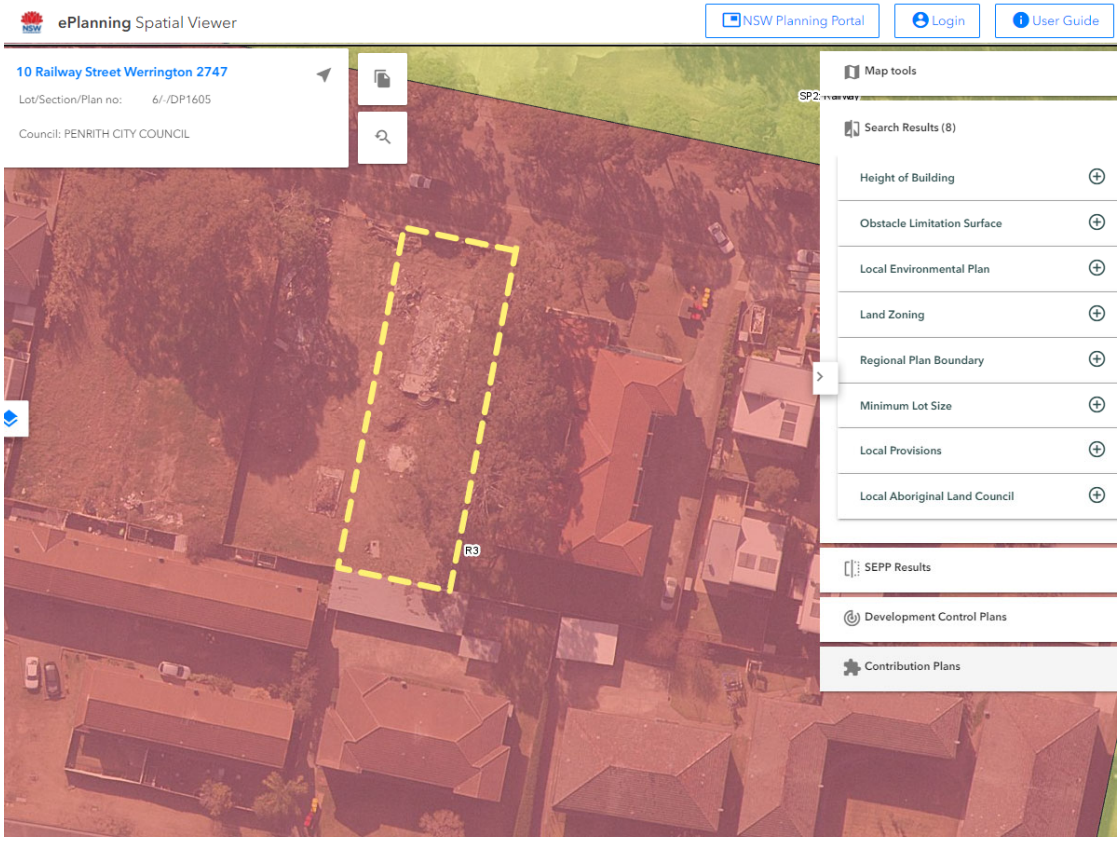
1.0. INTRODUCTION

1.1. Location and Description

Building Anatomy has been engaged to review the proposed works at the subject address. This review is undertaken against the **National Construction Code (NCC) 2019.1** and is to assist the Consent Authority consider whether the proposal, as lodged, is indicatively capable of complying with the NCC and without significant modification to those plans for which approval is sought.

Location:

The legal address is 10-11 Railway Street Werrington NSW.



Source: ***[ePlanning Spatial Viewer (nsw.gov.au)]***

Description:

Work involves the erection of a new building consisting of 69 Rooms, common facilities and a 2-level basement carparking.

The client is to confirm as the proposed 'Use', please confirm either a Class 2 or 3, the report is prepared for both yet a **Class 3** *Boarding House* building and **class 7a** *Carpark is drafted.*

Final classification or a mixture of the 2 is to be confirmed prior to Construction Certificate.

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Version: 1, Version Date: 18/11/2021

A6.2 Class 2 buildings

(1) A Class 2 building is a building containing two or more *sole-occupancy units*.

(2) Each *sole-occupancy unit* in a Class 2 building is a separate dwelling.

A6.3 Class 3 buildings

A Class 3 building is a residential building providing long-term or transient accommodation for a number of unrelated persons, including the following:

(1) A boarding house, guest house, hostel, lodging house or backpacker accommodation.

(2) A residential part of a hotel or motel.

(3) A residential part of a *school*.

(4) Accommodation for the aged, children, or people with disability.

(5) A residential part of a *health-care building* which accommodates members of staff.

(6) A residential part of a *detention centre*.

(7) A *residential care building*.

Limitation 1:

For A6.3, a Class 3 building is not a Class 1 or 2 residential building. However, a building could be a mixture of Class 3 and another Class.

1.2. Report Purpose

This review is undertaken against the **National Construction Code (NCC) 2019.1** and amendment 1 (Final BCA to be advised by the Certifier pending Construction Lodgement date) has been considered, parts C, D and E to the internal and immediate external parts of the building and is to assist the consent authority consider whether the proposal, as lodged, is indicatively capable of complying with those fire and life safety provisions of the NCC and without significant modification to those plans for which approval is sought.

Additionally, we cite clause 93 and 94 of the Environmental Planning and Assessment Regulation 2000 (Regulation), obliging the consent authority to consider whether the fire protection and structural capacity of the building will be appropriate to the building's proposed use; and whether the building complies (or will comply) with such Category 1[1] fire safety provisions1 applicable to the new use. This report looks to satisfy the consent authority of the matters outlined in clause 93 and 94.

Under a Construction Certificate assessment, the Certifier is also to consider clause 143 of the Regulations.

143 Fire protection and structural capacity

(1) A certifier must not issue a construction certificate for building work under a development consent that authorises a change of building use unless—

(a) the fire protection and structural capacity of the building will be appropriate to its new use, and

(b) the building will comply with such of the Category 1 fire safety provisions as are applicable to the new use,

assuming that the building work is carried out in accordance with the plans and specifications to which the construction certificate relates and any conditions to which the construction certificate is subject.

(2) Subclause (1)(b) does not apply to the extent to which an exemption is in force under clause 164B, 187 or 188, subject to the terms of any condition or requirement referred to in clause 164B(4), 187(6) or 188(4).

(3) In the case of building work that involves the alteration, enlargement or extension of an existing building in circumstances in which no change of building use is proposed, a certifier must not issue a construction certificate for the work unless, on completion of the building work, the fire protection and structural capacity of the building will not be reduced, assuming that the building work is carried out in accordance with the plans and specifications to which the construction certificate relates and any conditions to which the construction certificate is subject.

[1] ***Category 1 fire safety provision*** means the following provisions of the *Building Code of Australia*, namely, EP1.3, EP1.4, EP1.6, EP2.1, EP2.2 and EP3.2 in Volume One of that Code

(4) This clause does not apply to building work required by a consent authority as a condition of a development consent that authorises a change of building use.

Addition benchmarks will need to be demonstrated at the Construction Certificate (CC) Application, yet for the purposes of this report, compliance yes or no is afforded as to not be design advice, and where relevant, Compliance Readily Achievable - It is considered that the increased level of detail included in the CC drawings and specification will satisfy the Certifying Authority as to compliance matters in the future.

1.3. Basis of Report

This report is based upon and limited to:

- An assessment of design documentation referenced in Appendix B of this report.
- The Deemed-to-Satisfy provisions of the **Building Code of Australia 2019 Amendment 1** (BCA) including the NSW variations where applicable.

1.4. Referenced Documents

The following documentation was relied upon when preparing this report:

- Assessment of design documentation referenced in Appendix B of this report.
- The performance and deemed-to-satisfy provisions of the Building Code of Australia (BCA) incorporating the NSW Appendices where applicable.
- Guide to the Building Code of Australia.
- Disability (Access to Premises — Buildings) Standards 2010.
- Environmental Planning & Assessment Act 1979.
- Environmental Planning & Assessment Regulation 2000.
- Design and Building Practitioners Act 2020.
- Design and Building Practitioners Regulation 2021

In anticipation for Class 3 building to be captured under the Design and Building Practitioners Act and Regulation, reference are within this document for future reference if needed.

Schedule 1 Classes of registration

Part 1 Preliminary

1 Classes of registration as design practitioner

For the purposes of section 42 of the Act, the following classes of registration as a design practitioner are prescribed—

(a) design practitioner—architectural,

(b) design practitioner—body corporate

(c) design practitioner—building design (low rise),

(d) design practitioner—building design (medium rise),

(e) design practitioner—civil engineering,

(f) design practitioner—drainage,

(g) design practitioner—drainage (restricted),

(h) design practitioner—electrical engineering,

(i) design practitioner—facade,

(j) design practitioner—fire safety engineering,

(k) design practitioner—fire systems (detection and alarm systems),

(l) design practitioner—fire systems (fire hydrant and fire hose reel),

(m) design practitioner—fire systems (fire sprinkler),

(n) design practitioner—fire systems (mechanical smoke control),

(o) design practitioner—geotechnical engineering,

(p) design practitioner—mechanical engineering,

(q) design practitioner—structural engineering,

(r) design practitioner—vertical transportation.

2 Classes of registration as principal design practitioner

For the purposes of section 42 of the Act, the following classes of registration as a principal design practitioner are prescribed—

(a) principal design practitioner—body corporate,

(b) principal design practitioner—general.

3 Classes of registration as building practitioner

For the purposes of section 42 of the Act, the following classes of registration as a building practitioner are prescribed—

(a) building practitioner—body corporate,

(b) building practitioner—body corporate nominee,

(c) building practitioner—general.

4 Classes of registration as professional engineer

For the purposes of section 42 of the Act, the following classes of registration as a professional engineer are prescribed—

(a) professional engineer—civil,

(b) professional engineer—electrical,

(c) professional engineer—fire safety,

(d) professional engineer—geotechnical,

(e) professional engineer—mechanical,

(f) professional engineer—structural.

1.5. Limitations and Exclusions

The limitations and exclusions of this report are as follows:

- The plans are assessed indicatively to the extent necessary to proceed to construction certificate stage whereby assessment will be undertaken pursuant to Part 4A of the Environmental Planning and Assessment Act 1979. This means that the design has been assessed to be able to comply with the BCA (i.e. the submitted plans are consistent with the BCA but certain design details may not be specified at this stage due to the plans and specifications being at DA stage).

- Details in regard to access for people with disabilities have been assessed to the extent of the deemed-to-satisfy provisions of the BCA only. An assessment against Disability (Access to Premises — Buildings) Standards 2010 and AS 1428.1 is outside the scope of this report. A detailed report prepared by a suitably qualified access consultant may need to be prepared to verify compliance with AS 1428 prior to the issue of a construction certificate.

- This Report does not address issues in relation to the following:
  a) The structural adequacy of the building including the Fire Resistance Levels (FRL's) of any building elements (unless specifically referred to).
  b) The design, maintenance or operation electrical, mechanical, hydraulic or fire protection services.
  c) Environmental Planning and Assessment Act and Regulations (unless specifically referred to).
  d) Local Government Act and Regulations.
  e) Occupational Health and Safety Act and Regulations.
  f) WorkCover Authority requirements.
  g) Requirements of other Regulatory Authorities including, but not limited to, Telstra, Sydney Water, Electricity Supply Authority, RTA, Council and the like.
  h) Disability Discrimination Act.
  i) Construction Safety Act.
  j) Conditions of Development Consent issued by the relevant Local Council.

- This assessment does not incorporate the detailed requirements of the Australian Standards.

- PWA Consulting Pty Ltd Trading as Building Anatomy cannot guarantee acceptance of this report by the Local Council, NSW Fire Brigades or other approval authorities.

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1.6. Legislative Framework

Section 4.15 of the Environmental Planning and Assessment Act provides the matters of consideration that the consent authority must take into account in the determination of a development application.

Once development consent is granted, and pursuant to Clause 145 of the Environmental Planning and Assessment Regulations 2000, a certifying authority must not issue a construction certificate for building work unless:

(a1) the plans and specifications for the building include such matters as each relevant BASIX certificate requires, and

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Version: 1, Version Date: 18/11/2021

(a) the design and construction of the building (as depicted in the plans and specifications and as described in any other information furnished to the certifying authority under clause 140) are not inconsistent with the development consent, and

(b) the proposed building (not being a temporary building) will comply with the relevant requirements of the Building Code of Australia (as in force at the time the application for the construction certificate was made).

Compliance with the Building Code of Australia

The BCA is a performance-based document whereby compliance can be achieved by satisfying the deemed to satisfy requirements or by formulating an alternative solution to address the relevant performance requirements.

As indicated above, the requirements of the Environmental Planning and Assessment Regulations 2000 requires all new building works to comply with the relevant requirements of the BCA (as in force at the time the application for the construction certificate was made).

This means that the plans and documentation submitted with the *construction certificate* application must demonstrate full compliance with the relevant provisions of the Building Code of Australia.

Clause 143 Fire protection and structural capacity

If your development incorporates a Change of Use, Category 1 fire safety measures must be considered and implemented into the design as applicable:

EP1.3: A fire hydrant system
EP1.4: An automatic fire suppression system
EP1.6: Suitable facilities must be provided to the degree necessary in a building to co-ordinate fire brigade intervention
EP2.1: Sleeping Accommodation, occupants must be provided with automatic warning
EP2.2: Conditions in any evacuation route must be maintained for the period of time occupants take to evacuate
EP3.2: One or more passenger lifts fitted as emergency lifts to serve each floor served by the lifts in a building must be installed to facilitate the activities of the fire brigade and other emergency services personnel

Details of the above will need to be identified on the Building Fire Safety Schedule/Statement as present, if not present; these measures will need to be installed into the building if applicable.

Clause 144, 144A and 152 Referral of certain plans and specifications to New South Wales Fire Brigades

Under the Environmental Planning and Assessment Regulations Clause 144, Clause 144A has specific requirements for any Fire Engineering which identifies Category 2 fire safety provisions which form part of a building being more than 6,000m² and/or within a Fire Compartment more than 2,000m².

Category 2 means the following provisions of the Building Code of Australia, namely, CP9, EP1.3, EP1.4, EP1.6, EP2.2 and EP3.2 in Volume One of that Code

If this building has a floor area of more than 6,000m2 or an alternative solution is proposed within a fire compartment more than 2,000m², any Alternative Solution which identifies one or more of the above performance provisions, Fire Brigade approval is required in the form of a Clause 144 Approval along with a required Engineering Statement under Clause 144A and following the completion of the building a Clause 152 Report from the Fire Commissioner is required, a final fire safety report for a building means a written report specifying whether or not the Fire Commissioner is satisfied:

(a) that the building complies with the Category 2 fire safety provisions, and

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

(b) that the fire hydrants in the fire hydrant system will be accessible for use by New South Wales Fire Brigades, and
(c) that the couplings in the fire hydrant system will be compatible with those of the fire appliances and equipment used by New South Wales Fire Brigades.

Fulfilment of BASIX Commitments (Residential only)

Clause 154A of the Environmental Planning and Assessment Regulations 2000 requires a certifying authority to monitor fulfilment of any commitments listed on the BASIX certificate, where the BASIX requires the certifying authority to monitor those commitments.

A certifying authority must not issue an occupation certificate (whether interim or final) for any building resulting from, or any building that becomes a BASIX affected building because of, BASIX affected development or BASIX optional development to which this clause applies, or for any part of such a building, unless each of the commitments whose fulfilment it is required to monitor in relation to the building or part has been fulfilled.

For the purpose of satisfying itself as to the fulfilment of any such commitment, a certifying authority may rely on the advice of any properly qualified person (i.e. Energy Efficiency Consultant).

Special Requirements for Residential Flat Developments

Clause 143A of the Environmental Planning and Assessment Regulations 2000 requires a qualified designer to provide a statement that verifies that the plans and specifications that form part of construction certificate application achieve or improve the design quality of the development having regard to the design quality principles set out in Part 2 of the State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development prior to the issue of a Construction Certificate.

Clause 154A of the Environmental Planning and Assessment Regulations 2000 requires a qualified designer to provide a statement that verifies that the residential flat development achieves the design quality of the development as shown in the plans and specifications having regard to the design quality principles set out in Part 2 of the State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development prior to the issue of an Occupation Certificate.

Disability (Access to Premises — Buildings) Standards 2010

Disability (Access to Premises — Buildings) Standards 2010 has been introduced and is applicable to this building. It is noted that an access Consultant may be ben engaged at the CC stage to provide specific comments as to compliance with this standard. However, as the applicant is a tenant in a Multi tenanted building, the Premises Standard is not applicable to this application. However, its intent is recommended for best practice where possible.

In anticipation for Class 3 building to be captured under the Design and Building Practitioners Act (DBPA) and Regulation, reference to the (DBPA) within this document for future reference if needed.

Design and Building Practitioners Act 2020.

Design and Building Practitioners Regulation 2021.

The introduction of the Design and Building Practitioners Act and Regulation required the design team to be accountable for their designs. Designs for a 'Designed Building' (Currently any building with a Class 2 parts) are to be confirmed and approved via an accredited Designer.

6 Content of regulated designs involving fire resisting building elements

(1) For the purposes of section 5(2) of the Act, a fire resisting regulated design must include information, whether written, in the form of a drawing or otherwise, that explains how a fire-

resistance level will be achieved and maintained in circumstances where a penetration to a building element occurs—

(a) during the installation or maintenance of services in relation to building work, or

(b) at another time during the building work.

Note— The *Building Code of Australia* specifies requirements for when a service that penetrates a building element must have a particular fire-resistance level, and other requirements for service penetrations.

(2) In this clause—

fire resisting regulated design means a regulated design that includes—

(a) a building element that is required to have a fire-resistance level under the *Building Code of Australia*, or

(b) a floor or ceiling that is required to have resistance to the incipient spread of fire under the *Building Code of Australia*.

1.7. Form and content of regulated designs involving performance solutions

Under the Design and Building Practitioners Regulation 2021

5 Form and content of regulated designs involving performance solutions

(1) For the purposes of section 5(2) of the Act, a regulated design that is prepared for a performance solution for building work, including a building element, must be in the form of a report that includes the following—

(a) relevant plans that show, or specifications that describe, the physical elements of the performance solution, if any,

(b) a description and justification of the performance solution, including—

(i) the acceptance criteria and parameters on which the justification is based, and

(ii) a description of the physical elements of the performance solution, and

(iii) restrictions or conditions of the performance solution, and

(iv) a copy of the brief on which the justification of the performance solution is based,

(c) a statement that the performance solution complies with the relevant performance requirements of the *Building Code of Australia*,

(d) information that identifies the deemed-to-satisfy provisions of the *Building Code of Australia* being varied, where relevant.

(2) A report for a regulated design that is prepared for a performance solution must comply with the applicable evidence requirements for the design specified in the *Building Code of Australia*, Volume 1, Part A2.2.

(3) In this clause—

deemed-to-satisfy provisions has the same meaning as in the *Building Code of Australia*.

1.8. Terminology

- *Building Code of Australia* - Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and is adopted in NSW under the provisions of the Environmental Planning & Assessment Act & Regulation.

  BCA 2016 Amendment 1 *applies to this report.*

- *Fire Resistance Level (FRL)* - means the grading periods in minutes for the following criteria - (a) structural adequacy; and

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

(b) integrity; and
(c) insulation,
and expressed in that order.

- *Fire Source Feature (FSF)* - the far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.

- *Open space* - means a space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.

- *Performance Requirements of the BCA* - A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance requirement states the level of performance that a Building Solution must achieve.

  Compliance with the Performance Requirements can only be achieved by-
  (a) complying with the Deemed-to-Satisfy Provisions; or
  (b) formulating an Alternative Solution which-
  (i) complies with the Performance Requirements; or
  (ii) is shown to be at least equivalent to the Deemed-to-Satisfy Provisions; or
  (c) a combination of (a) and (b).

- *Sole occupancy unit* - means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier.

Note: **Design and Building Practitioners Regulation 2021.**

5 Form and content of regulated designs involving performance solutions

(1) For the purposes of section 5(2) of the Act, a regulated design that is prepared for a performance solution for building work, including a building element, must be in the form of a report that includes the following—
  (a) relevant plans that show, or specifications that describe, the physical elements of the performance solution, if any,
  (b) a description and justification of the performance solution, including—
    (i) the acceptance criteria and parameters on which the justification is based, and
    (ii) a description of the physical elements of the performance solution, and
    (iii) restrictions or conditions of the performance solution, and
    (iv) a copy of the brief on which the justification of the performance solution is based,
  (c) a statement that the performance solution complies with the relevant performance requirements of the *Building Code of Australia*,
  (d) information that identifies the deemed-to-satisfy provisions of the *Building Code of Australia* being varied, where relevant.
(2) A report for a regulated design that is prepared for a performance solution must comply with the applicable evidence requirements for the design specified in the *Building Code of Australia*, Volume 1, Part A2.2.
(3) In this clause—

deemed-to-satisfy provisions has the same meaning as in the *Building Code of Australia*.

BUILDING DESCRIPTION – PROPOSED DEVELOPMENT

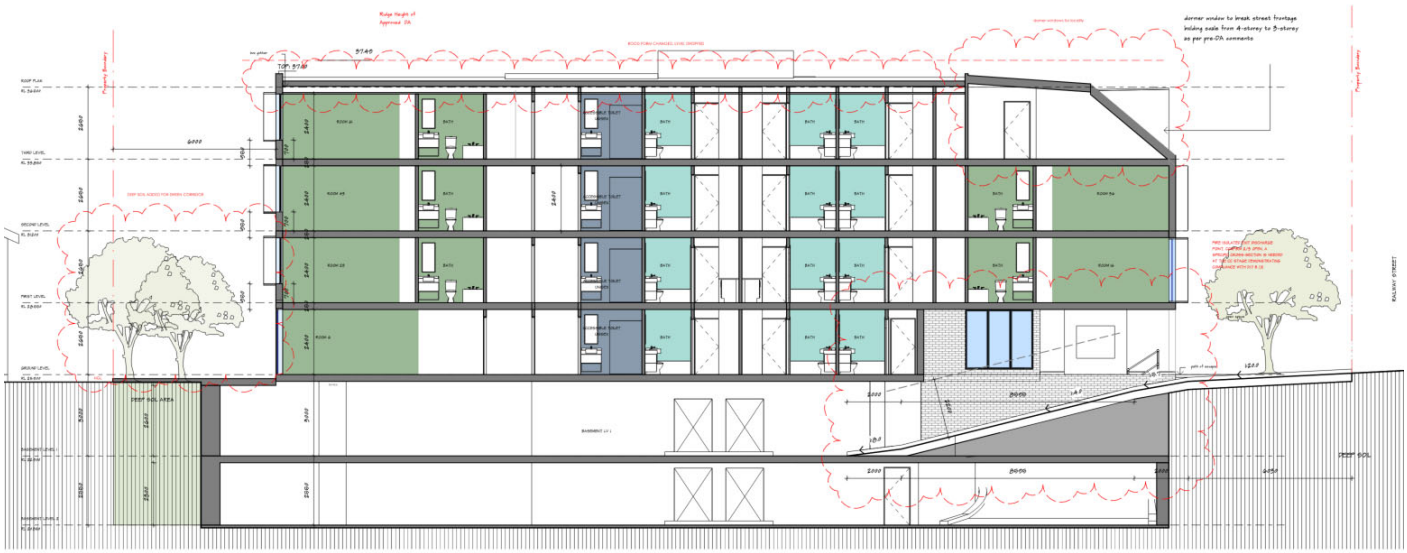
1.9. Building Code of Australia Description

For the purposes of the Building Code of Australia (BCA) the proposed development may be described as follows.

1.10. Rise in Storeys (Clause C1.2)

The overall building has a rise in storeys of **FOUR (4)**

The number of storeys contained **SIX (6)**



1.11. Building Classifications (Clause A6.0)

The proposed building, once refurbished, has been classified as follows.

Proposed classification in accordance with the below table.

Building Levels	Base Building Classification	Rise in Storeys
Basement 1	Class 7a – Carpark	-
Basement 2	Class 7a – Carpark	-
Ground Floor	Class 3 – Residential	1
Level 1	Class 3 – Residential	2
Level 2	Class 3 – Residential	3
Level 3	Class 3 – Residential	4

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

1.12. Effective Height (Schedule 3 - Definitions)

The building has an effective height of <12m.

As the ramp entry incorporates a technical external wall, when measured the external wall extends for 12 meters and has an average ceiling height of more than 1m. This, the lower level known as the basement is deemed as a Storey under the BCA and is to be included in the Rise-In-Storeys for the purposes of BCA C1.2(b)(ii).

Basement Level 1: **RL 22.9**
Third Level: **RL 33.85**
EH: 10.95

> **Effective height** means the vertical distance between the floor of the lowest *storey* included in the calculation of *rise in storeys* and the floor of the topmost *storey* (excluding the topmost *storey* if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).

Although it is noted that the building is <12m, it is recommended that at least one lift is a stretcher lift.

1.13. Type of Construction (Table C1.1)– 'Type A' Applies.

The building as is required to be of Type 'A' Construction as per Table C1.1.

Table C1.1 Type of construction required

Rise in storeys	Class of building 2, 3, 9	Class of building 5, 6, 7, 8
4 or more	A	A
3	A	B
2	B	C
1	C	C

It is also noted that the existing building was built pre this BCA series of building

1.14. Floor Area and Volume Limitations (Table C2.2)

The building is not subject to maximum floor area and volume limits under Type 'A' Construction of being Class 3 SOU's and the carpark Storey complies with Table C2.2.

Table C2.2 Maximum size of fire compartments or atria

Classification	Type A construction	Type B construction	Type C construction
5, 9b or 9c	Max *floor area*—8 000 m^2 Max volume—48 000 m^3	Max *floor area*—5 500 m^2 Max volume—33 000 m^3	Max *floor area*—3 000 m^2 max volume—18 000 m^3
6, 7, 8 or 9a (except for *patient care areas*)	Max *floor area*—5 000 m^2 Max volume—30 000 m^3	Max *floor area*—3 500 m^2 Max volume—21 000 m^3	Max *floor area*—2 000 m^2 Max volume—12 000 m^3

1.15. Fire Compartments (Clause C2.2)

The following fire compartments have been assumed:

1. Basement Car Park.

Note: Class 3 parts of the building are not deemed to be a 'Fire Compartment' per say as bounding construction or Units and Public Corridors are fire separated from each other via other design means.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Fire compartment means—

(a) the total space of a building; or

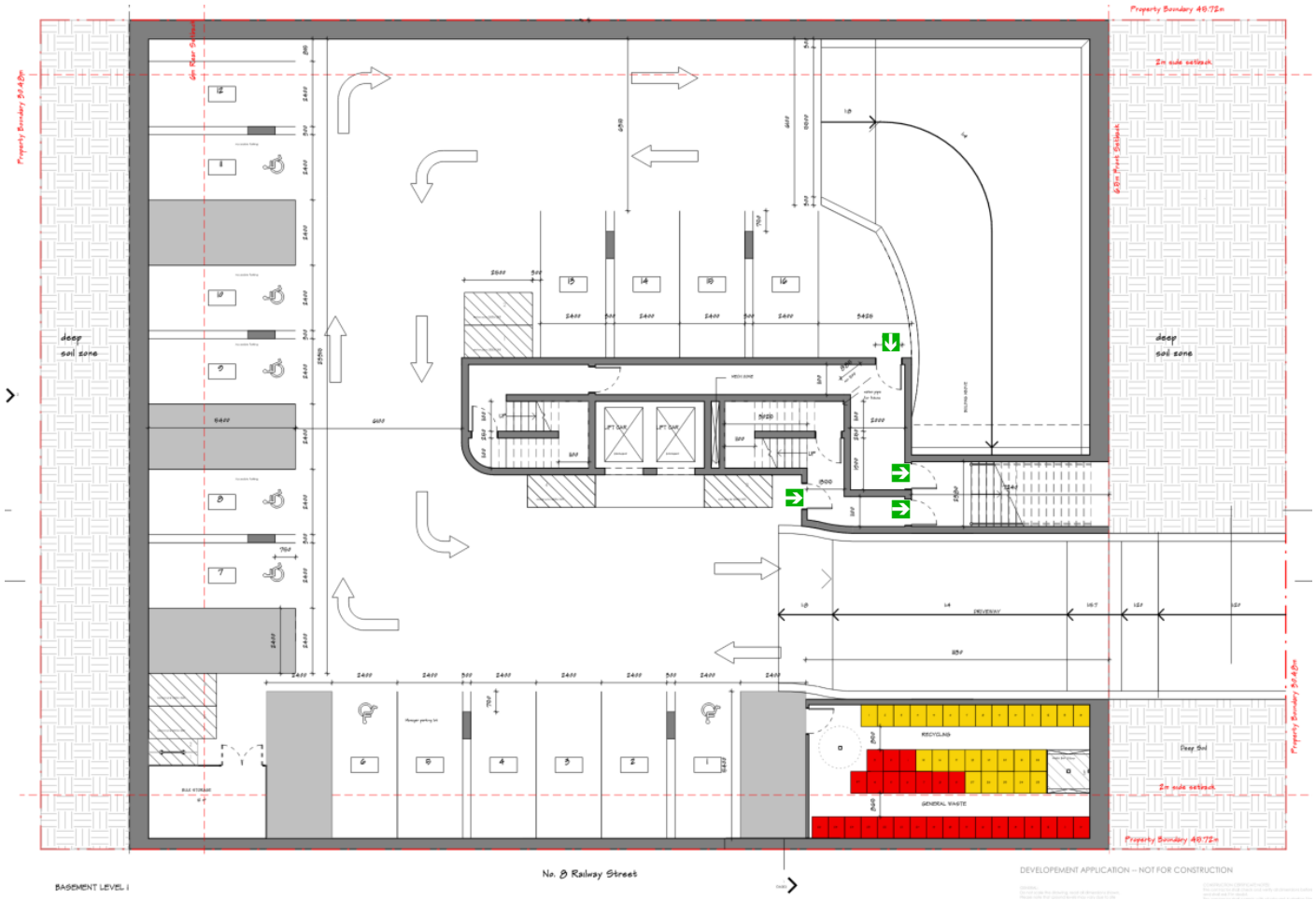
(b) when referred to in—

(i) the *Performance Requirements* — any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or

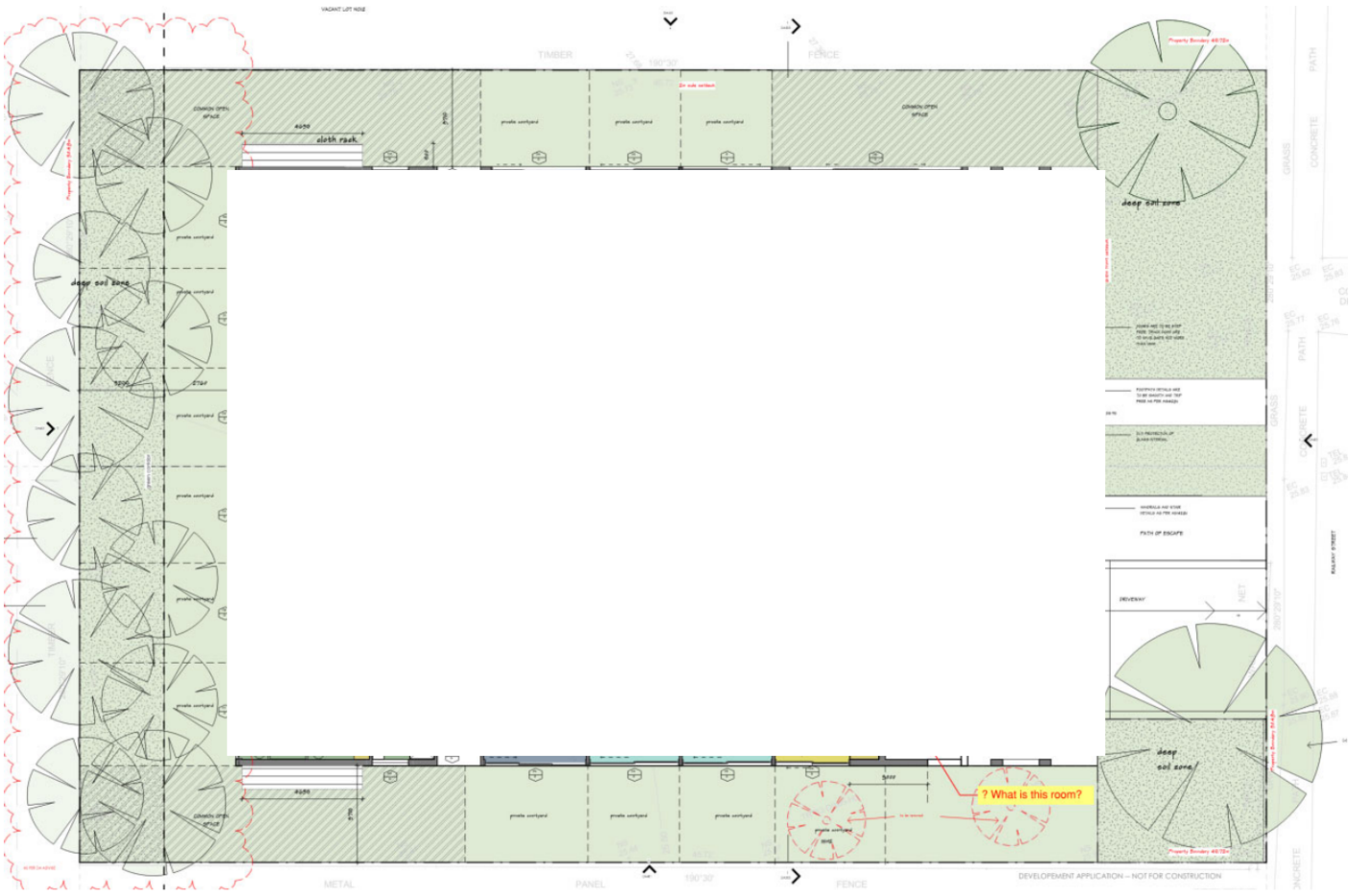
(ii) the *Deemed-to-Satisfy Provisions* — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that *required* for a *fire wall* for that type of construction and where all openings in the separating construction are protected in accordance with the *Deemed-to-Satisfy Provisions* of the relevant Part.

1.16. Exits (Clause D1.2)

The following points in the building have been considered as the exits: assumed:



Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



Exit means—

(a) any, or any combination of the following if they provide egress to a road or *open space*:

(i) An internal or external stairway.

(ii) A ramp.

(iii) A *fire-isolated passageway*.

(iv) A doorway opening to a road or *open space*.

(b) A *horizontal exit* or a *fire-isolated passageway* leading to a *horizontal exit*.

1.17. Climate Zone (Clause A1.0)

The building is located within **Climate Zone 6 (Penrith City Council)**

1.18. Location of Fire-Source Features (Clause C3.2)

The building is set back >3m from East and West Elevations

Fire-source feature means—

(a) the far boundary of a road, river, lake or the like adjoining the allotment; or

(b) a side or rear boundary of the allotment; or

(c) an *external wall* of another building on the allotment which is not a Class 10 building.

Note: *Under Spec C1.1 - 2.1*: A building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that–

(i) has an FRL of not less than 30/–/–; and

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

(ii) is neither transparent nor translucent.

1.19. Fire protection and structural capacity (Clause 143 of the EP&A Regulation)

If your development incorporates a Change of Use, Category 1 fire safety measures must be considered and implemented into the design as applicable.

These items will be included as good measure.

EP1.3:	***A fire hydrant system (required)***
EP1.4:	***An automatic fire suppression system (required)***
EP1.6:	*Suitable facilities must be provided to the degree necessary in a building to co-ordinate fire brigade intervention*
EP2.1:	***Sleeping Accommodation, occupants must be provided with automatic warning (required)***
EP2.2:	***Conditions in any evacuation route must be maintained for the period of time occupants take to evacuate (required)***
EP3.2:	*One or more passenger lifts fitted as emergency lifts to serve each floor served by the lifts in a building must be installed to facilitate the activities of the fire brigade and other emergency services personnel*

1.20. Fire Brigade referral (Clause 144 of the EP&A Regulation)

This building requires Fire Engineering which **would not need** NSW Fire Brigades referral. However, a Fire Engineering Brief is recommended.

Total Building size <2,000m2 fire compartments and the building total size is <6,000m2.

Note: Regardless of size, other triggers as listed below if triggered.

144 Referral of certain plans and specifications to New South Wales Fire Brigades

(1) This clause applies to the following buildings, or parts of buildings, that are the subject of an application for erection, rebuilding, alteration, enlargement or extension—

(a) a class 9a building that is proposed to have a total floor area of 2,000 square metres or more, where the plans and specifications for the work provide for a performance solution to meet the performance requirements contained in any one or more of the Category 2 fire safety provisions,

(b) a building (other than a class 9a building) that is proposed to have a fire compartment with a total floor area of more than 2,000 square metres, where the plans and specifications for the work provide for a performance solution to meet the performance requirements contained in any one or more of the Category 2 fire safety provisions,

(c) a building (other than a class 9a building) that is proposed to have a total floor area of more than 6,000 square metres, where the plans and specifications for the work provide for a performance solution to meet the performance requirements contained in any one or more of the Category 2 fire safety provisions,

(d) a class 2, class 3 or class 9 building of 2 or more storeys, or the class 4 part of any class 9 building of 2 or more storeys, where—

(i) the plans and specifications for the work provide for a performance solution to meet performance requirement CP2 in Volume 1 of the *Building Code of Australia*, to the extent that it relates to external combustible cladding, and

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

(ii) the performance solution does not apply the verification method CV3 in Volume 1 of the *Building Code of Australia* in its entirety,

(e) a class 5, class 6, class 7 or class 8 building of 3 or more storeys, or the class 4 part of any class 5, class 6, class 7 or class 8 building of 3 or more storeys, where—

(i) the plans and specifications for the work provide for a performance solution to meet performance requirement CP2 in Volume 1 of the *Building Code of Australia*, to the extent that it relates to external combustible cladding, and

(ii) the performance solution does not apply the verification method CV3 in Volume 1 of the *Building Code of Australia* in its entirety,

(f) a class 2 or class 3 building of 4 or more storeys where the plans and specifications for the work provide for a performance solution to meet performance requirement EP1.4 in Volume 1 of the *Building Code of Australia*,

(g) a class 9b early childhood centre where the plans and specifications for the work do not meet requirement D1.18(a) in Volume 1 of the *Building Code of Australia*.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

2.0. FIRE SAFETY SCHEDULES

Details on the existing and proposed fire safety schedules are included in the following schedules.

2.1. Proposed Fire Safety Schedule

As a result of the works proposed under this development application, the draft proposed fire safety schedule for the site will be as follows; this is based on existing fire services and required services due to this development:

2.2. Certification of Essential Fire Safety Measures

Pursuant to Section 169 of the Environmental Planning and Assessment Regulations 2000, it will be necessary for the owner of the building, on completion of work to furnish a Final Fire Safety Certificate with regard to each essential fire safety measure identified in the proposed Fire Safety Schedule listed above.

The final fire safety certificate must state that each essential fire safety measure specified in the fire safety schedule for the building to which the certificate relates:

(a) has been assessed by a properly qualified person, and
(b) was found, when it was assessed, to be capable of performing to at least the standard required by the current fire safety schedule for the building for which the certificate is issued.

Every year, the owner(s) will need to sign and submit an Annual Fire Safety Statement to the Local Council and the NSW Fire Brigades, which confirms that all essential fire safety measures have been tested and maintained and perform to the original design and installation standard. A copy of the Annual Fire Safety Statement must also be displayed in a prominent area of the buildings (i.e. the main entrance foyers).

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

2.3. Draft - Fire Safety Schedule

The following essential fire safety measures shall be implemented in the whole of the building premises and each of the fire safety measures must satisfy the standard of performance listed in the schedule which, for the purposes of Clause 168 of the Environmental Planning and Assessment Regulation 2000, is deemed to be the current fire safety schedule for the building.

The following essential fire safety measures shall be implemented in the whole of the building premises and each of the fire safety measures must satisfy the standard of performance listed in the schedule which, for the purposes of Clause 168 of the Environmental Planning and Assessment Regulation 2000, is deemed to be the current fire safety schedule for the building.

SCHEDULE – Base Building BCA Year 2019 (Amdt 1)
Type of Construction A
RIS = 4
Effective height = <1
Classifications: Class 3 and Class 7a
Uses: Residential Boarding House

NOTES
*** Indicates whether the measure is new (N), Existing (E) or Modified (M)**
****Date (DD-MM-YYYY) measure was assessed by a properly qualified person**

Item No.	Essential Fire and Other Safety Measures	Status*	Standard of Performance	Nature of Inspection or Test & Frequency AS1851-2012	Sec 164B Exemption	Pass/ Fail
	General – Fire Resistance (Floors – Walls - Doors – Shafts)					
1.	Access panels & doors/hoppers (fire rated)	**N**	**BCA 2019 (Amdt 1) C3.13** (Openings in Shafts) **BCA 2019 (Amdt 1) Spec C3.4** AS 1905.1 -2015 (Fire Resistant Door sets)	12 Months		
2.	Construction Joints - Fire Walls, shafts and internal walls and floor between compartments only.	**N**	**BCA 2019 (Amdt 1) C1.1, Spec C1.1** **BCA 2019 (Amdt 1) C3.16** AS1530.4 - 2014	12 Months		
3.	Fire doors	**N**	**BCA 2019 (Amdt 1) C3.8** (Openings in Fire Isolated Exits) **BCA 2019 (Amdt 1) C3.10** (Opening in Fire Isolated Lift Shafts) AS 1735.11 - 1986 **BCA 2019 (Amdt 1) C3.11** (Bounding Construction) **BCA 2019 (Amdt 1) D1.7** (Travel Via Fire Isolated Exits) **BCA 2019 (Amdt 1)** Spec C3.4 AS/NZS 1905.1 – 2015	3 Monthly (Sliding Fore Doors Only) 6 Monthly (Fire Doors and Smoke Doors) 12 Months		
4.	Smoke doors - Smoke Seals - Solid Core or fire rated - Swing in direction of egress/or both ways - Connected to AS1670.1 if held open Smoke detectors within 1.5m both sides - Fail close on power failure - Signage under D2.23 - Rising and Descending Stairs	**N**	**BCA 2019 (Amdt 1) C2.14** (Public Corridors Class 3) Clause 2 of Spec C2.5 **BCA 2019 (Amdt 1) D2.4** (Separation of Rising and Descending Stair Flights) **BCA 2019 (Amdt 1) Spec. C3.4** AS1670.1:2018	12 Months		
5.	Fire seals	**N**	**BCA 2019 (Amdt 1) C3.15,** **BCA 2019 (Amdt 1) C3.16,** **BCA 2019 (Amdt 1) Spec C3.15** AS4072.1-2005	12 Months		
6.	Lightweight construction - Equipment enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure. - Switchboards	**N**	**BCA 2019 (Amdt 1) C1.1, Spec. C1.1** **BCA 2019 (Amdt 1) A C1.8, Spec C1.8** **BCA 2019 (Amdt 1) D2.7** (Insulations in Exits and Paths of Travel) **BCA 2019 (Amdt 1) C3.11** (Bounding Construction) AS1530.4 – 2005	12 Months		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Item No.	Essential Fire and Other Safety Measures	Status*	Standard of Performance	Nature of Inspection or Test & Frequency AS1851-2012	Sec 164B Exemption	Pass/ Fail
			(**Note**: Type A and B Construction must have non-combustible wall system if no concessions apply)			
7.	Equipment enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure	**N**	**BCA 2019 (Amdt 1) D2.7** (Insulations in Exits and Paths of Travel)	12 Months		
			General			
8.	Fire Hazard Properties	**N**	**BCA 2019 (Amdt 1)** C1.10 and Spec C1.10	12 Months		
9.	Portable fire extinguishers	**N**	**BCA 2019 (Amdt 1) E1.6** AS 2444 – 2001	Six Monthly		
			General – Egress			
10.	Operation of Door latches - Bollards	**N**	**BCA 2019 (Amdt 1) D2.21** (Operation of Latch) AS1670.1 -2018	12 Months		
11.	Path of travel for stairways, passageway, and ramps	**N**	EP&A Reg. 2000 Clauses 184-186	12 Months		
12.	Warning & operational signs	**N**	**BCA 2019 (Amdt 1) D2.23** (Signs on Fire and Smoke Doors) **BCA 2019 (Amdt 1) D3.6** (Braille Exit Signs) *(Note: E4.5 (Exit Signs))* **BCA 2016 (Amdt 1) E3.3** (Lift Signs),	12 Months		
			Lifts			
13.	Access to Lift Pits - Located at lowest level or if >3m provided through an access door	**N**	**BCA 2019 (Amdt 1) D1.17** (Access to Lift Pits) 'DANGER LIFT WELL – ENTRY OF UNAUTHORISED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES'	12 Months		
14.	Lifts - >12m Fire Service Controls (Recommended) - >12m Recall Operation (Recommended) - Drive Control Switch - 2 copies of Fire Service Recall Switch Keys shall be secured in the Buildings FIP	**N**	**BCA 2019 (Amdt 1) C2.10** (Fire resistance Shaft) **BCA 2019 (Amdt 1) E3.2** (Stretcher Lifts) (Recommended) **BCA 2019 (Amdt 1) E3.3** (Warning Against Use of Lifts in Fire) **BCA 2019 (Amdt 1) E3.7** (Fire Service Controls) (Recommended) **BCA 2019 (Amdt 1) E3.9** (Fire Service Recall Operation Switch) **BCA 2019 (Amdt 1) E3.10** (Lift Car Fire Service drive control switch) **BCA 2019 (Amdt 1) Spec E3.1** AS1735.11-1986 (Fire rated landing doors)	12 Months		
			Electrical Services			
15.	Smoke Hazard Management Systems Automatic fire detection & alarm: - Clause 3 - AS3786, interconnected Smoke Alarm systems powered from consumer mains to all residential SOU's Fire Brigade Lock Box - Keys for Lift, and other systems. **Note: Add Sign if building does not have an ASE – 'Alarm does Not Call the Fire Brigade – Call 000 if there is an Emergency'**	**N**	**BCA 2019 (Amdt 1) E2.2, NSW Table E2.2a, Table 2.2b, Spec E2.2a** **BCA 2019 (Amdt 1)** Spec E2.2a - Clause 3 (Smoke alarm system) **BCA 2019 (Amdt 1)** Spec E2.2a - Clause 4 (Smoke detection system) **BCA 2019 (Amdt 1)** Spec E2.2a - Clause 7 (BOWS) AS3786 – 2014 (Amdt 1-4) AS1670.1- 2018 Fire Detection and Warning AS1670.3 – 2018 (Fire Alarm Monitoring)	Monthly, and Six Monthly		
16.	BOWS	**N**	**BCA 2019 (Amdt 1)** Spec E2.2a - Clause 7 (BOWS) **BCA 2019 (Amdt 1)** Spec E1.5a - Clause 8 (BOWS) AS1670.1 -2015	Monthly, and Six Monthly		
17.	Emergency lighting	**N**	**BCA 2019 (Amdt 1) E4.2, E4.4** AS/NZS 2293.1 –2005	12 Months		
18.	Exit signs	**N**	**BCA 2019 (Amdt 1) E4.5** (Exit Signs) **BCA 2019 (Amdt 1) E4.6** (Direction Signs) **BCA 2019 (Amdt 1) E4.8** (Design and Operation - Exits) AS/NZS 2293.1 –2005	12 Months		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Item No.	Essential Fire and Other Safety Measures	Status*	Standard of Performance	Nature of Inspection or Test & Frequency AS1851-2012	Sec 164B Exemption	Pass/ Fail
19.	System Monitoring	**N**	**BCA 2019 (Amdt 1) E1.5a, Clause 2** AS 1670.3 - 2004	12 Months		
	Hydraulic Services					
20.	Automatic fire suppression systems	**N**	**BCA 2019 (Amdt 1) E1.5** **Please chose -** - **AS2118.1 – 2017 (Recommended)** - AS2118.4 - 2012 - FPAA101D - FPAA101H **Hydraulic Consultant to confirm design infrastructure complies.** **TBA**: BCA Spec E1.5 Sprinkler valve enclosures - Sprinkler alarm valves must be located in a secure room or enclosure which has direct egress to a road or open space. - All sprinkler valve rooms and enclosures must be secured with a system suitable for use by the fire brigade. - Sprinkler in Carparks – Independent from other parts of the building or able to be isolated,	Monthly, and Six Monthly		
21.	Fire hydrant systems - NSW Storz Couplings Note: Booster Location Note: Pump Room Location	**N**	**BCA 2019 (Amdt 1) E1.3** **BCA 2019 (Amdt 1) C2.12 (Separation of Equipment)** AS 2419.1 – 2005 FRNSW Guide Sheet No. 4 'Fire Brigade Hose Couplings' (current version 03 dated 22 Feb 2012)	Monthly, and Six Monthly		
22.	Hose reel systems - Carpark Only	**N**	**BCA 2019 (Amdt 1) E1.4** AS 2441 – 2005	Six Monthly		
	Mechanical Services					
23.	Fire dampers - Mechanical Fire Dampers (Thermally Released) - Motorized Fire Dampers - Intumescent Fire Dampers - Smoke Dampers Details as to Location TBA	**N**	**BCA 2019 (Amdt 1) E2.2, Spec E2.2a, Spec E2.2b** **BCA 2019 (Amdt 1) C3.15, Spec C3.15** AS 1668.1 – 2015 AS1682.1 and AS1682.2	12 Months		
24.	Mechanical air handling systems 1. Mechanical ventilation to carpark. Fire Fan Control Panel (FFCP) on FBP	**N**	**BCA 2019 (Amdt 1) E2.2, Table E2.2a, and Table E2.2b** **BCA 2019 (Amdt 1) Spec E2.2a,** AS/NZS 1668.1 – 2015 and AS1670.1:2018 Section 7 Smoke Control Systems **Note: 5.5.3 Override control** To enable manual control by attending emergency services personnel, fans that are not required to shut down on initiation of fire mode in the car park shall be provided with a control switch at the designated building entry point. **NOTE**: Signage should be located at the car park entry indicating the location of the control switches.	Monthly, and Six Monthly		
	Performance Solutions					
25.	**Alternative Solution** **Fire Engineering Report Ref No. XXX prepared by XXX dated XXX**	**N**	**Fire Engineering Report Issues:**			

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Fire Safety Schedule
(During Construction)

Item No.	Essential Fire and Other Safety Measures	Status*	Standard of Performance	Nature of Inspection or Test & Frequency AS1851-2012	Sec 164B Exemption	Pass/Fail
1.	Fire hydrant systems - @ >12 - Dry Line - Booster Must be connected - Hydrants Connected up to the upper 2 storeys	**N**	**BCA 2019 (Amdt 1) BCA E1.9 - During Construction** **E1.3 - Hydrants** After the building reaches an effective height of 12m. The required Fire Hydrants and Hose Reels must be operational in at least every storey that is covered by the roof or floor structure above, except the 2 uppermost storeys and, any required booster connections must be installed.	N/A		
2.	Hose reel systems	**N**	**BCA 2019 (Amdt 1) BCA E1.9 - During Construction** **BCA 2016 (Amdt 1) BCA E1.4 – Hose Reels** AS 2441 – 2005	N/A		
3.	Portable fire extinguishers	**N**	**BCA 2019 (Amdt 1) BCA E1.9, During Construction** **E1.6 –** Portable fire extinguishers **Not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must always be provided on each storey adjacent each required exit or temporary stairway or exit.**	N/A		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

TABLE 1.11(A)

ROUTINE SERVICE FREQUENCIES FOR EACH SECTION

AS 1851 Section		Monthly	Three-monthly	Six-monthly	Yearly	Five-yearly	Ten-yearly	Twenty-five-yearly	Thirty-yearly
2	Automatic fire sprinkler systems	✓		✓	✓	✓	✓	✓	✓
3	Fire pumpsets	✓		✓	✓	✓	✓		
4	Fire hydrant systems	✓*			✓	✓			
	Hydrant valves			✓	✓				
5	Water storage tanks for fire protection systems	✓		✓	✓		✓		
6	Fire detection and alarm systems	✓		✓	✓	✓			
7	Special hazard systems	✓		✓	✓		✓		
8	Delivery lay flat fire hose				✓				
9	Fire hose reels			✓	✓				
10	Portable and wheeled fire extinguishers			✓	✓	✓			
11	Fire blankets			✓					
12	Passive fire and smoke systems		✓**	✓	✓				
13	Fire and smoke control features of mechanical services	✓	✓	✓	✓	✓			
14	Emergency planning in facilities	✓		✓	✓				

*Where pumpsets are fitted.
**Where horizontal sliding doors are fitted.

NOTE: The responsible entity may elect to conduct monthly activities on a weekly frequency.

TABLE 1.11(B)

FREQUENCY TOLERANCES

Frequency	Tolerance (±)
Monthly	5 working days
Three monthly	10 working days
Six monthly	1 month
Yearly	2 months
Five yearly	3 months
Ten yearly	6 months
Twenty five yearly	6 months
Thirty yearly	6 months

NOTE: The tolerance schedule is not intended to require additional routine service activities to be carried out (e.g. six monthly routines carried out at five or seven monthly intervals).

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3.0. CONCLUSION

In this instance we are confident that any modifications and advancement in level of details required to the proposal in order to satisfy the requirements of the BCA (in force at the time the Construction Certificate application is lodged) will **not** necessitate the need for any significant design changes that in turn would necessitate the submission of an application under Section 4.55 of the Environmental Planning and Assessment Act 1979 via the use of Performance Solutions to complement DTS design options.

In the same regard, we draw Council's attention to the requirements of clause 145 of the Environmental Planning & Assessment Regulation 2000 and suggest that detailed & specific BCA compliance matters shall be addressed to the satisfaction of the appointed Certifying Authority prior to the issue of the Construction Certificate.

In determining a development application to which this clause applies (Clause 94), a consent authority is to take into consideration whether it would be appropriate to require the existing building to be brought into total or partial conformity with the Building Code of Australia.

Further, it is considered that this BCA review and the additional preparation of the required Construction Certificate documentation will be sufficient to ensure that the proposed design will achieve the necessary compliance with the BCA.

This report contains a review of the subject building having regard to the deemed-to-satisfy provisions of the **National Building Code of Australia 2019.1 Parts C, D, E and F** and provides recommendations with respect to the ability of the building to comply with the BCA.

As a result of this review we are of the opinion that should the recommendations contained in the contents of this report be implemented then the measures contained in the building would be adequate to:-

- general occupant safety and amenity,
- prevent fire,
- suppress fire,
- prevent the spread of fire, and
- ensure or promote the safety of persons in the event of fire,

PREPARED BY:

Director
PWA Consulting Pty Ltd
Building Anatomy
B. Env Planning
Grad Dip. B Surv., MAIBS., MPIA (CPP).
Building Surveyor – Unrestricted – DBC 0009

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

APPENDIAX A - FIRE RESISTANCE LEVELS

3. Type A Fire-Resisting Construction

3.1 Fire-resistance of building elements

In a building *required* to be of Type A construction—

(a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and

(b) * * * * *

(c) any *internal wall required* to have an FRL with respect to *integrity* and *insulation* must extend to—

(i) the underside of the floor next above; or

(ii) the underside of a roof complying with Table 3; or

(iii) if under Clause 3.5 the roof is not *required* to comply with Table 3, the underside of the *non-combustible* roof covering and, except for roof battens with dimensions of 75 mm x 50 mm or less or *sarking-type material*, must not be crossed by timber or other *combustible* building elements; or

(iv) a ceiling that is immediately below the roof and has a *resistance to the incipient spread of fire* to the roof space between the ceiling and the roof of not less than 60 minutes; and

(d) a *loadbearing internal wall* and a *loadbearing fire wall* (including those that are part of a *loadbearing shaft*) must be constructed from—

(i) concrete; or

(ii) masonry; or

(iii) *fire-protected timber*, provided that—

(A) the building is—

(aa) a separate building; or

(bb) a part of a building—

(AA) which only occupies part of a *storey*, and is separated from the remaining part by a *fire wall*; or

(BB) which is located above or below a part not containing *fire-protected timber* and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a *fire wall* for the lower *storey*; and

(B) the building has an *effective height* of not more than 25 m; and

(C) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification E1.5; and

(D) any insulation installed in the cavity of the timber building element *required* to have an FRL is *non-combustible*; and

(E) cavity barriers are provided in accordance with Specification C1.13; or

(iv) any combination of (i) to (iii); and

(e) * * * * *

(f) the FRLs specified in Table 3 for an external column apply also to those parts of an internal column that face and are within 1.5 m of a *window* and are exposed through that *window* to a *fire-source feature*.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Table 3 Type A construction: FRL of building elements

Building element	Class of building — FRL: (in minutes) *Structural adequacy*/*Integrity*/*Insulation*			
	2, 3 or 4 part	**5, 7a or 9**	**6**	**7b or 8**
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any *fire-source feature* to which it is exposed is—				
For *loadbearing* parts—				
less than 1.5 m	90/ 90/ 90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/ 60/ 60	120/ 90/ 90	180/180/120	240/240/180
3 m or more	90/ 60/ 30	120/ 60/ 30	180/120/ 90	240/180/ 90
For non-*loadbearing* parts—				
less than 1.5 m	–/ 90/ 90	–/120/120	–/180/180	–/240/240
1.5 to less than 3 m	–/ 60/ 60	–/ 90/ 90	–/180/120	–/240/180
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN not incorporated in an *external wall*—				
For *loadbearing* columns—	90/–/–	120/–/–	180/–/–	240/–/–
For non-*loadbearing* columns—	–/–/–	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS—	90/ 90/ 90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS—				
Fire-resisting lift and stair *shafts*—				
Loadbearing	90/ 90/ 90	120/120/120	180/120/120	240/120/120
Non-*loadbearing*	–/ 90/ 90	–/120/120	–/120/120	–/120/120
Bounding *public corridors*, public lobbies and the like—				
Loadbearing	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Between or bounding *sole-occupancy units*—				
Loadbearing	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like *shafts* not used for the discharge of hot products of combustion—				
Loadbearing	90/ 90/ 90	120/ 90/ 90	180/120/120	240/120/120
Non-*loadbearing*	–/ 90/ 90	–/ 90/ 90	–/120/120	–/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS—	90/–/–	120/–/–	180/–/–	240/–/–
FLOORS	90/ 90/ 90	120/120/120	180/180/180	240/240/240
	2, 3 or 4 part	**5, 7a or 9**	**6**	**7b or 8**
ROOFS	90/ 60/ 30	120/ 60/ 30	180/ 60/ 30	240/ 90/ 60

3.2 Concessions for floors

A floor need not comply with Table 3 if—

(a) it is laid directly on the ground; or

(b) in a Class 2, 3, 5 or 9 building, the space below is not a *storey*, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or

(c) it is a timber *stage* floor in a Class 9b building laid over a floor having the *required* FRL and the space below the *stage* is not used as a dressing room, store room, or the like; or

(d) it is within a *sole-occupancy unit* in a Class 2 or 3 building or Class 4 part of a building; or

(e) it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the *required* FRL.

3.3 Floor loading of Class 5 and 9b buildings: Concession

If a floor in a Class 5 or 9b building is designed for a live load not exceeding 3 kPa—

(a) the floor next above (including floor beams) may have an FRL of 90/90/90; or

(b) the roof, if that is next above (including roof beams) may have an FRL of 90/60/30.

3.4 Roof superimposed on concrete slab: Concession

A roof superimposed on a concrete slab roof need not comply with Clause 3.1 as to *fire-resisting construction* if—

(a) the superimposed roof and any construction between it and the concrete slab roof are *non-combustible* throughout; and

(b) the concrete slab roof complies with Table 3.

3.5 Roof: Concession

A roof need not comply with Table 3 if its covering is *non-combustible* and the building—

(a) has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or

(b) has a *rise in storeys* of 3 or less; or

(c) is of Class 2 or 3; or

(d) has an *effective height* of not more than 25 m and the ceiling immediately below the roof has a *resistance to the incipient spread of fire* to the roof space of not less than 60 minutes.

3.6 Roof lights

If a roof is *required* to have an FRL or its covering is *required* to be *non-combustible*, roof lights or the like installed in that roof must—

(a) have an aggregate area of not more than 20% of the roof surface; and

(b) be not less than 3 m from—

(i) any boundary of the allotment other than the boundary with a road or public place; and

(ii) any part of the building which projects above the roof unless that part has the FRL *required* of a *fire wall* and any openings in that part of the wall for 6 m vertically above the roof light or the like are protected in accordance with C3.4; and

(iii) any roof light or the like in an adjoining *sole-occupancy unit* if the walls bounding the unit are *required* to have an FRL; and

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

(iv) any roof light or the like in an adjoining fire-separated section of the building; and

(c) if a ceiling with a *resistance to the incipient spread of fire* is *required*, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.

3.7 Internal columns and walls: Concession

For a building with an *effective height* of not more than 25 m and having a roof without an FRL in accordance with Clause 3.5, in the *storey* immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and *internal walls* other than *fire walls* and *shaft* walls may have—

(a) in a Class 2 or 3 building: FRL 60/60/60; or

(b) in a Class 5, 6, 7, 8 or 9 building—

(i) with *rise in storeys* exceeding 3: FRL 60/60/60; or

(ii) with *rise in storeys* not exceeding 3: no FRL.

3.8 Open spectator stands and indoor sports stadiums: Concession

In an *open spectator stand* or indoor sports stadium, the following building elements need not have the FRL specified in Table 3:

(a) The roof if it is *non-combustible*.

(b) Columns and *loadbearing* walls supporting only the roof if they are *non-combustible*.

(c) Any non-*loadbearing* part of an *external wall* less than 3 m—

(i) from any *fire-source feature* to which it is exposed if it has an FRL of not less than –/60/60 and is *non-combustible*; or

(ii) from an *external wall* of another *open spectator stand* if it is *non-combustible*.

3.9 Carparks

(a) Notwithstanding Clause 3.1, a *carpark* may comply with Table 3.9 if it is an *open-deck carpark* or is protected with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 and is—

(i) a separate building; or

(ii) a part of a building—

(A) which only occupies part of a *storey*, and is separated from the remaining part by a *fire wall*; or

(B) which is located above or below another classification, and the floor separating the classifications complies with C2.9; or

(C) which is located above another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3 for a Class 7 part other than a *carpark*; or

(D) which is located below another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3.9.

(b) For the purposes of this Clause, a *carpark*—

(i) includes—

(A) an administration area associated with the functioning of the *carpark*; and

(B) where the *carpark* is sprinklered, is associated with a Class 2 or 3 building and provides carparking for separate *sole-occupancy units*, each carparking area with an area not greater than 10% of its *floor area* for purposes ancillary to the *sole-occupancy units*; but

(ii) excludes—

(A) except for (b)(i), any area of another classification, or other part of a Class 7 building not used for carparking; and

(B) a building or part of a building specifically intended for the parking of trucks, buses, vans and the like.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Table 3.9 REQUIREMENTS FOR CARPARKS — continued

Building element		**FRL (not less than)** ***Structural adequacy/Integrity/Insulation*** **ESA/M (not greater than)**
(b)	steel column, other than one covered by (a) and one that does not support a part of a building that is not used as a *carpark*	60/–/– or 26 m^2/tonne
(c)	any other column not covered by (a) or (b)	60/–/–
Beam		
(a)	steel floor beam in continuous contact with a concrete floor slab	60/–/– or 30 m^2/tonne
(b)	any other beam	60/–/–
Fire-resisting lift and stair shaft (within the *carpark* only)		60/60/60
Floor slab and vehicle ramp		60/60/60
Roof (not used for carparking)		–/–/–

Notes:

1. ESA/M means the ratio of exposed surface area to mass per unit length.
2. Refer to **Specification E1.5** for special requirements for a sprinkler system in a *carpark* complying with Table 3.9 and located within a multi-classified building.

3.10 Class 2 and 3 buildings: Concession

(a) A Class 2 or 3 building having a *rise in storeys* of not more than 3 need not comply with **Clause 3.1(d)** of **Specification C1.1** and the requirements of **C1.9(a)**, **(b)** and **C2.6** for *non-combustible* material, if it is constructed using—

(i) timber framing throughout; or

(ii) *non-combustible* material throughout; or

(iii) a combination of **(i)** and **(ii)**,

provided—

(iv) * * * * *

(v) any insulation installed in the cavity of a wall *required* to have an FRL is *non-combustible*; and

(vi) the building is fitted with an *automatic* smoke alarm system complying with **Specification E2.2a**.

(b) A Class 2 or 3 building having a *rise in storeys* of not more than 4 may have the top three *storeys* constructed in accordance with **(a)** provided—

(i) the lowest *storey* is used solely for the purpose of parking motor vehicles or for some other ancillary purpose; and

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

(ii) the lowest *storey* is constructed of concrete or masonry including the floor between it and the Class 2 or 3 part of the building above; and

(iii) the lowest *storey* and the *storey* above are separated by construction having an FRL of not less than 90/90/90 with no openings or penetrations that would reduce the *fire-resisting* performance of that construction except that a doorway in that construction may be protected by a –/60/30 *self-closing* fire door.

(c) In a Class 2 or 3 building complying with **(a)** or **(b)** and fitted with a sprinkler system complying with **Specification E1.5**, any FRL criterion prescribed in **Table 3**—

(i) for any floor and any *loadbearing* wall, may be reduced to 60, except any FRL criterion of 90 for an *external wall* must be maintained when tested from the outside; and

(ii) for any non-*loadbearing internal wall*, need not apply if—

(A) it is lined on each side with 13 mm standard grade plasterboard or similar *non-combustible* material; and

(B) it extends—

(aa) to the underside of the floor next above; or

(bb) to the underside of a ceiling with a *resistance to the incipient spread of fire* of 60 minutes; or

(cc) to the underside of a *non-combustible* roof covering; and

(C) any insulation installed in the cavity of the wall is *non-combustible*; and

(D) any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material; and

(E) any doorway in the wall is protected by a *self-closing*, tight fitting, solid core door not less than 35 mm thick.

APPENDIAX B - REFERENCED DOCUMENTATION

The following documentation was used in the preparation of this report: (As attached)

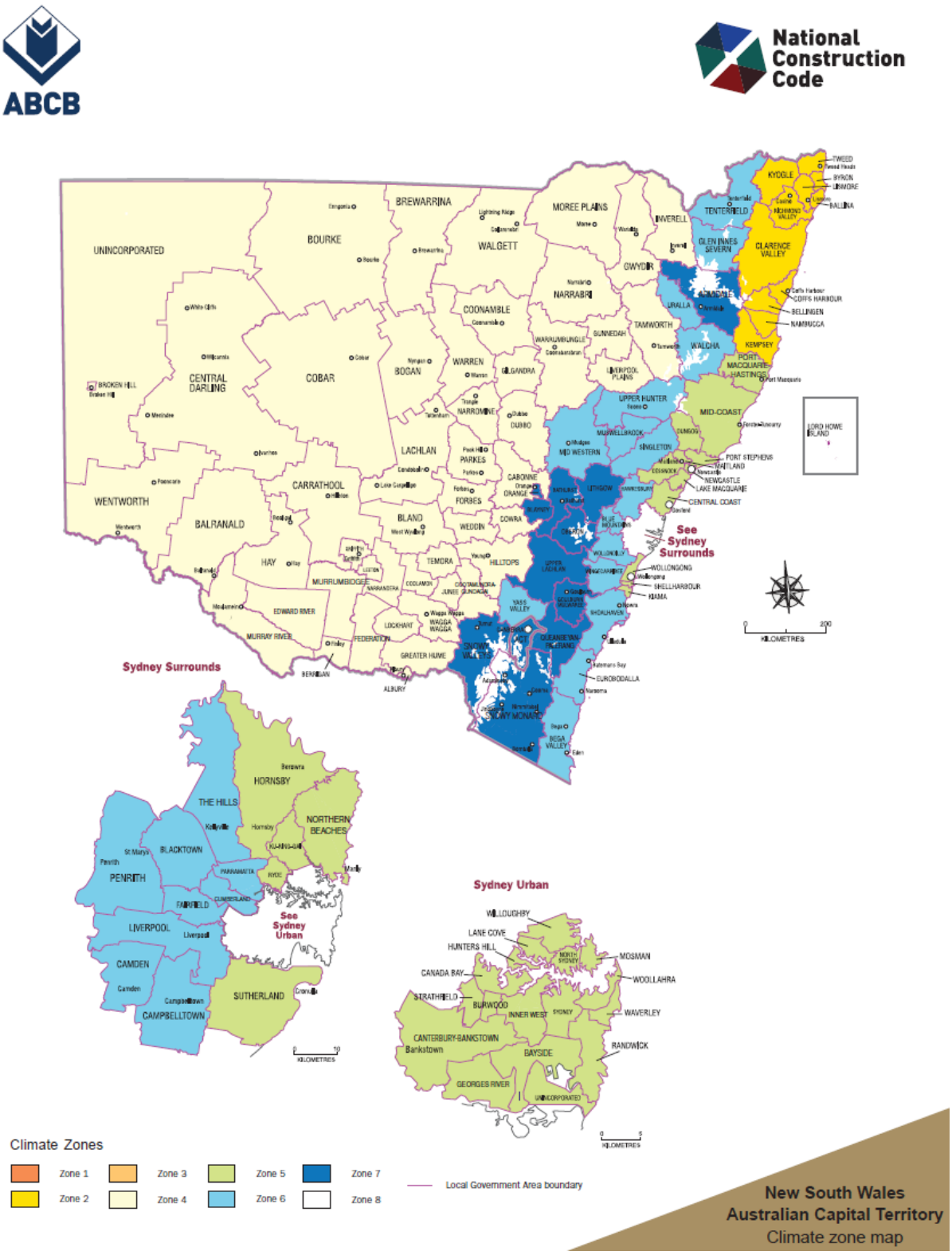
10-11 Railway Street, Werrington, NSW 2747

Drawing List

DA000	COVER PAGE	06/10/20	DA302	SECTION B-B	03/03/21
DA001	BASIX	06/10/20	DA303	SECTION C-C	03/03/21
DA002	PLANNING REQUIREMENTS	06/10/20	DA401	EXTERIOR FINISHES SCHEDULE	06/10/20
DA003	SITE ANALYSIS	06/10/20	DA501	SHADOW DIAGRAM 21 JUNE 9am	03/05/21
DA100	SITE PLAN	06/10/20	DA502	SHADOW DIAGRAM 21 JUNE 12pm	06/10/20
DA101	BASEMENT LEVEL 2	01/19/21	DA503	SHADOW DIAGRAM 21 JUNE 3pm	03/05/21
DA102	BASEMENT LEVEL 1	02/10/21	DA504	SHADOW DIAGRAM 21 DECEMBER 9am	09/17/21
DA103	GROUND FLOOR PLAN	06/10/20	DA505	SHADOW DIAGRAM 21 DECEMBER 12pm	09/17/21
DA104	FIRST FLOOR PLAN	10/20/20	DA506	SHADOW DIAGRAM 21 DECEMBER 3pm	09/17/21
DA105	SECOND FLOOR PLAN	01/20/21	DA601	3D PERSPECTIVE	06/10/20
DA106	THIRD FLOOR PLAN	02/10/21			
DA107	ROOF PLAN	03/03/21			
DA201	ELEVATIONS	06/10/20			
DA202	ELEVATIONS	02/02/21			
DA301	SECTION A-A	06/10/20			

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

APPENDIAX C - CLIMATE ZONE MAP



Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

APPENDIAX D - RECOMMENDED DESIGN CERTIFICATIONS.

The National Construction Code, **BCA 2019.1 Volume 1 (BCA), in Part A2.2**, establishes the evidence certifying authorities need to support that the use of a material, design or form of service/component installation meets a National Construction Code (NCC) performance requirement or a deemed-to-satisfy provision. Supporting consultants letter act as Certification to provide such evidence.

Relevant Discipline	Compliance Requirements
Project Architect	▪ Access points to fire rated riser shafts will be protected with fire rated access panels achieving a minimum FRL of -/60/30. ▪ External walls are all to incorporate Spandrel Fire Separation between storeys achieving at least and FRL of 60/60/60. Clause C2.6 of the BCA. ▪ All service penetrations through fire rated elements will be protected with fire seals tested to achieve the required FRL in accordance with AS4072.1 and AS1530.4-2015 in accordance with BCA Spec C3.15. ▪ The finished surface materials to stairs, ramps and landings will achieve a slip resistance classification that accords with Tables D2.14 when tested to AS4586-2013. ▪ Balustrades will be provided to all elevated balconies, landings, stairs and ramps in accordance with Clause D2.16 of BCA. ▪ Handrails will be provided to all stairs and ramps in accordance with Clause D2.17 of BCA. ▪ The door latching mechanisms to the proposed required exit doors and doors within the path of travel to an exit will be in accordance with Clause D2.21 of BCA. ▪ Fire door signage will be provided to all doors entering/ exiting the fire isolated exits in the building to comply with Clause D2.23 of BCA. ▪ Water proofing membranes for external above ground use will comply with AS4654 Parts 1 and 2. ▪ Glazed assemblies to comply with AS2047 and AS1288. ▪ Bathrooms and/ or laundries will be provided with floor wastes per Clause F1.11 of BCA. ▪ Stairways will be constructed of the materials specified within BCA Clause D2.3 *If Concessions are chosen under Spec E1.5a details would need to be disclosed to the certifier at the CC Stage.*
Structural Engineer	▪ The building has been designed to resist all necessary actions and imposed loads determined in accordance with BCA Part B and the relevant Structural Australian Standards as they relate to the relevant materials and forms of construction. ▪ The FRL's of the structural elements for the proposed works have been designed in accordance with Table 3 for a building of Type A Construction of Specification C1.1 of BCA. ▪ The basement roof slab has been designed to achieve an FRL not less than 120/120/120 where parts act as 'Open Space' ▪ Joints in fire rated external walls are to have the required FRL with respect to integrity and insulation relative to the building element they are joining. ▪ BCA Part B – Structural Provisions ▪ BCA Part C1.11 and Spec C1.11 – Performance of External Walls in Fire (pre-Cast Concrete/Tilt up) ▪ BCA Clause D2.2 – Fire Isolated Stairways and Ramps ▪ FRL's as applicable under BCA Spec C1.1 o **Part 3 and Table 3 'Type A'** o ~~Part 4 and Table 4 'Type B'~~ o ~~Part 5 and Table 5 'Type C'~~

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Relevant Discipline	Compliance Requirements
	▪ AS1170.0:2002 – General Principles ▪ AS1170.1:2002 – Permanent, Imposed, and other Actions ▪ AS1170.2:2011 – Wind Actions ▪ AS1170.3:2003 – Snow and Ice Actions ▪ AS1170.4:2007 – Earthquake actions ▪ AS2159:2009 – Piling – Design and Installation ▪ AS2870:2011 – Residential Slabs and Footings ▪ AS3600:2018 – Concrete Structures Code ▪ AS4100:1998 – Steel Structures Codes ▪ AS 4600 – 2005, Cold formed steel ▪ AS3700:2018 – Masonry ▪ AS1720.1:2010 –Timber Structures – Design Methods ▪ AS1720.4:2006 – Fire Resistance for structural adequacy of timber members ▪ AS1720.5:201 – Nailplated timber roof trusses ▪ AS3660.1:2014 – Termite Risk Management - New building work ▪ AS 2047 – 2014, Windows in buildings. ▪ AS 1288 – 2006, Glass in buildings (Note if Glass is acting as a balustrade include AS1170) **Damp-proofing** ▪ BCA clause F1.9 and AS/NZS 2904 and /or a Impervious sheet material in accordance with AS3660.1 ▪ BCA Clause F1.10 Damp-proofing of floors on the ground to AS2870 (Vapour Barrier) ▪ All sarking to AS/NZ4200.1 and AS4200.2 **Note**: Sarking is to be non-combustible in accordance with C1.9 where exempted, (1mm in thickness and Flammability Index not greater than 5) and Spec C1.10 ▪ AS/NZS 4200:2017 – Pliable Building Membranes and Underlays and AS4200:2007.1 Insulation (recommended – BCA 2019.1)
Hydraulic Consultant	▪ Fire hydrants will be installed in accordance with Clause E1.3 of BCA and AS2419.1-2005 and any requirements of the Fire Engineered Performance Solution as required. ▪ External wall-wetting drencher systems protecting openings in the external facade to be installed in accordance with BCA C3.4 and AS2118.2-2010. ▪ Fire hose reels will be installed in the basement car park in accordance with Clause E1.4 of BCA 2016.1 Amendment 1 and AS2441-2005 as required. ▪ Storm water drainage will be provided in accordance with and AS3500.3 and AS3500.5 (as appropriate) ▪ Portable Fire Extinguishers will be provided to protect the main switch board and the kitchen to comply with AS2444-2001 and Clause E1.6 of BCA.
Electrical Consultant	▪ A smoke detection and alarm system will be installed throughout the building in accordance with Table E2.2a, and Specification E2.2a of BCA 2019.1, Amendment 1 and AS1670.1-2018. ▪ Emergency lighting will be installed throughout the development in accordance with Clause E4.2, E4.4 of BCA and AS2293.1 – 2018 ▪ Exit signage will be installed in accordance with Clause E4.5, E4.7, and E4.8 of BCA and AS2293.1 – 2018.

Relevant Discipline	Compliance Requirements
Mechanical Consultant	▪ Enclosed areas of the building will be provided with compliant mechanical ventilation systems that accord with AS1668.2-2012 per Clause F4.5 of BCA.
Lift Consultant	▪ Lift installations will comply with Spec E3.1 & Table E3.6a and b of BCA. ▪ Lift landing doorways will be protected by a –/60/– FRL fire doors that comply with AS1735.11. ▪ Lift indicator panels in the wall of the fire isolated shaft will be backed by construction having an FRL of not less than –/60/60 if it exceeds 35,000mm2 in area. ▪ Warning sign for Passenger lifts under Figure E3.3 are to be installed ▪ Details of E3.7 Fire Service Controls are to be referenced. ▪ Details of E3.9 Fire Service recall control switch are to be referenced. ▪ Details of E3.10 Lift car fire service drive control switch are to be referenced.

APPENDIAX E - BCA REQUIREMENTS

Noting that the level of documentation at this stage is for a Construction Certificate assessment purposes, an indicative compliance assessment of the referenced documents identified in Appendix B of this report has been undertaken against the Deemed-to-Satisfy Provisions of the Building Code of Australia (BCA).

Outlined below is a summary of the Deemed-to-Satisfy Provisions of the BCA. All Deemed-to-Satisfy clauses that are applicable to the subject building have been referred to below, including a comment adjacent to each clause of the proposal's ability to satisfy each respective clause.

The abbreviations outlined below have been used in the following tables:

N/A	The Deemed-to-Satisfy clause does not apply to the subject building.
Complies	The relevant provisions of the Deemed-to-Satisfy clause have been demonstrated by the proposed design and existing building features, notwithstanding it is at DA documentation stage.
CRA	'Compliance Readily Achievable'. It is considered that the level of detail included in the documentation will not determine strict compliance with the individual BCA clause requirements. However, subject to noting the requirements of each clause, it is considered BCA compliance can be readily demonstrated without significant implication to the approved design. This will occur through progression of documentation to the Construction Certificate stage of the development.
FI	Further information is necessary to determine the compliance potential of the building design.
PS	Performance Solution to be proposed.
FSU	Fire Safety Upgrade.
DNC	Does Not Comply.
DTS	Deemed-To-Satisfy provisions as defined by the Building Code of Australia.

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
SECTION B – STRUCTURE						
Part B1 – Structural Provisions						
1.	**B1.1 –** Resistance to actions	The resistance of the building must be greater than the most critical action effect resulting from different combinations of actions, where the most critical action has been determined in accordance with this Part – Structural Engineer to certify at CC stage.	**CRA**	**A design practitioner—structural engineering** The resistance of a building or structure must be greater than the most critical action effect resulting from different combinations of actions. Structural details and a design certificate will be obtained from a qualified structural engineer prior to the issue of a CC.		
2.	**B1.2 -** Determination of individual actions	The magnitude of actions must be determined in accordance with this Clause – Structural Engineer to certify at CC stage.	**CRA**	**A design practitioner—structural engineering** The magnitude of individual actions must be determined in accordance with Clause B1.2 of the BCA. Structural details and a design certificate will be obtained from a qualified structural engineer prior to the issue of a Construction Certificate.		
3.	**B1.4 –** Determination of structural resistance of materials and forms of construction	The structural resistance of materials and forms of construction must be determined in accordance with this Clause – Structural Engineer, Architect and Manufacturers to certify at CC stage. i.e.: □ AS 1170.0 – 2002 General Principles □ AS 1170.1 – 2002, including certification for balustrading (dead and live loads) □ AS 1170.2 – 2002, Wind loads □ AS 1170.4 – 2007, Earthquake loads □ AS 3700 – 2011, Masonry code □ AS 3600 – 2009, Concrete code □ AS 4100 – 1998, Steel Structures and/or □ AS 4600 – 2005, Cold formed steel. □ AS 2047 – 2014, Windows in buildings. □ AS 1288 – 2006, Glass in buildings	**CRA**	**A design practitioner—structural engineering** The structural resistance of materials and forms of construction must be determined in accordance with the relevant Australian Standards in accordance with Clause B1.4 of the BCA. Structural details and a design certificate will be required by a qualified structural engineer prior to the issue of a Construction Certificate. ***See Appendix D***		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
4.	**B1.5 –** Structural software	Structural software used in computer aided design of a building or structure within the geometrical limits of (b) of this Clause must comply with the ABCB Protocol for Structural Software. Structural Engineer to certify.	**CRA**	**A design practitioner—structural engineering** Structural details and a design certificate will be required by a qualified structural engineer prior to the issue of a Construction Certificate.		
5.	**B1.6 –** Construction of buildings in flood hazard areas	A Class 2 or 3 building, Class 9a health care building, Class 9c aged-care building or Class 4 part of a building, in a flood hazard area (refer to Council maps) must comply the ABCB Standard for Construction of Buildings in Flood Hazard Areas.	**CRA**	**A design practitioner—structural engineering** **Confirm the area is not Flood Affected** Structural details and a design certificate will be required by a qualified structural engineer prior to the issue of a Construction Certificate.		
SECTION C – FIRE RESISTANCE **Part C1 – Fire Resistance and Stability**						
6.	**C1.1 / Spec 1.1 –** *Type of construction required* *Note Also* ***C1.9***	All building elements to achieve the fire resistance levels of Type A Construction as outlined in Specification C1.1 (Refer Appendix A).	**CRA**	**A design practitioner—architectural** The building is to be erected as **Type 'A'** fire resisting construction in accordance with Specification C1.1 of the BCA. Refer to **Appendix A** for the relevant fire resisting requirements. Plans to reflect required FRL's prior to the issue of a Construction Certificate.		
Table C1.1 Type of construction required Rise in storeys / Class of building 2, 3, 9 / Class of building 5, 6, 7, 8 4 or more: A / A 3: A / B 2: B / C 1: C / C				FRLs are to be listed on the CC plans and the Products and Test Sheets for the proposed materials. FRL's presented appear consistent with **Table 3 of Spec C1.1** **Note: Spec Sheets for wall systems as per tested system is still to be provided.**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S

Table 3 Type A construction: FRL of building elements

Building element	Class of building — FRL: (in minutes) *Structural adequacy/Integrity/Insulation*			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any *fire-source feature* to which it is exposed is—				
For *loadbearing* parts—				
less than 1.5 m	90/ 90/ 90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/ 60/ 60	120/ 90/ 90	180/180/120	240/240/180
3 m or more	90/ 60/ 30	120/ 60/ 30	180/120/ 90	240/180/ 90
For non-*loadbearing* parts—				
less than 1.5 m	–/ 90/ 90	–/120/120	–/180/180	–/240/240
1.5 to less than 3 m	–/ 60/ 60	–/ 90/ 90	–/180/120	–/240/180
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN not incorporated in an *external wall*—				
For *loadbearing* columns—	90/–/–	120/–/–	180/–/–	240/–/–
For non-*loadbearing* columns—	–/–/–	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS—	90/ 90/ 90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS—				
Fire-resisting lift and stair *shafts*—				
Loadbearing	90/ 90/ 90	120/120/120	180/120/120	240/120/120
Non-*loadbearing*	–/ 90/ 90	–/120/120	–/120/120	–/120/120
Bounding *public corridors*, public lobbies and the like—				
Loadbearing	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Between or bounding *sole-occupancy units*—				
Loadbearing	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like *shafts* not used for the discharge of hot products of combustion—				
Loadbearing	90/ 90/ 90	120/ 90/ 90	180/120/120	240/120/120
Non-*loadbearing*	–/ 90/ 90	–/ 90/ 90	–/120/120	–/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS—	90/–/–	120/–/–	180/–/–	240/–/–
FLOORS	90/ 90/ 90	120/120/120	180/180/180	240/240/240
	2, 3 or 4 part	**5, 7a or 9**	**6**	**7b or 8**
ROOFS	90/ 60/ 30	120/ 60/ 30	180/ 60/ 30	240/ 90/ 60

Note also Spandural detail under need to be confirmed to achieve and FRL of 60/60/60 also if a AS2118.1 is not slected udner Spec E1.5a

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

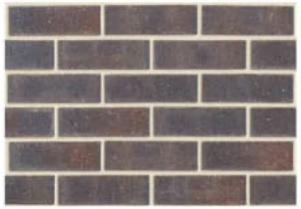
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		3.1 Fire-resistance of building elements In a building *required* to be of Type A construction— (a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and (b) * * * * * (c) any *internal wall required* to have an FRL with respect to *integrity* and *insulation* must extend to— (i) the underside of the floor next above; or (ii) the underside of a roof complying with Table 3; or (iii) if under Clause 3.5 the roof is not *required* to comply with Table 3, the underside of the *non-combustible* roof covering and, except for roof battens with dimensions of 75 mm x 50 mm or less or *sarking-type material*, must not be crossed by timber or other *combustible* building elements; or (iv) a ceiling that is immediately below the roof and has a *resistance to the incipient spread of fire* to the roof space between the ceiling and the roof of not less than 60 minutes; and				
7.	**C1.2 –** Calculation of rise in storeys	The rise in storeys of a building is the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space calculated in accordance with the requirements set out in this clause	**Note**	The building has an overall rise in storeys: **RIS = FOUR (4)** The building contains **SIX (6)** storeys.		
8.	**C1.3 –** Buildings of multiple classification	In a building of multiple classifications, the type of construction required for the building is the most fire-resisting type resulting from the application of Table C1.1 on the basis that the classification applying to the top storey applies to all storeys.	**CRA**	As the building appears to inherit the Higher FRL across the Storey. This application does not alter the building that would affect this clause. Additional FRL's are required to confirm that the Class 7b storage areas are Fire Separated from the remainder of the storey with the lower ground floor of building C and D, or the higher FRL is to apply to the whole storey.		
9.	**C1.4 –** Mixed types of Construction	A building may be of mixed types of construction where it is separated in accordance with C2.7 and the type of construction is determined in accordance with C1.1 or C1.3.	**N / A**	The building Appears to be all one type of Construction, there is no separation by required fire walls. All parts of the building are required to be of **Type A** construction.		
10.	**C1.5 –** Two storey Class 2, 3 or 9c buildings	A building having a rise in storeys of 2 may be of Type C construction provided that it complies with the requirements set out in this clause.	**N / A**			
11.	**C1.6 –** Class 4 parts of buildings	For the type of construction required by C1.3, a Class 4 part of a building requires the same FRL for building elements and the same construction separating the Class 4 part from the remainder of the building as a Class 2 part in the same type of construction.	**N / A**			
12.	**C1.7 –** Open spectator	An open spectator stand or indoor sports stadium may be of Type C construction subject to the provisions set out in sub-clauses (a) & (b)	**N / A**			

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	stands and indoor sports stadiums					
13.	**C1.8 –** Lightweight construction	Lightweight construction must comply with Specification C1.8 if used in a wall system in accordance with sub-clauses (a) & (b).	**CRA**	**A design practitioner—architectural** Lightweight construction used in a wall system must comply with Specification C1.8. Lightweight construction used as a fire-resisting covering of a steel column or the like, and where the covering is not in continuous contact with the column must have the voids filled to a height of not less than 1.2m above the floor and where the column is liable to be damaged must be protected by steel or other suitable material. If lightweight construction is used in the proposed development, then details demonstrating required FRL and compliance with this clause must be provided prior to the issue of a Construction Certificate.		
14.	**C1.9 –** Non-combustible building elements	(a) In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible: (i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. (ii) The flooring and floor framing of lift pits. (iii)Non-loadbearing internal walls where they are required to be fire-resisting. (b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in— (i) a building required to be of Type A construction; and (ii) a building required to be of Type B construction, subject to C2.10, in— (A) a Class 2, 3 or 9 building; and	**CRA**	**A design practitioner—architectural** In this regard, we note that further details are required having regard to the proposed external façade materials which must be of non-combustible construction. Where the design team proposes to use any combustible cladding (such as aluminium composite panels or the like), then it will be necessary to provide details along with a CodeMark Certificate of the proposed product, which indicates that the product has been tested against **AS1530.1** for combustibility. It is also noted that this clause also prohibits the use of in situ formwork containing combustible elements including PVC lined formwork products where the PVC lining remains in place for the life of the building were proposed to be used as an external wall element, common walls, the flooring and floor framing of lift pits, services riser shafts or non-loadbearing internal walls required to be fire resisting.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(B) a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys. (c) A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1. (d) The requirements of (a) and (b) do not apply to gaskets, caulking, sealants, termite management systems, Glass including laminated glass, thermal breaks associated with glazing systems and damp-proof courses. (e) The following materials, may be used wherever a non-combustible material is required: (i) Plasterboard. (ii) Perforated gypsum lath with a normal paper finish. (iii) Fibrous-plaster sheet. (iv) Fibre-reinforced cement sheeting. (v) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (vi) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5. (vii) Bonded laminated materials where— (A) each lamina, including any core, is non-combustible; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and (C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively.		**The design architect is also to specifically confirm.** 1. All Internal wall components *are non-compostable,* or parts *are combustible.* 2. Selected Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. 3. Selected Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5. 4. The architect is to provide evidence of suitability under BCA A5.2 via the following with the application for CC; a. a current CodeMark certificate, b. a current certificate of Accreditation, c. a report issued by an Accredited Testing Laboratory, or d. a certificate or report from a professional engineer for each non-combustible building element.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
 1. PGH BRICK MYSTIQUE  2. BLACK ALUMINUM SHROUD OR SIMILAR  3. ROOF TILES MONIER HORIZON CARAWAY  4. FC SHEET JAMES HARDIE STRIA - RENDERED DULUX MOROCCAN DUSK  5. CEMBRIT FACADE PANEL COLOR RANGE SELECTION						
15.	**C1.10 –** Fire hazard properties	The fire hazard properties of all floor materials, floor coverings, wall and ceiling lining materials must comply with Specification C1.10. The fire hazard properties of all other materials must comply with Specification C1.10. Existing carpet to the 'Office Part' of the tenancy does have carpet, it is recommended to be replaced is its original installation certificate complying with Spec C1.10.	**CRA**	**A design practitioner—architectural** Design certification will be required verifying compliance prior to the issue of a Construction Certificate. **The design architect is also to specifically confirm.** 1. All Internal wall components *are non-compostable,* or parts *are combustible.* 2. The architect is to provide evidence of suitability under BCA A5.2 via the following with the application for CC of all intended wall, ceiling, and floor linings. a. a current CodeMark certificate, b. a current certificate of Accreditation, c. a report issued by an Accredited Testing Laboratory, or a certificate or report from a professional engineer for each non-combustible building element.		
16.	**C1.11 –** Performance of external walls in fire	Concrete external walls that could collapse as complete panels (E.g. tilt-up and pre-cast concrete), in a building having a rise in storeys of not more than 2, must comply with Specification C1.11.	**N / A**	**A design practitioner—architectural** **A design practitioner—structural engineering**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
17.	**C1.12 –**	Clause now deleted, and relocated to C1.9.	**N / A**			
18.	**C1.13 –** Fire-protected timber: Concession	This clause specifies that fire protected timber in a Class 2, 3 or 5 building may be used providing it meets particular criteria and is provided with fire services set out under this clause. *Fire-protected timber* in all building classifications may be used wherever an element is required to be non-combustible, provided— (a) the building is— (i) a separate building; or (ii) a part of a building— (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or (B) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and (b) the building has an effective height of not more than 25 m; and (c) the building has a sprinkler system throughout complying with Specification E1.5; and (d) any insulation installed in the cavity of the timber building element required to have an FRL is non-combustible; and (e) cavity barriers are provided in accordance with Specification C1.13.	**N / A**	**A design practitioner—architectural** **A design practitioner—structural engineering** It is noted that *fire protected timber* is not proposed to be applied to this building.		
19.	**C1.14 –** Ancillary elements	An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following: (a) An ancillary element that is non-combustible. (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate or grille not more than 2 m2 in area associated with a building service. (e) An electrical switch, socket-outlet, cover plate or the like. (f) A light fitting. (g) A required sign. (h) A sign other than one provided under (a) or (g) that— (i) achieves a group number of 1 or 2; and (ii) does not extend beyond one storey; and (iii) does not extend beyond one fire compartment; and	**CRA**	**A design practitioner—architectural** **A design practitioner—facade** All Pergolas, awnings and other attachment to the external are included in this clause. **Comment**: The architect is to provide evidence of suitability under BCA A5.2 via the following with the application for CC; a) a current CodeMark certificate, b) a current certificate of Accreditation, c) a report issued by an Accredited Testing Laboratory, or		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(iv) is separated vertically from other signs permitted under (h) by at least 2 storeys. (i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that— (i) meets the relevant requirements of Table 4 of Specification C1.10 as for an internal element; and (ii) serves a storey— (A) at ground level; or (B) immediately above a storey at ground level; and (iii) does not serve an exit, where it would render the exits unusable in a fire. (j) A part of a security, intercom or announcement system. (k) Wiring. (l) A paint, lacquer or a similar finish. (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k).		d) a certificate or report from a professional engineer for each non-combustible building element.		
	Part C2 – Compartmentation and Separation					
20.	**C2.1 –** Application of Part		**Note**			
21.	**C2.2 –** General floor area limitations	Informational - C2.2, C2.3 and C2.4 do not apply to a carpark provided with a sprinkler system complying with Specification E1.5, an open-deck carpark or an open spectator stand. *However*, floor area and volume limitations do not apply to a carpark provided with a sprinkler system (other than a FPAA101D orFPAA101H system) complying with Specification E1.5.	**Note**	This clause sets out the parameters for the area and volume of Class 5, 6, 7, 8 & 9 buildings as required by sub-clauses (a), (b) & (c). All parts of the building comply and are within compartment limitations. This application does not alter the building that would affect this clause. As the building is existing, compliance with compartment limitations is assumed.		
		Table C2.2 Maximum size of fire compartments or atria Classification / Type A construction / Type B construction / Type C construction 5, 9b or 9c: Max *floor area*—8000 m² / Max volume—48000 m³ ; Max *floor area*—5500 m² / Max volume—33000 m³ ; Max *floor area*—3000 m² / max volume—18000 m³ 6, 7, 8 or 9a (except for *patient care areas*): Max *floor area*—5000 m² / Max volume—30000 m³ ; Max *floor area*—3500 m² / Max volume—21000 m³ ; Max *floor area*—2000 m² / Max volume—12000 m³ Note to Table C2.2: See C2.5 for maximum size of compartments in *patient care areas* in Class 9a *health-care buildings*.				
22.	**C2.3 –** Large Isolated buildings	The size of a fire compartment in a building may exceed that specified in Table C2.2 where the provisions of sub-clauses (a), (b) & (c) of this Part apply.	**N / A**			

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
23.	**C2.4 –** Requirements for open spaces and vehicular access	An open space and vehicular access required by C2.3 must comply with the requirements of sub-clauses (a) & (b) of this Part, i.e. generally an unobstructed path of 6m in width is to be provided around all buildings. Differences apply whether the building is provided with a sprinkler system.	**N / A**			
24.	**C2.5 –** Class 9a and 9c buildings	Class 9a and Class 9c buildings must comply with the provisions of sub-clauses (a) & (b) of this Part and the NSW Provisions of the Code.	**N / A**			
25.	**C2.6 –** Vertical separation of Openings in external walls	If in a building of **Type A construction**, any part of a window or other opening in an external wall is above another opening in the storey next below and its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by and horizontal or vertical spandrel with an FRL of 60/60/60, and for the purposes of C2.6, window or other opening means that part of the external wall of a building that does not have an FRL of 60/60/60 or greater.	**CRA**	**A design practitioner—architectural** As the building is to be Sprinkler Protected, if a AS2118.1 system is chosen this clause would comply. If a AS2118.1 or a FPA system is selected, further spandrel details are to be provided to the Certifier.		
26.	**C2.7 –** Separation by fire walls	**Construction** — A fire wall must be constructed in accordance with the following: (i) The fire wall has the relevant FRL prescribed by Specification C1.1 for each of the adjoining parts, and if these are different, the greater FRL, except where Tables 3.9, 4.2 and 5.2 of Specification C1.1 permit a lower FRL on the carpark side. (ii) Any openings in a fire wall must not reduce the FRL required by Specification C1.1 for the fire wall, except where permitted by the Deemed-to-Satisfy Provisions of Part C3. (iii) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire-resisting performance of the fire wall is maintained.	**CRA**	**A design practitioner—architectural**		
27.	**C2.8 –** Separation of classifications in the same storey	• Each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or • The parts must be separated in that storey by a fire wall having – • The higher FRL prescribed in **Table 3**, 4 or 5 of Specification C1.1 as applicable for that element for the Type of construction and the classifications concerned. • Where one part is a car park complying with Table 3.9, 4.2 or 5.2 of Specification C1.1, the parts may be separated by a fire wall complying with the appropriate Table.	**CRA**	**A design practitioner—architectural** **Comments**: The higher of the following FRL's are to be provided to walls separating classifications in the same storey: • Class 3 = FRL 90/90/90 • Class 7a = FRL 120/120/120		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				Note: Fire doors are to be provided in separating walls that have the same integrity of the FRL with a concession for the insulation which can be reduced to 30min. A floor plan identifying the required FRL and door schedule is to be provided with the structural details to confirm FRL compliance.		
28.	**C2.9 –** Separation of classifications in different storeys **Note:** *C3.11,* *Spec C1.1 for Type C Construction*	**Type A** Floors separating storeys of different classifications must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey. Type B or C The floor separating the Class 2, 3 or 4 part from the storey below must: (i) be a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or (ii) have an FRL of at least 30/30/30; or (iii) have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal. Note: Determination of Floor FRL's must also consider compliance with C2.7 whereby the floor must have the same FRL as the fire wall of the fire compartment below and D2.12 whereby roof as open space must have an FRL not less than 120/120/120.	**CRA**	**A design practitioner—architectural** If parts of different classification are situated one above the other in adjoining *storeys* they must be separated as follows; (a) Type A construction — The floor between the adjoining parts must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey. **Comments**: The following FRL's are to be provided to floors separating classifications in different storeys. • **Class 3** = FRL 90/90/90 • **Class 7a** = FRL 120/120/120 A floor plan identifying the required FRL is to be provided with the structural details to confirm compliance. **Note: If options for Spec C1.1 Table C3.9, is this is to be applied, specific details are to be disclosed to the Certifier.**		
29.	**C2.10 –** Separation of lift shafts	(a) Any lift connecting more than 2 storeys, or more than 3 storeys if the building is sprinklered, (other than lifts which are wholly within an atrium) must be separated from the remainder of the building by enclosure in a shaft in which— (i) in a building required to be of Type A construction—the walls have the relevant FRL prescribed by Specification C1.1; and (ii) in a building required to be of Type B construction — the walls— (A) if loadbearing, have the relevant FRL prescribed by Table 4 of Specification C1.1; or (B) if non-loadbearing, be of non-combustible construction.	**CRA**	**A design practitioner—architectural** **A design practitioner—structural engineering** Passenger lifts must be separated from the remainder of the building by enclosure in a fire rated shaft achieving an FRL prescribed by **Table 3 of Specification C1.1.** Please also note the lid of the shaft is also to be fire rated.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(b) Any lift in a patient care area in a Class 9a health-care building or a resident use area in Class 9c aged care building must be separated from the remainder of the building by a shaft having an FRL of not less than— (i) in a building of Type A or B construction — 120/120/120; or (ii) in a building of Type C construction — 60/60/60. (c) An emergency lift must be contained within a fire-resisting shaft having an FRL of not less than 120/120/120. (d) Openings for lift landing doors and services must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C3.		**Comments:** The lifts are enclosed in their own shaft and require an FRL of not less than the following with lift openings to be protected. • Class 2 = FRL 90/90/90 • Class 7a = FRL 120/120/120 Structural details are required to confirm FRL compliance. Details to be provided with the application for CC.		
30.	**C2.11 –** Stairways and lifts in one shaft	A stairway and lift must not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft.	**CRA**	**A design practitioner—structural engineering** The architectural documentation indicates that the lifts will be provided within separate shafts. The Lift and the Stair Shaft are adjoining yet separated.		
31.	**C2.12 –** Separation of equipment	(a) Equipment other than that described in (b) and (c) must be separated from the remainder of the building with construction complying with (d), if that equipment comprises— (i) lift motors and lift control panels; or (ii) emergency generators used to sustain emergency equipment operating in the emergency mode; or (iii) central smoke control plant; or (iv) boilers; or (v) a battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more. (b) Equipment need not be separated in accordance with (a) if the equipment comprises— (i) smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification E2.2b; or (ii) stair pressurising equipment installed in compliance with the relevant provisions of AS/NZS 1668.1; or (iii) a lift installation without a machine-room; or (iv) equipment otherwise adequately separated from the remainder of the building. (c) Separation of on-site fire pumps must comply with the requirements of AS 2419.1. (d) Separating construction must have— (i) except as provided by (ii)— (A) an FRL as required by Specification C1.1, but not less than 120/120/120; and	**Need Design Detail**	**A design practitioner—architectural** **A design practitioner—fire systems (fire hydrant and fire hose reel)** **A design practitioner—fire systems (fire sprinkler)** Separation must be by construction having an FRL as required by Specification C1.1, but not less than FRL 120/120/120 with openings protected by self-closing fire doors having an FRL of not less than –/120/30. Separation of on-site fire pumps must comply with the requirements of AS 2419.1-2005. **Note: Location of Pump room under E1.5** **Note: Ventilation requirements** **The plans do not show or indicate a room allocated for a Pump room if required in the future for Fire Hydrant and Sprinkler systems**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(B) any doorway protected with a self-closing fire door having an FRL of not less than –/120/30; or (ii) when separating a lift shaft and lift motor room, an FRL not less than 120/–/–.				
Note: Clause 6.4.2 of AS 2419.1-2005 requires that an internal pumproom located within the building shall have the following: **A door opening to a road or open space, or a door opening to fire-isolated passage or stair which leads to a road or open space; and** **Except where the building is sprinkler protected in accordance with AS 2118.1, enclosing walls with an FRL notless than that prescribed by the BCA for a firewall for the particular building classifications served by the fire hydrant system.** **6.4.2 Internal pumprooms** Pumprooms located within a building shall have— (a) a door opening to a road or open space, or a door opening to fire-isolated passage or stair which leads to a road or open space; and (b) except where the building is sprinklered in accordance with AS 2118.1, enclosing walls with an FRL not less than that prescribed by the BCA for a firewall for the particular building classification served by the fire hydrant system. **6.4.3 External Pumprooms** Pumprooms and enclosures, located external to and within 6 m of any building they are protecting, shall have enclosing walls with an FRL not less than that prescribed by the BCA for a firewall for the particular building classification served by the fire hydrant system. Hardstand shall be provided within 20 m of the access door to the pumproom.					
32.	**C2.13 –** Electricity supply system	(a) An **electricity substation** located within a building must— (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (ii) have any doorway in that construction protected with a *self-closing* fire door having an FRL of not less than –/120/30. (b) A **main switchboard** located within the building which sustains emergency equipment operating in the emergency mode must— (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (ii) have any doorway in that construction protected with a self-*closing* fire door having an FRL of not less than –/120/30. (c) **Electrical conductors** located within a building that supply— (i) a substation located within the building which supplies a main switchboard covered by (b); or	**CRA**	**A design practitioner—electrical engineering** **A design practitioner—architectural** No substation indicated; this building also does not have a main switchboard which sustains emergency equipment operating in emergency mode It is not envisaged that requirements for the altered building will vary from existing, however if this is the case then details verifying compliance can be provided on plans prior to the issue of a Construction Certificate.		

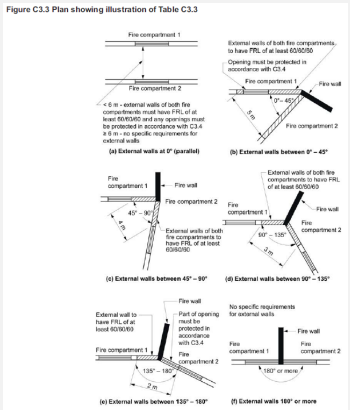
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) a main switchboard covered by (b), Must- (iii) have a classification in accordance with AS/NXS 3013 of not less than - (A) If located in a position that could be subject to damage by motor vehicles – WS53W; or (B) Otherwise – WS52W; or (C) be enclosed or otherwise protected by construction having an FRL of 120;120/120 For the purpose of (d), **emergency equipment includes** but not limited to: 0 Fire hydrant booster pumps 0 Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like. 0 Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building. 0 Air handing systems designed to exhaust and control the spread of fire and smoke 0 Emergency lifts 0 Control and indication equipment 0 Emergency Warning and intercom systems **Note**: Separation must be by construction having an FRL as required by Specification C1.1, but not less than FRL 120/120/120 with openings protected by self-closing fire doors having an FRL of not less than –/120/30. ***See***: Separation of on-site fire pumps must comply with the requirements of AS 2419.1-2005.				
33.	**C2.14 –** Public corridors in Class 2 and 3 buildings	Public corridors in Class 2 parts that exceed 40 m in length must be divided at intervals of not more than 40m with smoke-proof walls complying with Clause 2 of Specification C2.5.	**CRA**	Only one (1) residential corridor exceed 40m In a Class 2 or 3 building, a public corridor, if more than 40 m in length, must be divided at intervals of not more than 40 m with smoke-proof walls complying with Clause 2 of Specification C2.5. **Smoke doors are proposed to be installed in each storey separating corridors to intervals <40m**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Part C3 – Protection of Openings					
34.	**C3.1 –** Application of Part	The Deemed-to-Satisfy Provisions of this Part do not apply to– a) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre-cast concrete panel construction if, in all cases they are not larger than necessary for the purpose; and b) Non-combustible ventilators for subfloor or cavity ventilation, if each does not exceed 45 000 mm2 in face area and is spaced not less than 2 m from any other ventilator in the same wall; and c) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or veranda, colonnade, terrace, or the like; and In a carpark– a) Service penetrations through; and b) Openings formed by a vehicle ramp in, a. A floor other than a floor that separates a part not used as a carpark, providing the connected floors comply as a single fire compartment for the purposes of all other requirements of the Deemed-to-Satisfy Provisions of Sections C, D and E. b. For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings in building elements required to be fire-resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL. For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings, other than those covered under (a)(iii), between building elements such as columns, beams and the like, in the plane formed at the construction edge or perimeter of the building, are deemed to be openings in an external wall.	**Note**	Concessions and definition of certain openings.		
35.	**C3.2 –** Protection of openings in external walls	Openings in an external wall that is required to have an FRL must – (a) If the distance between the opening and the fire-source feature to which it is exposed is less than – (i) 3 m from a side or rear boundary of the allotment; or (ii) 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or	**N / A**	**A design practitioner—architectural** The building **does not** incorporate windows within 3m of the boundary which under current codes, protection is required.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(iii) 6 m from another building on the allotment that is not a Class 10, be protected in accordance with C3.4 and if wall-wetting sprinklers are used, they are located externally; and (b) If the required to be protected under (a), not occupy more than 1/3 of the area of the external wall of the storey in which it is located unless they are in a Class 9b building used as an open spectator stand.				
36.	**C3.3 –** Separation of external walls and associated openings in different fire compartments	The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must be not less than that set out in Table C3.3 unless- (a) Those parts of each wall have an FRL not less than 60/60/60; and (b) Any openings protected in accordance with C3.4. **Angle between walls / Min. Distance** 0° (walls opposite) — 6 m more than 0° to 45° — 5 m more than 45° to 90° — 4 m more than 90° to 135° — 3 m more than 135° to less than 180° — 2 m 180° or more — Nil	**N / A**	No windows or opeings are located within an exposure distance under Table C3.3. Figure C3.3 Plan showing illustration of Table C3.3 		
37.	**C3.4 –** Acceptable method of protection	Where protection is required, openings must be protected as follows: <u>Doorways:</u> (i) Internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing; or (ii) –/60/30 fire doors that are self-closing. <u>Windows:</u> (i) Internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or (ii) –60/– fire windows that are automatically closing or permanently fixed in the closed position; or	**N / A**	**A design practitioner—architectural** Fire doors, fire windows and fire shutters must comply with BCA Specification C3.4. If required, Details as to your chosen options must be disclosed as to reflect on the Final Fire Safety Schedule.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(iii) –/60/– automatic closing fire shutters. <u>Other openings:</u> (i) Excluding voids – internal or external wall-wetting sprinklers; or (ii) Construction having an FRL not less than –/60/–				
38.	**C3.5 –** Doorways in fire walls	Doorways in fire walls, that are not part of a horizontal exit, must be protected by a fire door or fire shutter that has an FRL of not less than that required for the firewall except that the insulation rating must be at least 30.	**N / A**	**A design practitioner—architectural** There are no Fire Walls are within this part of the building.		
39.	**C3.6 –** Sliding fire doors	If a doorway in a fire wall is fitted with a sliding fire door which is open when the building is in use it must be activated in accordance with the requirements of this clause and warning signs must be installed on either side of the doorway. **If proposed, sliding Fire Door, Fire Services drawings need to indicate local smoke detectors within 1.5m of the sliding Fire Doors.** **Signage is also required:** **'WARNING – SLIDING FIRE DOOR'** In capital letters not less than 50mm in height.	**N / A**	**A design practitioner—architectural**		
40.	**C3.7 –** Protection of doorways in horizontal exits	(a) A doorway that is part of a *horizontal exit* must be protected by either— (i) a single fire door that has an FRL of not less than that *required* by Specification C1.1 for the *fire wall* except that the door must have an *insulation* level of at least 30; or (ii) in a Class 7 or 8 building — 2 fire doors, one on each side of the doorway, each with an FRL of not less than ½that *required* by Specification C1.1 for the *fire wall* except that each door must have an *insulation* level of at least 30. (b) Each door *required* by (a) must be *self-closing*, or *automatic*-closing in accordance with the following: (i) The *automatic*-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and	**N / A**	**A design practitioner—architectural**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		located on each side of the *fire wall* not more than1.5 m horizontal distance from the opening. (ii) Where any other *required* suitable fire alarm system, including a sprinkler system (other than a FPAA101Dsystem) complying with Specification E1.5, is installed in the building, activation of the system in either *fire compartment* separated by the *fire wall* must also initiate the *automatic*-closing operation.				
41.	**C3.8 –** Openings in fire isolated exits	(a) Doorways that open to *fire-isolated stairways*, *fire-isolated passageways* or *fire-isolated ramps*, and are not doorways opening to a road or *open space*, must be protected by –/60/30 fire doors that are *self-closing*, or *automatic*-closing in accordance with (b) and (c). (b) The *automatic*-closing operation *required* by (a) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located not more than 1.5 m horizontal distance from the approach side of the doorway. (c) Where any other *required* suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification E1.5, is installed in the building, activation of the system must also initiate the *automatic*-closing operation. (d) A *window* in an *external wall* of a *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp* must be protected in accordance with C3.4 if it is within 6 m of, and exposed to, a *window* or other opening in a wall of the same building, other than in the same fire-isolated enclosure.	**CRA**	**A design practitioner—architectural** A door schedule is to be provided to confirm compliance. Details to be provided with the application for CC. ***See*** *Fire Safety Schedule*		
42.	**C3.9 –** Service penetrations in fire isolated exits	The fire isolated exits are not to be penetrated by any services **other** than: • electrical wiring associated with: – a lighting, detection, or pressurization system serving the exit; or – a security, surveillance or management system serving the exit; or – an intercommunication system or an audible or visual alarm system in accordance with D2.22; or – the monitoring of hydrant or sprinkler isolating valves. • ducting associated with a pressurisation system if it; (i) is constructed of material having an FRL of not less than –/120/60 where it passes through any other part of the building; and (ii) does not open into any other part of the building; or	**CRA**	**A design practitioner—architectural** The Design Architect is to Provide a Full Schedule of all intended Fire Services located passing through a fire rated element.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		water supply pipes for fire services.				
43.	**C3.10 –** Openings in fire isolated lift shafts	Lift landing doors are required to be fire doors with an FRL of -/60/- that comply with AS 1735.11-1986, and be set to remain closed except when discharging or receiving, passengers, goods or vehicles. Panels in the wall of the lift shaft must be backed by construction having an FRL of not less than –/60/60 if it exceeds 35 000 mm2 in area.	**CRA**	**design practitioner—vertical transportation** **A design practitioner—architectural** Lift contractor will need to certify compliance with the design requirements.		
44.	**C3.11 –** Bounding construction: Class 2, 3, 4 and 9 Buildings	A doorways between sole occupancy units and the public lobbies and any common / service rooms and the public lobbies (class 2/3 parts) must be protected by self–closing -/60/30 fire doors. In a Class 2/3 building where a path of travel to an exit does not provide a person seeking egress with a choice of travel in different directions to alternative exits and is along an open balcony, landing or the like and passes an external wall of– (i) another sole-occupancy unit; or (ii) a room not within a sole-occupancy unit, then that external wall must– (i) be constructed of concrete or masonry, or be lined internally with a fire-protective covering; and (ii) have any doorway fitted with a self-closing, tight-fitting solid core door not less than 35 mm thick; and (iii) have any windows or other openings– A. protected internally in accordance with C3.4; or B. located at least 1.5 m above the floor of the balcony, landing or the like.	**PS**	**A design practitioner—architectural** The Design Architect is to Provide a Full Schedule of all intended location of Fire Rated Walls. The Design Architect is to Provide a Full Schedule of all intended location of Fire Doors in a Fire Rated Elements. **It was advised that the upper storey bounding walls to SOU's are to extend to the roof Lining as per 3.1 c iii. (Underside of the roof Lining)** **Provided Spec Sheet as to selected wall system and how that system terminates at the roof line.** **Please Note,** Spec E1.5a introduces additional concessions if you so choose. Details are to be confirmed with your Certifier. **Note**: The choice of **FPA101H** Systems does not offer any concessions for Fire Doors. **Performance Solution** Required – 3 SOU's open onto the foyer part of the building which contain a *Pubic Corridor*, this part of a residential *Pubic Corridor* is also connected to the 'common room' which is not separated from the residential *Pubic Corridor.*		
	Resistance to the incipient spread of fire, in relation to a ceiling membrane, means the ability of the membrane to insulate the space between the ceiling and roof, or ceiling and floor above, so as to limit the temperature rise of materials in this space to a level which will not permit the rapid and general spread of fire throughout the space.					

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Fire-protective covering means— (a) 13 mm fire-protective grade plasterboard; or (b) 12 mm cellulose cement flat sheeting complying with AS/NZS 2908.2 or ISO 8336; or (c) 12 mm fibrous plaster reinforced with 13 mm x 13 mm x 0.7 mm galvanised steel wire mesh located not more than 6 mm from the exposed face; or (d) other material not less fire-protective than 13 mm fire-protective grade plasterboard, fixed in accordance with the normal trade practice for a *fire-protective covering*. **Public corridor** means an enclosed corridor, hallway or the like which— (a) serves as a means of egress from 2 or more *sole-occupancy units* to a *required exit* from the *storey* concerned; or (b) is *required* to be provided as a means of egress from any part of a *storey* to a *required exit*. **Note: Spec C1.1, 5.1 (e) Fire Resistance of Building Elements** (e) in a Class 2 or 3 building, except where within the one *sole-occupancy unit*, or a Class 9a *health-care building*, or a Class 9b building, a floor separating *storeys*, or above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, and any column supporting the floor, must— (i) have an FRL of at least 30/30/30; or (ii) have a *fire-protective covering* on the underside of the floor including beams incorporated in it and around the column, if the floor or column is *combustible* or of metal; and				

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		3. Type A Fire-Resisting Construction **3.1 Fire-resistance of building elements** In a building *required* to be of Type A construction— (a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and (b) * * * * * (c) any *internal wall required* to have an FRL with respect to *integrity* and *insulation* must extend to— (i) the underside of the floor next above; or (ii) the underside of a roof complying with Table 3; or (iii) if under Clause 3.5 the roof is not *required* to comply with Table 3, the underside of the *non-combustible* roof covering and, except for roof battens with dimensions of 75 mm x 50 mm or less or *sarking-type material*, must not be crossed by timber or other *combustible* building elements; or (iv) a ceiling that is immediately below the roof and has a *resistance to the incipient spread of fire* to the roof space between the ceiling and the roof of not less than 60 minutes; and				
45.	**C3.12 –** Openings in floors for services	(a) Where a service passes through— (i) a floor that is *required* to have an FRL with respect to *integrity* and *insulation*; or (ii) a ceiling *required* to have a *resistance to the incipient spread of fire*, the service must be installed in accordance with (b). (b) A service must be protected— (i) in a building of Type A construction, by a *shaft* complying with Specification C1.1; or (ii) in a building of Type B or C construction, by a *shaft* that will not reduce the fire performance of the building elements it penetrates; or (iii) in accordance with C3.15. (c) Where a service passes through a floor which is *required* to be protected by a *fire-protective covering*, the penetration must not reduce the fire performance of the covering.	**CRA**	***A design practitioner—architectural*** The Design Architect is to Provide a Full Schedule of all intended Fire Services located passing through a fire rated element. Where services pass through a floor which is required to achieve an FRL or a ceiling required to have a resistance to the incipient spread of fire, the service must be enclosed within a fire resisting shaft or fire protected in accordance with Clause C3.15.		
46.	**C3.13 –** Openings in shafts	Openings in shafts must be protected by: a) if it is in a sanitary compartment – a door or panel which together with its frame, is non-combustible or has an FRL of not less than –/30/30; or b) a self-closing –/60/30 fire door or hopper; or	**CRA**	***A design practitioner—architectural*** The Design Architect is to Provide a Full Schedule of all intended Fire Services located passing through a fire rated element.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		c) an access panel having an FRL of not less than –/60/30; or d) if the shaft is a garbage shaft – a door or hopper of non-combustible construction.		This clause specifies that in buildings of Type A Construction, openings in shafts must be protected (generally with 1 hour fire rated shafts and doors).		
47.	**C3.14 –**	-	**Note**	No provisions		
48.	**C3.15 –** Openings for service installation	Where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, that installation must comply with any one of the following: (a) Tested systems (i) The service, building element and any protection method at the penetration are identical with a prototype assembly of the service, building element and protection method which has been tested in accordance with AS 4072.1 and AS 1530.4 and has achieved the required FRL or resistance to the incipient spread of fire. (ii) It complies with (i) except for the insulation criteria relating to the service if— (A) the service is a pipe system comprised entirely of metal (excluding pipe seals or the like); and (B) any combustible building element is not located within 100 mm of the service for a distance of 2 m from the penetration; and (C) combustible material is not able to be located within 100 mm of the service for a distance of 2 m from the penetration; and (D) it is not located in a required exit. (b) Ventilation and air-conditioning — In the case of ventilating or air-conditioning ducts or equipment, the installation is in accordance with AS/NZS 1668.1. (c) Compliance with Specification C3.15 (i) The service is a pipe system comprised entirely of metal (excluding pipe seals or the like) and is installed in accordance with Specification C3.15 and it— (A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and (B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts; and (C) does not contain a flammable or combustible liquid or gas.	**CRA**	***A design practitioner—architectural*** The Design Architect is to Provide a Full Schedule of all intended Fire Services located passing through a fire rated element. Where services (e.g. hydraulic, mechanical, plumbing, electrical) penetrate a building element that is required to achieve an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire then that installation must be protected / sealed (e.g. fire collars, fire dampers etc) by material that is identical to tested prototypes and in accordance with AS4072.1 and AS1530.4, and having achieved the required FRL or resistance to the incipient spread of fire or other specified method. Details verifying compliance must be provided on plans prior to the issue of a Construction Certificate. Based on the Fire Safety Strategy, current fire stopping requirements would still apply to the bounding ceilings and walls as appropriate regardless to slow fire spread. **Note**: Contractors should check with PC to confirm compliance with their proposed fire stopping method prior to the required mandatory inspection.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) The service is sanitary plumbing installed in accordance with Specification C3.15 and it— (A) is of metal or UPVC pipe; and (B) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and (C) is in a sanitary compartment separated from other parts of the building by walls with the FRL required by Specification C1.1 for a stair shaft in the building and a self-closing –/60/30 fire door. (iii) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification C3.15 and it— (A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and (B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts. (iv) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification C3.15.				
49.	**C3.16 –** Construction Joints	Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL.	**CRA**	***A design practitioner—structural engineering*** Construction joints are to be installed in accordance with a tested prototype in accordance with AS1530.4. Details verifying compliance must be provided on plans prior to the issue of a Construction Certificate.		
50.	**C3.17 –** Columns protected with lightweight construction	A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire.	**CRA**	***A design practitioner—structural engineering*** Columns must be protected in accordance with the identical tested prototype. Details verifying compliance must be provided on plans prior to the issue of a Construction Certificate.		
	SPECIFICATION C.1.1 – FIRE-RESISTING CONSTRUCTION					
51.	**2.1 –** Exposure to fire-source features	A building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that– (i) has an FRL of not less than 30/–/–; and (ii) is neither transparent nor translucent.	**Note**	***Noted***		
52.	**2.2 –**	Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must have an FRL not less than that	**Note**	***A design practitioner—structural engineering***		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Fire protection for a support of another part	required by other provisions of this Specification; and if located within the same fire compartment as the part it supports have an FRL in respect of structural adequacy the greater of that required for the supporting part itself and for the part it supports.				
53.	**2.3 –** Lintels	A lintel must have the FRL required for the part of the building in which it is situated unless it does not contribute to the support of a fire door, fire window or fire shutter and meets the requirements of Spec C1.1 clause 2.3 (a) & (b).	**Note**	***A design practitioner—structural engineering***		
54.	**2.4 –** Attachments not to impair fire-resistance	The method of attaching or installing a finish, lining, ancillary element or service installation to a building element must not reduce the fire-resistance of that element to below that required.	**Note**	***A design practitioner—architectural***		
55.	**2.5 –** General concessions	Detail any concessions that apply: • Steel columns (1 or 2 storey buildings) • Timber columns (1 storey buildings) • Structures on roofs • Curtain walls and panel walls • Balconies and verandas' Structures on roofs — A non-combustible structure situated on a roof need not comply with the other provisions of this Specification if it only contains— (i) lift motor equipment; or (ii) one or more of the following: (A) Hot water or other water tanks. (B) Ventilating ductwork, ventilating fans and their motors. (C) Air-conditioning chillers. (D) Window cleaning equipment. (E) Other service units that are non-combustible and do not contain flammable or combustible liquids or gases.	**Note**	***A design practitioner—architectural***		
56.	**2.6 –** Mezzanine floors: Concession		**Note**	***A design practitioner—architectural***		
57.	**2.7 –** Enclosure of shafts	Fire-isolated shafts are required to be enclosed at the top and bottom of the shaft with fire rated construction having an FRL required for the walls of a non-load-bearing shaft in the same building, as per specification C1.1. This fire rating is required in two directions.	**Note**	***A design practitioner—architectural***		

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		The above does not apply to shafts extending beyond the roof covering, other than fire isolated stair and lift shafts and the bottom of non-combustible shafts laid directly on the ground.				
58.	**2.8 –** Carparks in Class 2 and 3 Buildings	Class 2 buildings not more than 4 storeys Class 3 building not more than 3 storeys	**Note**			
59.	**2.9 –** Residential Aged Care building: Concession	Noted	**Note**			
60.	**3.0 –** Type A fire-resisting construction	Noted	**Note**			
61.	**3.1 –** Fire-resistance of building elements	The FRL's of all elements are to be in accordance with the FRL's as per Table 3. **(see Appendix A)** • An external wall that is required to have an FRL tested from both directions to satisfy the FRL requirement. • Internal walls in a Class 2 building required to be fire rated must extend to– **(i) to the underside of the floor next above if that floor has an FRL of at least 30/30/30 or a fire-protective covering on the underside of the floor; or** **(ii) the underside of a ceiling having a resistance to the incipient spread of fire to the roof space above itself of not less than 60 minutes; or** **(iii) the underside of the roof covering if it is non-combustible and, except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or** **(iv) 450 mm above the roof covering if it is combustible; and** • In a Class 2 or 3 building, except where within the one sole-occupancy unit, or a Class 9a health-care building, or a Class 9b building, a floor separating storey, or above a space for the accommodation of motor vehicles or used for	**CRA**	***A design practitioner—architectural*** ***A design practitioner—structural engineering*** As the building is required to comply with that of Type A Construction, the relevant FRL's must be achieved in both directions (i.e. internal and external) and be of non-combustible construction. Typically, the building will need to comply with the following: o External walls, common walls, flooring and the like must be of non-combustible construction (i.e. no timber framing) o Insulation & sarking provided within the external walls must be of non-combustible materials. o Non-combustible fire stopping will be required at the cavity edges (both vertically and horizontally). o An internal separating wall required to have an FRL must not be penetrated by any building element other than roof battens of dimensions not greater than 50mm x 75mm. o A loadbearing internal wall must be of concrete or masonry construction.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		storage or any other ancillary purpose, and any column supporting the floor, must— (i) have an FRL of at least 30/30/30; or (ii) have a fire-protective covering on the underside of the floor including beams incorporated in it and around the column, if the floor or column is combustible or of metal. **Note:** This includes non-combustible insulation. When an insulation material is not certified as non-combustible, this material will need to be the subject of a Fire Engineering, this needs to be disclosed. The FRL's specified in **Table 3** for an external column apply also to those parts of an internal column that face and are within 1.5m of a window and are exposed through that window to a fire-source feature. **I.e.:** It should also be noted that if Dincel material is to be used as an element where the BCA requires such element to be non-combustible, this material will need to be the subject of a Fire Engineering Assessment at the CC stage		0 External walls must achieve an FRL in accordance with table 3 depending on the setback from the boundaries. 0 Any loadbearing external columns (not in the external wall) will need to achieve an FRL. 0 The roof need not achieve an FRL. 0 Internal loadbearing columns in the topmost storeys may be reduced to achieve an FRL of not less than 60/60/60. With regard to the garbage chute located within the basement level, please note that the fire rating of the metal ducting is to be continued from the soffit of the room, down to the self-closing fire rated hopper.		
62.	**3.2 –** Concessions for floors	A floor need not comply with Table 3 if— (a) it is laid directly on the ground; or (b) in a Class 2, 3, 5 or 9 building, the space below is not a storey, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or (c) it is a timber stage floor in a Class 9b building laid over a floor having the required FRL and the space below the stage is not used as a dressing room, store room, or the like; or (d) it is within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; or (e) it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the required FRL.	**Note**	***Noted***		
63.	**3.3 –** Floor Loading of Class 5 and 9b buildings: Concession	If a floor in a Class 5 or 9b building is designed for a live load not exceeding 3 kPa— (a) the floor next above (including floor beams) may have an FRL of 90/90/90; or (b) the roof, if that is next above (including roof beams) may have an FRL of 90/60/30.	**Note**	***N / A***		
64.	**3.4 –** Roof superimposed	A Roof located over a concrete slab fire rated as per Table 23, need not have an FER also.	**Note**	***Noted***		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

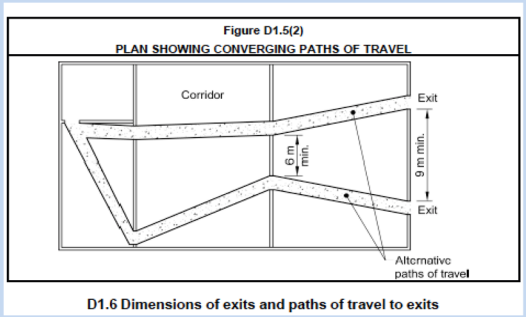
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	on concrete slab: Concession					
65.	**3.5 –** Roof: Concession	A roof need not comply with Table 3 if its covering is non-combustible and the building— a) has a sprinkler system complying with Specification E1.5 installed throughout; or b) has a rise in storeys of 3 or less; or c) is of Class 2 or 3; or d) has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.	**Note**	***Noted***		
66.	**3.6 –** Roof lights	If a roof is *required* to have an FRL or its covering is *required* to be *non-combustible*, roof lights or the like installed in that roof must— a) have an aggregate area of not more than 20% of the roof surface; and b) be not less than 3 m from— (i) any boundary of the allotment other than the boundary with a road or public place; and (ii) any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the rooflight or the like are protected in accordance with C3.4; and (iii) any rooflight or the like in an adjoining sole-occupancy unit if the walls bounding the unit are required to have an FRL; and (iv) any rooflight or the like in an adjoining fire-separated section of the building; and c) if a ceiling with a *resistance to the incipient spread of fire* is *required*, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.	**Note**	***Noted***		
67.	**3.7 –** Internal columns and walls: Concession	For a building with an *effective height* of not more than 25 m and having a roof without an FRL in accordance with Clause 3.5, in the *storey* immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and *internal walls* other than *fire walls* and *shaft* walls may have— (a) in a Class 2 or 3 building: FRL 60/60/60; or (b) in a Class 5, 6, 7, 8 or 9 building— (i) with *rise in storeys* exceeding 3: FRL 60/60/60 (ii) with rise *in storeys* not exceeding 3: no FRL.	**CRA**	***A design practitioner—structural engineering*** ***A design practitioner—architectural*** *FRL's are to be shown on CC Plans.*		
	SECTION D – ACCESS AND EGRESS					

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

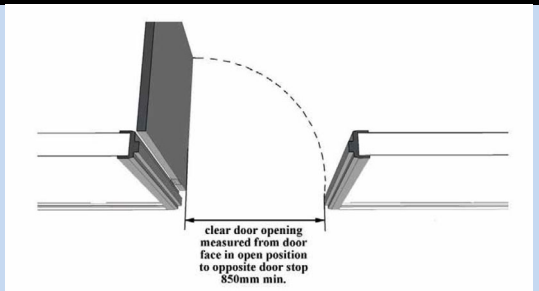
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Part D1 – Provision for Escape					
	Clause	Description	**Status**	Comments		
68.	**D1.1 –** Application of Part	The Deemed-to-Satisfy provisions of this Part do not apply to the internal parts of a sole-occupancy unit of a Class 2 or 3 building or a Class 4 part of a building.	**Note**	***Noted***		
69.	**D1.2 –** Number of exits required	(a) **All buildings** — Every building must have at least one exit from each storey. (b) **Class 2 to 8 buildings** — In addition to any horizontal exit, not less than 2 exits must be provided from the following: (i) Each storey if the building has an effective height of more than 25m. (ii) A Class 2 or 3 building subject to C1.5. (d) **Class 9 buildings** — In addition to any horizontal exit, not less than 2 exits must be provided from the following: (i) Each storey if the building has a rise in storeys of more than 6 or an effective height of more than 25 m. (ii) Any storey which includes a patient care area in a Class 9a health-care building. (iii) Any storey that contains sleeping areas in a Class 9c building. (iv) Each storey in a Class 9b building used as an early childhood centre. (v) Each storey in a primary or secondary school with a rise in storeys of 2 or more. (vi) Any storey or mezzanine that accommodates more than 50 persons, calculated under D1.13.	**Complies**	Building has effective height less than 25m. Each storey is to have at least one (1) exit. The lower ground storey is to have two (2) exits as the rise to an exit is more than 1.5m. Currently **each storey** is provided with **two (2) exits**.		
70.	**D1.3 –** When fire isolated exits are required	**Class 2 and 3 buildings** — Every stairway or ramp serving as a required exit must be fire-isolated unless it connects, passes through or passes by not more than— (i) 3 consecutive storeys in a Class 2 building; or (ii) 2 consecutive storeys in a Class 3 building, and one extra storey of any classification may be included if— (iii) it is only for the accommodation of motor vehicles or for other ancillary purposes; or (iv) the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; or (v) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having— (A) an FRL of –/60/60, if non-loadbearing; and (B) an FRL of 90/90/90, if loadbearing; and	**Complies**	**The building is afforded with several exits, only two (2) exits are required to be isolated being the main internal exits serving all levels of the building.**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(C) no opening that could permit the passage of fire or smoke. **Class 5, 6, 7, 8 or 9 buildings** — Every stairway or ramp serving as a required exit must be fire-isolated unless— (i) in a Class 9a health-care building — it connects, or passes through or passes by not more than 2 consecutive storeys in areas other than patient care areas; or (ii) it is part of an open spectator stand; or (iii) in any other case except in a Class 9c building, it connects, passes through or passes by not more than 2consecutive storeys and one extra storey of any classification may be included if— (A) the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; or (B) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having— (aa) an FRL of –/60/60, if non-loadbearing; and (bb) an FRL of 90/90/90 for Type A construction or 60/60/60 for Type B or C construction, if loadbearing; and (cc) no opening that could permit the passage of fire or smoke.				
71.	**D1.4 –** Exit travel distances	a) **Class 2 and 3 buildings**— (i) The entrance doorway of any *sole-occupancy unit* must be not more than— (A) 6 m from an *exit* or from a point from which travel in different directions to 2 *exits* is available; or (B) 20 m from a single *exit* serving the *storey* at the level of egress to a road or *open space*; and (ii) no point on the floor of a room which is not in a *sole-occupancy unit* must be more than 20 m from an *exit* or from a point at which travel in different directions to 2 *exits* is available. **Class 5, 6, 7, 8 or 9 buildings** — Subject to (d), (e) and (f)— (i) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m; and (ii) in a Class 5 or 6 building, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30 m.	**CRA**	**As the building is required to be sprinkler protected, the selection of a AS2118.1 system will allow up to 12m in leu of 6m.** 		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Note Concessions under **Specification E1.5a** for compliance				
72.	**D1.5 –** Distances between alternative exits	Exits that are required as alternative means of egress must be— (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— (i) in a Class 2 or 3 building — 45 m apart; or (ii) in a Class 9a health-care building, if such required exit serves a patient care area — 45 m apart; or (iii) in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart.	**Complies**	**Travel distances comply**  D1.6 Dimensions of exits and paths of travel to exits		
73.	**D1.6 –** Dimensions of exits	In a required exit or path of travel to an exit— (a) the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and (b) the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than— (i) 1 m; or (ii) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area (iii) in a public corridor in a Class 9c aged care building, notwithstanding (c) and (d)— (A) 1.5 m; and (B) 1.8 m for the full width of the doorway, providing access into a sole-occupancy unit or communal bathroom; and (c) if the storey, mezzanine or open spectator stand accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width, except for doorways, must be not less than— (i) 1 m plus 250 mm for each 25 persons (or part) in excess of 100; or (ii) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area; and (d) if the storey, mezzanine or open spectator stand accommodates more than 200 persons, the aggregate	**CRA**	**A design practitioner—architectural** In a required exit or path of travel, the unobstructed height throughout must be not less than 2m, except the unobstructed height of any doorway must be reduced to not less than 1980mm. The unobstructed width of each exit or path of travel to an exit except a doorway must not be less than 1m. The unobstructed width must be measured clear of all obstructions such as handrails, projecting parts of balustrades or other barriers and the like. Further details are to be provided in the form of a door schedule which indicates that the unobstructed widths of the proposed doorways are not less than 750mm for isolated exits, all other doors where on an accessible storey, should be consistent with AS1428.1:2009 I.e., Minimum of 850mm. **Dimension of appear Exits Comply**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		unobstructed width, except for doorways, must be increased to— (i) 2 m plus 500 mm for every 60 persons (or part) in excess of 200 persons if egress involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12; or (ii) in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200; and (e) in an open spectator stand which accommodates more than 2000 persons, the aggregate unobstructed width, except for doorways, must be increased to 17 m plus a width (in metres) equal to the number in excess of 2000 divided by 600.				
74.	**D1.7 –** Travel via fire-isolated exits	(a) A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from— (i) a public corridor, public lobby or the like; or (ii) a sole-occupancy unit occupying all of a storey; or (iii) a sanitary compartment, airlock or the like. (b) Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway— (i) to a road or open space; or **(ii) to a point—** **(A) in a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter; and** **(B) from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or** (iii) into a covered area that— (A) adjoins a road or open space; and (B) is open for at least 1/3 of its perimeter; and (C) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and (D) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m. (c) Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have— (i) an FRL of not less than 60/60/60; and	**PS**	**A design practitioner—architectural** Protection of foyer doors and glazing is required to the discharge doors next to in accordance with C3.4 as the stair is with <3m above the discharge point and <6m. **(b)(ii)(A) A Fire Engineer if to confirm that the under-croft area meets 2/3 open design requirements.**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) any openings protected internally in accordance with C3.4, for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser. (d) If more than 2 access doorways, not from a sanitary compartment or the like, open to a required fire-isolated exit in the same storey— (i) a smoke lobby in accordance with D2.6 must be provided; or (ii) the exit must be pressurised in accordance with AS/NZS 1668.1. (e) A ramp must be provided at any change in level less than 600 mm in a fire-isolated passageway in a Class 9 building.				
75.	**D1.8 –** External stairways in lieu of fire-isolated exits	An external stairway or ramp may serve as a required exit in lieu of a fire-isolated exit serving a storey below an effective height of 25m provided that it is constructed in accordance with the requirements of sub-clauses (a) to (d). The provisions also set out the requirements of protection for external required exits.	**Note**			
76.	**D1.9 –** Travel by Non-fire-isolated Stairways or ramps	**(a) A non-*fire-isolated stairway* or non-*fire-isolated ramp* serving as a *required exit* must provide a continuous means of travel by its own *flights* and landings from every *storey* served to the level at which egress to a road or *open space* is provided.** (b) In a **Class** 2, **3** or 4 building, the distance between the doorway of a room or *sole-occupancy unit* and the point of egress to a road or *open space* by way of a stairway or ramp that is not fire-isolated and is *required* to serve that room or *sole-occupancy unit* must not exceed— (i) 30 m in a building of Type C construction; or (ii) 60 m in all other cases. (c) In a **Class** 5, 6**, 7**, 8 or 9 building, the distance from any point on a floor to a point of egress to a road or *open space* by way of a *required* non-*fire-isolated stairway* or non-*fire-isolated ramp* must not exceed 80 m. (d) In a **Class** 2, **3** or 9a building, a *required* non-*fire-isolated stairway* or non-*fire-isolated ramp* must discharge at a point not more than— (i) 15 m from a doorway providing egress to a road or *open space* or from a *fire-isolated passageway* leading toa road or *open space*; or (ii) 30 m from one of 2 such doorways or passageways if travel to each of them from the non-*fire-isolated stairway* or non-*fire-isolated ramp* is in opposite or approximately opposite directions.	**CRA**	**Travel distances to open space comply via non-fire isolated exits.**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(e) In a Class 5 to 8 or 9b building, a *required* non-*fire-isolated stairway* or non-*fire-isolated ramp* must discharge at a point not more than— (i) 20 m from a doorway providing egress to a road or *open space* or from a *fire-isolated passageway* leading toa road or *open space*; or (ii) 40 m from one of 2 such doorways or passageways if travel to each of them from the non-*fire-isolated stairway* or non-*fire-isolated ramp* is in opposite or approximately opposite directions.				
77.	**D1.10 –** Discharge from exits	(a) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it. (b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than— (i) the minimum width of the required exit; or (ii) 1 m, whichever is the greater. (c) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by— (i) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to-Satisfy Provisions of Part D3; or (ii) except if the exit is from a Class 9a building, a stairway complying with the Deemed-to-Satisfy Provisions of the BCA. (d) The discharge point of alternative exits must be located as far apart as practical. (e) In a Class 9b building which is an open spectator stand that accommodates more than 500 persons, a required stairway or required ramp must not discharge to the ground in front of the stand. (f) In a Class 9b building used as an entertainment venue, at least half of the required number of exits from each storey or mezzanine, and at least half of the aggregate width of such exits must discharge otherwise than through the main entrance, or the area immediately adjacent to the main entrance of the building. (g) The number of persons accommodated must be calculated according to D1.13.	**CRA**	**A design practitioner—architectural** Suitable barriers such as bollards are to be provided to prevent the blockage of exits by vehicles, etc. All external ramps that are used as a path from an exit to a road must have a gradient not steeper than 1:8 at any part.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

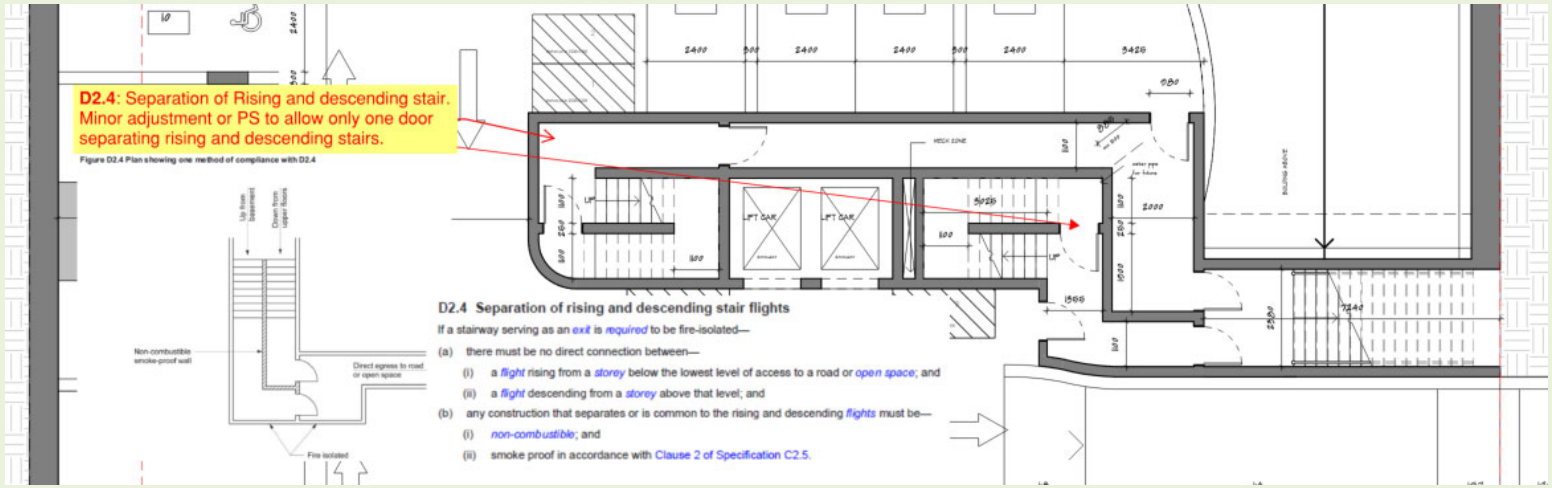
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
78.	**D1.11 –** Horizontal exits	Horizontal exits must not be counted as required exits between sole-occupancy units or in an early childhood centre, primary or secondary school. Horizontal exits may be counted as required exits in Class 9a-health care building or a Class 9c aged care building if the path of travel from a fire compartment leads by one or more horizontal exits directly into another fire compartment which has at least one required exit which is not a horizontal exit. In addition, horizontal exits must have a clear area on the side of the fire wall to which occupants are evacuating, to accommodate the total number of persons serviced by the horizontal exit of not less than 2.5m2 per patient.	**N / A**			
79.	**D1.12 –** Non-required stairs, ramps or escalators	This clause sets out the requirements for the application of non-required exits and the circumstances under which they may be utilised. Clause D1.12 only applies to escalators, moving walkways and travelators, non-required non-fire-isolated stairways and non-required non-fire-isolated ramps. A non-required stairway cannot be used to connect patient care areas in a class 9a building or resident use areas in a class 9c building.	**N / A**			
80.	**D1.13 –** Number of persons accommodated	**Informational–** The number of persons accommodated in a storey, room or mezzanine must be determined within consideration to the purpose for which it is used and the layout of the floor area by– (a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in BCA Table D1.13 according to the use of that part, excluding spaces set aside for— (i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and (ii) service ducts and the like, sanitary compartments or other ancillary uses; or (b) reference to the seating capacity in an assembly building or room; or (c) any other suitable means of assessing its capacity. Based on floor area and Table D1.13, the population numbers are as follows:	**Note**			
81.	**D1.14 –** Measurement of distance	**Informational –** The nearest part of an exit means in the case of— (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and	**Noted**			

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and (d) a doorway opening to a road or open space, the nearest part of the doorway; and (e) a horizontal exit, the nearest part of the doorway.				
82.	**D1.15 –** Method of measurement	**Informational –** This clause sets out the method of measuring travel distance to an exit in various circumstances by determining the path that a person would walk.	**Note**			
83.	**D1.16 –** Plant rooms and lift machine rooms: Concession	(a) A ladder may be used in lieu of a stairway to provide egress from— (i) a plant room with a *floor area* of not more than 100 m2; or (ii) all but one point of egress from a plant room, a lift machine room or a Class 8 *electricity network substation* with a *floor area* of not more than 200 m2. (b) A ladder permitted under (a)— (i) may form part of an *exit* provided that in the case of a *fire-isolated stairway* it is contained within the *shaft*; or (ii) may discharge within a *storey* in which case it must be considered as forming part of the path of travel; and (iii) for a plant room or a Class 8 *electricity network substation*, must comply with AS 1657; and (iv) for a lift machine room, where access is provided from within a machine room to a secondary floor, a fixed rung type ladder complying with AS 1657 may be used, provided that— (A) the height between the floors is not more than 2800 mm; and (B) the ladder is inclined at an angle to the horizontal not less than 65 degrees nor more than 75 degrees; and (C) the distance between the front face of the ladder and any adjacent obstruction is not less than— (aa)960 mm, where the ladder is inclined 65 degrees to the horizontal; or (bb)760 mm, where the ladder is inclined 75 degrees to the horizontal; or (cc)a distance that is determined by interpolating the values in (aa) and (bb), where the ladder is inclined at any angle between 65 degrees and 75 degrees to the horizontal; and (D) a clear space not less than 600 mm exists between the foot of the ladder and any equipment.	**Note**	**A design practitioner—architectural** **A design practitioner—structural engineering**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
84.	**D1.17 –** Access to lift pits	Access to lift pits must— (a) where the pit depth is not more than 3 m, be through the lowest landing doors; or (b) where the pit depth is more than 3 m, be provided through an access doorway complying with the following: (i) In lieu of D1.6, the doorway must be level with the pit floor and not be less than 600 mm wide by 1980 mm high clear opening, which may be reduced to 1500 mm where it is necessary to comply with (ii). (ii) No part of the lift car or platform must encroach on the pit doorway entrance when the car is on a fully compressed buffer. (iii) Access to the doorway must be by a stairway complying with AS 1657. (iv) In lieu of D2.21, doors fitted to the doorway must be— (A) of the horizontal sliding or outwards opening hinged type; and (B) self-closing and self-locking from the outside; and (C) marked on the landing side with the letters not less than 35 mm high: (D) "DANGER LIFT WELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES"	**Note**			
	Part D2 – Construction of Exits					
85.	**D2.1 –** Application of Part	**Informational–** Except for D2.13, D2.14(a), D2.16, D2.17(d), D2.17(e), D2.21 and D2.24, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 3 building. Except for D2.13, D2.14(a), D2.16, D2.17(d), D2.17 (e), D2.18 & D2.24, the deemed-to-satisfy Provisions of this Part do not apply to internal parts of the Class 2 sole-occupancy units.	**Note**			
86.	**D2.2 –** Fire isolated stairs or ramps	A stairway or ramp, including landings that are required to be within a fire-resisting shaft must be constructed of non-combustible materials to protect the structural integrity of the shaft.	**CRA**	**A design practitioner—architectural** **A design practitioner—structural engineering**		
87.	**D2.3 –** Non-fire-isolated stairways and ramps	Buildings more than 2 storeys Required stairs and ramps (including landings and any supporting building elements) must be constructed according to D2.2, or only of- (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that— (i) has a finished thickness of not less than 44 mm; and	**Complies**	**A design practitioner—architectural** Required stairs that are not required to be within a fire-resting shaft are to be constructed of concrete, steel, or timber of specified minimum dimensions.		

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		(ii) has an average density of not less than 800 kg/m3 at a moisture content of 12%; and (iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue".				
88.	**D2.4 –** Separation of rising and descending stair flights	If a stairway serving as an exit is required to be fire-isolated— (a) there must be no direct connection between— (i) a flight rising from a storey below the lowest level of access to a road or open space; and (ii) a flight descending from a storey above that level; and (b) any construction that separates or is common to the rising and descending flights must be (i) non-combustible; and (ii) smoke proof in accordance with Clause 2 of Specification C2.5. Or; Complies – there is no direct connection between the stairs rising from the basement levels and the stairs from the residential levels.	**Need Design Detail**	**A design practitioner—architectural** A Smoke Door is required to separate Rising and Descending Stairs. This includes smoke separation within the stair itself between the two (2) separate flights.		
						
89.	**D2.5 –** Open access ramps and balconies	Where an open access ramp or balcony is provided to meet the smoke hazard management requirements of Table E2.2a, it must— (a) have ventilation openings to the outside air which— (i) have a total unobstructed area not less than the *floor area* of the ramp or balcony; and (ii) are evenly distributed along the open sides of the ramp or balcony; and	**N / A**	**A design practitioner—architectural**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(b) not be enclosed on its open sides above a height of 1 m except by an open grille or the like having a free air space of not less than 75% of its area.				
90.	**D2.6 –** Smoke lobbies	A smoke lobby *required* by D1.7 must— (a) have a *floor area* not less than 6 m2; and (b) be separated from the occupied areas in the *storey* by walls which are impervious to smoke, and— (i) have an FRL of not less than 60/60/– (which may be fire-protective grade plasterboard, gypsum block with set plaster, face brickwork, glass blocks or glazing); and (ii) extend from slab to slab, or to the underside of a ceiling with a *resistance to the incipient spread of fire* of 60minutes which covers the lobby; and (iii) any construction joints between the top of the walls and the floor slab, roof or ceiling must be smoke sealed with intumescent putty or other suitable material; and (c) at any opening from the occupied areas, have smoke doors complying with Clause 3 of Specification C3.4 except that the smoke sensing device need only be located on the approach side of the opening; and (d) be pressurised as part of the *exit* if the *exit* is *required* to be pressurised under E2.2.	**N / A**	**A design practitioner—architectural**		
91.	**D2.7 –** Installations in exits and paths of travel	(a) Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the Deemed-to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp. (b) An opening to any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like, must not be located in any part of a required exit or any corridor, hallway, lobby or the like leading to a required exit. (c) Gas or other fuel services must not be installed in a required exit. (d) Services or equipment comprising— (i) electricity meters, distribution boards or ducts; or (ii) central telecommunications distribution boards or equipment; or (iii) electrical motors or other motors serving equipment in the building, may be installed in— (i) a required exit, except for fire-isolated exits specified in (a); or	**CRA**	**A design practitioner—architectural** EDB cupboards or the like which are located within the path of travel must be enclosed in non-combustible construction and be suitably smoke sealed to prevent smoke spreading from the enclosure. In this regard, the doors must be lined on the inside of the door with sheet metal or similar and smoke seals provided around the perimeter of the door. The ceiling within the cupboard shall also be smoke sealed to prevent smoke leaking into the corridor ceiling space.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

<table>
<tr><th>ITEM</th><th>Clause</th><th>Reference</th><th>Status</th><th>Comments</th><th>DETAIL SHOWN ON CC PLANS OR SPECIFICATION</th><th>RFI'S</th></tr>
<tr><td></td><td></td><td>(ii) in any corridor, hallway, lobby or the like leading to a required exit,
if the services or equipment are enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure.
(e) Electrical wiring may be installed in a fire-isolated exit if the wiring is associated with—
(i) a lighting, detection, or pressurisation system serving the exit; or
(ii) a security, surveillance or management system serving the exit; or
(iii) an intercommunication system or an audible or visual alarm system in accordance with D2.22; or
(iv) the monitoring of hydrant or sprinkler isolating valves.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>92.</td><td>D2.8 –
Enclosure of space under stairs and ramps</td><td>The space below non-fire-isolated stairs must not be enclosed to form a cupboard or similar enclosed space unless the enclosing walls have an FRL of not less than 60/60/60 and any doorway to the enclosed space is fitted with a self-closing --/60/30 fire door.
There is to be no form of cupboard or similar enclosed space proposed within any of the stairways.
The existing stair appears not to have an accessible cupboard.</td><td>Note</td><td>A design practitioner—architectural</td><td></td><td></td></tr>
<tr><td>93.</td><td>D2.9 –
Width of stairways</td><td>Informational –
A required stairway or ramp that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2 m.</td><td>N / A</td><td>A design practitioner—architectural</td><td></td><td></td></tr>
<tr><td>94.</td><td>D2.10 –
Pedestrian ramps</td><td>(a) A fire-isolated ramp may be substituted for a fire-isolated stairway if the construction enclosing the ramp and the width and ceiling height comply with the requirements for a fire-isolated stairway.
(b) A ramp serving as a required exit must—
(i) where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS 1428.1; or
(ii) in any other case, have a gradient not steeper than 1:8.
(c) The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586.
Table 2 – Slip resistance Classification
<table><tr><th>Application</th><th colspan="2">Surface Conditions</th></tr><tr><th></th><th>Dry</th><th>Wet</th></tr></table></td><td>CRA</td><td>A design practitioner—architectural

Ramps serving as a required exit must not have a gradient steeper than 1:8. If the ramp is required for disabled access under Part D3 it must comply with AS1428.1. The surface of the ramp must have a non-slip finish.

The entry is not to be classified as a Pedestrian ramp for the purpose of an Exit.

However, see D3 of this report for further comments.</td><td></td><td></td></tr>
</table>

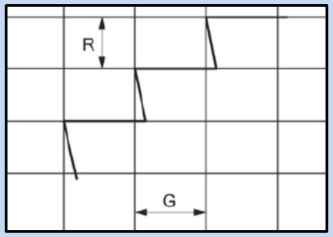
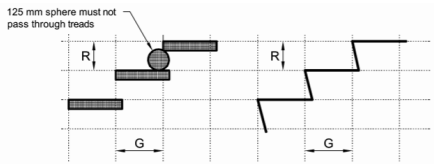
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference			Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Ramp steeper than 1:14	P4 or R11	P5 or R12				
		Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11				
		Tread or landing surface	P3 or R10	P4 or R11				
		Nosing or landing edge strip	P3	P4				
95.	**D2.11 –** Fire-isolated passageways	(a) The enclosing construction of a fire-isolated passageway must have an FRL when tested for a fire outside the passageway in another part of the building of— (i) if the passageway discharges from a fire-isolated stairway or ramp — not less than that required for the stairway or ramp shaft; or (ii) in any other case — not less than 60/60/60. (b) Notwithstanding (a)(ii), the top construction of a fire-isolated passageway need not have an FRL if the walls of the fire-isolated passageway extend to the underside of— (i) a non-combustible roof covering; or (ii) a ceiling having a resistance to the incipient spread of fire of not less than 60 minutes separating the roof space or ceiling space in all areas surrounding the passageway within the fire compartment. **Note**: E2.2a Fire Isolated Passages >60m are required to be pressurised as per or open access ramps or balconies.			**N / A**	**A design practitioner—architectural**		
96.	**D2.12 –** Roof as open space	If an *exit* discharges to a roof of a building, the roof must— (a) have an FRL of not less than 120/120/120; and (b) not have any roof lights or other openings within 3 m of the path of travel of persons using the *exit* to reach a road or *open space*.			**CRA**	**A design practitioner—architectural** **A design practitioner—structural engineering** **Comment:** The basement roof slab must achieve a minimum FRL for 120/120/120.		
97.	**D2.13 –** Goings and risers	(a) A stairway must have— (i) not more than 18 and not less than 2 risers in each *flight*; and (ii) going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13, except as permitted by (b) and (c);and (iii) constant goings and risers throughout each *flight*, except as permitted by (b) and (c), and the dimensions of goings (G) and risers (R) in accordance with (a)(ii) are considered constant if the variation between— (A) adjacent risers, or between adjacent goings, is no greater than 5 mm; and			**CRA**	**A design practitioner—architectural** **A design practitioner—structural engineering** Stairs are to have risers measuring between 115-190mm and goings between 250-355. Goings and Risers are to satisfy the equation of		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

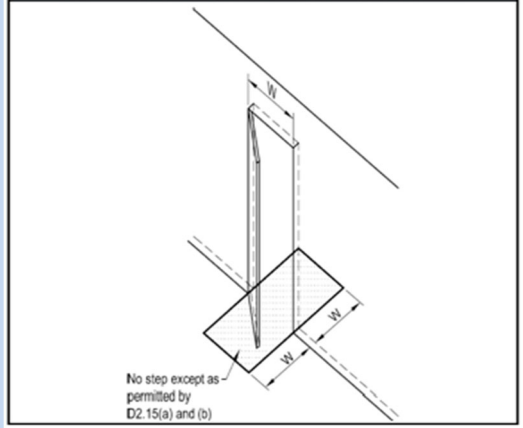
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<tr><td></td><td></td><td>(B) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm; and
(iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and
(v) treads which have—
(A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or
(B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and
(vi) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and
(vii) in a Class 9b building, not more than 36 risers in consecutive flights without a change in direction of at least30°; and
(viii) in the case of a required stairway, no winders in lieu of a landing.</td><td></td><td>2R+G=700(max) and 550(min).

Any gap between risers must not permit a 125mm sphere to pass through it, these are to be adjusted to ensure compliance is achieved.

 
</td><td></td><td></td></tr>
<tr><td></td><td colspan="3">Table D2.14 Slip-resistance classification
<table><tr><th>Application</th><th>Dry surface conditions</th><th>Wet surface conditions</th></tr><tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr><tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr></table></td><td colspan="2"><table><tr><th></th><th colspan="2">Riser (R)</th><th colspan="2">Going (G) (2)</th><th colspan="2">Quantity (2R+G)</th></tr><tr><th></th><th>Max</th><th>Min</th><th>Max</th><th>Min</th><th>Max</th><th>Min</th></tr><tr><td>Public stairways</td><td>190</td><td>115</td><td>355</td><td>250</td><td>700</td><td>550</td></tr><tr><td>Private stairways(1)</td><td>190</td><td>115</td><td>355</td><td>240</td><td>700</td><td>550</td></tr></table> 
</td><td></td><td></td></tr>
<tr><td>98.</td><td>D2.14 –
Landings</td><td>Landings to have either a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586 or a strip at the edge of the landing with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586.
<table><tr><th rowspan="2">Application</th><th colspan="2">Surface conditions</th></tr><tr><th>Dry</th><th>Wet</th></tr><tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr><tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr></table></td><td>CRA</td><td>A design practitioner—architectural

Landings must comply with the requirements of Clause D2.14 of the BCA. Landings must be not less than 750mm long and have a non-slip finish throughout or an adequate non-skid strip near the edge of the landing where it leads to a flight below and 30% colour contrasting nosings and slip resistant as per table D2.14.</td><td></td><td></td></tr>
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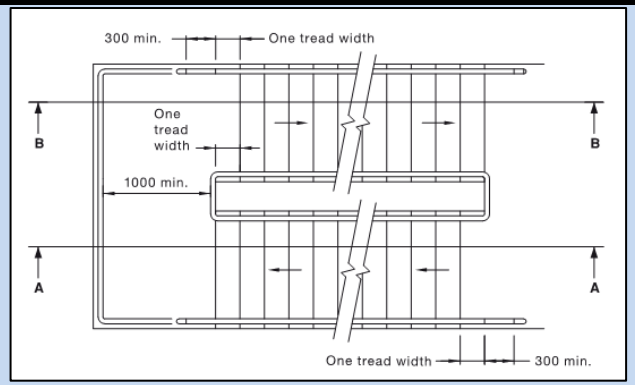
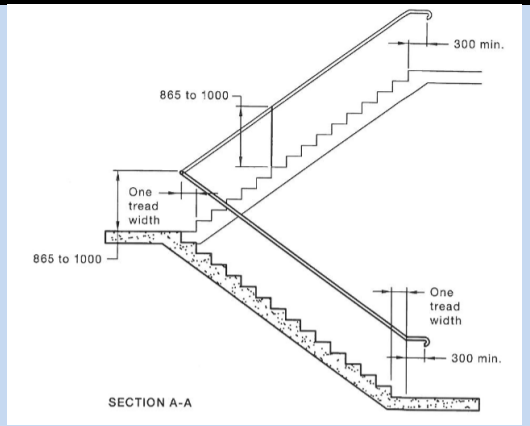
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
99.	**D2.15 –** Thresholds	The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorways that the width of the door leaf unless– (a) in patient care areas in a Class 9a health-care building, the door sill is not more than 25mm above the finished floor level to which the doorway opens; or (b) in a Class 9c building, a ramp is provided with a maximum gradient of 1:8 for a maximum height of 25mm over the threshold; or (c) in a building required to be accessible by Part D3, the doorway— (i) opens to a road or open space; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or (d) in a Class 9b building used as an entertainment venue, the door sill of a doorway opening to a road, open space, external stair landing or external balcony is not more than 50mm above the finished floor level to which the doorway opens; or (e) in other cases – (i) the doorway opens to a road or open space, internal stair landing or external balcony; and (ii) the door sill is not more than 190mm above the finished surface of the ground, balcony, or the like, to which to doorway opens.	**CRA**	**A design practitioner—architectural** A threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless the door opens to a road or open space, external stair landing or external balcony and the doorsill is not more than 190mm above the finished surface of the ground balcony or the like to which the door opens. Figure D2.15(1) ILLUSTRATION OF WHERE A STEP IS NOT ALLOWED IN A DOORWAY  **Concessions**—D2.15(a), (b) and (c) Concessions are granted in specified circumstances. These include: • D2.15(a)—in the patient care areas of a hospital; and • D2.15(b)—in Class 9c buildings; and • D2.15(c)—in a building required to be accessible by Part D3. • D2.15(d)—in other buildings, to allow for weatherproofing under an external door.		
100.	**D2.16 –** Balustrades	This clause details where balustrades are required to be provided and sets out in specific detail the construction requirements. Typically, the following will apply to a Class 2 building: 0 Balustrades are required where the fall to the level below is more than 1m in height. The minimum height of a balustrade is 1m above the floor of the landing, walkway or the like; and 865mm above the floor of a stairway or a ramp.	**CRA**	**A design practitioner—architectural** **A design practitioner—structural engineering** The plans indicate that in some cases that glass balustrades are provided, which will need to be provided with a continuous handrail or top rail and fixed into the internal wall or column construction.		

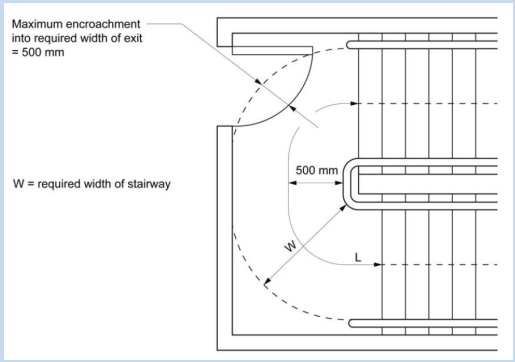
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		◦ For a fall of more than 4m to the surface level below, a window sill must be a minimum of 865mm in height above the height of the floor surface. ◦ Where the floor is more than 4m above the surface beneath the balustrade any horizontal or near horizontal members between 150mm and 760mm above the floor must not could facilitate climbing. Balustrades must be constructed so as to not permit a sphere of 125mm diameter to pass through. The exception to this is within fire isolated exits within the building, where the rails can be positioned a maximum of 460mm apart, so long as a bottom rail is located so a sphere of 150mm cannot pass through the opening between the nosing of the stair treads and the rail or between the floor of the landing, balcony or the like.		Notwithstanding, consideration shall also be given to the below: ◦ Any planter boxes located on the podium should be designed to achieve a 1m height to prevent a further 1m high balustrade being provided at the edge of the building. ◦ Where air conditioning units are provided to balconies, it will be necessary for a vertical type of barrier to prevent this unit being used as a foothold. Any electrical GPO's, gas outlets or the like which may be used as a foothold shall be located above 760mm from FFL. Final details are to be provided prior to the issue of a Construction Certificate.		
101.	**D2.17 –** Handrails *(See also D3.5)*	(a) Except for handrails referred to in D2.18, handrails must be— (i) located along at least one side of the ramp or *flight*; and (ii) located along each side if the total width of the stairway or ramp is 2 m or more; and (iii) in a Class 9b building used as a primary *school*— (A) have one handrail fixed at a height of not less than 865 mm; and (B) have a second handrail fixed at a height between 665 mm and 750 mm, measured above the nosings of stair treads and the floor surface of the ramp, landing or the like; and (iv) in any other case, fixed at a height of not less than 865 mm measured above the nosings of stair treads and the floor surface of the ramp, landing, or the like; and (v) continuous between stair *flight* landings and have no obstruction on or above them that will tend to break a hand-hold; and (vi) in a *required exit* serving an area *required* to be *accessible*, designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail *required* by (a)(iii)(B).	**CRA**	**A design practitioner—architectural** Handrails are to be provided to at least one side of stair flights within fire isolated stairs and both side in any other case (See D3) and located not less than 865mm above the nosings of stair treads and the floor surfaces of landings. Isolated stairs are Compliant. All non-isolated Stairs are not compliant. An additional handrail is required to each stair as per AS1428.1 making the stair <1m clear as required. Details demonstrating compliance with this clause must be incorporated into the architectural drawings prior to the issue of a Construction Certificate.		

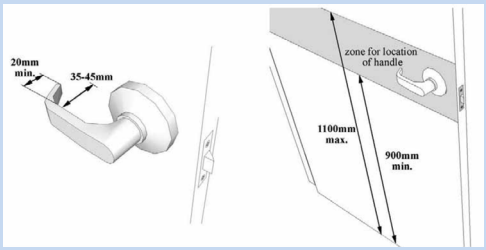
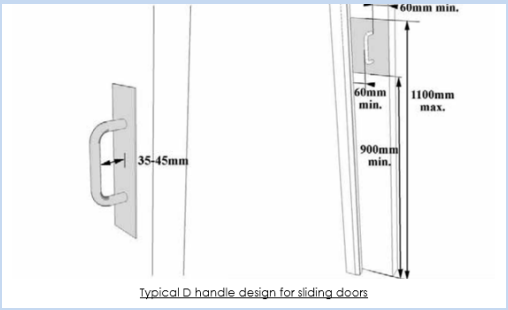
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
						
102.	**D2.18 –** Fixed platforms walkways, stairways and ladders	A fixed platform, walkway, stairway, ladder, any going and riser, any balustrade or other barrier attached thereto may comply with AS1657 if it only serves a machinery or plant room or non-habitable part of a sole-occupancy unit in a Class 2 building or Class 4 part	**Note**	Noted		
103.	**D2.19 –** Doorways and doors	A doorway serving as a *required exit* or forming part of a *required exit*, or a doorway in a *patient care area* of a Class 9a *health-care building*— (i) must not be fitted with a revolving door; and (ii) must not be fitted with a roller shutter or tilt-up door unless— (A) it serves a Class 6, 7 or 8 building or part with a *floor area* not more than 200 m2; and (B) the doorway is the only *required exit* from the building or part; and (C) it is held in the open position while the building or part is lawfully occupied; and (iii) must not be fitted with a sliding door unless— (A) it leads directly to a road or *open space*; and (B) the door is able to be opened manually under a force of not more than 110 N; and (iv) if fitted with a door which is power-operated— (A) it must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and (B) if it leads directly to a road or *open space* it must open automatically if there is a power failure to the door or on	**Note**	**A design practitioner—architectural** Swinging doors are proposed throughout the building. **Note:** Power-operated sliding doors must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source and if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		the activation of a fire or smoke alarm anywhere in the *fire compartment* served by the door.				
104.	**D2.20 –** Swinging doors	A swinging door in a required exit or forming part of a required exit— (a) must not encroach— (i) at any part of its swing by more than 500 mm on the required width (including any landings) of a required— (A) stairway; or (B) ramp; or (C) passageway, if it is likely to impede the path of travel of the people already using the exit; and (ii) when fully open, by more than 100 mm on the required width of the required exit, and the measurement of encroachment in each case is to include door handles or other furniture or attachments to the door; and (b) must swing in the direction of egress unless— (i) it serves a building or part with a floor area not more than 200 m^2, it is the only required exit from the building or part and it is fitted with a device for holding it in the open position; or (ii) it serves a sanitary compartment or airlock (in which case it may swing in either direction); and (d) must not otherwise impede the path or direction of egress. 	**Need Design Detail**	**A design practitioner—architectural** **Performance Solution Proposed for Buildings Smoke Doors if they are orientated against door swing direction.**		
105.	**D2.21 –** Operation of latch	(a)A door in a *required exit*, forming part of a *required exit* or in the path of travel to a *required exit* must be readily openable without a key from the side that faces a person seeking egress, by—	**CRA**	**A design practitioner—architectural** The door which serve as the exits for the building must be readily openable without a key from the side that faces a person seeking egress, by a single hand		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(i) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area *required* to be *accessible* by Part D3— (A) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and (B) have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35 mm and not more than 45 mm; or (ii) a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor; and (iii) where the latch operation device referred to in (ii) is not located on the door leaf itself— (A) manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located— (aa)not less than 500 mm from an internal corner; and (bb)for a hinged door, between 1 m and 2 m from the door leaf in any position; and (cc)for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position. (B) braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. (b) The requirements of (a) do not apply to a door that— (i) serves a vault, strong-room, *sanitary compartment*, or the like; or (ii) serves only, or is within— (A) a *sole-occupancy unit* in a Class 2 building or a Class 4 part of a building; or (B) a *sole-occupancy unit* in a Class 3 building (other than an entry door to a *sole-occupancy unit* of a boarding house, guest house, hostel, lodging house or backpacker accommodation); or (C) a *sole-occupancy unit* with a *floor area* not more than 200 m2 in a Class 5, 6, 7 or 8 building; or (D) a space which is otherwise inaccessible to persons at all times when the door is locked; or (iii)serves— (A) Australian Government Security Zones 4 or 5; or (B) the secure parts of a bank, *detention centre*, mental health facility, *early childhood centre* or the like; and it can be immediately unlocked—		downward action on a single device which is located between 900 mm and 1.1 m from the floor or a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor. Manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located— not less than 500 mm from an internal corner; and for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position.  Typical lever handle design  Typical D handle design for sliding doors		

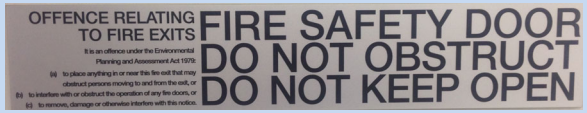
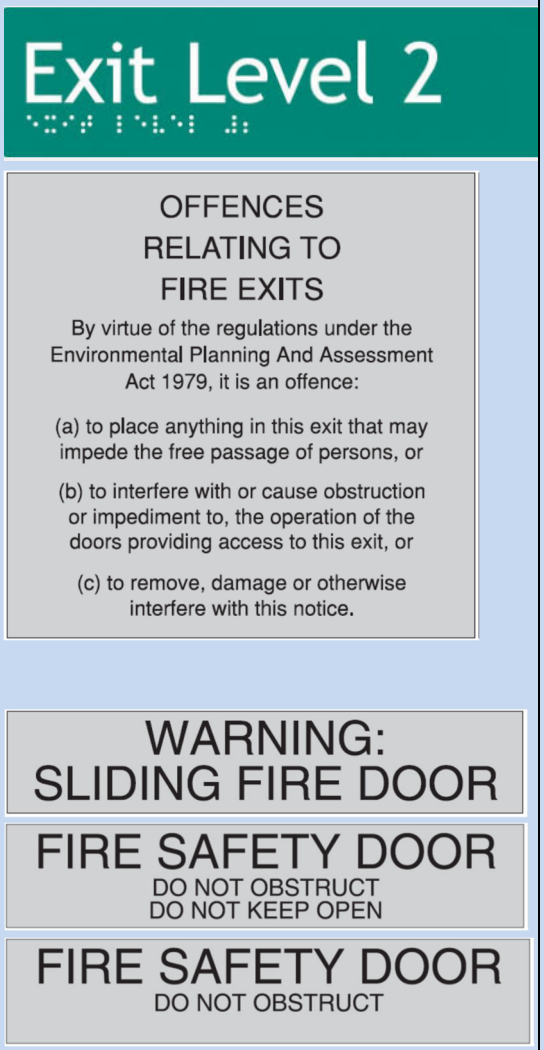
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(C) by operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or (D) by hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire; or (iv) is fitted with a fail-safe device which *automatically* unlocks the door upon the activation of any sprinkler system (other than a FPAA101D system) complying with Specification E1.5 or smoke, or any other detector system deemed suitable in accordance with AS 1670.1 installed throughout the building, and is readily openable when unlocked; (c) The requirements of (a) do not apply in a Class 9b building (other than a *school*, an *early childhood centre* or a building used for religious purposes) to a door in a *required exit*, forming part of a *required exit* or in the path of travel to a *required exit* serving a *storey* or room accommodating more than 100 persons, determined in accordance with D1.13, in which case it must be readily openable— (i) without a key from the side that faces a person seeking egress; and (ii) by a single hand pushing action on a single device such as a panic bar located between 900 mm and 1.2 m from the floor; and (iii) where a two-leaf door is fitted, the provisions of (i) and (ii) need only apply to one door leaf if the appropriate requirements of D1.6 are satisfied by the opening of that one leaf; and (iv) where the door is a door in a path of travel providing re-entry to the building from a balcony, terrace or the like, it may be fitted with key-operated fastenings only, the tongues of which must be locked in the retracted position whenever the building is occupied by the public, so the door can yield to pressure. (d) The requirements of (a) and (c) do not apply to a door serving a Class 9b building used as an *entertainment venue* where the following provisions apply to a door or gate used by the public— (i) on a door, the single device operating the latch or bolts must be a panic bar if those doors are to be secured; or (ii) an *exit* door or gate used by the public as the main entrance may be fitted with key-operated fastenings only,				

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		the tongues of which must be locked in the retracted position whenever the building is occupied by the public so the door or gate can yield to pressure from within; or (iii) a door from a balcony, terrace or the like, being a door in a path of travel providing re-entry to the building, may comply with the locking provision of (ii) above.				
106.	**D2.22 –** Re-entry fire-isolated exits	(a) Doors of a fire-isolated *exit* must not be locked from the inside as follows: (i) In a Class 9a *health-care building*. (ii) In a Class 9c building. (iii) In a fire-isolated *exit* serving any storey above an *effective height* of 25 m, throughout the *exit*. (b) The requirements of (a) do not apply to a door fitted with a fail-safe device that *automatically* unlocks the door upon the activation of a fire alarm and— (i) on at least every fourth *storey*, the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available; or (ii) an intercommunication system, or an audible or visual alarm system, operated from within the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation.	**N / A**	**A design practitioner—architectural**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
107.	**D2.23 –** Signs on doors *Note also Brail Sign requirements under D3.6*	(a) A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to, a— (i) (A) required fire door providing direct access to a fire-isolated exit, except a door providing direct egress from a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; and (B) required smoke door, on the side of the door that faces a person seeking egress and, if the door is fitted with a device for holding it in the open position, on either the wall adjacent to the doorway or both sides of the door; and (ii) (A) Fire door forming part of a horizontal exit; and (B) Smoke door that swings in both directions; and (C) Door leading from a fire isolated exit to a road or open space, on each side of the door. (b) A sign referred to in (a) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state— (i) for an automatic door held open by an automatic hold-open device— "**FIRE SAFETY DOOR—DO NOT OBSTRUCT**" or (ii) for a self-closing door— "**FIRE SAFETY DOOR** **DO NOT OBSTRUCT** **DO NOT KEEP OPEN**"; or (iii) for a door discharging **from** a fire-isolated exit— "**FIRE SAFETY DOOR—DO NOT OBSTRUCT**." **See example below;** **Note**: In accordance with Clause 183 of the EP&A Reg 2000 a fire safety notice be displayed in the following areas of the building; A fire safety notice is to display **the following words**; 	**CRA**			

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Note: The above requirements also include the need to have **Braille** exit signage on the doors which states "exit" & indicate the level that the person seeking egress is on (i.e. "level").				
108.	**D2.24 –** Protection of openable windows	(a) A window opening must be provided with protection, if the floor below the window is 2m or more above the surface beneath in – (i) a bedroom in a Class 2 or 3 building or Class 4 part of a building; or (ii) a Class 9b early childhood centre. (b) Where the lowest level of the window opening is less than 1.7m above the floor, a window opening covered by (a) must comply with the following: (i) The openable portion of the window must be protected with – (A) a device capable of restricting the window opening; or (B) a screen with secure fittings. (ii) A device or screen required by (i) must – (A) not permit a 125mm sphere to pass through the window opening or screen; and (B) resist an outward horizontal action of 250N against the – (aa) window restrained by a device; or (bb) screen protecting the opening; and (C) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden. (c) A barrier with a height not less than 865mm above the floor is require to an openable window – (i) in addition to window protection, when a child resistant release mechanism is required by (b)(ii)(C); and (ii) where the floor below the window is a 4m or more above the surface beneath if the window is not covered by (a). (d) A barrier covered by (c) except for (e) must not – (i) permit a 125mm sphere to pass through it; and (ii) have any horizontal or near horizontal elements between 150mm and 760mm above the floor that facilitate climbing. (e) A barrier required by (c) to an openable window in – (i) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and (ii) Class 7 (other than carparks) and Class 8 buildings and parts of buildings containing those classes; (iii) must not permit a 300mm sphere to pass through it.	**CRA**	**A design practitioner—architectural** Details indicating compliance will need to be shown on the Construction Certificate Plans. Details are to be provided which indicates that a child resistant release mechanism, device or similar is provided to the window openings of the Class 2 parts.	a)	b)

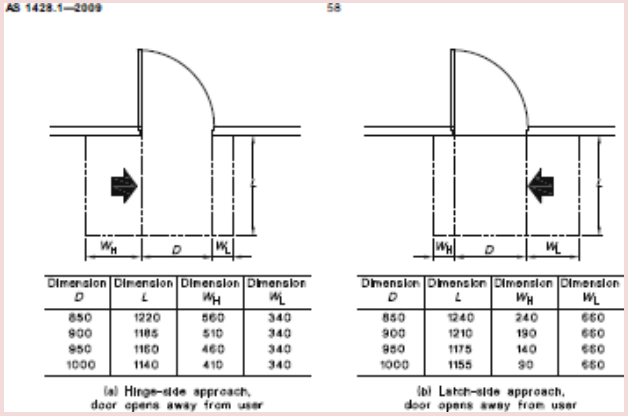
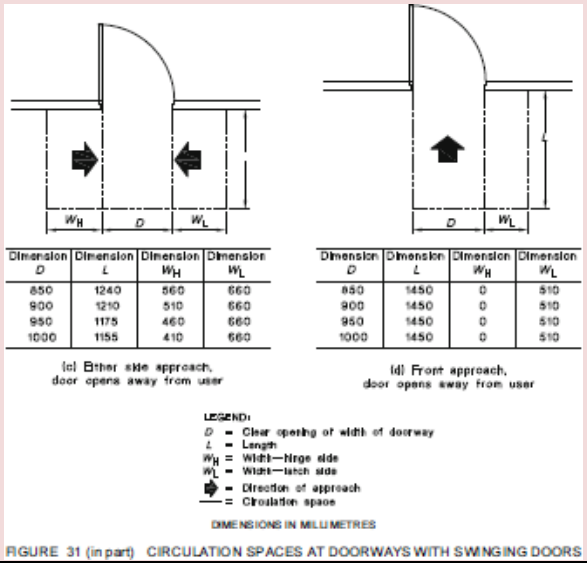
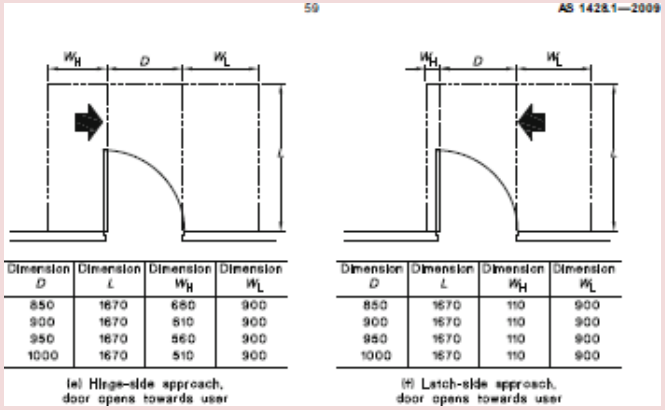
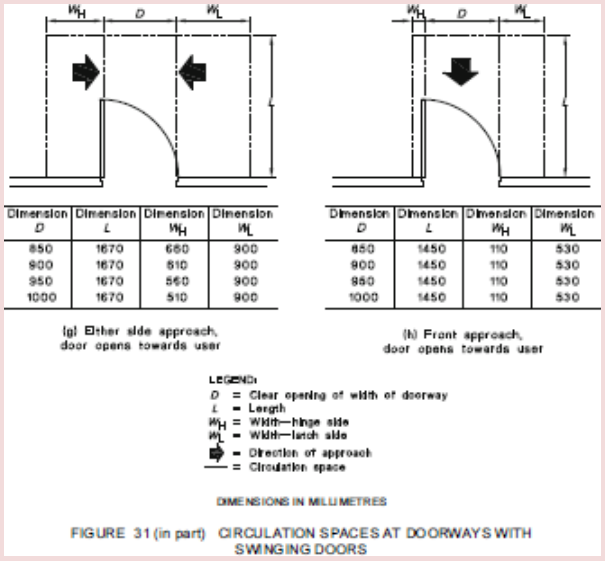
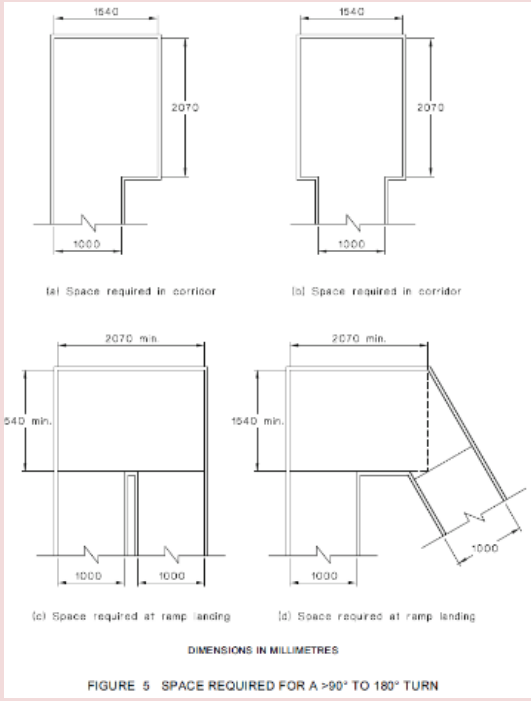
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Comment: Windows openings in bedrooms are to provided with protection. Details are to be provided with the application for CC.				
109.	**D2.25 –** Timber stairways: concession	Noted	**Note**			
	Part D3 – Access for People with Disabilities					
	Clause	Description	**Status**	Comments		
110.	**D3.0 –** Deemed-to-Satisfy Provisions	Informational –	**Note**	Disability (Access to Premises — Buildings) Standards 2010 is to be read in conjunction with the BCA. Compliance with the Access Codes appears to be achieved.		
111.	**D3.1 –** General Building Access Requirements	Buildings and parts of buildings must be accessible as required by Table D3.1, unless exempted by D3.4. **Table D3.1:** **Class 3** Common areas From a pedestrian entrance *required* to be *accessible* to at least 1 floor containing *sole-occupancy units* and to the entrance doorway of each *sole-occupancy unit* located on that level. To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, *swimming pool*, common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunch room, lounge room, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed— (a) to the entrance doorway of each *sole-occupancy unit*; and (b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp. *Sole-occupancy units* If the building or group of buildings contain— / To and within— 1 to 10 *sole-occupancy units* / 1 *accessible sole-occupancy unit*. 11 to 40 *sole-occupancy units* / 2 *accessible sole-occupancy units*. 41 to 60 *sole-occupancy units* / 3 *accessible sole-occupancy units*. 61 to 80 *sole-occupancy units* / 4 *accessible sole-occupancy units*. 81 to 100 *sole-occupancy units* / 5 *accessible sole-occupancy units*. 101 to 200 *sole-occupancy units* / 5 *accessible sole-occupancy units* plus 1 additional *accessible sole-occupancy unit* for every 25 units or part thereof in excess of 100. 201 to 500 *sole-occupancy units* / 9 *accessible sole-occupancy units* plus 1 additional *accessible sole-occupancy unit* for every 30 units or part thereof in excess of 200. more than 500 *sole-occupancy units* / 19 *accessible sole-occupancy units* plus 1 additional *accessible sole-occupancy unit* for every 50 units or part thereof in excess of 500. Not more than 2 *required accessible sole-occupancy units* may be located adjacent to each other. Where more than 2 *accessible sole-occupancy units* are *required*, they must be representative of the range of rooms available.	**Need Design Detail**	**A design practitioner—architectural** Final design details of wheelchair access to this part are to beprovided at the final Construction Certificate stage. **A performance solution** is required if corridors are not adjusted to allow access to each SOU doorway, and corridors with dead ends, are to be adjusted. A Performance Solution can be presented to he certifier to assess at the CC stage. The building is accommodating 69 Class 3 SOU rooms, Table D3.1 require a minimum of four (4) accessible rooms. Complies. It is noted that Councils DCP may required additional assessable rooms as 8 are proposed. It is noted that each allocated accessible room should also have a dedicated car space. Only 4 accessible car spaces are allocated, yet		
	Architects/Designers Note: AS1428.1 is very detailed, please ensure that your design has been checked and recheckedas to full compliance. .I.e.:					

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		- *All doors are to be a minimum of a clear opening width of not less than 850 mm and the required circulation spacesaround doors to be accessible in accordance with AS 1428.1* - *Door hardware is to a 'D' grasping style, 20N force to open and close all doors.* - *Walkways, corridors also must be compliant for dead areas, wheelchair passing and splayed corners.* - *Doors and doorways need to have 30% luminance contrasting to distinguish door locations,* - *All Glazing other than windows needs 30% luminance contrasting, The contrasting line shall be not less than 75 mm wide and shall extend across the full width of the glazing panel. The lower edge of the contrasting line shall be located between 900 mm and 1000 mm above the plane of the finished floor level. Any contrasting line on theglazing shall provide a minimum of 30% luminance contrast when viewed against the floor surface or surfaces within 2 m of the glazing on the opposite side.* - *All stairs excluding the fire isolated stair are to incorporate the required double handrail, downturns, solid treads, colour contrast nosing strips and TGSI's.* *Floor surfaces and junction points are all smooth and comply with slip resistant levels.*				
		Door Circulation Spaces **All circulation spaces to SOU doors and doorways through commercial and common areas are to be confirmed for compliance with AS1428.1-2009.** **Numerous doorways to common facilities throughout the basement and residential floor levels and the doorways to thecommercial loading dock and sanitary facilities on the ground floor level appear not to meet the set dimensions under AS 1428.1 and/or are provided with less than 850mm clearance through the active door leaf.** **Please note: D3 requires access just to the SOU door, not within the unit unless the unit is Adaptable.** **Compliance can be achieved by slight redesign or alternatively in some cases via an access performance solution conducted prior to issue of the Construction Certificate.**				

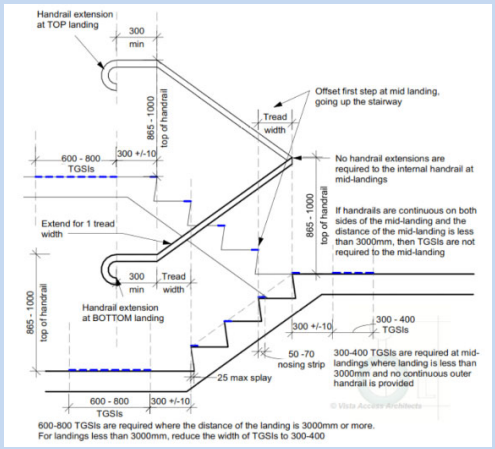
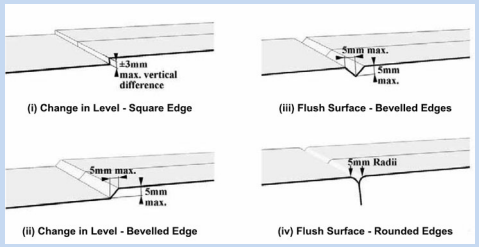
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		AS 1428.1—2009 58  (a) Hinge-side approach, door opens away from user (b) Latch-side approach, door opens away from user  (c) Either side approach, door opens away from user (d) Front approach, door opens away from user LEGEND: D = Clear opening of width of doorway L = Length W_H = Width—hinge side W_L = Width—latch side = Direction of approach = Circulation space DIMENSIONS IN MILLIMETRES FIGURE 31 (in part) CIRCULATION SPACES AT DOORWAYS WITH SWINGING DOORS	59 AS 1428.1—2009  (e) Hinge-side approach, door opens towards user (f) Latch-side approach, door opens towards user  (g) Either side approach, door opens towards user (h) Front approach, door opens towards user LEGEND: D = Clear opening of width of doorway L = Length W_H = Width—hinge side W_L = Width—latch side = Direction of approach = Circulation space DIMENSIONS IN MILLIMETRES FIGURE 31 (in part) CIRCULATION SPACES AT DOORWAYS WITH SWINGING DOORS	 (a) Space required in corridor (b) Space required in corridor (c) Space required at ramp landing (d) Space required at ramp landing DIMENSIONS IN MILLIMETRES FIGURE 5 SPACE REQUIRED FOR A >90° TO 180° TURN		
112.	**D3.2 –** Access to Buildings	Compliance with Part D3 of the BCA is applicable to this building. All common areas are also to facilitate access in accordance with AS1428.1. From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance	**Need Design Detail**	**A design practitioner—architectural** An accessway/s has been provided from Principal Pedestrian Entry (PPE) areas.		

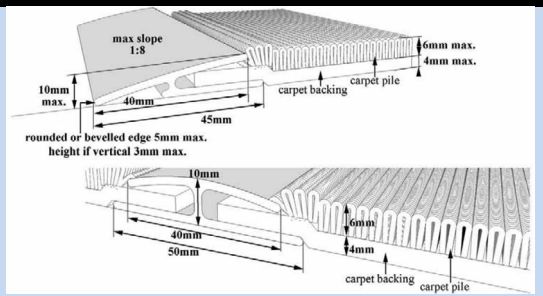
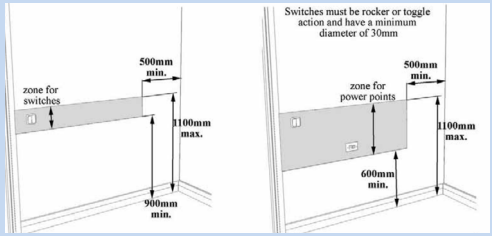
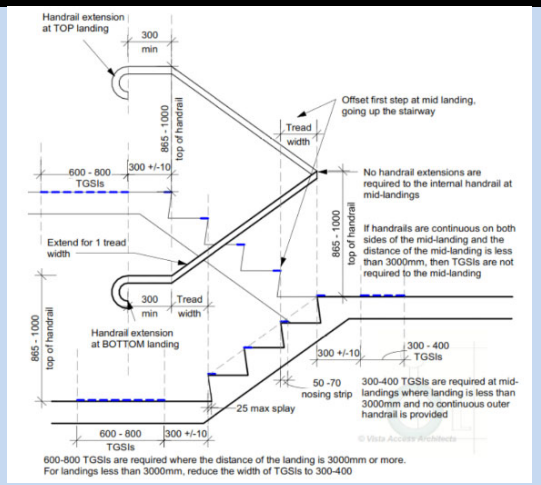
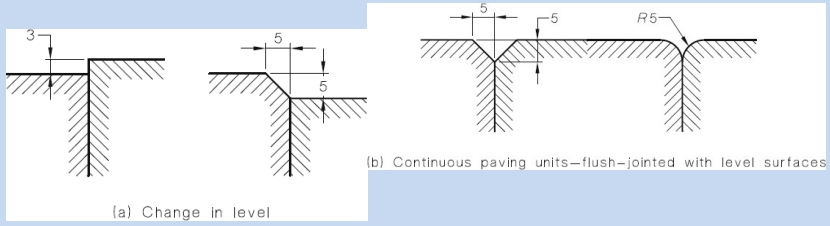
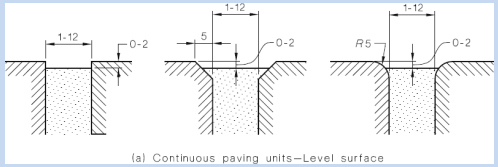
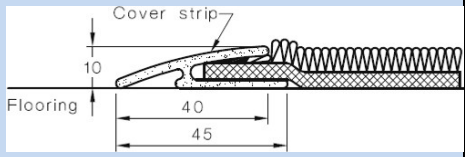
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		doorway ofeach sole-occupancy unit located on that level and to and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed— **(a) to the entrance doorway of each sole-occupancy unit; and** **(b) to and within rooms or spaces for use in common by the residents,located on the levels served by the lift or ramp.** **Areas Required to be Accessible** Access to the commercial and residential garbage rooms on the ground and basement floor levels is required to be accessible and appear to require review. 0 Access to storage cages for adaptable units on the basement floor level is required and appears to require review. 0 Access to the residential bike storage areas on the basement floor level is required and appears to require review. 0 Access to the commercial loading dock on the ground floor level is required and appears to require review. 0 Access to the sanitary facilities and parent's room on the ground floor level is required and appears to require review.		The residential parts of the building are deemed to have only one entry, the fire isolated exits are for egress purposes only. All doors are to be a minimum of a clear opening width of not less than 850 mm and the required circulation spaces around doors to be accessible in accordance with AS 1428.1 including SOU doors to storey serviced via a lift. All stairs excluding fire isolated stair are to incorporate the required double handrail, downturns, colour contrast nosing strips and TGSI's. Nosing to stairs within the fire isolated passage are to have a colour contrasting strip. Final design details of wheelchair access to this part are to be provided at the final Construction Certificate stage.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

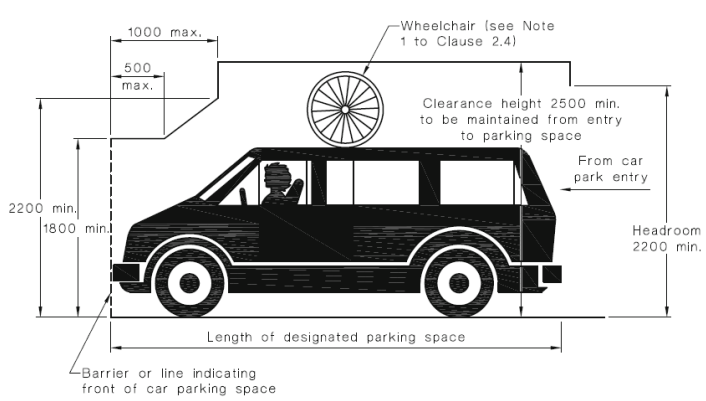
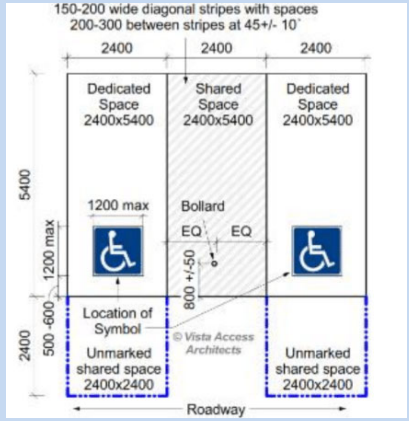
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
113.	**D3.3 –** Parts of Buildings to be accessible	 0 All accessways must have suitable turning / passing spaces. 0 Internal surfaces are to comply with Section 7 of AS1428.1-2009.  0 Internal tiles or internal vinyls are to comply with AS 4586. 0 All finished floor surfaces are to be trip free, the following details demonstrate the tolerance level for floor finishes: 0 Any proposed carpets within the building are to have a pile height or pile thickness not exceeding 11mm and the carpet backing thickness shall not exceed 4mm (total thickness shall not exceed 15mm).	**CRA**	**A design practitioner—architectural** Walkways and ramps must comply with clause 10 of AS 1428.1-2009. Non-fire-isolated stairways must comply with Clause 11 of AS 1428.1-2009. Fire-isolated stairways must comply with clause 11 (f) & (g) of AS 1428.1-2009. Accessways must have passing spaces (1800 mm x 2000 mm) complying with AS 1428.1-2009 at maximum 20 m intervals on those parts of an accessway where a direct line of sight is not available. Accessways must have turning spaces (1540 mm x 2070 mm) within 2m of the end of the accessway and at maximum 20 m intervals along the accessway. **Note**: Turning spaces must be provided clear of fixtures and fittings such as skirtings, general purpose outlets (GPOs), fire extinguishers etc. An intersection of accessways satisfies the spatial requirements for a passing and turning space. **Note**: The Access to Premises Standards to not provide the concessions provided in sub-cluses (g) and (h) in this clause, hence compliance with the Access to Premises Standards will require the floor covering in the accessible areas to strictly comply with Clause 7.4.1(a) of AS1428.1-2009. **Please advise as to which apartments are to be adaptable. Plans Not provided.** Final details to be provided detailing floor services and materials are to be provided at the Construction Certificate stage or noted on the plans.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

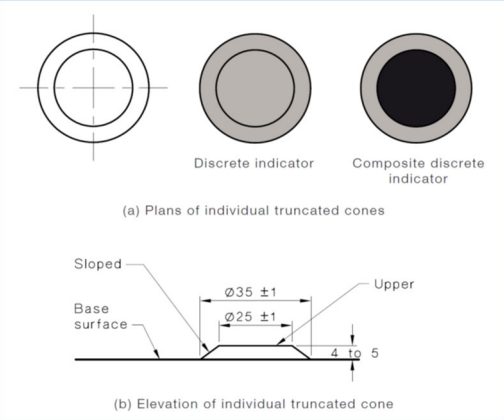
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		 0 Circulation space at main entry doorways must comply with clause 13 of AS1428.1-2009. 0 All door handles and related hardware to common area doorways required to be accessible shall be of a type that allows the door to be unlocked and opened with one hand in accordance with AS1428.1-2009 0 All switches and controls, other than general purpose outlets, shall be located not less than 900 mm nor more than 1,100 mm above the FFL and not less than 500 mm from internal corners except where on the architrave on the latch side. 				
						

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

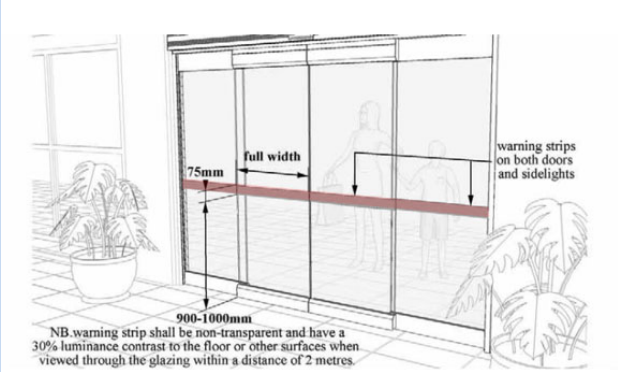
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Note: BCA Clause D3.3 changes the above to 11mm, 4mm and 15mm respectively					
114.	**D3.4 –** Exemptions	This part provides exemptions to the Deemed-to-Satisfy provisions for access by people with a disability. This part provides details on buildings or parts of buildings not required to be accessible under the BCA where providing access would be inappropriate because of the nature of the area or the tasks undertaken **Note:** Clause 13.5.3 of AS1428.1-2009 excludes early childhood centres from the standard location of opening and locking controls as regulated by the relevant statutory authority. The Children (Education and Care Services) Supplementary Provisions Regulation 2012 (NSW) restricts unsupervised access to kitchens, nappy changing facilities, entry & exit points, and all equipment (such as light and heating) that may be hazardous to children must be guarded to prevent access by children.	**Note**	The following areas are not required to be accessible: - An area where access would be inappropriate because ofthe particular purpose for which the area is used; - An area that would pose a health or safety risk for people witha disability; and - Any path of travel providing access only to an areaexempted by the above.		
115.	**D3.5 –** Accessible Carparking	Car-parking spaces have been provided to the building which are ancillary to the use. Adaptable Units require a Parking Space as per AS4299-1995, typically design dimensions and requirements of the current AS2890.6:2009 is applied. ***Note**: Accessible sign posting, and Bollards are not mandatory to Adaptable Units, as they are one's personal unit entitlements, also, where visitor Parking and its associated Accessible Space requirements do required sign posting if more than 5 public spaces are afforded.*	**CRA**	**A design practitioner—architectural** Designer to verify compliance prior to the issue of the Construction Certificate. Please note all services need to be documented as to not encroach of the required head heights.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		**3.7 CAR PARKING** **3.7.1 General** Private car parking spaces shall be large enough to enable a person with a wheelchair to get in and out of both the car and the parking space. A car parking space width of 3.8 m minimum is necessary to enable a driver to alight, open the passenger side door, and assist a person with a disability into a wheelchair, or for a side-loading ramp. A 3.8 m, minimum width is also required for a driver with a disability to unload a wheelchair and to alight. A roof to the car parking space is desirable. NOTE: If it is required to unload the wheelchair within the garage, an internal vertical clearance of 2.5 m is necessary to operate a car roof wheelchair unit.			
116.	**D3.6 –** 'Exits' must have Braille to identify occupant's location within a building.	In a building required to be accessible – Braille and tactile signage complying with Specification D3.6 andincorporating the international symbol of access or deadness, as appropriate, in accordance with AS1428.1 must identify each – – Sanitary facility, – Ambulant toilet facility, – Any required accessible carparking space, – Where needed, directional signage to any Carparking space orsanitary facility. – At Each '**Exit'** and which '**Level'** an occupant is at also needs tobe in Braille. Where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must beplaced at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary facility.	**CRA**	**A design practitioner—architectural**  Example of Braille egress sign from ground floor exits		
117.	**D3.7 –** Hearing Augmentation	This part provides requirements for provision of hearing augmentation in accessible buildings, i.e. to be provided where an in-built amplification system (other than one used for emergencies), is installed: – In a room in a class 9b building; or – In an auditorium, conference room, meeting room, or room for judiciary purposes. or – At any ticket office, teller's booth, reception area or the like where the public is screened from the service provider.	**N / A**	**A design practitioner—architectural**		

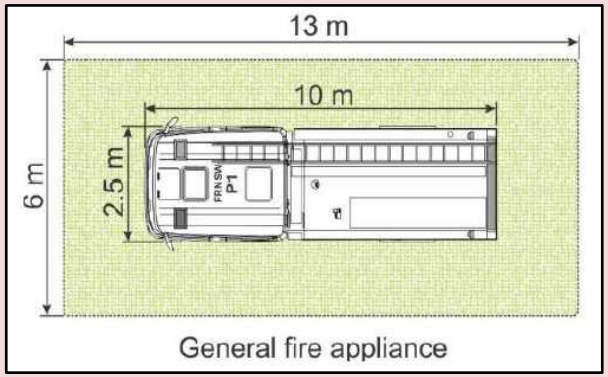
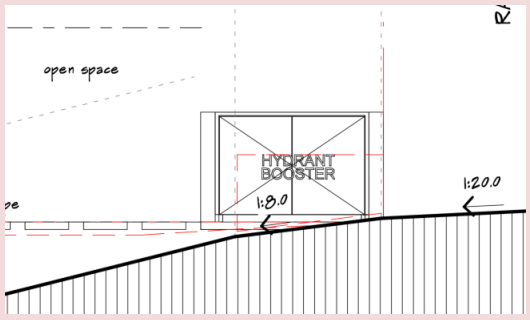
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
118.	**D3.8 –** Tactile Indicators	For a building required to be accessible, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment in accordance with this clause. I.e.: – A stairway, other than a fire-isolated stairway, – An escalator, – A passenger conveyor of moving walk, – A ramp other than a fire-isolated ramp, step ramp, kerb ramp orswimming pool ramp, – In the absence of a suitable barrier an overhead obstruction lessthan 2m above floor level, other than a doorway. Tactile ground surface indicators required by (a) must comply with sections 1 and 2 of AS/NZS 1428.4.1	**CRA**	**A design practitioner—architectural** Detail are to be shown on the final CC Plans. 		
119.	**D3.9 –** Wheelchair Seating Spaces in Class 9b Assembly Buildings	This part provides requirements for the provision of wheelchair seating spaces in Class 9b Assembly buildings and includes the number of spaces to be provided in theatres, cinemas and the like.	**N / A**	**A design practitioner—architectural**		
120.	**D3.10 –** Swimming Pools	This part provides the requirements for making swimming pools accessible to people with disabilities required by Table D3.1 to be accessible and must be constructed in accordance with Specification D3.10 Not less than 1 means of accessible water entry/exit in accordance with Specification D3.10 must be provided for each swimming pool required by Table D3.1 to be accessible. An accessible entry/exit must be by means of— 0 a fixed or movable ramp and an aquatic wheelchair; or 0 a zero-depth entry at a maximum gradient of 1:14 and an aquatic wheelchair; or 0 a platform swimming pool lift and an aquatic wheelchair; or 0 a sling-style swimming pool lift.	**N / A**	**A design practitioner—architectural**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

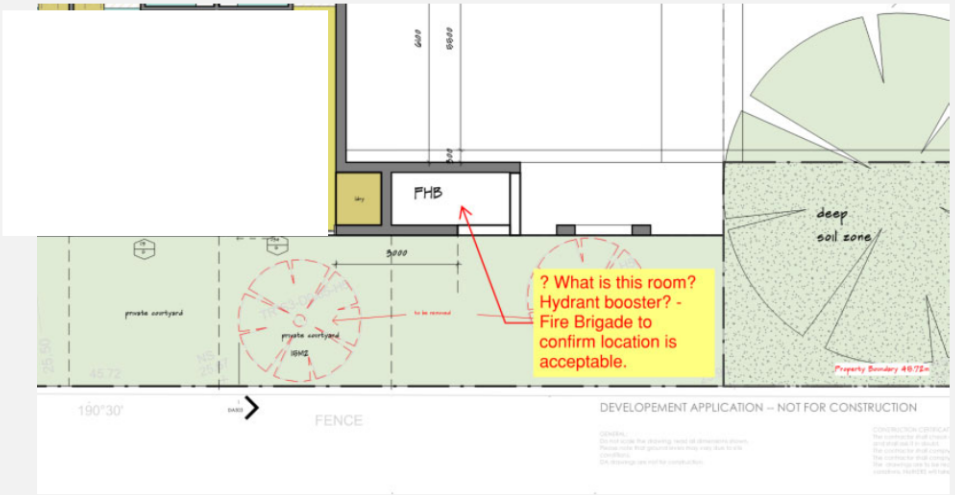
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Where a swimming pool has a perimeter of more than 70 m in length,at least one accessible water entry/exit must be provided by a meansother than a sling-style swimming pool lift. Latching devices on gates and doors forming part of a swimming poolsafety barrier need not comply with AS 1428.1.				
121.	**D3.11 –** Ramps	Ramps may be used as part of an accessway where there is a change of level and must comply with the requirements set out in AS1428.1	**Note**	**A design practitioner—architectural**		
122.	**D3.12 –** Glazing on an Accessway	On an accessway, where there is no chair rail, handrail or transom, allframeless or fully glazed doors, sidelights, and any glazing capable ofbeing mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.  *Decals / motifs to identify glazed doors and walls where no mullions*	**CRA**	**A design practitioner—architectural** All frameless glass panels or fully glazed doors on an accessway are to be clearly marking in accordance with AS 1428.1. In this instance, all frameless glass panel or fully glazed doors, including glazing capable of being mistaken for a doorway or opening, shall be marked with a full width solid non transparent contrast line not less than 75mm wide is required to be located between 900mm and 1000mm above floor level. Decals are required to warn people with vision impairment that they are approaching any new glazed panels with the decals to be provided as per AS 1428.1 – 2009, clause 6.6. This requires a solid-non-transparent line 75mm in width, located between 900mm and 1100mm above the floor and 30% contrasting when viewed against the floor surface/s within 2m of the glazing on the opposite side of the glass.		
	SECTION E – SERVICES AND EQUIPMENT **Part E1 – Fire Fighting Equipment**					
	Clause	Description	**Status**	Comments		
	E1.1 –	-	**-**	No Provisions		
	E1.2 –	-	**-**	No Provisions		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
123.	**E1.3 –** Fire Hydrants	A fire hydrant system must be provided to serve a building having a total floor area greater than 500m² and where a fire brigade is available to attend a building fire, installed in accordance with the provisions of AS2419.1-2005 **E1.3 Fire hydrants** (a) A fire hydrant system must be provided to serve a building— (i) having a total *floor area* greater than 500 m²; and (ii) where a *fire brigade station* is— (A) no more than 50 km from the building as measured along roads; and (B) equipped with equipment capable of utilising a fire hydrant. (b) The fire hydrant system— (i) must be installed in accordance with AS 2419.1, except— (A) a Class 8 *electricity network substation* need not comply with clause 4.2 of AS 2419.1 if— (aa) it cannot be connected to a town main supply; and (bb) one hour water storage is provided for fire-fighting; and (B) where a sprinkler system is installed throughout a building in accordance with AS 2118.1, AS 2118.4, AS 2118.6, FPAA101H or FPAA101D the fire hydrant booster protection requirements of clauses 7.3(c)(ii) and 7.3(d)(iii) of AS 2419.1 do not apply; and (C) a fire hydrant booster assembly may be located between 3.5 m and 10 m of the building, and need not comply with clause 7.3(d)(iii) of AS 2419.1 where the assembly is protected by an adjacent fire-rated freestanding wall that— (aa) achieves an FRL of not less than 90/90/90; and (bb) extends not less than 1 m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3 m wide; and  	**Need Design Detail**	**A design practitioner—fire systems (fire hydrant and fire hose reel)** **A design practitioner—architectural** The building is >500m2 thus hydrant coverage is required. Final details to be provided detailing floor services and materials are to be provided at the Construction Certificate stage or noted on the plans. **The designer needs to confirm** if the Hydrant and Sprinkler system require a pump room and water pressures serving the system. Additional space should be reserved in the building for a pump room with direct assess to the fire isolated exits serving the building. The grade adjacent to the Hydrant Booster needs to be confirmed via your hydraulic fire services consultant.  		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S



Note Only:

The following is noted about booster assemblies as from cl. 7.3 of AS2118.1-2005:

Fire brigade booster assemblies shall be located so that they meet the following requirements:

(a) They are readily accessible to firefighters.

(b) They are operable by fire brigade pumping appliances located within 8 m.

(c) If within, or affixed to, the external wall of the building, the booster shall be—

- **(i) within sight of the main entrance to the building; and**
- **(II) separated from the building by a construction with a fire resistance rating of not less than FRL 90/90/90 for a distance of not less than 2 m each side of and 3 m above the upper hose connections in the booster assembly.**

(d) If remote from the building, the booster shall be—

- **(i) at the boundary of the site or within sight of the main entrance of the building;**
- **(II) adjacent to the principal vehicular access to the site; and**
- **(iii) located not less than 10 m from the external wall of any building served**

(e) The booster enclosure shall only contain firefighting pipework and equipment.

(f) In a position not less than 10 m from any high voltage main electrical distribution equipment such as transformers and distribution boards, and from liquefied petroleum gas and other combustible storage.

(g) In a position so that the booster assembly is not obstructed or obscured by obstacles, stored goods, vehicles, vegetation, etc.

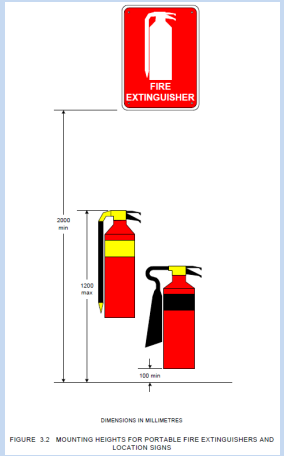
Comments: The booster assembly has the following non-compliances:

- **The handstand location is not identified within 8m. Reference should be made to the Fire Safety Guideline, Access for Fire Brigade Vehicles and Firefighters, published by Fire and Rescue NSW, reference No. FRN14/3255, document ID D15/6224, Version 5, dated 4 October 2019 for details, diagram attached below for reference of size and orientation of a hardstand.**

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	(https://www.fire.nsw.gov.au/ gallery/files/pdf/guidelines/ vehicle_access.pdf) **The following is noted about hardstand areas:** ○ **To be a flat, level all weather surface, clear of obstructions.** ○ **To provide easy manoeuvring space for the fire appliance.** ○ **Any section of carriageway can be designated only when the passing traffic flow will no be blocked by the fire positioned appliance.**					
124.	**E1.4 –** Hose Reels	Fire hose reels are to be provided to serve a fire compartment greater than 500m2 and to serve the building where internal fire hydrants are to be provided. Should the building be provided with internal fire hydrants each storey is to be served via hose reel system with *exception to the Class 2 parts of the building.* E1.4 does not apply to a Class 2, 3 or 5 building or Class 4 part of a building. A fire hose reel system complying with BCA clause E1.4 and AS 2441-2005 must be provided to the building (excluding Classes 2 parts). All points on a floor shall be within reach of a 4 m hose stream issuing from a nozzle at the end of the hose laid on floor. The hose length shall not exceed 36 m. Fire hose reels must be located so that the fire hose will not need to pass through doorways fitted with fire or smoke doors, except— (i) doorways in walls referred to in C2.5(a)(v) in a Class 9a building and C2.5(b)(iv) in a Class 9c building, separating ancillary use areas of high potential fire hazard; and (ii) doorways in walls referred to in C2.12 or C2.13 separating equipment or electrical supply systems; and (iii) doorway openings to shafts referred to in C3.13.	**CRA**	**A design practitioner—architectural** **A design practitioner—fire systems (fire hydrant and fire hose reel)** **Fire Hose Reels are not identified on the plans, final CC plans are to reflect locations.** **Hose reels are to be located in the Car Park**		
125.	**E1.5 –** Sprinklers	The building must be provided with a sprinkler system complying with Table E1.5 and Specification E1.5 installed throughout. The sprinkler valve room location should be indicated on the plans. The room must have direct egress to road or open space.	**CRA**	**A design practitioner—architectural** **A design practitioner—hydraulic**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				The building is to be afforded with a Sprinkler System. There are 4 choices, your hydraulic consultant would advise the ones suitable for your specific design as some have limited applications. • **AS2118.1; or (Recommended)** • AS2118.4, as applicable; or • FPAA101D, as or • FPAA101H.		
126.	**E1.6 –** Portable fire extinguishers	Portable fire extinguishers must be provided as listed in Table E1.6 and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444	**CRA**	**A design practitioner—architectural** Portable fire extinguishers are required to be provided in accordance with Table E1.6 of the BCA and AS 2444. Along with areas advised by a Fire Safety Contractor, in the Class 2 part, install an ABE type fire extinguisher and a minimum size of 2.5 kg and or either.; a) 10m of the SOU entry in a common area; or, b) Within each unit in an accessible location for the occupants.		
		 FIGURE 3.2 MOUNTING HEIGHTS FOR PORTABLE FIRE EXTINGUISHERS AND LOCATION SIGNS		**3.6 CABINET OR ENCLOSURE** Where a cabinet or enclosure is used, the open door shall not encroach on the required width of path of travel to an exit or doorway. In addition to the location sign referred to in Clause 3.3, the cabinet or enclosure shall be marked with the words 'FIRE EXTINGUISHER' in letters at least 32 mm high in a colour contrasting with the background unless the door has not less than 50% of its surface area fabricated from transparent material that permits visual identification of the cabinet's contents. Where extinguishers are likely to incur unauthorized interference, the cabinet may be locked. Locked cabinets shall be provided with a frangible panel to provide access to the latching device or extinguisher. The panel shall be not less than 150 × 150 mm, and the panel material shall comply with the requirements for frangibility set out in AS 1603.5.		
127.	**E1.7 –**	-	-	No Provisions		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
128.	**E1.8 –** Fire control centres	A fire control centre facility in accordance with Specification E1.8 must be provided for— (a)a building with an *effective height* of more than 25 m; and (b)a Class 6, 7, 8 or 9 building with a total *floor area* of more than 18 000 m2.	**N / A**	**A design practitioner—architectural**		
129.	**Spec E1.8 –** Fire control centres	**A fire control centre must—** (a) provide an area from which fire-fighting operations or other emergency procedures can be directed or controlled; and (b) contain controls, panels, telephones, furniture, equipment and the like associated with the *required* fire services in the building; and (c) not be used for any purpose other than the control of— (i) fire-fighting activities; and (ii) other measures concerning the occupant safety or security. **3. Location of fire control centre** A fire control centre must be so located in a building that egress from any part of its floor, to a road or *open space*, does not involve changes in level which in aggregate exceed 300 mm. **4. Equipment not permitted within a fire control centre** An internal combustion engine, pumps, sprinkler control valves, pipes and pipe fittings must not be located in a fire control centre, but may be located in rooms accessed through the fire control centre. **5. Ambient sound level for a fire control centre** (a) The ambient sound level within the fire control centre measured when all fire safety equipment is operating in the manner in which it operates in an emergency must not exceed 65 dB(A). (b) The measurement must be taken for a sufficient time to characterize the effects of all sound sources. Where there is not a great variation in noise level, a measurement time of 60 seconds may be used. **6. Construction of a fire control room** A fire control centre in a building more than 50 m in *effective height* must be in a separate room where— (a) the enclosing construction is of concrete, masonry or the like, sufficiently impact resistant to withstand the impact of any likely falling debris, and with an FRL of not less than 120/120/120; and (b) any material used as a finish, surface, lining or the like within the room complies with the requirements of Specification C1.10; and (c) services, pipes, ducts and the like that are not directly *required* for the proper functioning of the fire control room do not pass through it; and (d) openings in the walls, floors or ceiling which separate the room from the interior of the building are confined to door ways, ventilation and other openings for services necessary for the proper functioning of the facility. **7. Protection of openings in a fire control room** Openings permitted by Clause 6 must be protected as follows: (a) Openings for *windows*, doorways, ventilation, service pipes, conduits and the like, in an *external wall* of the building that faces a road or *open space*, must be protected in accordance with the *Deemed-to-Satisfy Provisions* of Part C3. (b) Openings in the floors, ceilings and *internal walls* enclosing a fire control room must, except for doorways, be protected in accordance with the *Deemed-to-Satisfy Provisions* of Part C3. (c) A door opening in the *internal walls* enclosing a fire-control room, must be fitted with a *self-closing* –/120/30smoke sealed fire door. (d) Openings associated with natural or mechanical ventilation must— (i) not be made in any ceiling or floor immediately above or below the fire control room; and (ii) be protected by a –/120/– fire damper if the opening is for a duct through a wall *required* to have an FRL, other than an *external wall*. **8. Doors to a fire control room** (a) *Required* doors to a fire control room must open into the room, be lockable and located so that persons using escape routes from the building will not obstruct or hinder access to the room. (b) The fire control room must be accessible via two paths of travel—			

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

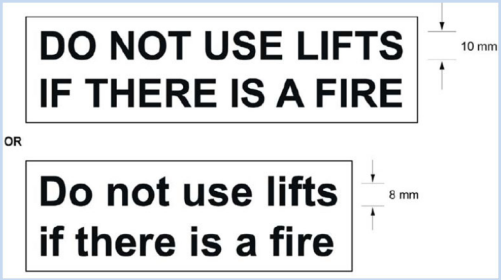
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(i) one from the front entrance of the building; and (ii) one direct from a public place or *fire-isolated passageway* which leads to a public place and has a door with an FRL of not less than –/120/30. **9. Size and contents of a fire control room** (a) A fire control room must contain— (i) a Fire Indicator Panel and necessary control switches and visual status indication for all *required* fire pumps, smoke control fans and other *required* fire safety equipment installed in the building; and (ii) a telephone directly connected to an external telephone exchange; and (iii) a blackboard or whiteboard not less than 1200 mm wide x 1000 mm high; and (iv) a pin-up board not less than 1200 mm wide x 1000 mm high; and (v) a raked plan layout table of a size suitable for laying out the plans provided under (vi); and (vi) colour-coded, durable, tactical fire plans. (b) In addition, a fire control room may contain— (i) master emergency control panels, lift annunciator panels, remote switching controls for gas or electrical supplies and emergency generator backup; and (ii) building security, surveillance and management systems if they are completely segregated from all other systems. (c) A fire control room must— (i) have a *floor area* of not less than 10 m2 and the length of any internal side must be not less than 2.5 m; and (ii) if only the minimum prescribed equipment is installed — have a net *floor area* of not less than 8 m2 with a clear space of not less than 1.5 m2 in front of the Fire Indicator Panel; and (iii) if additional equipment is installed — have an additional area of not less than 2 m2 net *floor area* for each additional facility and a clear space of not less than 1.5 m2 in front of each additional control or indicator panel, and the area *required* for any path of travel through the room to other areas must be provided in addition to the requirements (ii) and (iii). **10. Ventilation and power supply for a fire control room** A fire control room must be ventilated by— (a) natural ventilation from a *window* or doorway in an *external wall* of the building which opens directly into the fire control room from a road or *open space*; or (b) a pressurisation system that only serves the fire control room, and— (i) is installed in accordance with AS 1668.1 as though the room is a *fire-isolated stairway*; and (ii) is activated *automatically* by operation of the fire alarm, or sprinkler system complying with SpecificationE1.5, installed in the building and manually by an over-riding control in the room; and (iii) provides a flow of fresh air through the room of not less than 30 air changes per hour when the system is operating and any door to the room is open; and (iv) has fans, motors and ductwork that form part of the system but not contained within the fire control room protected by enclosing construction with an FRL of not less than 120/120/120; and (v) has any electrical supply to the fire control room or equipment necessary for its operation connected to the supply side of the main disconnection switch for the building, and no openable devices other than necessary doorways, pressure controlled relief louvres and *windows* that are openable by a key, must be constructed in the fire control room. **11. Sign for a fire control room** The external face of the door to the fire control room must have a sign with the words— FIRE CONTROL ROOM in letters of not less than 50 mm high and of a colour which contrasts with that of the background. **12. Lighting for a fire control room**				

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Emergency lighting in accordance with the *Deemed-to-Satisfy Provisions* of Part E4 must be provided in a fire control room, except that an illumination level of not less than 400 lux must be maintained at the surface of the plan table.				
130.	**E1.9 –** Fire precautions during construction	In buildings under construction at least one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to a required exit and if the building has reached an effective height of 12m the required hydrant and hose reel systems must be installed, as set out in (b)(ii) and be operational and any required booster connections must be installed	**CRA**	**A design practitioner—architectural** During construction, not less than one fire extinguisher to suit Class A, B and C fires is required for each storey, and is required to be located adjacent to each exit.		
131.	**E1.10 –** Provisions for special hazards	Suitable provision must be made if special problems of firefighting could arise because of. (a) The nature or quantity of materials stored, displayed or used in a building on the allotment; or (b) The location of the building in relation to a water supply for fire fighting purposed.	**Note**	**A design practitioner—architectural**		
	Part E2 – Smoke Hazard Management					
132.	**E2.1 –** Application of Part	The Deemed-to-Satisfy Provisions of this Part do not apply to any open deck carpark or open spectator stand. The smoke exhaust and smoke-and-heat vent provisions of this part do not apply to any area not used by occupants for an extended period of time such as a storeroom with a floor area of less than 30m², sanitary compartment, plant room or the like.	**Note**	Part is not applicable to • open deck car parks • open spectator stands		
133.	**E2.2 –** General requirements	**Automatic air pressurisation system** The fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp serving is required to be provided with an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1 as the fire-isolated stairway serve storeys above an effective height of 25 m; **Note:** An automatic air pressurisation system for fire-isolated exits applies to the entire exit. The discharge into the lobby for two of the egress stairs does not satisfy this requirement. **Smoke Detection** The building is required to be provided with an automatic smoke detection and alarm system complying with BCA Spec E2.2a and AS1670.1-2015. **Building Occupant Warning System** A building occupant warning system provided as part of a smoke hazard management system must comply with clause 3.22 of AS 1670.1 to sound through all occupied areas. **System Monitoring**	**CRA**	**A design practitioner—architectural** **A design practitioner—fire systems (detection and alarm systems)** **Note**: Common areas utilise a concession where a AS2118.1 Sprinkler System is installed throughout the building connected to the buildings BOWs, smoke detection is not needed. **See Draft Fire Safety Schedule under Part 2 of this report.** **The following smoke hazard management services are required for the subject development:**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		A fire alarm monitoring system connected to a fire station or fire station dispatch centre in accordance with AS 1670.3 is required.		o An Automatic Smoke detection and alarm system complying with Clause 4 (AS1670.1-2018) for the common areas of the Class 2, and o Clause 3 (AS3786-2014) within the residential SOU's Note: Where multiple detectors are provided within an SOU, those detectors must be interconnected. o The carpark shall be provided with a sprinkler system in accordance with AS2118.1-2017. o Building Occupant Warning System (BOWS) throughout, Automatic Shutdown / Manual Over-ride mechanical exhaust system in basement carpark. The location of all Smoke Alarms are to be indicated on the CC Plans. Final details to be provided detailing floor services and materials are to be provided at the Construction Certificate stage or noted on the plans.		
134.	**E2.3 –** Provisions for special hazards	Additional smoke hazard management measures may be necessary due to the nature of a building's special characteristic, its use, the nature of materials being stored in them and special mix of classifications.	**Note**			
	Part E3 – Lift Installations					
135.	**E3.1 –**	**7 Regulated designs relating to integration of vertical transportation products in buildings** (1) For the purposes of section 5(2) of the Act, a regulated design for building work relating to the integration of a vertical transportation product in a building to which the building work relates must include the registration number of the product if the product is used, or is proposed to be used, in a workplace. **Note—**	**Note**	**A design practitioner—vertical transportation.**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		The *Work Health and Safety Act 2011*, section 42, provides that the design of a vertical transportation product that is used in a workplace must be authorised in accordance with the *Work Health and Safety Regulation 2017*. (2) In this clause— ***registration number*** means the registration number for the vertical transportation product referred to in the *Work Health and Safety Regulation 2017*, clause 273. ***workplace*** has the same meaning as in the *Work Health and Safety Act 2011*				
136.	**E3.2 –** Stretcher facility in lifts	(a) A stretcher facility in accordance with (b) must be provided— (i) in at least one emergency lift required by E3.4; or (ii) where an emergency lift is not required, if passenger lifts are installed to serve any storey above an effective height of 12 m, in at least one of those lifts to serve each floor served by the lifts. (b) A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.	**CRA**	**A design practitioner—vertical transportation.** A lift consultant will need to ensure compliance in this regard, and that the shaft provided is suitable. All lifts are to be able to accomidate a **stretcher facility** **The building has an effective height of 8m, Stretcher lifts are optional yet recommended.**		
137.	**E3.3 –** Warning against use of lifts in fire	Warning signs required to be provided must be displayed where they can be readily seen and must comply with the details and dimensions of: 	**CRA**	**A design practitioner—vertical transportation.** Warning signage to be provided as follows– "Do not use lifts if there is a fire".		
138.	**E3.4 –** Emergency lifts	(a) At least one emergency lift complying with (d) must be installed in— (i) a building which has an *effective height* of more than 25 m; and (ii) a Class 9a building in which *patient care areas* are located at a level that does not have direct egress to a road or *open space*. (b) An emergency lift may be combined with a passenger lift and must serve those *storeys* served by the passenger lift so that	**N / A**	**A design practitioner—vertical transportation.**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		all *storeys* of the building served by passenger lifts are served by at least one emergency lift. (c) Where two or more passenger lifts are installed and serve the same *storeys*, excluding a lift that is within an *atrium* and not contained wholly within a *shaft*— (i) at least two emergency lifts must be provided to serve those *storeys*; and (ii) if located within different *shafts*, at least one emergency lift must be provided in each *shaft*. (d) An emergency lift must— (i) be contained within a *fire-resisting shaft* in accordance with C2.10; and (ii) in a Class 9a building serving a *patient care area*— (A) have minimum dimensions, measured clear of all obstructions, including handrails, etc complying with Table E3.4; and (B) be connected to a standby power supply system where installed; and (iii) if the building has an *effective height* of more than 75 m, have a rating of at least— (A) 600 kg if not provided with a stretcher facility; or (B) 900 kg if provided with a stretcher facility.				
139.	**E3.5 –** Landings	E3.5(a) The provisions of clause 12.2 – "Access" of AS 1735.2 do not apply. E3.5(b) The provisions of Clause A3.2 – "Access to landings" of Appendix A of AS 1735.1 do not apply. E3.5(c) Access and egress to and from lift well landings must comply with the Deemed-to-Satisfy Provisions of Part D.	**CRA**	**A design practitioner—vertical transportation.** Final details to be provided detailing floor services and materials are to be provided at the Construction Certificate stage or noted on the plans.		
140.	**E3.6 –** Facilities for people with disabilities	In an accessible building, every passenger lift must be one of the types identified in Table E3.6a, have accessible features in accordance with Table E3.6b and not rely on a constant pressure device for its operation if the lift car is fully enclosed.	**CRA**	**A design practitioner—vertical transportation.** Final details to be provided detailing final design items are to be provided at the Construction Certificate stage or noted on the plans.		
141.	**E3.7 –** Fire Services Control	In passenger lifts designed in accordance with AS 1735 Parts 1 and 2, all lift cars serving any storey above an effective height of 12m must be provided with fire service controls. Where lifts serve any storey above an effective height of 12m, the following must be provided: (a) A fire service recall control switch complying with E3.9 for— (i) a group of lifts; or (ii) a single lift not in a group that serves the storey.	**CRA**	**A design practitioner—vertical transportation.** Final details to be provided detailing final design items are to be provided at the Construction Certificate stage or noted on the plans.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(b) A lift car fire service drive control switch complying with E3.10 for every lift.		**The building has an effective height of 8m, Stretcher lifts are optional yet recommended.**		
142.	**E3.8 –** Aged care buildings	Where residents in an aged care building are on levels which do not have direct access to a road or open space a building must be provided with either at least one lift to accommodate a stretcher in accordance with E3.2(b) or a ramp in accordance with AS1428.1 and the ramp must discharge to a level providing direct access to a road or open space	**N / A**	**A design practitioner—vertical transportation.**		
143.	**E3.9 –** Fire Recall Control Switch	This Clause looks at the specific requirements relating to Fire service control switches and the need for operation.	**CRA**	**A design practitioner—vertical transportation.** See E3.7 in the report.		
144.	**E3.10 –** Lift Car Drive Control Switch	This clause identifies the requirements for the position and location of a service drive control switch.	**CRA**	**A design practitioner—vertical transportation.** See E3.7 in the report.		
	Part E4 – Emergency Lighting, Exit Signs and Warning Systems					
145.	**E4.1 –**	-	**-**	No provisions		
146.	**E4.2 –** Emergency lighting requirements	An emergency lighting system must be installed— (a) in every *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp*; and (b) in every *storey* of a Class 5, 6, 7, 8 or 9 building where the *storey* has a *floor area* more than 300m^2— (i) in every passageway, corridor, hallway, or the like, that is part of the path of travel to an *exit*; and (ii) in any room having a *floor area* more than 100m^2 that does not open to a corridor or space that has emergency lighting or to a road or *open space*; and (iii) in any room having a *floor area* more than 300m^2;	**CRA**	Emergency lighting is to be provided throughout the building in accordance with AS2293.1-2005 Electrical engineers review. Where existing lighting requirements are to be altered, details and a design certificate will be required by a suitably qualified electrical engineer prior to the issue of a Construction Certificate.		
147.	**E4.3 –** Measurement of distance	Distance, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.	**Note**			
148.	**E4.4 –** Design and operation of emergency lighting	Every required emergency lighting system must comply with AS2293.1	**CRA**	Emergency lighting shall be provided throughout the building in accordance with the requirements of Clause E4.4 of the BCA and AS 2293.1.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				Details and a design certificate will be required by a suitably qualified electrical engineer prior to the issue of a Construction Certificate.		
149.	**E4.5 –** Exit signs	An exit sign must be clearly visible to persons approaching the exit and must be installed on, above or adjacent to each door providing egress form a building. Sub-clauses (a) to (d) set out the situations where exit signs are required to be installed	**CRA**	Exit signs are to be provided in accordance with Clause E4.5 of the BCA. Exit signs must be clearly visible to person approaching the exit and must be installed on, above or adjacent to; 1. A door providing direct egress from a storey to a stairway, passageway or ramp serving as a required exit. 2. A door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space. 3. A door serving as or forming part of a required exit in a storey required to be provided with emergency lighting. Where and if requirements are altered under this proposal, details and a design certificate will be required by a suitably qualified electrical engineer prior to the issue of a Construction Certificate.		
150.	**E4.6 –** Direction signs	If an exit is not readily apparent to persons occupying or visiting the building then exit signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit.	**CRA**	Where an exit is not readily apparent then exit signs with directional arrows must be installed in appropriate positions in corridors, hallways, lobbies and the like indicating the direction to a required exit in accordance with Clause E4.6 of the BCA. Where and if requirements are altered under this proposal, details and a design certificate will be required by a suitably qualified electrical engineer prior to the issue of a Construction Certificate. It is noted that E4.7 can apply, exit signs are optional.		
151.	**E4.7 –** Class 2, 3 and 4 buildings: Exemptions	This clause grants an exemption for Class 2, 3 and Class 4 parts of buildings from the need to comply with E4.5 if the provisions of sub-clauses (a) & (b) are complied with.	**Note**			
152.	**E4.8 –**	Every required exit sign must comply with AS/NZS 2293.1 and be clearly visible at all times when the building is occupied by any person having the legal right of entry into the building.	**CRA**	Exit signs are to operate in accordance with AS 2293.1 and be clearly visible at all times while the building is occupied.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Design and operation of exit signs			Where and if requirements are altered under this proposal, details and a design certificate will be required by a suitably qualified electrical engineer prior to the issue of a Construction Certificate.		
153.	**Spec E4.8 –** Photoluminescent Exit Signs	Every *required exit* sign must comply with— (a) AS/NZS 2293.1; or (b) for a photoluminescent *exit* sign, Specification E4.8; and (c) be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	**N / A**			
154.	**E4.9 –** EWIS systems	This clause sets out the types of buildings requiring the installation of a sound system and intercom system to assist with the emergency evacuation of occupied. This clause specifies that sound and intercom systems must comply with AS 1670.4 An emergency warning and intercom system complying where applicable with AS 1670.4 must be installed in a building with an effective height of more than 25m. ***See*** additional for Class 3 building, Class 9a, Class 9b buildings.	**N / A**	**A design practitioner—fire systems (detection and alarm systems),**		
	SECTION F – HEALTH AND AMENITY **Part F1 – Damp and Weatherproofing**					
	Clause	Description	**Status**	Comments		
155.	**FP1.4 –** Weatherproofing (Performance Requirement)	**F1.0 Deemed-to-Satisfy Provisions** Performance Requirement FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls. **FP1.4 Weatherproofing** A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause— (a) unhealthy or dangerous conditions, or loss of amenity for occupants; and (b) undue dampness or deterioration of building elements. **Limitation:** FP1.4 does not apply to—	**PS**	**A design practitioner—architectural** **A design practitioner— facade** Performance Requirement FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(a) a Class 7 or 8 building where in the particular case there is no necessity for compliance; or (b) a garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes; or (c) an open spectator stand or open-deck carpark.				
156.	**F1.1 –** Stormwater drainage	Stormwater drainage design shall be in accordance with AS/NZS 3500.3.	**CRA**	**A design practitioner— drainage** Details and a design certificate will be required by a suitably qualified hydraulic engineer prior to the issue of a Construction Certificate.		
157.	**F1.2 –**	-	**-**	No provisions		
158.	**F1.3 –**	-	**-**	No provisions		
159.	**F1.4 –** External above ground membranes	Waterproofing membranes for external above ground use to comply with AS4654 Parts 1 and 2-2012.	**CRA**	**A design practitioner—architectural** Details and a design certificate will be required by a suitably qualified hydraulic engineer prior to the issue of a Construction Certificate.		

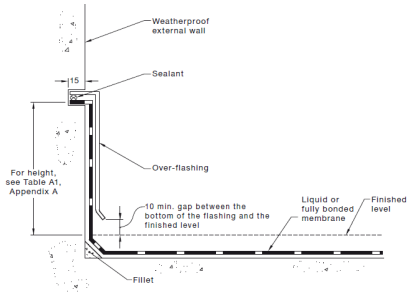


FIGURE 2.2 TYPICAL VERTICAL UPWARD TERMINATION—DETAIL OF OVER-FLASHING FOR LIQUID OR FULLY BONDED SHEET MEMBRANES

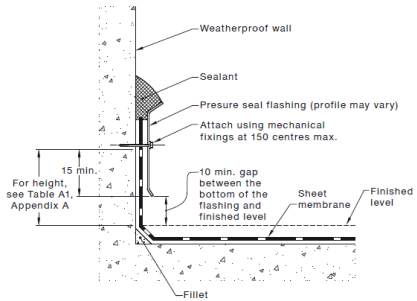
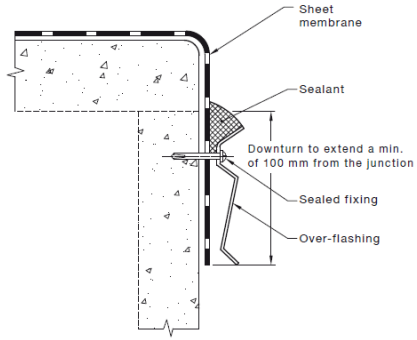
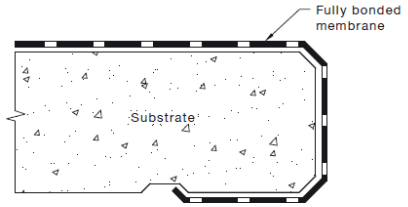


FIGURE 2.3 TYPICAL VERTICAL UPWARD TERMINATION—DETAIL OF PRESSURE SEAL FOR SHEET MEMBRANE



NOTE: Gap between pressure seal flashing and membrane has been exaggerated for clarity.

(a) Roof edge detail for a sheet membrane system with pressure seal

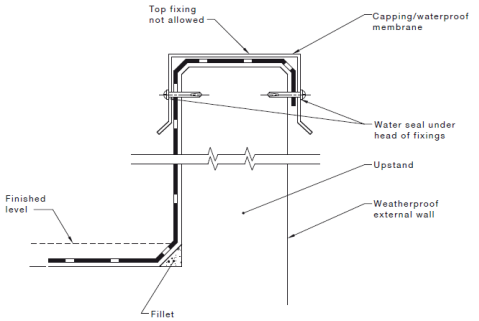


(b) Optional balcony edge detail for a fully bonded membrane

FIGURE 2.4 TYPICAL VERTICAL DOWNWARD TERMINATION

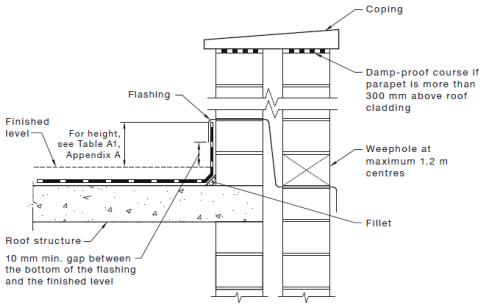
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S



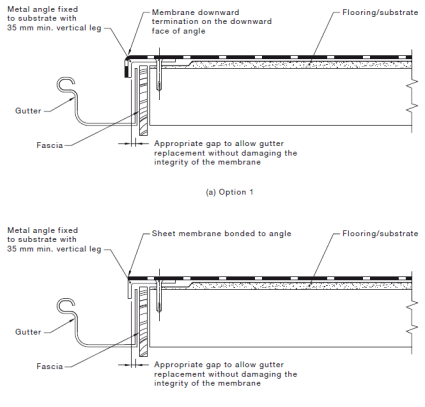
NOTE: For falls, see Clause 2.5.2.

FIGURE 2.5 TYPICAL EDGE PROTECTION OF SHEET MEMBRANE OVER A PARAPET



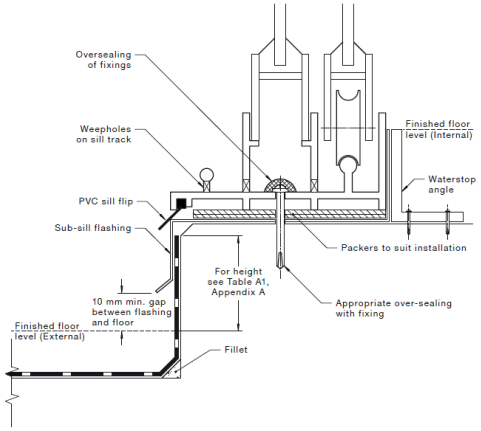
NOTE: For falls, see Clause 2.5.2.

FIGURE 2.6 TYPICAL MEMBRANE TERMINATION AT A CAVITY PARAPET



NOTES:
1 Overflow facilities should divert water away from the building.
2 For falls, see Clause 2.5.2.

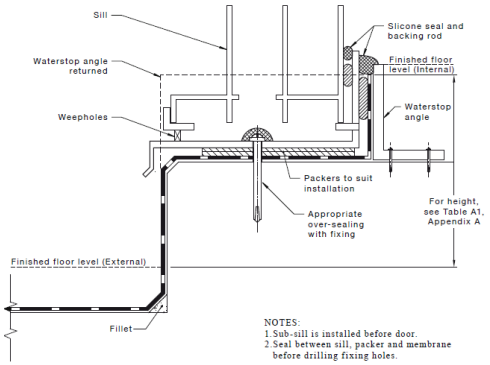
FIGURE 2.7 TYPICAL GUTTER TERMINATIONS—DETAIL



NOTE: For falls, see Clause 2.5.2.

(a) Option 1 Opening higher than sill upward termination

FIGURE 2.8 (in part) TYPICAL DETAILS OF MEMBRANE TERMINATION AT EXTERNAL OPENING DOORS

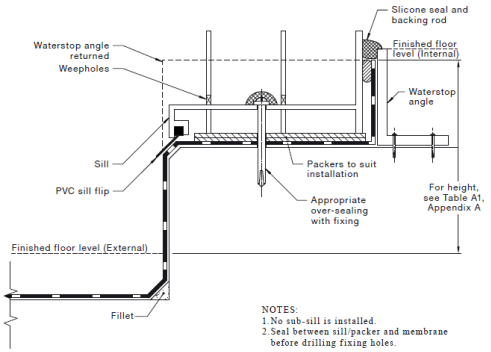


NOTES:
1.Sub-sill is installed before door.
2.Seal between sill, packer and membrane before drilling fixing holes.

NOTE: For falls, see Clause 2.5.2.

(b) Option 2 Sill with sub-sill

FIGURE 2.8 (in part) TYPICAL DETAILS OF MEMBRANE TERMINATION AT EXTERNAL OPENING DOORS



NOTES:
1.No sub-sill is installed.
2.Seal between sill/packer and membrane before drilling fixing holes.

NOTE: For falls, see Clause 2.5.2.

(c) Option 3 Sill—No sub-sill

FIGURE 2.8 (in part) TYPICAL DETAILS OF MEMBRANE TERMINATION AT EXTERNAL OPENING DOORS

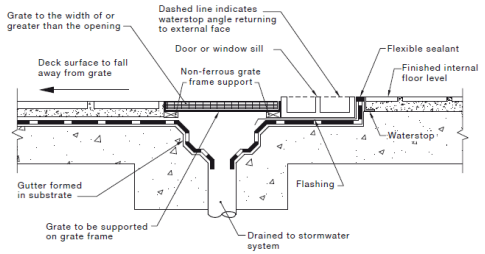
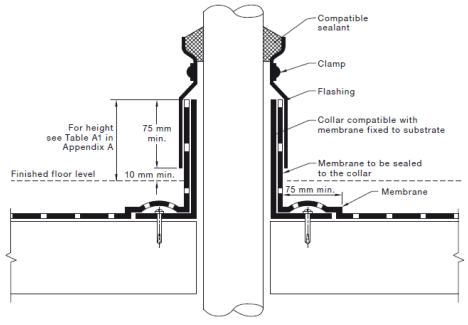


FIGURE 2.9 TYPICAL DETAILS OF MEMBRANE TERMINATION AT WALL OPENINGS WHERE THE INTERNAL AND EXTERNAL FINISHED FLOOR LEVELS DO NOT ALLOW FOR AN UPTURN



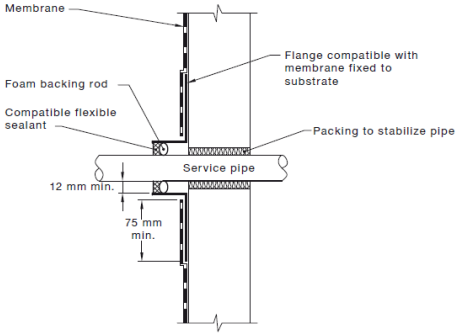
DIMENSIONS IN MILLIMETRES

NOTES:
1 All pipes, ducts and vents should be located within a collar mechanically fixed to the substrate as an extension to the penetration. Alternatively, a collar may be cast into the substrate to form the penetration. A separate collar should be used for each penetration.
2 The membrane should be turned up around the penetration and over-flashed with a minimum overlap of 75 mm.
3 Sufficient clearance between pipe and sleeve/substrate to be provided.

FIGURE 2.10 TYPICAL DETAILS OF VERTICAL PENETRATION USING A COLLAR

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S



NOTE: Prime service pipe to allow for proper adhesion between sealant and pipe interface.

FIGURE 2.11 TYPICAL PENETRATION

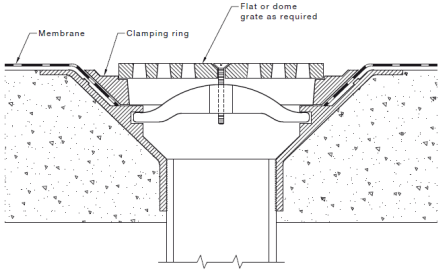
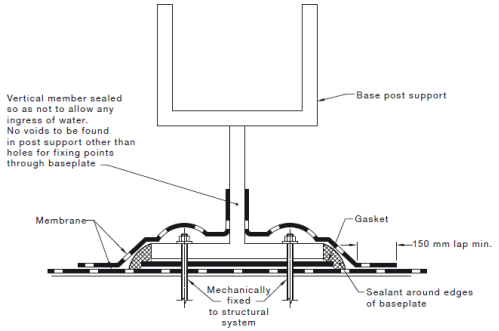


FIGURE 2.15 DRAINAGE DETAIL FOR AN EXPOSED MEMBRANE



(b) Post membrane installation

NOTES:

1 The membrane should be turned up around the post or support prior to membrane installation.

2 All post bases should be placed into position prior to placement of membrane. If posts are placed onto a completed membrane, any damaged membrane should be replaced or repaired to ensure its original integrity.

3 For posts penetrating through the deck, see Clause 2.8.4.

4 All penetrations into concrete should be treated with epoxy. All fixings into concrete should be of a chemically injected type in order to maintain the integrity of the waterproofing and substrate.

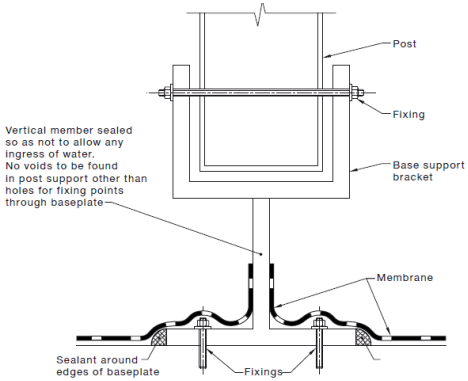
5 Consideration should be given to post designs that are fixed below the level of the deck without penetrating through the surface of the deck.

6 Waterproofing of the system will be compromised by the use of timber or metal posts that are not suitable for external use.

7 For base support to heavy structures or plant, extra consideration should be given to waterproofing and sealants to cater for the vibration movement around the base of the installations, such as—

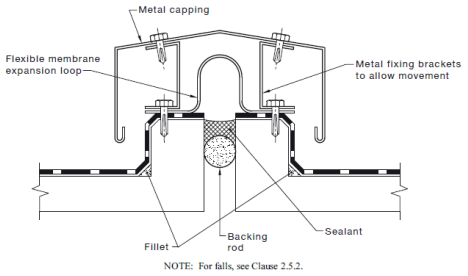
(a) heavy plant and equipment and plinths;
(b) power poles;
(c) flagpoles;
(d) communication towers;
(e) roof access railings; and
(f) building maintenance units.

FIGURE 2.12 (in part) TYPICAL DETAILS OF METAL POST SUPPORT



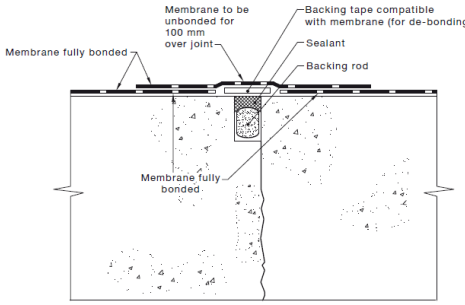
(a) Prior to membrane installation

FIGURE 2.12 (in part) TYPICAL DETAILS OF METAL POST SUPPORT



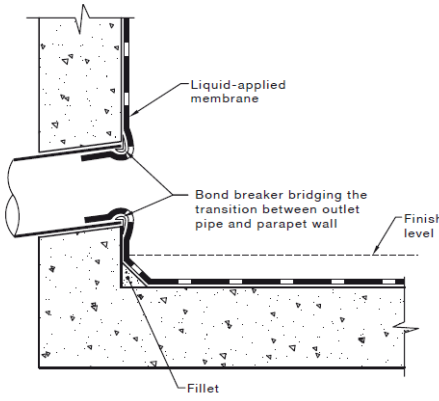
NOTE: For falls, see Clause 2.5.2.

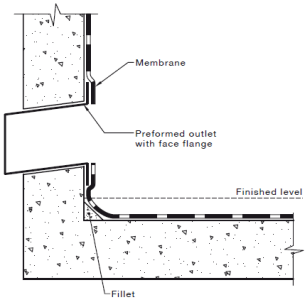
FIGURE 2.13 TYPICAL DISCONTINUOUS ONE-WAY MOVEMENT JOINT



NOTE: For falls, see Clause 2.5.2.

FIGURE 2.14 TYPICAL CONTINUOUS MOVEMENT JOINT



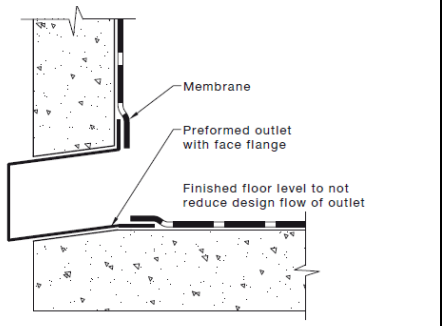
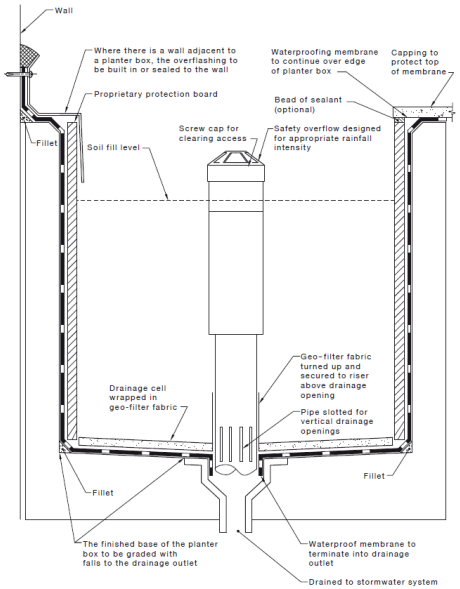


(b) Preformed overflow through parapet

NOTE: The overflow pipe should be located in a readily visible location to alert of a potential blockage.

FIGURE 2.16 (in part) TYPICAL DETAILS OF OVERFLOW

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
 (c) Preformed outlet to parapet overflow FIGURE 2.16 (in part) TYPICAL DETAILS OF OVERFLOW PIPE						
 FIGURE 2.17 TYPICAL PLANTER BOX CONSTRUCTION					
160.	**F1.5 –** Roof coverings	Metal roof sheeting is to comply with AS1562.1	**CRA**	**A design practitioner—architectural** Roof coverings are to comply with the relevant Australian Standards as per Clause F1.5. Details and design certification to be provided prior to the issue of a Construction Certificate.		
161.	**F1.6 –** Sarking	Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.	**CRA**	**A design practitioner—architectural** Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2. Details and design certification to be provided prior to the issue of a Construction Certificate.		
162.	**F1.7 –**	Water proofing of wet areas is to comply with AS3740-2010.	**CRA**	**A design practitioner—architectural**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Waterproofing of wet areas			Shower enclosure surfaces, floor surfaces in bathrooms, shower rooms, slop hoppers, sink compartments, laundry and sanitary compartments is required to be waterproofed in accordance with AS 3740. Details and design certification to be provided prior to the issue of a Construction Certificate.		
	F1.8 –	-	**-**	No provisions		
163.	**F1.9 –** Damp-proofing	Damp-proof course is to be provided compliant with AS2904.	**CRA**	**A design practitioner—architectural** Damp-proof course is to be provided compliant with AS2904.		
164.	**F1.10 –** Damp-proofing of floors on the ground	Vapour barrier is to be provided in accordance with AS2870.	**CRA**	**A design practitioner—architectural** A vapour barrier in accordance with AS2870 is to be provided beneath the basement floor slab. Details and design certification to be provided prior to the issue of a Construction Certificate.		
165.	**F1.11 –** Provisions of floor wastes	In a Class 2 or 3 building or Class 4 part of a building, the floor of each bathroom and laundry located above a sole-occupancy unit or public space must be graded to permit drainage to a floor waste.	**CRA**	**A design practitioner—architectural** The floor of each bathroom / laundry is to be graded to permit drainage to a floor waste. The plans forming part of the Construction Certificate Application must detail compliance with the above.		
166.	**F1.12 –** Sub-floor ventilation	The sub-floor space between the suspended floor of a building and the ground must be in accordance with sub-clauses (a) to (g). This clause specifies the minimum sub-floor ventilation openings and the height of sub-floor timbers above the ground level for the three climatic zones set out in Figure F1.12 of the BCA	**CRA**	**A design practitioner—architectural** Details are to be included on the architectural documentation.		
167.	**F1.13 –** Glazed assemblies	Glazed assemblies in an external wall must comply with AS2047 requirements for resistance to water penetration for windows, sliding doors with a frame, adjustable louvres, windows with one piece framing	**CRA**	**A design practitioner—architectural** **A design practitioner—facade**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				Windows, sliding doors with a frame, adjustable louvres, shopfronts and window walls with one piece framing in an external wall must comply with AS 2047 requirements for resistance to water penetration. Details and design certification to be provided prior to the issue of a Construction Certificate.		
	Part F2 – Sanitary and Other Facilities					
168.	**F2.1 –** Facilities in residential buildings	Sanitary and other facilities for Class 2 and 3 buildings and Class 9c aged care buildings and for Class 4 parts of buildings must be provided in accordance with Table F2.1.	**CRA**	**A design practitioner—architectural** The following facilities will need to be provided for the Class 2/3 residents: 0 A kitchen sink and facilities for preparation of food, 0 A bath or shower, 0 A closet pan & washbasin, 0 Laundry facilities comprising of a washtub and a space for a washing machine, Clothes drying facilities comprising of 7.5m length of line or a space for one heat operated drying cabinet or appliance. **Note**: Floor wastes shall be provided to all laundries, particularly where they are situated adjacent to / within the kitchen space.		
169.	**F2.2 –** Calculation of number of occupants and fixtures	(a) The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means. (b) Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females. (c) In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility *required* for people with a disability (other than a facility provided under F2.9) may be counted once for each sex. (d) For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary products.	**Note**			
170.	**F2.3 –**	a) Except where permitted by (b), (c), (f), F2.4(a), F2.4(b) and F2.9(b), separate sanitary facilities for males and females	**CRA**	**A design practitioner—architectural**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Facilities in Class 3 to 9 buildings	must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Table F2.3. (b) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex. (c) If the majority of employees are employed, a unisex facility may be provided instead of separate facilities for each sex. (d) Employees and the public may share the same facilities in a Class 6 and 9b building (other than a *school* or *early childhood centre*) provided the number of facilities provided is not less than the total number of facilities *required* for employees plus those *required* for the public. (e) Adequate means of disposal of sanitary products must be provided in sanitary facilities used by females.		**A single Unisex toilet is afforded to visitors and general staff, provided not more than 2 employees of the opposite sex is on site.**		

Table F2.3 Sanitary facilities in Class 3, 5, 6, 7, 8 or 9 buildings

User Group	Closet Pans		Urinals		Washbasins	
	Design Occupancy	Number	Design Occupancy	Number	Design Occupancy	Number
Class 3, 5, 6 and 9 other than *schools*						
Male employees	1 — 20 > 20	1 Add 1 per 20	1 — 10 11 — 25 26 —50 >50	0 1 2 Add 1 per 50	1 — 30 > 30	1 Add 1 per 30
Female employees	1 — 15 > 15	1 Add 1 per 15	N/A	N/A	1 — 30 > 30	1 Add 1 per 30

171.	**F2.4 –** Facilities for people with disabilities	Accessible unisex sanitary compartments must be provided, in accordance with Table F2.4(a), in buildings or parts that are required to be accessible. The details for the provision of disabled facilities and the standard, AS 1428.1, are set out in sub-clauses (a) to (i).	**CRA**	**A design practitioner—architectural** Final dimensions of accessible facilities are required at the Construction Certificate.		

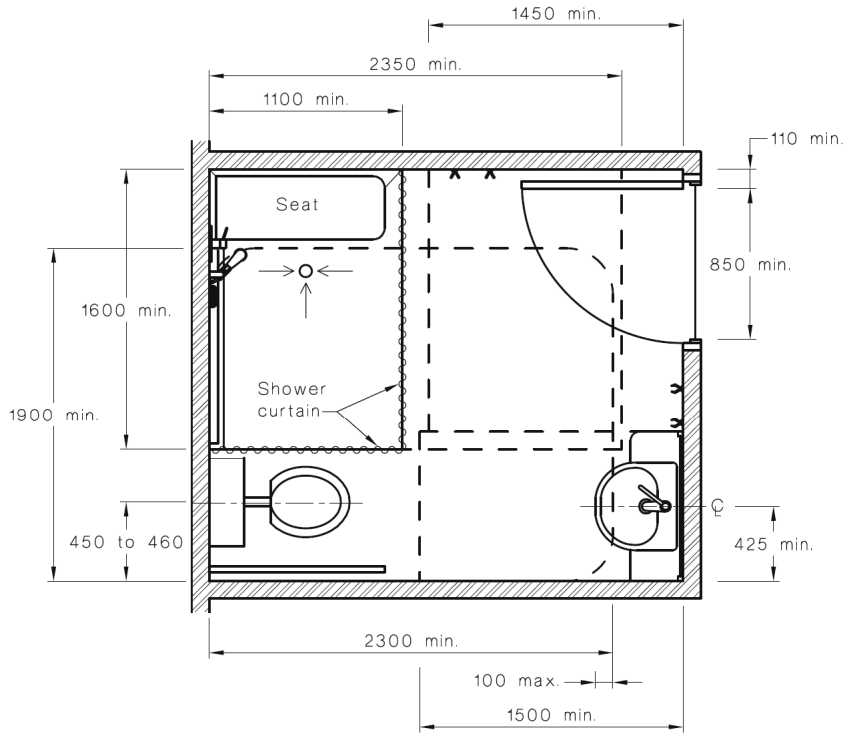
Table F2.4(a) Accessible unisex sanitary compartments

Class of building	Minimum accessible unisex sanitary compartments to be provided
Class 3 and Class 9c	(a) In every *accessible sole-occupancy unit* provided with *sanitary compartments* within the *accessible sole-occupancy unit*, not less than 1; and (b) at each bank of *sanitary compartments* containing male and female *sanitary compartments* provided in common areas, not less than 1.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

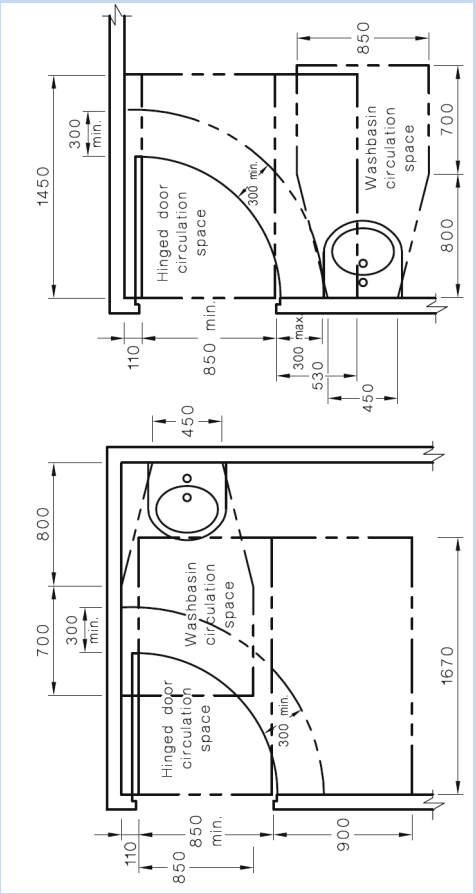
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S

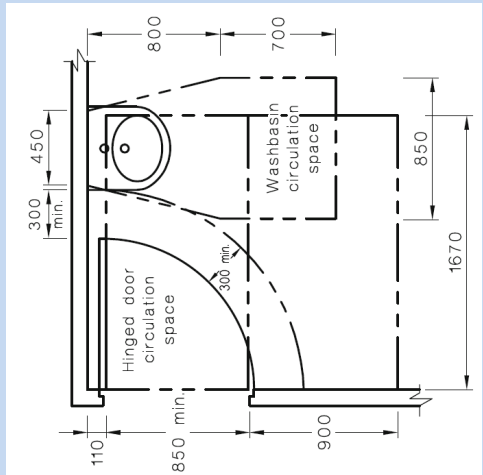
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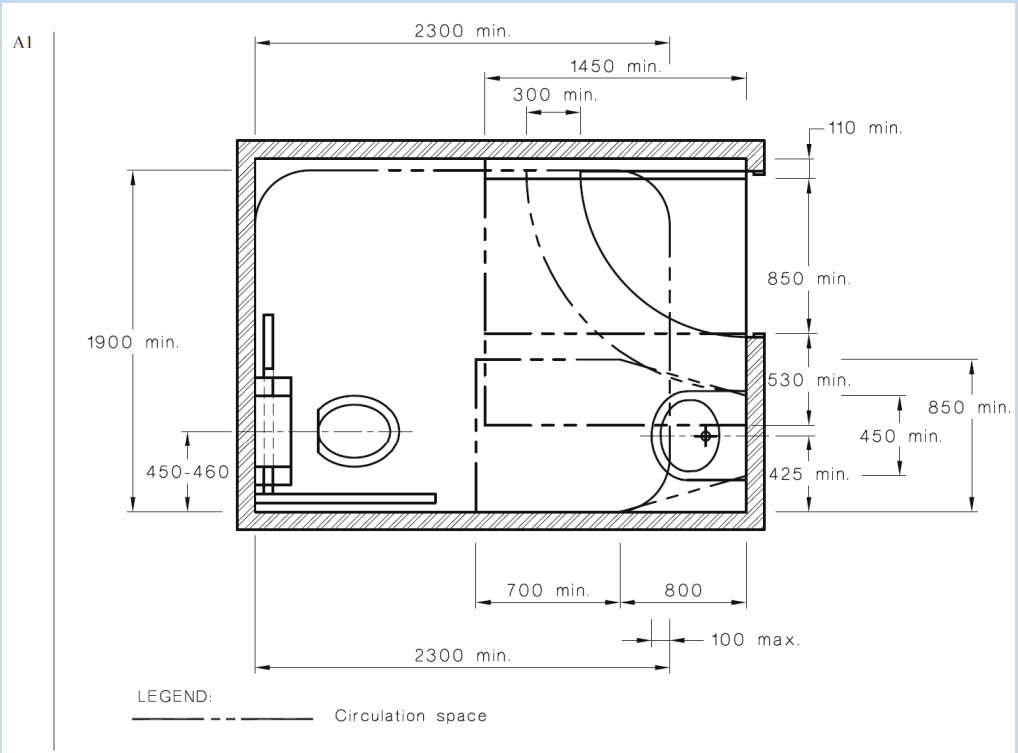
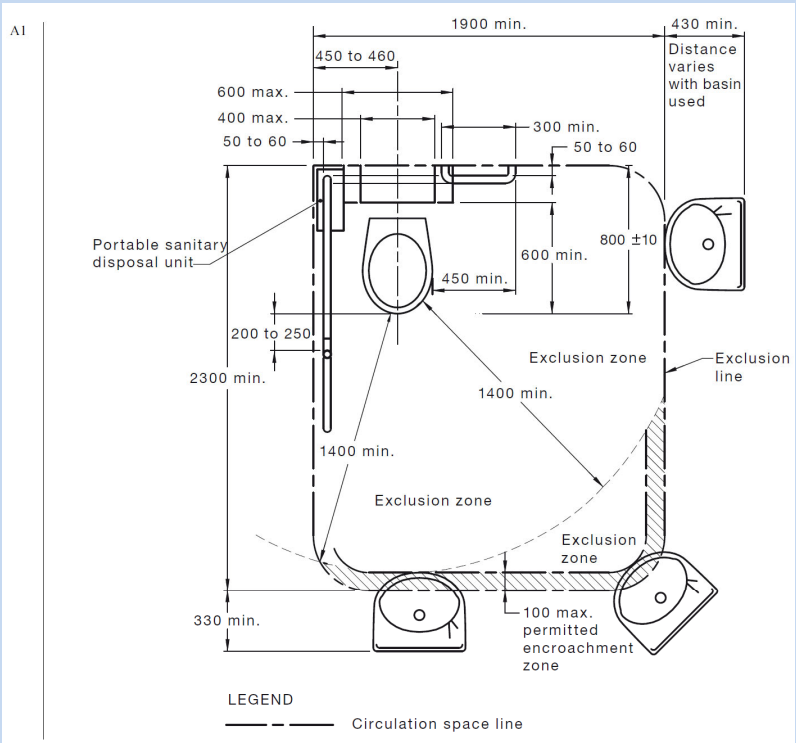
DIMENSIONS IN MILLIMETRES

FIGURE 50 SANITARY COMPARTMENT SHOWING OVERLAP OF WASHBASIN FIXTURE INTO SHOWER CIRCULATION SPACE

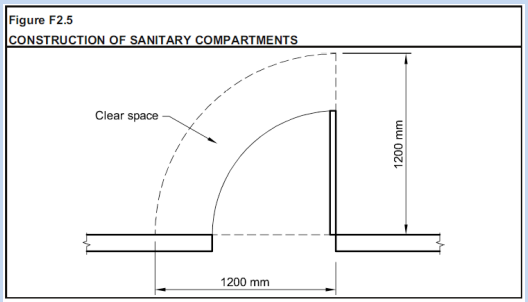




Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		 DIMENSIONS IN MILLIMETRES FIGURE 52 EXAMPLE OF OVERLAPPING CIRCULATION SPACES IN A SANITARY COMPARTMENT		 NOTE: This circulation space may overlap any other circulation spaces specified in this Standard. DIMENSIONS IN MILLIMETRES FIGURE 43 CIRCULATION SPACE FOR WC PAN—RIGHT-HAND TRANSFER (LEFT-HAND TRANSFER IS MIRROR REVERSED)		
172.	**F2.5 –** Construction of sanitary compartments	(a) Other than in an *early childhood centre*, *sanitary compartments* must have doors and partitions that separate adjacent compartments and extend— (i) from floor level to the ceiling in the case of a unisex facility; or (ii) to a height of not less than 1.5 m above the floor if primary *school* children are the principal users; or (iii) 1.8 m above the floor in all other cases. (b) The door to a fully enclosed *sanitary compartment* must— (i) open outwards; or	**CRA**	**A design practitioner—architectural** Doors to the fully enclosed toilets are to open outwards, slide or be readily removable from the outside of the sanitary compartment unless there is a clear space of at least 1.2m between the closet pan within the sanitary compartment and the nearest part of the doorway.		

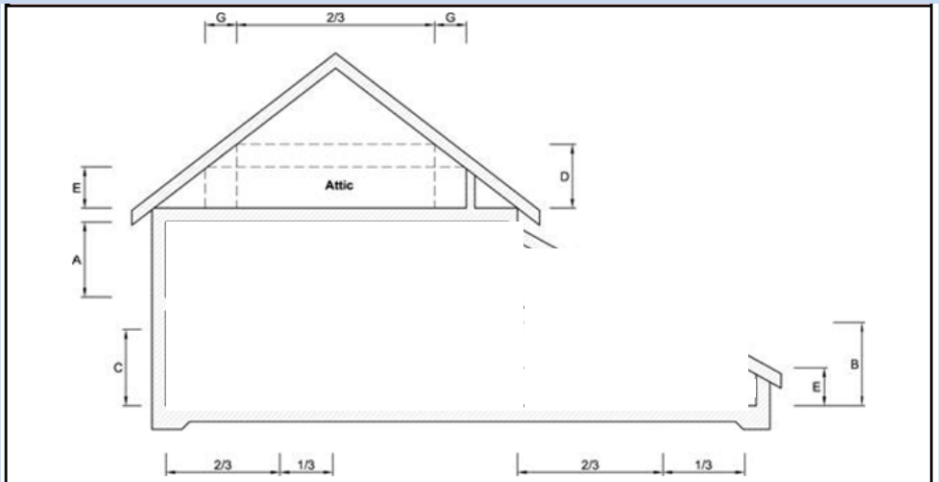
Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) slide; or (iii) be readily removable from the outside of the *sanitary compartment*, unless there is a clear space of at least 1.2 m, measured in accordance with Figure F2.5, between the closet pan within the *sanitary compartment* and the doorway.		Plans submitted with the Construction Certificate Application must detail compliance with the above.  		
173.	**F2.6 –** Interpretation: Urinals and washbasins	(a) A urinal may be— (i) an individual stall or wall-hung urinal; or (ii) each 600 mm length of a continuous urinal trough; or (iii) a closet pan used in place of a urinal. (b) A washbasin may be— (i) an individual basin; or (ii) a part of a hand washing trough served by a single water tap.	**N / A**	**A design practitioner—architectural**		
174.	**F2.7 –** Warm water installations	Hot water, warm water and cooling water systems in a building other than a system only serving a sole-occupancy unit in a Class 2, 3 or Class 4 Part of a building must be installed in accordance with AS/NZS 3666.1.	**N / A**	Not Applicable in NSW		
175.	**F2.8 –** Waste	In a Class 9a & 9c health-care and aged care buildings, facilities must be provided with facilities to facilitate the emptying of containers of sewage and dirty water.	**N / A**	**A design practitioner—architectural**		
176.	**F2.9 –** Accessible adult change facilities	(a) Accessible adult change facilities required by (b) (i) must be constructed in accordance with Specification F2.9; and (ii) cannot be combined with another sanitary compartment. (b) One unisex accessible adult change facility must be provided in an accessible part of a— (i) Class 6 building that is a shopping centre having a design occupancy of not less than 3,500 people, calculated on the basis of the floor area and containing a minimum of 2 sole-occupancy units; and (ii) Class 9b sports venue or the like that— (A) has a design occupancy of not less than 35,000 spectators; or	**N / A**	**A design practitioner—architectural**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(B) contains a swimming pool that has a perimeter of not less than 70 m and that is required by Table D3.1 to be accessible; and (iii) museum, art gallery or the like having a design occupancy of not less than 1,500 patrons; and (iv) theatre or the like having a design occupancy of not less than 1,500 patrons; and (v) passenger use area of an airport terminal building within an airport that accepts domestic and/or international flights that are public transport services as defined in the Disability Standards for Accessible Public Transport 2002.				
	Part F3 – Room Sizes					
177.	**F3.1 –** Height of rooms and other spaces	The height of rooms and other spaces must be not less than— (b) in a Class 5, 6, 7 or 8 building— (i) except as allowed in (ii) and (f) — 2.4 m; and (ii) a corridor, passageway, or the like — 2.1 m; and (d) in a Class 9b building— (i) a *school* classroom or other *assembly building* or part that accommodates not more than 100 persons — 2.4 m; and (ii) a theatre, public hall or other *assembly building* or part that accommodates more than 100 persons — 2.7 m; and (iii) a corridor— (A)that serves an *assembly building* or part that accommodates not more than 100 persons — 2.4 m; or (B)that serves an *assembly building* or part that accommodates more than 100 persons — 2.7 m; and (iv)the number of persons accommodated must be calculated according to D1.13; and (f) in any building— (i) a bathroom, shower room, *sanitary compartment*, other than an *accessible* adult change facility, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and (ii) a commercial kitchen — 2.4 m; and (iii) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like; and (iv)a *required accessible* adult change facility — 2.4 m.	**Complies**	**A design practitioner—architectural** Ceiling Heights look compliant.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		 **Note:** The letters in the diagram represent the following minimum dimensions: A = 2.4 m In a *habitable room* (excluding a kitchen). B = 2.4 m In a *habitable room* with a sloping ceiling for at least two-thirds of the floor area of the room or space. C = 2.1 m In a non-*habitable room* with a sloping ceiling for at least two-thirds of the floor area of the room or space. D = 2.2 m In an attic with a sloping ceiling for at least two-thirds of the floor area of the room or space. E = 1.5 m For the purpose of calculating the floor area of a room or space, any ceiling height of less than 1.5 m is excluded. F = 2.0 m In a stairway (measured vertically above the nosing line). The combined dimensions of G must not exceed one-third of the floor area (See E above) of the room or space.				
	Part F4 – Light and Ventilation					
178.	**F4.1 –** Provisions of natural light	Natural light must be provided in: (a) **Class 2 buildings and Class 4 parts of buildings** — to all *habitable rooms*. (b) **Class 3 buildings** — to all bedrooms and dormitories. (c) **Class 9a and 9c buildings** — to all rooms used for sleeping purposes. (d) **Class 9b buildings** — to all general purpose classrooms in primary or secondary *schools* and all playrooms or the like for the use of children in an *early childhood centre*.	**Note**	Natural light must be provided to all habitable rooms.		
179.	**F4.2 –**	(a) Required natural light must be provided by – (i) windows, excluding roof lights, that – (A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other	**Complies**	**A design practitioner—architectural**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Methods and extent of natural light	obstructions of not less than 10% of the floor area of the room; and (B) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (ii) roof lights, that – (A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the floor area of the room; and (B) are open to the sky; or (iii) a proportional combination of windows and roof lights required by (i) and (ii). (b) Except in a Class 9c building, in a Class 2, 3 or 9 building or Class 4 part of a building a required window that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of – (i) Generally – 1m; and (ii) In a patient care area or other room used for sleeping purposes in a Class 9a building – 3m; and (iii) 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill. (c) In a Class 9c building, a required window must be transparent and located – (i) in an external wall with the window sill not more than 1 m above the floor level; and where the window faces an adjoining allotment, another building or another wall of the same building, it must not be less than a horizontal distance of 3 m from the adjoining allotment, other building or wall.				
180.	**F4.3 –** Natural light borrowed from adjoining room	(a) Natural light to a room in a Class 2 building or Class 4 part of a building or in a *sole-occupancy unit* of a Class 3building, may come through one or more glazed panels or openings from an adjoining room (including an enclosed verandah) if— (i) both rooms are within the same *sole-occupancy unit* or the enclosed verandah is on common property; and (ii) the glazed panels or openings have an aggregate light transmitting area of not less than 10% of the *floor area* of the room to which it provides light; and (iii) the adjoining room has— (A) *windows*, excluding *roof lights*, that—	**Note**	**A design practitioner—architectural**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(aa)have an aggregate light transmitting area of not less than 10% of the combined *floor areas* of both rooms; and (bb)are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (B) *roof lights*, that— (aa) have an aggregate light transmitting area of not less than 3% of the combined *floor areas* of both rooms; and (bb) are open to the sky; or (C) a proportional combination of *windows* and *roof lights required* by (A) and (B). (b) The areas specified in (a)(ii) and (a)(iii) may be reduced as appropriate if direct natural light is provided from another source.				
181.	**F4.4 –** Artificial lighting	(a) Artificial lighting must be provided – (i) in required stairways, passageways, and ramps; and (ii) if natural light of a standard equivalent to that required by F4.2 is not available, and the periods of occupation or use of the room or space will create undue hazard to occupants seeking egress in an emergency, in – (A) Class 4 parts of a building — to sanitary compartments, bathrooms, shower rooms, airlocks and laundries; and (B) Class 2 buildings — to sanitary compartments, bathrooms, shower rooms, airlocks, laundries, common stairways and other spaces used in common by the occupants of the building; and (C) Class 3, 5, 6, 7, 8 and 9 buildings — to all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress. (b) The artificial lighting system must comply with AS/NZS 1680.0.	**CRA**	Lighting to all areas is to comply with AS 1680.0.		
182.	**F4.5 –** Ventilation of rooms	A *habitable room*, office, shop, factory, workroom, *sanitary compartment*, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have— (a) natural ventilation complying with F4.6; or (b) a mechanical ventilation or air-conditioning system complying with AS 1668.2 and AS/NZS 3666.1.	**CRA**	**A design practitioner—architectural** **A design practitioner—mechanical engineering** Ventilation shall be provided throughout the building by means of natural ventilation complying with Clause F4.6 or mechanical ventilation complying with the		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

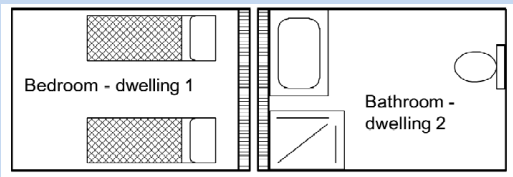
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				requirements of AS1668.2 and AS3666.1 as required by Clause F4.5 of the BCA. Details and design certification to be provided by mechanical engineer prior to the issue of a Construction Certificate.		
183.	**F4.6 –** Natural ventilation	(a) Natural ventilation provided in accordance with F4.5(a) must consist of openings, *windows*, doors or other devices which can be opened— (i) with a ventilating area not less than 5% of the *floor area* of the room *required* to be ventilated; and (ii) open to— (A) a suitably sized court, or space open to the sky; or (B) an open verandah, carport, or the like; or (C) an adjoining room in accordance with F4.7	**CRA**	**A design practitioner—architectural** **A design practitioner—mechanical engineering** See Clause F4.5		
184.	**F4.7 –** Ventilation borrowed from adjoining room	Natural ventilation to a room may come through a *window*, opening, door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same *sole-occupancy unit* or the enclosed verandah is common property, and— (a) in a Class 2 building, a *sole-occupancy unit* of a Class 3 building or Class 4 part of a building— (i) the room to be ventilated is not a *sanitary compartment*; and (ii) the *window*, opening, door or other device has a ventilating area of not less than 5% of the *floor area* of the room to be ventilated; and (iii) the adjoining room has a *window*, opening, door or other device with a ventilating area of not less than 5% of the combined *floor areas* of both rooms	**CRA**	**A design practitioner—architectural** **A design practitioner—mechanical engineering** See Clause F4.5		
185.	**F4.8 –** Restriction on position of water closets and urinals	*Sanitary compartments* must not open directly into— (a) a kitchen or pantry; or (b) a public dining room or restaurant; or (c) a dormitory in a Class 3 building; or (d) a room used for public assembly (which is not an *early childhood centre*, primary *school* or *open spectator stand*); or (e) a workplace normally occupied by more than one person	**N / A**	**A design practitioner—architectural**		
186.	**F4.9 –** Airlocks	If a *sanitary compartment* is prohibited under F4.8 from opening directly to another room— (a) in a *sole-occupancy unit* in a Class 2 or 3 building or Class 4 part of a building— (i) access must be by an airlock, hallway or other room; or	**N / A**	**A design practitioner—architectural**		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) the *sanitary compartment* must be provided with mechanical exhaust ventilation; and (b) in a Class 5, 6, 7, 8 or 9 building (which is not an *early childhood centre*, primary *school* or *open spectator stand*)— (i) access must be by an airlock, hallway or other room with a *floor area* of not less than 1.1 m2 and fitted with *self-closing* doors at all access doorways; or (ii) the *sanitary compartment* must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view.				
187.	**F4.10 –** -		**-**	No provisions		
188.	**F4.11 –** Carparks	Every storey of a carpark, except an open-deck carpark, must have – (a) a system of mechanical ventilation complying with AS 1668.2; or (b) a system of natural ventilation complying with Section 4 of AS 1668.4.	**CRA**	**A design practitioner—architectural** **A design practitioner—mechanical engineering**		
189.	**F4.12 –** Kitchen local exhaust	A commercial kitchen must be provided with a kitchen exhaust hood complying with AS 1668.1 and AS 1668.2 where— (a) any cooking apparatus has— (i) a total maximum electrical power input exceeding 8 kW; or (ii) a total gas power input exceeding 29 MJ/h; or (b) the total maximum power input to more than one apparatus exceeds— (i) 0.5 kW electrical power; or (ii) 1.8 MJ/hour gas, per m2 of *floor area* of the room or enclosure.	**Note**	**A design practitioner—architectural** **A design practitioner—mechanical engineering**		
	Part F5 – Sound Transmission and Insulation N/A					
	Clause	Description	**Status**	Comments		
190.	**F5.0 –** Deemed-to-Satisfy Provisions		**Note**	Informational		
191.	**F5.1 –** Application of Part		**Note**	Informational– The Deemed-to-Satisfy Provisions of this Part apply to Class 2 and 3 buildings and Class 9c buildings.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
192.	**F5.2 –** Determination of airborne sound insulation ratings	A form of construction required to have an airborne sound insulation rating must— (a) have the required value for weighted sound reduction index (Rw) or weighted sound reduction index with spectrum adaptation term (Rw + Ctr) determined in accordance with AS/NZS 1276.1or ISO717.1using results from laboratory measurements; or (b) comply with Specification F5.2.	**CRA**	**A design practitioner—architectural** Acoustic Engineer to Confirm walls type compliance		
193.	**F5.3 –** Determination of impact sound insulation ratings	(a) A floor in a building required to have an impact sound insulation rating must – (i) have the required value for weighted normalized impact sound pressure level (Ln,w) determined in accordance with ASISO717.2 using results from laboratory measurements; or (ii) comply with Specification F5.2. (b) A wall in a building required to have an impact sound insulation rating must – (i) for a Class 2 or 3 building be of discontinuous construction; and (ii) for a Class 9c building, must – (A) for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or (B) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Specification F5.5 than a wall listed in Table 2 of Specification F5.2. (c) For the purpose so of this Part, discontinuous construction means a wall having a minimum 20mm cavity between 2 separate leaves, and (i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and (ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery.	**CRA**	**A design practitioner—architectural** Acoustic Engineer to Confirm walls type compliance		
194.	**F5.4 –** Sound insulation rating of floors	(a) A floor in a Class 2 or 3 building must have an Rw + Ctr (airborne) not less than 50 and an Ln,w (impact) not more than 62 if it separates – (i) sole-occupancy units; or (ii) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification. (b) A floor in a Class 9c building separating sole-occupancy units must have an Rw not less than 45	**CRA**	**A design practitioner—architectural** Acoustic Engineer to Confirm walls type compliance		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
195.	**F5.5 –** Sound insulation rating of walls	(a) A wall in a Class 2 or 3 building must – (i) have an Rw + Ctr (airborne) not less than 50, if it separates sole-occupancy units; and (ii) have an Rw (airborne) not less than 50, if it separates a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification; and (iii) comply with F5.3(b) if it separates – (A) a bathroom, sanitary compartment, laundry or kitchen in one sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit; or (B) a sole-occupancy unit from a plant room or lift shaft. (b) A door may be incorporated in a wall in a Class 2 or 3 building that separates a sole-occupancy unit from a stairway, public corridor, public lobby or the like, provided the door assembly has an Rw not less than 30. (c) A wall in a Class 9c building must have an Rw not less than 45 if it separates – (i) sole-occupancy units; or (ii) a sole-occupancy unit from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room. (d) In addition to (c), a wall separating a sole-occupancy unit in a Class 9c building from a kitchen or laundry must comply with F5.3(b). (e) Where a wall required to have sound insulation has a floor above, the wall must continue to – (i) the underside of the floor above; or (ii) a ceiling that provides the sound insulation required for the wall. (f) Where a wall required to have sound insulation has a roof above, the wall must continue to – (i) the underside of the roof above; or (ii) a ceiling that provides the sound insulation required for the wall.	**CRA**	**A design practitioner—architectural** Acoustic Engineer to Confirm walls type compliance A wall in a Class 2 part must have an Rw + Ctr (Airborne) not less than 50 where it separates: o Sole occupancy units, and o Sole Occupancy Units from a kitchen, laundry, dirty utility, bathroom (not associated with the unit) or the like. A wall of a Sole Occupancy unit which adjoins a kitchen, laundry, dirty utility, bathroom or the like must: For other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery (i.e., discontinuous)  		
196.	**F5.6 –** Sound insulation rating of services	This clause details the separation requirements for services. The requirements only apply to services which pass through more than one sole-occupancy unit or are located in a wall or floor cavity which separates sole-occupancy units. F5.6 does not apply if the pipe is only located in a single unit or any part of a Class A 2, 3 or 9cA building which is not part of a sole-occupancy unit	**CRA**	**A design practitioner—architectural** Acoustic Engineer to Confirm walls type compliance Where a duct, soil, waste or water supply pipe including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one Sole Occupancy Unit, the duct or pipe must be separated		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				from the rooms of any SOU unit by construction with an Rw + Ctr (airborne) not less than: a) 40 if the adjacent room is a habitable room (other than a kitchen) or 25 if the adjacent room is a kitchen or non-habitable room.		
197.	**F5.7 –** Sound isolation of pumps		**CRA**	**A design practitioner—architectural** A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating pump.		
	Part F6 – Condensation Management					
	Clause	Description	**Status**	Comments		
198.	**F6.0 –** Deemed-to-Satisfy Provisions	Part F6 aims to limit the amount of condensation that can accumulate within a building by requiring that water vapor be extracted to a point external to the building. It only applies to residential building classifications which are considered to be more susceptible to the accumulation of moisture due to the building's intended function and use.	**CRA**	Informational **Definitions** • **Pliable building membrane** – means a water barrier as classified by AS/NZS 4200.1. • **Water control layer** – means a pliable building membrane or the exterior cladding when no pliable building membrane is present. **Water sensitive materials** – means materials that have an inherent capacity to absorb water vapour and include timber, plasterboard, plywood, oriented strand board and the like.		
199.	**F6.1 –** Application of Part	Only applies to sole-occupancy units of a Class 2 building and a Class 4 part of building.	**Note**	Informational		
200.	**F6.2 –** Pliable building membrane	(a)Where a *pliable building membrane* is installed in an *external wall*, it must— (i) comply with AS/NZS 4200.1; and (ii) be installed in accordance with AS 4200.2; and (iii) be a vapour permeable membrane for *climate zones* 6, 7 and 8; and (iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. (b) Except for single skin masonry and single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity.	**CRA**	**A design practitioner—architectural** Where a pliable building membrane is installed in an external wall it shall comply with AS/NZS 4200.1 and installed in accordance with AS 4200.2.		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
201.	**F6.3 –** Flow rate and discharge of exhaust systems	(a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of – (i) 25L/s for a bathroom or sanitary compartment; and (ii) 40 L/s for a kitchen or laundry. (b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air. (c) Exhaust from a bathroom, sanitary compartment or laundry must be discharged- (i) directly or via a shaft or duct to outdoor air or (ii) to a roof space that is ventilated in accordance with F6.4.	**CRA**	**A design practitioner—architectural** Details including a design statement is to be provided to demonstrate compliance with F6.3.		
202.	**F6.4 –** Ventilation of roof spaces	(a) Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings. (b) Openings required by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is greater than 22 degrees, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22 degrees.	**CRA**	**A design practitioner—architectural** Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings		
	SECTION G – ANCILLARY PROVISIONS **Part G1 – Minor Structures and Components**					
	Clause	Description	**Status**	Comments		
203.	**G1.1 –** Swimming pools	This clause prescribes the standard for fencing of swimming pools. Sub-clauses (a) to (e) set out when the provisions of **G1.1** apply and the minimum standard for swimming pool fencing as required in AS1926.1. **Note:** In NSW the fencing of swimming pools is regulated by the Swimming Pools Act.	**N / A**	**A design practitioner—architectural**		
204.	**G1.2 –** Refrigerated chambers, strong-rooms and vaults	(a) A refrigerated or cooling chamber, strongroom or vault which is of sufficient size for a person to enter must have— (i) a door which is capable of being opened by hand from inside without a key; and (ii) internal lighting controlled only by a switch which is located adjacent to the entrance doorway inside the chamber, strongroom or vault; and (iii) an indicator lamp positioned outside the chamber, strongroom or vault which is illuminated when the interior lights required by (a)(ii) are switched on; and (iv) an alarm that is—	**N / A**	**A design practitioner—architectural** A refrigerated or cooling chamber, strongroom or vault which is of sufficient size for a person to enter must be capable of being opened from the inside by hand without a key. This clause also sets out the acceptable safety standards for a cooling chamber or strongroom by installation of dedicated controls within the chamber or vault and the external lights that indicate that the space is in use.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(A) located outside but controllable only from within the chamber, strongroom or vault; and (B) able to achieve a sound pressure level outside the chamber, strongroom or vault of 90 dB(A) when measured 3 m from the sounding device. (b) A door required by (a)(i) in a refrigerated or cooling chamber must have a doorway with a clear width of not less than 600 mm and a clear height not less than 1.5 m.				
205.	**G1.3 –** Outdoor play spaces	The outdoor play space must be enclosed on all sides with a barrier which complies with AS 1926.1-2007 to restrict the children from exiting the premises. The above requirements do not apply to a wall, including doors and windows, which form part of the Class 9b early childhood centre.	**N / A**	**A design practitioner—architectural**		
206.	**G1.101 –** Provision for cleaning windows	A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. A building satisfies this requirement where the windows can be cleaned wholly from within the building; or provision is made for the cleaning of the windows by a method complying with the occupational Health and Safety Act 2000 and regulations made under that Act. 0 A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. 0 A building satisfies (a) where- the windows can be cleaned wholly from within the building	**CRA**	**A design practitioner—architectural** Details are to be provided at the CC Stage		
207.	**Part G2 –** Heating appliances, fireplaces, chimneys and flues	The installation of a stove, heater or similar appliance in a building must comply with: • Domestic solid-fuel burning appliances — Installation: AS/NZS 2918. For boilers and pressure vessels: Specification G2.2	**Note**	**A design practitioner—architectural**		
208.	**Part G3 –** Atrium construction		**N / A**	**A design practitioner—architectural**		
209.	**Part G4 –** Construction in alpine areas		**N / A**	**A design practitioner—architectural**		
210.	**NSW Part G5 –**	The building is to be design in accordance with AS3959 except where amended by a Planning for Bush Fire Protection; and	**N / A**	**A design practitioner—architectural** A Bush Fire Report is to confirm compliance with AS3959		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Construction in bushfire prone areas	For Section 9 Construction for Bushfire Attach Level FZ (BAL-FZ). The building subject to BAL-FZ must comply with specific condition of development consent at this level. or; Se Also NSW Rural Fire Services under section 4.14 of the Environmental Planning and Assessment Act 1979 or, As modified by development consent with a bushfire safety authority issued under section 100B of the Rural Fires Act 1997.				
211.	**Part G6 –** Occupiable outdoor areas	Application of Part Except G6.2, DTS provision do not apply to OOA of a class 2, 3, 9c and 4 building.	**Note**			
212.	**Part G6.2 –** Fire Hazard Properties	As per C1.10, all OOA's must comply with C1.10 expect where amended by (b) (i) Average specific extinction area (ii) Smoke-Development Index (iii) Smoke development rate (iv) Smoke growth rate	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
213.	**Part G6.3 –** Fire Separation	Noted	**Note**			
214.	**Part G6.4 –** Provision for escape	Noted – Travel distances comply with D1.4, and D1.5 of the BCA for all OOA's.	**Complies**	**A design practitioner—architectural**		
215.	**Part G6.5 –** Construction of Exits	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
216.	**Part G6.6 –** Fire fighting equipment	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
217.	**Part G6.7 –** Lift installations	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
218.	**Part G6.8 –** Visibility in an emergency, exit signs and warning system	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
219.	**Part G6.9 –** Light and Ventilation	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
220.	**Part G6.10 –** Fire Orders	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
	SECTION H – SPECIAL USE BUILDINGS					
	N / A					
	SECTION J – ENERGY EFFICIENCY					
	Clause	Description	**Status**	Comments		
1.	**NSW J(A) –** Energy Efficiency – Class 2 Buildings and Class 4 Parts		**Note**	**A design practitioner—architectural** See Basix report		

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

CONCEPT STORMWATER DRAWINGS FOR
10-11 RAILWAY ST, WERRINGTON NSW 2747

SYMBOLS

RL	PIT SURFACE LEVEL
IL	INVERT LEVEL
TK	TOP OF KERB
B.O.W	BOTTOM OF WALL
T.O.W	TOP OF WALL
SW	STORMWATER DRAINAGE PIPE
RWT	DOWNPIPE TO RAINWATER TANK
SW	OVERFLOW PIPE FROM RAINWATER TANK
	Ø100 SUBSOIL PIPE
	Ø100 SUBSOIL PIPE
FW	FLOOR WASTE 150X150
FW	FLOOR WASTE 150Ø
RWO	RAINWATER OUTLET 300Ø
PG	PLANTER GRATE
DP	DOWN PIPE
CO	CLEAN OUT
IO	INSPECTION OPENING
VD	VERTICAL DROP
VR	VERTICAL RISER
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT
	WIDE GRATED DRAIN
	OVERLAND FLOW PATH
	CAST IN SLAB PIPE

NOTES

1. ALL LINES ARE TO BE MIN. 100Ø UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
3. ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
5. ALL WORK DO BE DONE IN ACCORDANCE WITH AS/NZ 3500.3 (CURRENT EDITION) AND COUNCIL SPECIFICATIONS.
6. LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
7. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL AND ALL OTHER RELEVANT CONSULTANT'S PLANS.
8. ALL RAINWATER TANKS TO BE FITTED WITH A FIRST FLUSH DEVICE TO PREVENT POTENTIAL CONTAMINANTS FROM ENTERING THE TANKS.
9. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
10. ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
11. ALL GUTTERS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES
12. PROVIDE EMERGENCY OVERFLOW TO ALL PLANTER BOX AND BALCONIES.
13. ALL PITS WITH DEPTH MORE THAN 1M MUST HAVE IRON STEPS AND TO BE BENCHED AND STREAMLINED
14. PROVIDE STORMWATER GRATE 200Wx200D AT THE BASE OF ALL MECHANICAL SHAFTS AND UNCOVERED STAIRS OR OPENINGS.
15. ENSURE ALL DRAINAGE WORKS ARE AWAY FROM TREE ROOTS
16. SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM INFORMATION SUPPLIED BY THE RELEVANT AUTHORITIES AND FIELD INVESTIGATION AND ARE NOT GUARANTEED COMPLETE NOR CORRECT. IT IS THE CLIENT AND CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL PRIOR TO CONSTRUCTION.
17. ALL VARIATIONS TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY SMART STRUCTURES AUSTRALIA PRIOR TO COMMENCEMENT OF WORKS.
18. THE MINIMUM SIZES OF THE STORMWATER DRAINS SHALL NOT BE LESS THAN DN90 FOR CLASS 1 BUILDINGS AND DN100 FOR OTHER CLASSES OF BUILDING OR AS REQUIRED BY THE REGULATORY AUTHORITY

AS 3500.3- TABLE 8.2
SIZE OF MINIMUM INTERNAL DIMENSIONS
FOR STORMWATER AND INLET PITS

DEPTH OF INVERT OF OUTLET	MINIMUM INTERNAL DIMENSIONS (mm)		
	RECTANGULAR		CIRCULAR
	WIDTH	LENGTH	DIAMETER
≤600	450	450	600
>600 ≤900	600	600	900
>900 ≤1200	600	900	1000
>1200	900	900	1000

DRAWING LIST	
DRAWING NUMBER	DRAWING NAME
D00	COVER SHEET, LEGEND & DRAWING SCHEDULE
D01	BASEMENT 2 STORMWATER DRAINAGE PLAN
D02	BASEMENT 1 STORMWATER DRAINAGE PLAN
D03	GROUND FLOOR STORMWATER DRAINAGE PLAN
D07	ROOF STORMWATER DRAINAGE PLAN
D09	POST DEVELOPMENT CATCHMENT PLAN AND MUSIC MODEL RESULTS
D10	STORMWATER DRAINAGE SECTIONS AND DETAILS SHEET 1
D11	STORMWATER DRAINAGE SECTIONS AND DETAILS SHEET 2
D15	EROSION AND SEDIMENT CONTROL PLAN AND DETAILS SHEET 1
D16	EROSION AND SEDIMENT CONTROL PLAN AND DETAILS SHEET 2

DIAL 1100 BEFORE YOU DIG

IMPORTANT:
CONTRACTOR TO OBTAIN CURRENT SET OF "DIAL BEFORE YOU DIG" PLANS ON SITE ALL TIMES AND PRIOR TO CONSTRUCTION WORKS

No.	Description	Date	Issued by	Checked by
A	ISSUED FOR D.A.	13.09.21	N.E.	K.E.

SCALE BARS
1:20 0 0.1 0.2 0.5 1 2
1:50 0 0.25 0.5 1.25 2.5 5
1:100 0 0.5 1 2.5 5 10
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CLIENT: -

ARCHITECT: LEVEL ARCHITECTS

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DRAWING TITLE: **COVER SHEET, LEGEND & DRAWING SCHEDULE**

SHEET NO.	REV.	SCALE @ A1
D00	A	NTS

DESIGNED:	DRAWN:	AUTHORISED:
K.E.	N.E.	K.E.

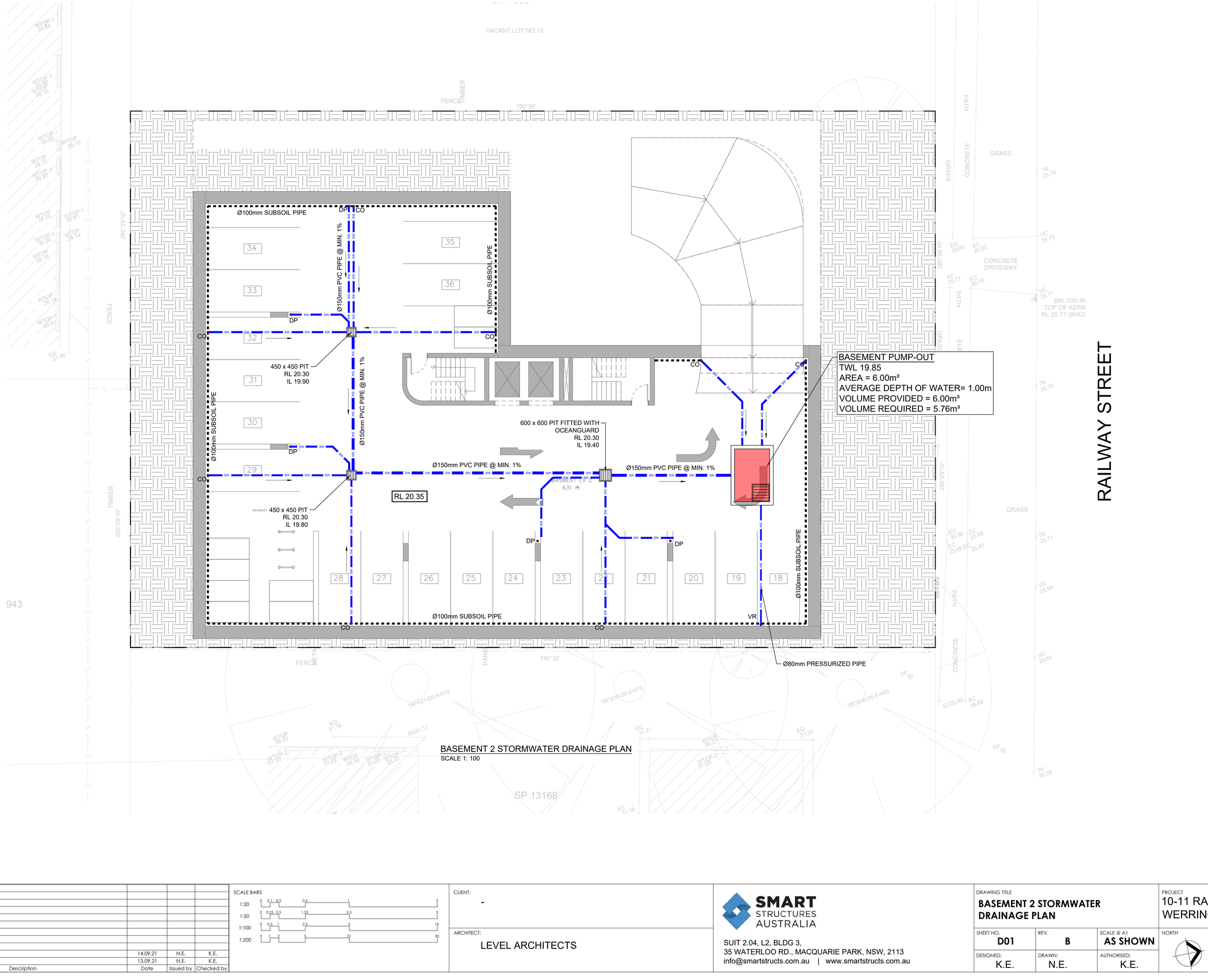
PROJECT: 10-11 RAILWAY ST, WERRINGTON NSW 2747

NORTH

PROJECT NO. 200442

PROJECT START DATE: SEPTEMBER 2021

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



BASEMENT 2 STORMWATER DRAINAGE PLAN
SCALE 1: 100

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B	ISSUED FOR D.A.	14.09.21	N.E.	K.E.
A	ISSUED FOR D.A.	13.09.21	N.E.	K.E.

SCALE BARS
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CLIENT: -

ARCHITECT: LEVEL ARCHITECTS

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DRAWING TITLE: **BASEMENT 2 STORMWATER DRAINAGE PLAN**

PROJECT: 10-11 RAILWAY ST, WERRINGTON NSW 2747

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D01	B	AS SHOWN		200442
DESIGNED: K.E.	DRAWN: N.E.	AUTHORISED: K.E.		PROJECT START DATE: SEPTEMBER 2021

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

BASEMENT 1 STORMWATER DRAINAGE PLAN
SCALE 1: 100

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B	ISSUED FOR D.A.	14.09.21	N.E.	K.E.
A	ISSUED FOR D.A.	13.09.21	N.E.	K.E.

SCALE BARS
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CLIENT: -

ARCHITECT: LEVEL ARCHITECTS

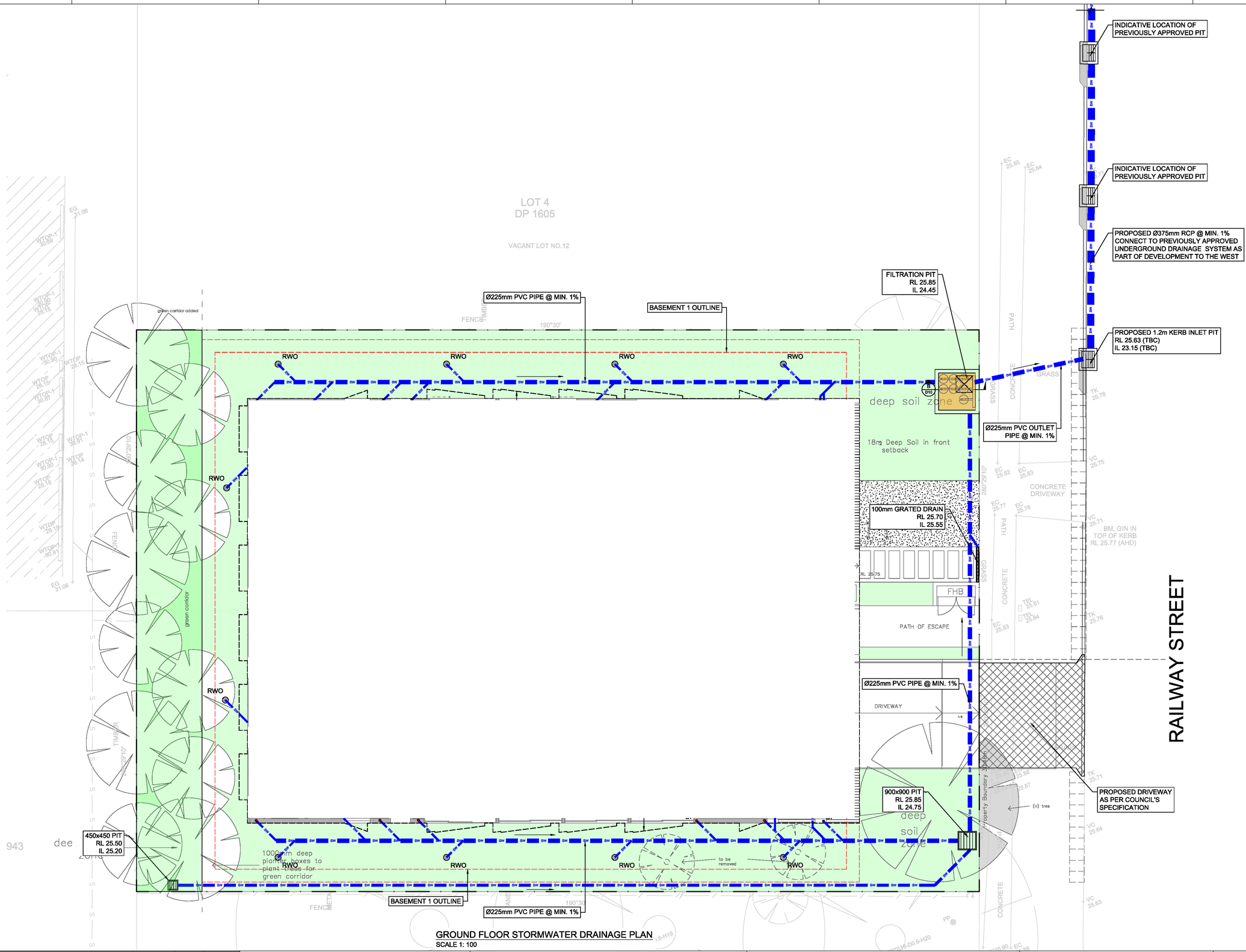
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DRAWING TITLE: **BASEMENT 1 STORMWATER DRAINAGE PLAN**

PROJECT: 10-11 RAILWAY ST, WERRINGTON NSW 2747

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D02	B	AS SHOWN		200442

DESIGNED:	DRAWN:	AUTHORISED:	PROJECT START DATE:
K.E.	N.E.	K.E.	SEPTEMBER 2021



GROUND FLOOR STORMWATER DRAINAGE PLAN
SCALE 1: 100

No.	Description	Date	Issued by	Checked by
B	ISSUED FOR D.A.	14.09.21	N.E.	K.E.
A	ISSUED FOR D.A.	13.09.21	N.E.	K.E.

SCALE BARS
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CLIENT: -

ARCHITECT: LEVEL ARCHITECTS

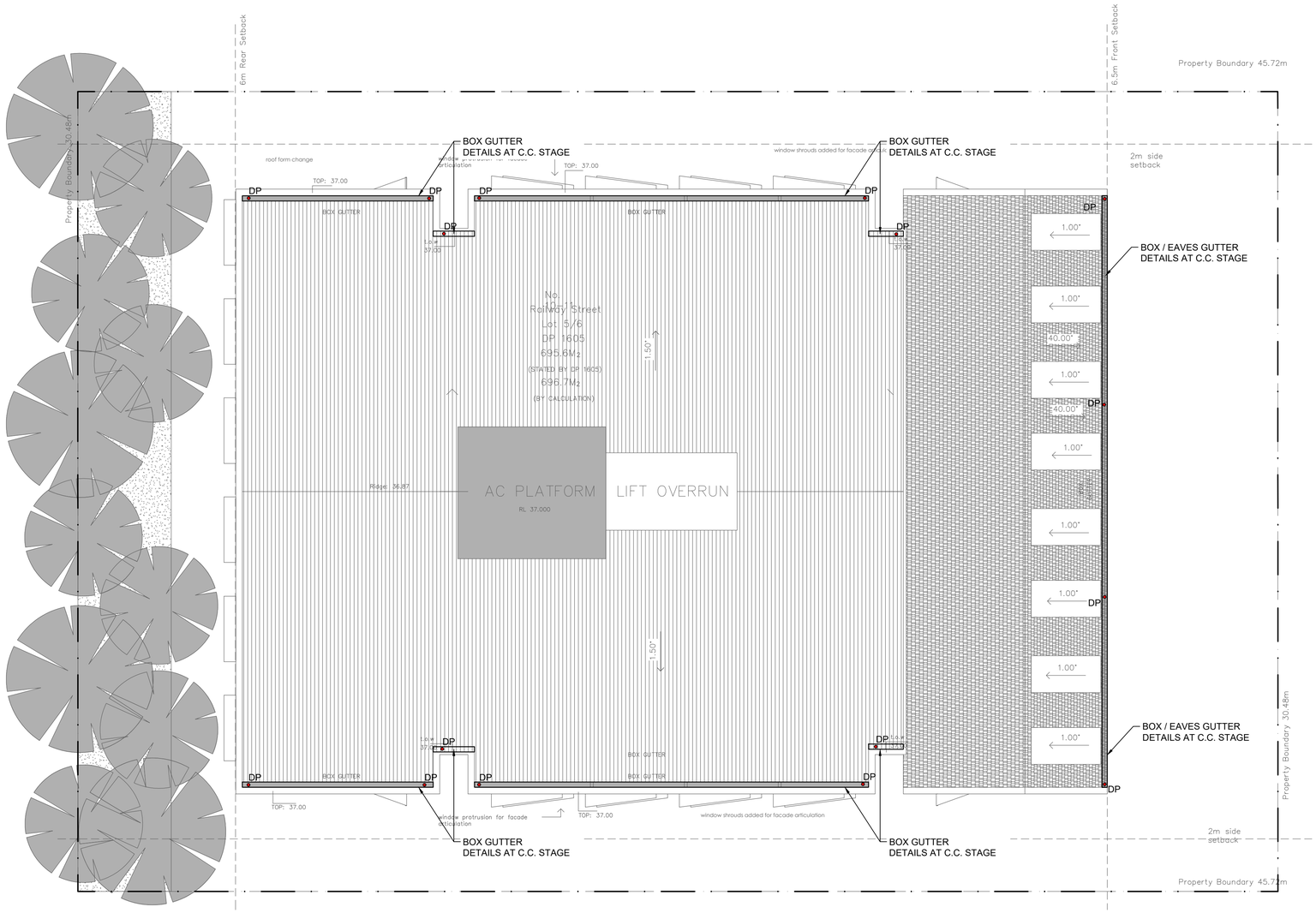
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DRAWING TITLE: GROUND FLOOR STORMWATER DRAINAGE PLAN

PROJECT: 10-11 RAILWAY ST, WERRINGTON NSW 2747

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D03	B	AS SHOWN		200442
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RAILWAY STREET

ROOF STORMWATER DRAINAGE PLAN
SCALE 1: 100

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B	ISSUED FOR D.A.	14.09.21	N.E.	K.E.
A	ISSUED FOR D.A.	13.09.21	N.E.	K.E.

SCALE BARS
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CLIENT: -

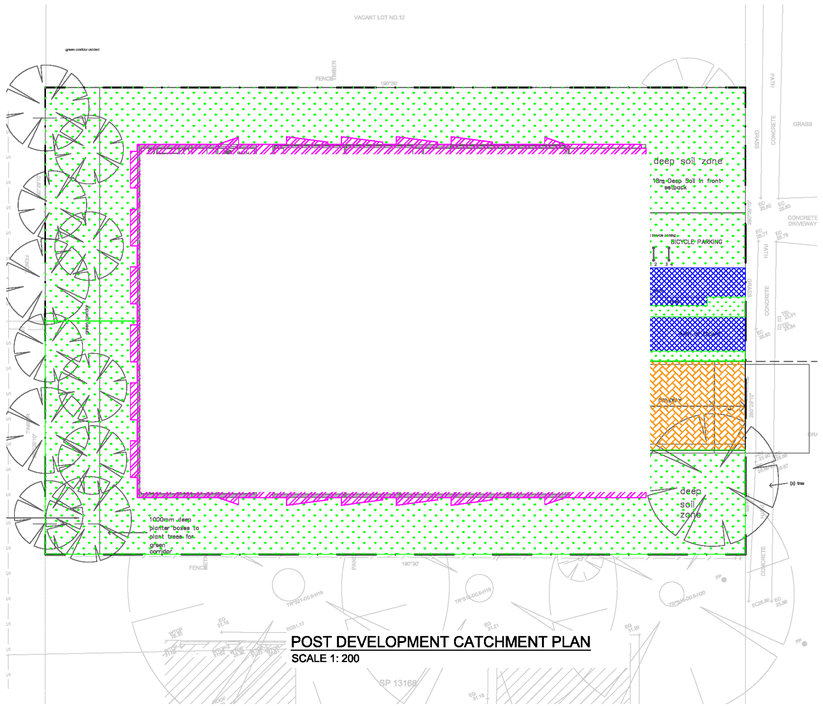
ARCHITECT: LEVEL ARCHITECTS

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DRAWING TITLE: ROOF STORMWATER DRAINAGE PLAN
PROJECT: 10-11 RAILWAY ST, WERRINGTON NSW 2747

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D07	B	AS SHOWN		200442
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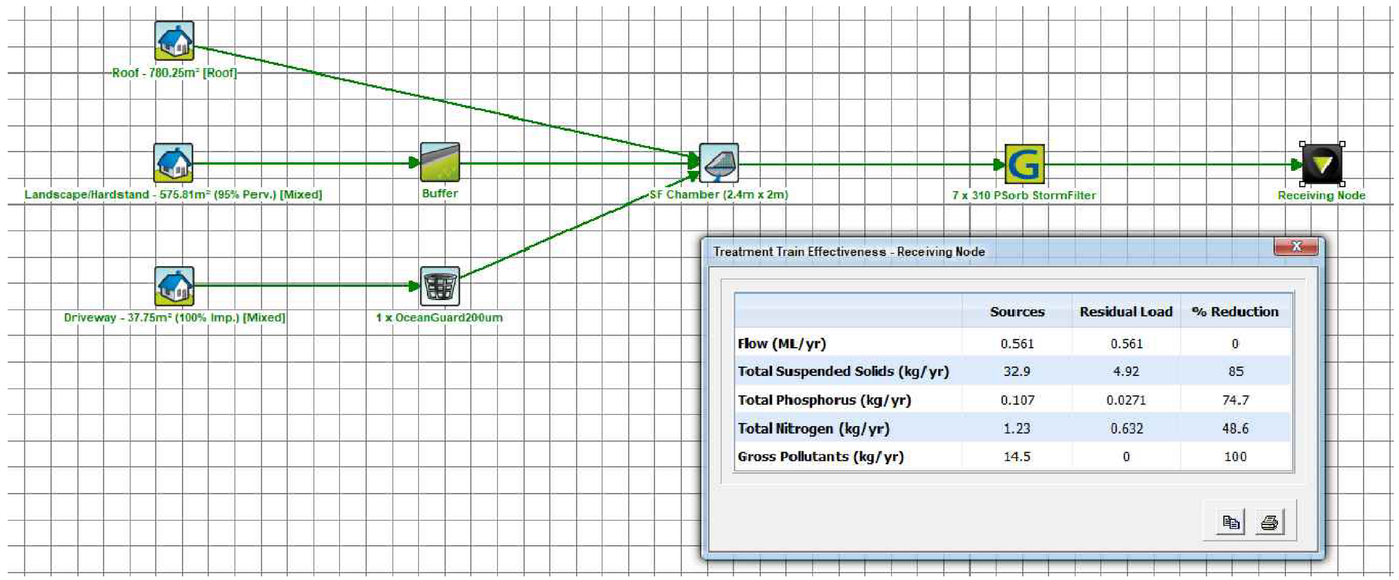
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POST DEVELOPMENT CATCHMENT PLAN
SCALE 1: 200

POST DEVELOPMENT CATCHMENT PLAN

TOTAL SITE AREA:	1393.81 m²	
ROOF:	780.25 m²	
DRIVEWAY:	37.75 m²	
HARDSTAND:	28.71m²	
LANDSCAPE:	547.10 m²	



	Sources	Residual Load	% Reduction
Flow (ML/yr)	0.561	0.561	0
Total Suspended Solids (kg/yr)	32.9	4.92	85
Total Phosphorus (kg/yr)	0.107	0.0271	74.7
Total Nitrogen (kg/yr)	1.23	0.632	48.6
Gross Pollutants (kg/yr)	14.5	0	100

MUSIC MODEL RESULTS

No.	Description	Date	Issued by	Checked by
A	ISSUED FOR D.A.	13.09.21	N.E.	K.E.

SCALE BARS
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1:100 0 0.5 1 2.5 5 10
1:200 0 1 2 5 10 20

CLIENT:
-

ARCHITECT:
LEVEL ARCHITECTS

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DRAWING TITLE
POST DEVELOPMENT CATCHMENT PLAN AND MUSIC MODEL RESULTS

PROJECT
10-11 RAILWAY ST, WERRINGTON NSW 2747

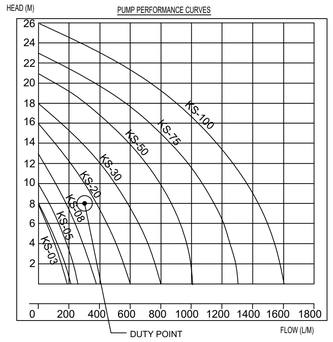
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D09	A	AS SHOWN		200442
DESIGNED:	DRAWN:	AUTHORISED:		PROJECT START DATE:
K.E.	N.E.	K.E.		SEPTEMBER 2021

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

PUMP SPECIFICATIONS
STANDARD PUMP-OUT NOTES

THE PUMP-OUT SYSTEM IS DESIGNED TO WORK IN THE FOLLOWING MANNER -

1. A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMP.
2. A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL, WHEREBY THE PUMP WILL OPERATE & DRAIN THE TANK TO THE LEVEL OF THE LOW LEVEL FLOAT.
3. A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD ACTIVATE THE ALARM.
4. AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT & A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.



PUMP WELL DETAILS

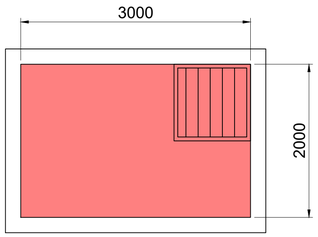
AREA DRAINING TO SUMP = 70m²

VOLUME BASED ON 100 YEAR ARI 2 HOUR INTENSITY
INTENSITY = 41.10mm/hr
Q = 1 x 41.10mm/hr x 70m² / 3600 = 0.80L/s
VOLUME REQUIRED = 0.80 x (60x60x2) = 5.76m³
STORAGE PROVIDED 2.0x3.0x1.0m= 6.00 m³

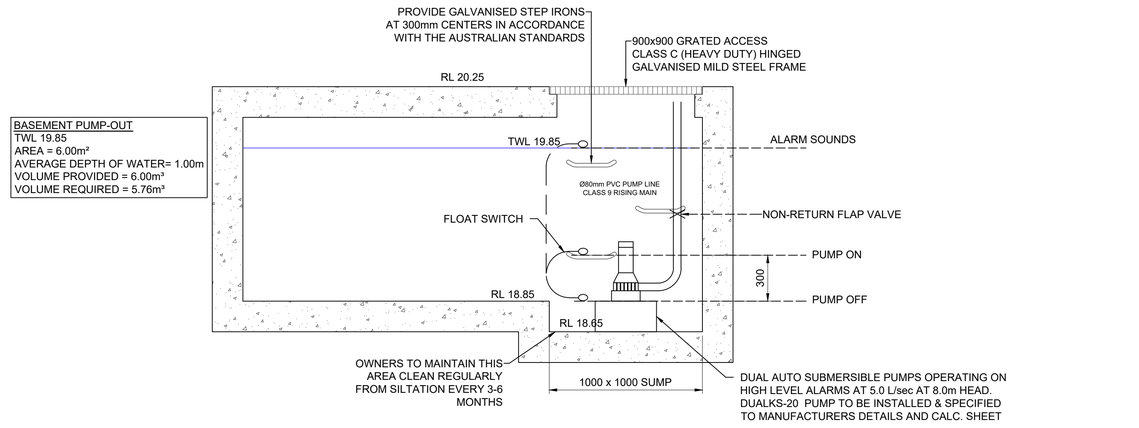
PUMP OUT RATE BASED ON 100 YEAR ARI 5 MIN
INTENSITY = 239mm/hr
Q = 1 x 239 x 70 / 3600 = 4.65L/s
MIN. PUMP OUT RATE REQUIRED BY AS 3500.3 = 10.0 L/sec

DUAL KS-20 PUMP OR EQUIVALENT TO BE INSTALLED IN SUMP AND CONNECTED TO CONTROL PANEL WHICH WILL ALLOW FOR THE PUMPS TO OPERATE SIMULTANEOUSLY ON HIGH LEVEL ALARMS AT 5.0L/sec (PER PUMP) AT 8.0m HEAD

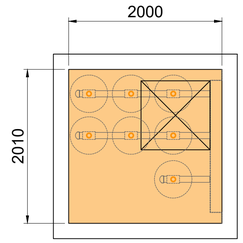
Type	Output		Outlet		Rated Head Capacity		Maximum Head	Maximum Capacity	Weigh	Dimension		
	HP	kW	mm	Inch	M	LPM	M	LPM	Kg	L(mm)	W(mm)	H(mm)
KS-03	1/3	0.25	40	1 1/2"	3	130	8	180	9	188	141	305
KS-04	1/2	0.4	50	2"	5	150	8	220	11	208	140	359
KS-05	1/2	0.4	50	2"	5	160	10	260	14	230	156	375
KS-08	1	0.75	50	2"	6	240	13	380	21	290	180	425
KS-20	2	1.5	80	3"	10	300	16	600	31	278	182	475
KS-30	3	2.2	80	3"	10	500	18	800	42	390	250	450
KS-50	5	3.7	100	4"	10	800	21	1100	48	450	240	530
KS-75	7 1/2	5.6	100	4"	15	800	23	1300	60	550	310	590
KS-100	10	7.5	150	6"	18	900	25	1600	70	550	310	610



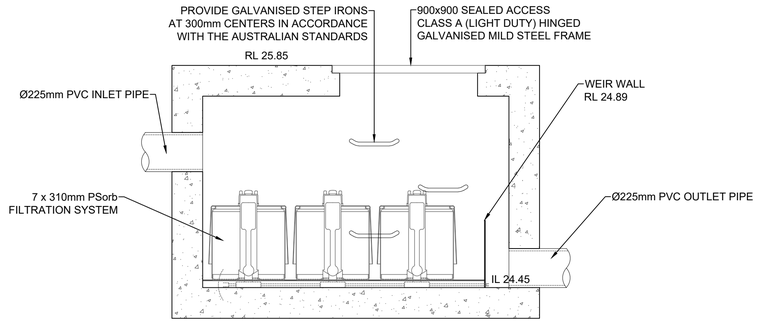
PUMP OUT PIT PLAN VIEW
SCALE NTS



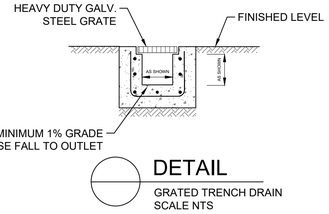
SECTION THROUGH PUMP OUT PIT
A / D01
SCALE NTS



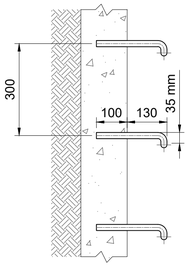
FILTRATION PIT PLAN VIEW
SCALE NTS



B / D03 FILTRATION TANK SECTION
SCALE NTS



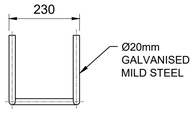
DETAIL
GRATED TRENCH DRAIN
SCALE NTS



SIDE ELEVATION
SCALE NTS



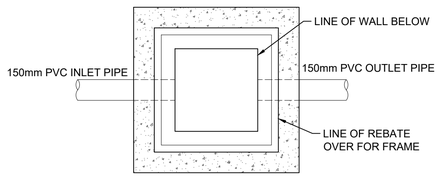
FRONT ELEVATION
SCALE NTS



PLAN VIEW
SCALE NTS

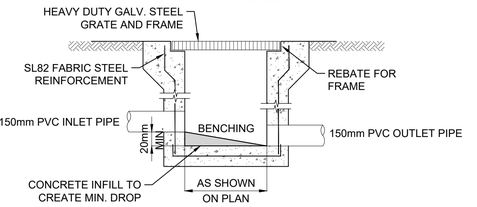
STEP IRON DETAIL
SCALE NTS

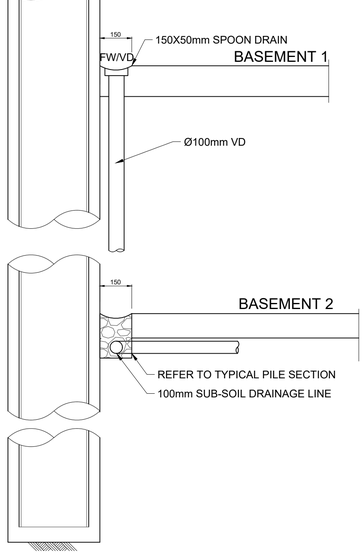
NOTE: INSTALL WHERE PITS ARE DEEPER THAN 900



PLAN WITHOUT GRATE

DETAIL
STORMWATER PIT
SCALE NTS





TYPICAL SPOON DRAIN DETAIL
SCALE NTS

No.	Description	Date	Issued by	Checked by
A	ISSUED FOR D.A.	13.09.21	N.E.	K.E.

SCALE BARS
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1:100 0 0.5 1 2.5 5 10
1:200 0 1 2 5 10 20

CLIENT: -

ARCHITECT: LEVEL ARCHITECTS

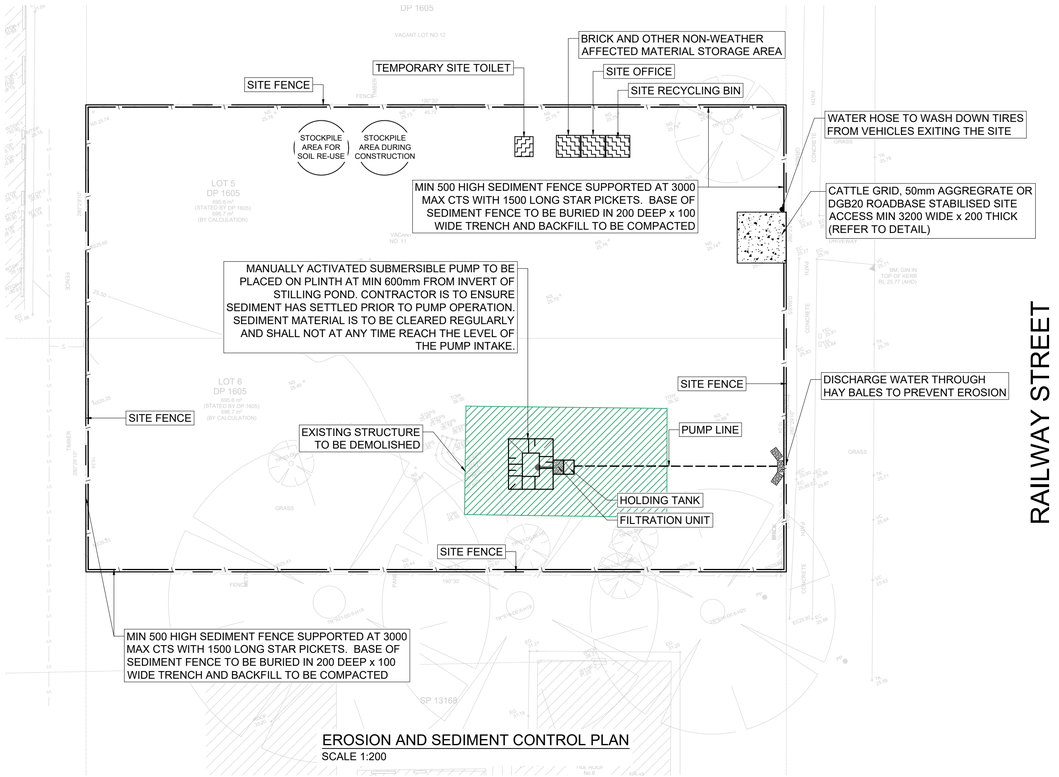
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DRAWING TITLE: **STORMWATER DRAINAGE SECTIONS AND DETAILS SHEET 1**

PROJECT: 10-11 RAILWAY ST, WERRINGTON NSW 2747

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D10	A	AS SHOWN		200442
DESIGNED: K.E.	DRAWN: N.E.	AUTHORISED: K.E.		PROJECT START DATE: SEPTEMBER 2021

Document Set ID: 9812242
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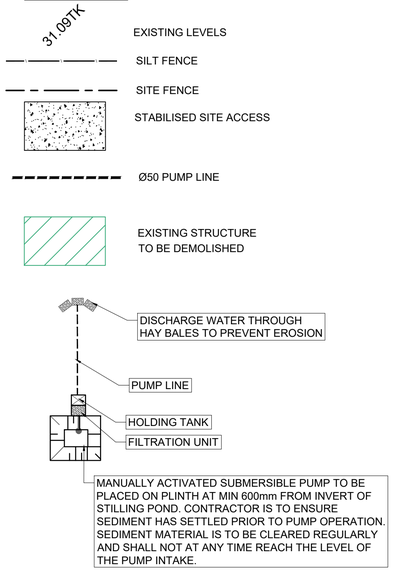
EROSION AND SEDIMENT CONTROL PLAN
SCALE 1:200

EROSION CONTROL NOTES

1. ALL EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH 'MANAGING URBAN STORMWATER, 3RD EDITION' PRODUCED BY THE NSW DEPARTMENT OF HOUSING.
2. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND REMOVED REGULARLY DURING CONSTRUCTION
3. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC- CONTRACTOR TO MINIMISE DISTURBED AREAS.
4. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER
5. NOT WITHSTANDING DETAILS SHOWN, IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
6. ALL DISTURBED AREAS AND STOCKPILES TO BE STABILISED WITHIN 14 DAYS. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTERS AND FOOTPATHS.
7. TOPSOIL TO BE STRIPPED, STOCKPILED AND RE-SPREAD ON COMPLETION OF EARTHWORKS. NONE TO BE REMOVED.
8. NO DISTURBANCE OF SITE PERMITTED OTHER THAN IMMEDIATE AREA OF THE WORKS.
9. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.

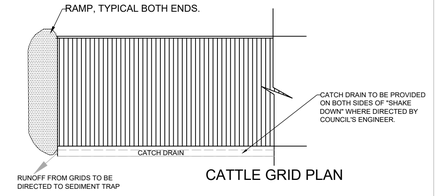
NON-COMPLIANCE MAY RESULT IN A $1500 FINE

SYMBOLS



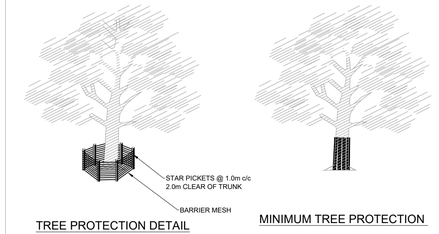
NOTES THIS DRAWING

1. ALL DOCUMENTS WILL BE SUBMITTED TO COUNCIL FOR APPROVAL.
2. ALL SEDIMENT CONTROL MEASURES ARE TO BE IN PLACE.
3. INSTALLATION OF SILT FENCING, SEDIMENTATION BARRIERS AROUND DRAINS.
4. FENCING IS TO BE 1.8m(min) HEIGHT, PLACED AROUND THE SITE UNTIL THE WORK COMPLETE.
5. THE SITE GATES WILL BE LOCATED AT RAILWAY STREET.
6. THE HARDSTAND AREAS OR CATTLE GRIDS WILL BE PLACED AT THE SITE ENTRANCES AND EXITS. TO REMOVE THE BULK OF DIRT AND MUD THAT MAY ACCUMULATE ON TRUCK TYRES.
7. CONTRACTOR WILL CONDUCT REGULAR STREET SWEEPS ALONG THE ACCESS ROUTE TO ENSURE THE ROADS ADJACENT TO THE SITE ENTRANCES ARE KEPT CLEAN OF ANY DIRT AND DEBRIS.
8. REGULAR ENVIRONMENTAL INSPECTIONS WILL BE CARRIED OUT BY CONTRACTOR'S PERSONNEL TO ENSURE COMPLIANCE WITH THIS PLAN.



CATTLE GRID PLAN

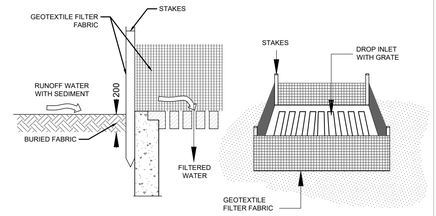
CATTLE GRID ALTERNATIVE



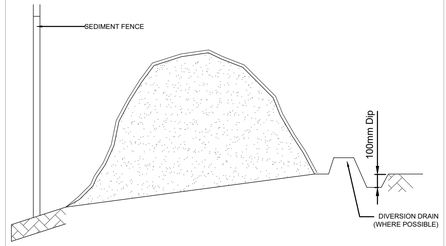
TREE PROTECTION DETAIL

MINIMUM TREE PROTECTION

TREE PROTECTION DETAIL

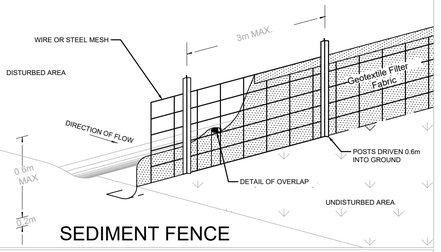


GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP

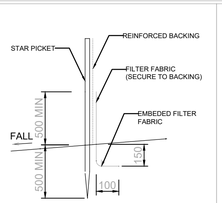


SOIL STOCK PILE

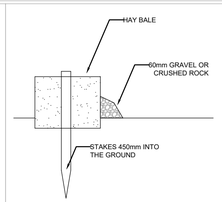
DRAINAGE AREA 0.4Ha MAX. SLOPE GRADIENT 1:2 MAX.
SLOPE LENGTH 60m MAX.



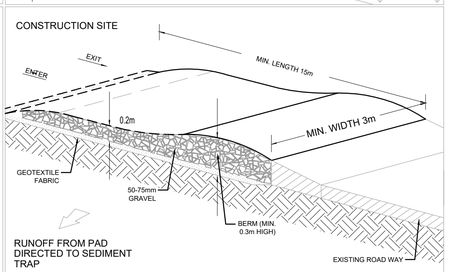
SEDIMENT FENCE



SILT FENCE DETAIL

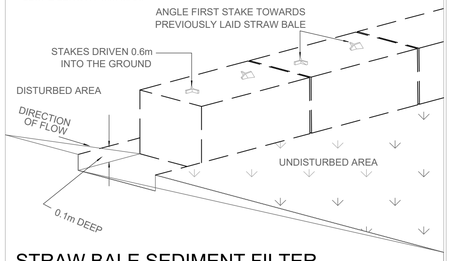


HAY BALE DETAIL

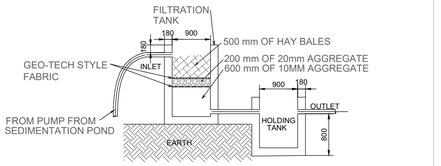


TEMPORARY CONSTRUCTION EXIT

DRAINAGE AREA 0.4Ha MAX. SLOPE GRADIENT 1:2 MAX.
SLOPE LENGTH 40m MAX.



STRAW BALE SEDIMENT FILTER



NOTE: HAY TO BE CHANGED EVERY DAY
GEO-TECH, SAND, AND BLUE METAL, TO BE CHANGED WEEKLY

TYPICAL DETAIL OF FILTRATION UNIT

No.	Description	Date	Issued by	Checked by
A	ISSUED FOR D.A.	13.09.21	N.E.	K.E.

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1:200 0 1 2 5 10 20

CLIENT: -

ARCHITECT: LEVEL ARCHITECTS

SMART STRUCTURES AUSTRALIA
SUIT 2.04, L2, BLDG 3,
35 WATERLOO RD., MACQUARIE PARK, NSW, 2113
info@smartstructs.com.au | www.smartstructs.com.au

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLAN AND DETAILS SHEET 1

PROJECT: 10-11 RAILWAY ST, WERRINGTON NSW 2747

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D15	A	AS SHOWN		200442
DESIGNED: K.E.	DRAWN: N.E.	AUTHORISED: K.E.		PROJECT START DATE: SEPTEMBER 2021

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

GENERAL INSTRUCTIONS:

SWM01
THESE PLANS PRESENT A CONCEPTUAL SOIL AND WATER MANAGEMENT PLAN (SWMP) ONLY AND SHOWS A POSSIBLE WAY OF MANAGING SOIL AND EROSION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT AND MANAGEMENT OF THE SITE AND PREPARING A DETAILED PLAN AND OBTAINING APPROVAL FROM THE RELEVANT AUTHORITY PRIOR TO THE COMMENCEMENT OF ANY WORKS.

SWM02
THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS AND ANY OTHER PLANS, WRITTEN INSTRUCTIONS, SPECIFICATION OR DOCUMENTATION THAT MAY BE ISSUED AND RELATING TO DEVELOPMENT OF THE SUBJECT SITE.

SWM03
THE CONTRACTOR WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE CONSISTENT WITH ' MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION' - ALSO KNOWN AS ' THE BLUE BOOK'.

SWM04
ALL BUILDERS AND SUB-CONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS.

EROSION CONTROL:

SWM05
WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNTIL SEDIMENT CONCENTRATION IS LESS THEN OR EQUAL TO 50MG/L, IE THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/ OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AND APPROVED STRUCTURE.

SWM06
ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD THE SURFACE WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.

SWM07
ACCEPTABLE RECEPTORS WILL BE CONSTRUCTED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.

SWM08
'SEDIMENT' FENCING WILL BE INSTALLED AS INDICATED ON THE PLANS AND AT THE DIRECTION OF SITE SUPERINTENDENT TO ENSURE CONTAINMENT OF SEDIMENT. THE SEDIMENT FENCING WILL OUTLET OR OVERFLOW UNDER STABILISED CONDITIONS INTO THE SEDIMENT BASIN, TO SAFELY CONVEY WATER INTO A SUITABLE FILTERING SYSTEM SHOULD THE PORES IN THE FABRIC BLOCK.

SWM09
THE SEDIMENT BASINS WILL BE CONSTRUCTED WITH THE MINIMUM WET SEDIMENT CAPACITY OF CUM CUBIC METERS AND DESIGNED TO REMAIN STABLE IN AT LEAST THE 1 IN CDSE YEAR CRITICAL DURATION STORM EVENT. ARTIFICIAL FLOCCULATION OF THE FINER PARTICLES MAY NOT BE NECESSARY IN THIS INSTANCE.

SWM10
STOCKPILES SHOULD NOT BE LOCATED WITHIN 5M OF TREES AND HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, DRAINAGE LINES, PAVED AREAS AND DRIVEWAYS. WHERE THEY ARE WITHIN 5M FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSTREAM WATERS. MEASURE SHOULD ALSO BE APPLIED TO PREVENT THE EROSION OF THE STOCKPILE.

SWM11
ALL CUT AND FILL BATTERS ARE TO BE SEEDED AND MULCHED WITHIN 14 DAYS OF COMPLETION OF FORMATION.

SWM12
ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY -
A. PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE,
B. ENSURING THAT NOTHING IS NAILED TO THEM,
C. PROHIBITING PAVING GRADING SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS :

1. ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS THE GREATER,
2. A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH,
3. CARE IS TAKEN.

SWM13
DURING WINDY WEATHER, LARGE DISTURBED UNPROTECTED AREAS SHOULD BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.

SWM14
TEMPORARY PROTECTION FROM EROSIVE FORCES WILL BE UNDERTAKEN ON LANDS WHERE FINAL SHAPING HAS NOT BEEN COMPLETED BUT WORKS ARE UNLIKELY TO PROCEED FOR PERIODS OF TWO MONTHS OR MORE (EG. ON TOP SOIL STOCKPILES). THIS MAY BE ACHIEVED WITH A VEGETATIVE COVER. A RECOMMENDED LISTING OF PLANT SPECIES FOR SOIL AND WATER MANAGEMENT NOTES:
TEMPORARY COVER IS -
I) AUTUMN/WINTER SOWING -OATS/RYECORN AT 20KG/HA
-JAPANESE MILLET AT 10KG/HA
II) SPRING/SUMMER SOWING -JAPANESE MILLET AT 20KG/HA
- OATS/RYECORN AT 10 KG/HA

SWM15
DIVERSION BANKS/ CHANNELS WILL BE REHABILITATED AS SOON AS POSSIBLE AND WITHIN 5 WORKING DAYS FROM THEIR FINAL SHAPING. OTHER THAN IN THE WINTER MONTHS, SUITABLE MATERIALS'S INCLUDE TURF GRASSES SUCH S COUCH OR KIKUYU. DURING WINTER, OR AT OTHER TIMES WHEN TEMPORARY REHABILITATION (MORE THAN 3 MONTHS) IS REQUIRED, IT IS SUGGESTED THAT HESSIAN CLOTH IS USED BUT ONLY IF TACKED WITH APPROPRIATE PEGS AND AN ANIONIC BITUMEN EMULSION. FOOT AND VEHICULAR TRAFFIC SHOULD BE KEPT AWAY FROM THESE AREAS.

SWM16
UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

CONSTRUCTION SEQUENCE

SWM17
WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE SHOULD BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE -
I) INSTALL INLET SEDIMENT TRAPS TO ALL GULLY PITS FRONTING THE SITE,
II) INSTALL A 1.8M CHAIN WIRE FENCE AROUND THE BOUNDARIES AND ATTACH HESSIAN CLOTH OR SIMILAR TO IT ON THE WINDWARD SIDE (TIES AT THE TOP, CENTRE AND BOTTOM AND AT 1M INTERVALS OR AS INSTRUCTED BY THE SUPERINTENDENT),
III) INSTALL GEOFABRIC SEDIMENT FENCE AND SEDIMENT TRAPS AROUND ALL PERMANENT STORMWATER RETICULATION STRUCTURES AS SHOWN ON THE PLAN,
IV) CONSTRUCT STABILISED CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN OR TO LOCATION AS DETERMINED BY SUPERINTENDENT,
V) INSTALL DIVERSION BANKS ALONG THE BOUNDARY WHERE REQUIRED, REHABILITATE DISTURBED LANDS DOWNSLOPE FROM THE BASINS WITHIN 20 WORKING DAYS,
VI) ENSURE THAT THE SEDIMENT BASIN IS DIRECTED ONTO A TURFED AREA AND DRAINS TO A SUITABLE LOCATION. A TEMPORARY STORMWATER LINE MAY BE NECESSARY TO CONVEY THE FLOWS TO THIS LOCATION. CONSTRUCT DIVERSION CHANNELS AT THE BOUNDARY TO DRAIN INTO THE SEDIMENT BASIN AS SHOWN ON PLANS.
VII) AT COMPLETION STABILISE SITE AND DECOMMISSION SEDIMENT BASIN AND ALL EROSION CONTROL DEVICES.

SWM18
TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

SWM19
FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

SITE INSPECTION AND MAINTENANCE

SWM 20
AT LEAST WEEKLY AND AFTER EVERY RAIN FALL EVENT, THE CONTRACTOR WILL INSPECT THE SITE AND ENSURE THAT -
I) DRAINS AND ALL SEDIMENT CONTROL DEVICES OPERATE EFFECTIVELY AND INITIATE REPAIR OR MAINTENANCE AS REQUIRED,
II) RECEPTORS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WIGHT WASTE MATERIALS AND LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANOR APPROVED BY THE SUPERINTENDENT,
III) SPILL SAND (OR OTHER MATERIALS) IS REMOVED FROM HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, GUTTERS, PAVED AREAS AND DRIVEWAYS,
IV) SEDIMENT IS REMOVED FROM BASINS AND / OR TRAPS WHEN LESS THAN $20M^3$ OF TRAPPING CAPACITY REMAIN PER $1000M^2$ OF DISTRIBUTED LANDS, AND OR LESS THAN 500 DEPTH REMAINS IN THE SETTLING ZONE. ANY COLLECTED SEDIMENT WILL BE DISPOSED IN AREAS WHERE FURTHER POLLUTION TO DOWN SLOPE LANDS AND WATERWAYS IS UNLIKELY,
V) REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND INITIATE UPGRADING OR REPAIR AS APPROPRIATE.

SWM 21
THE CONTRACTOR SHALL PROVIDE ALL MONITORING CONTROL AND TESTING.

A	ISSUED FOR D.A.	13.09.21	N.E.	K.E.
No.	Description	Date	Issued by	Checked by

SCALE BARS
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CLIENT:
-

ARCHITECT:
LEVEL ARCHITECTS

SMART STRUCTURES AUSTRALIA
SUIT 2.04, L2, BLDG 3,
35 WATERLOO RD., MACQUARIE PARK, NSW, 2113
info@smartstructs.com.au | www.smartstructs.com.au

DRAWING TITLE
EROSION AND SEDIMENT CONTROL PLAN AND DETAILS SHEET 2

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D16	A	AS SHOWN		200442
DESIGNED: K.E.	DRAWN: N.E.	AUTHORISED: K.E.		PROJECT START DATE: SEPTEMBER 2021

PROJECT
10-11 RAILWAY ST,
WERRINGTON NSW 2747

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

TBA URBAN

STRATEGY — MANAGEMENT — ADVISORY

Neighbourhood Character Analysis

Railway Street Werrington 2747

Subject Property:

10 -11 Railway Street, Werrington

Version Date:

20 September 2021

Prepared for:

Level Architects



Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Disclaimer:

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Document Control:

Project Reference Number: 83/2021

Version No.	Date	Document Status	Completed
1.0 (Draft)	15 July 2021	Draft for client review	Patrick W
2.0 (Draft)	20 August 2021	Updated post review	Patrick W
2.1 (Final Draft)	20 September 2021	Content review and proofread	Peter M

Document Release:

Issuing Version	Issued Date	Director Approval	Signature
2.1	20 September 2021	Patrick Waite	*Patrick Waite*

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Version: 1, Version Date: 18/11/2021

Table of Contents

Purpose of Neighbourhood Character Analysis 4
Werrington Suburb 5
Werrington demographics 6
Neighbourhood Character Elements (as prescribed by the Penrith DCP) 7
A) Surrounding Land uses 7
B) Social and Historic Context 9
C) Scale & Built Form 10
D) Natural Environment 14
E) Density 15
F) Amenity 17
G) Safety and Security 17
H) Social dimensions and housing affordability 17
I) Aesthetics 17
Conclusion 21

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Purpose of Neighbourhood Character Analysis

The purpose of this Neighbourhood Character Analysis is to understand and attempt to transcribe the key elements that make up the Werrington neighbourhood as it currently stands and consider the desired future character of the Werrington neighbourhood.



The structure of this analysis follows the set of key elements that contribute to consideration of local and neighbourhood provided in Part 5D of the Penrith Development Controls Plan (DCP) 2014:

A) Surrounding land uses

B) Social and Historic Context

C) Scale and Built Form

D) Natural Environment

E) Density

F) Amenity

G) Safety and Security

H) Social dimensions and housing affordability

I) Aesthetics

These key neighbourhood elements are discussed in detail further within this analysis.

Subject site

The neighbourhood analysis is prepared to inform a development proposal at 10-11 Railway Street, Werrington (subject site).

Proposed development

The current consideration for the subject site is for a boarding house, which is a permitted land use on the subject site. Although the description of boarding houses evokes a negative sentiment to many, the contemporary use of a boarding house is more akin to a co-living housing opportunity for young and time poor professionals, or students requiring low maintance and cost efficient housing.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Werrington Suburb

Werrington is a suburb in the Penrith Local Government Area, located 5.4 km east from the Penrith CBD and 45.8 km west from the Sydney CBD. The suburb is generally located between the suburbs of Kingswood to the east and St Marys to the west and is bound by Werrington Creek to the north and east, South Creek to the west, and the Great Western Highway to the south.

The suburb covers an area of about 45,000m^2 and includes the following notable land uses:

- Werrington Train Station,
- the Western Sydney University's Werrington campus,
- Cobham Youth Justice Centre,
- Colonial Golf Course,
- part of South Creek Park inclusive of the Kingsway sports field,
- part of Werrington Lake Reserve and
- Werrington Public School,
- Kurrambee School,
- Thorndale School, and
- residential neighbourhoods around the train station and north of rail corridor.

Refer to Figure 1.

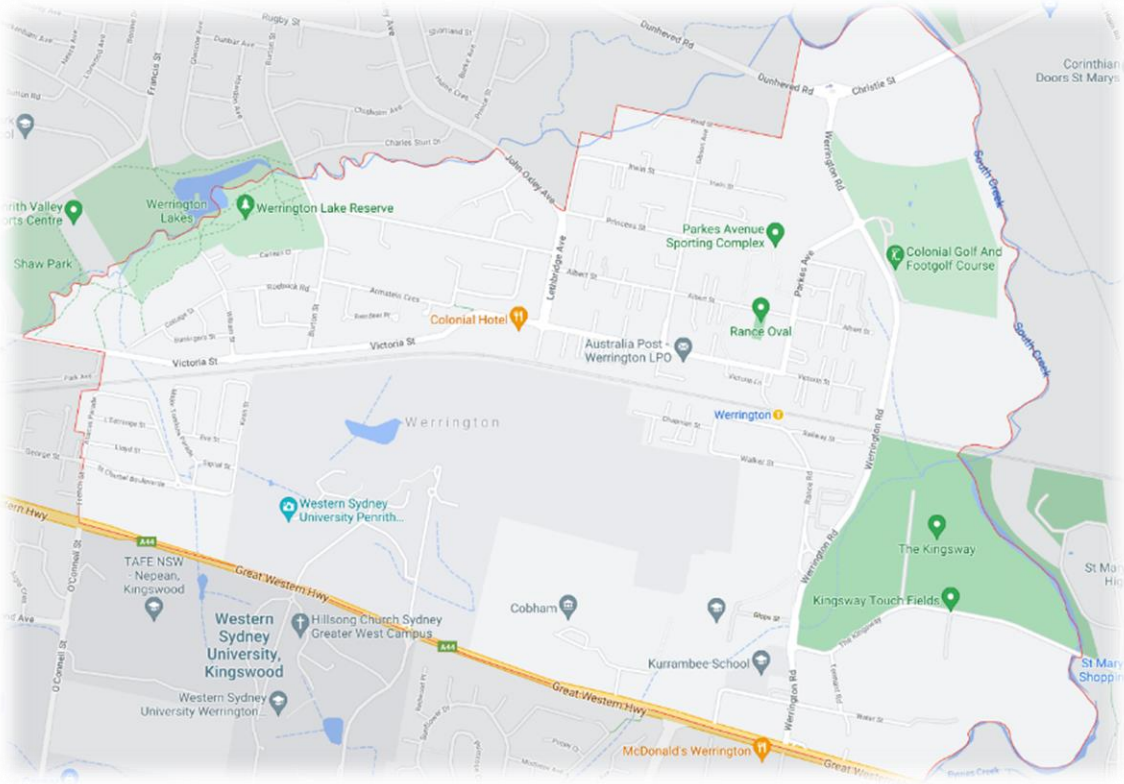


Figure 1 - Aerial image of the boundaries of the Werrington suburb (google maps)

The suburb boundaries of Werrington are used to understand the community composition, population trends and strategic objectives that impact on the immediate neighbourhood that is the subject of this analysis.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Werrington demographics

The relevant high level demographic constitution of Werrington, as informed by the 2016 consensus and summarised on the Australian Bureau of Statistics (ABS) website, is discussed as follows:



Population

The 2016 census estimated the residential population of Werrington to be 4,136 and the ABS 2020 estimated residential population increases this to 4,918. From 2019 to 2020 the population of Werrington grew about 5.3%, which is a much faster growth rate than the average of greater Sydney (1.1%).

The fastest growing age group within the Werrington (2011 to 2016) was the young work force category (age 25 to 34), which is also represents the second largest age group (15.5%) behind parents and homebuilders (20.5%) within the community.

Comment: A boarding house typology will support the fastest growing age group being young work force members as they commence their career and look for affordable accommodation with high chances of social interaction.



Employment Industries

The top employment industries for the residents of Werrington include Health Care and Social Assistance (12.8%), retail trade (11.6%) and construction (8.4%). Although these statistics are dated back from 2016, each of the noted employment industries continues to be key employment areas for Penrith, and therefore considered to remain a relevant consideration in this neighbourhood analysis.

Comment: A low upkeep style of accommodation such a modern boarding house will support workers in these employment industries as these roles tend to be time intensive (Health Care, Retail, and Constructing), and tend to employ for people earlier within their career.



Household types

The largest household type in Werrington are lone persons households which make up 27.7% of the community, and couples with children are the second largest household type making up 25.5% of the community. This community make up is quite a stark difference to the general household makeup of greater Sydney average where lone persons make up 20.4% of households and couple with children make up 35.3%.

Comment: Appropriately located accommodation such as a boarding house would provide a warranted and desirable housing stock for the lone person household population of Werrington.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Neighbourhood Character Elements (as prescribed by the Penrith DCP)

A) Surrounding Land uses

General surrounding land uses

The environment and urban context of the subject site is heavily influenced by the following notable urban elements:

1. The rail corridor (T1 North Shore & Western line)being located across the road from the subject site.
2. Werrington Train Station being located about a 170m walk along station street.
3. The regionally significant Kingsway Park being located an easy 120m east.
4. The Werrington Western Sydney University (Penrith Campus) being located 1km south-west.
5. Werrington neighbourhood shop being a 330 metre walk.
6. Great Western Highway being located 900m south along Werrington Rd.

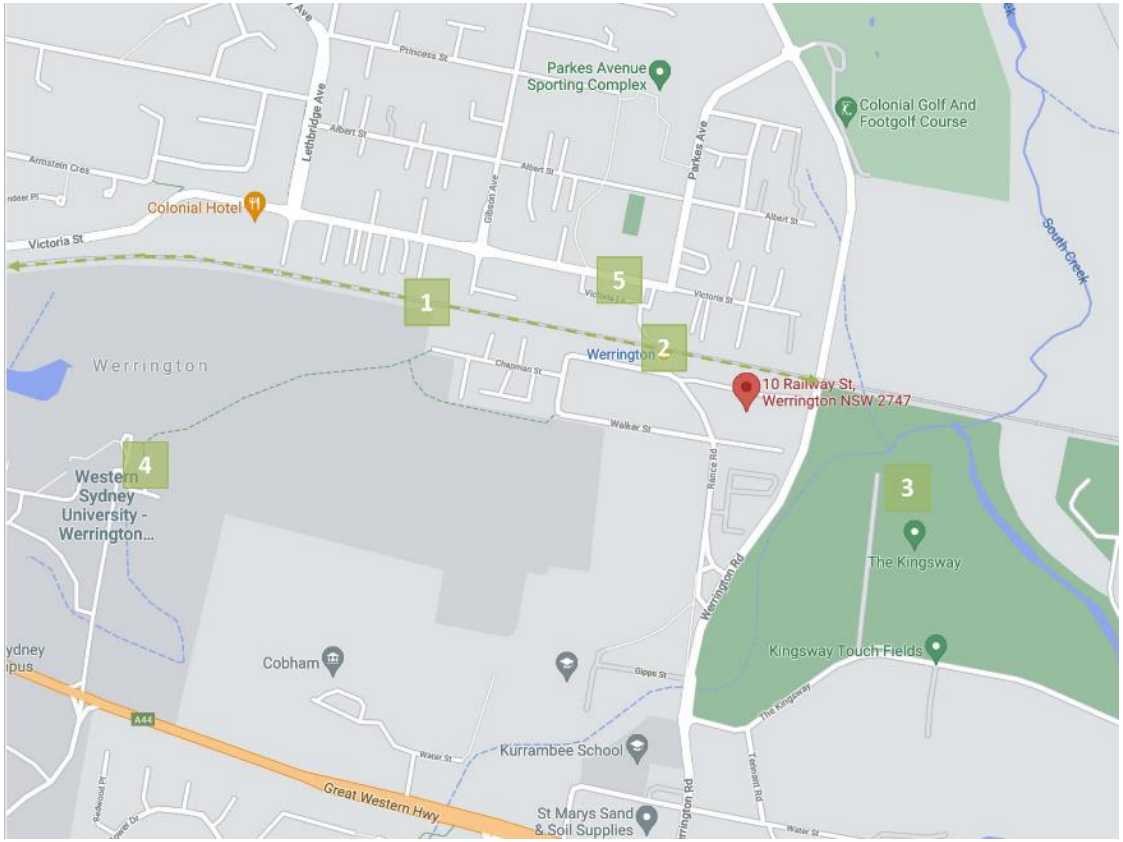


Figure 2 – Context map showing key urban elements within proximity of the subject site (identified by red market)

Comment: The site has excellent connectivity to a mass transport system, being Werrington Train Station, and is located within walking distance to neighbourhood shops and the recreation lands with proximity to Kingsway Park.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Surrounding land use zones

The subject site is zoned R3 (Medium Residential Density). To the north, directly across from the rail corridor, the land is zoned R4 (High Density Residential), and directly to the south of Walker Street the land is also zoned R4 (High Density Residential).

Further south of the Walker Street R4 zoning is land zoned IN2 (Light Industrial) which currently accommodates the Wollemi College.

Land to the west is of the R3 zoning subdivision blocks has been zoned R1 (General Residential) in which higher order residential development is permissible (e.g. Residential Flat Buildings / Apartments). This R1 zoned land, however, is currently vacant.

Further east of the R1 zoned land is the Werrington Western Sydney University campus which is zoned B7 (Business Park).

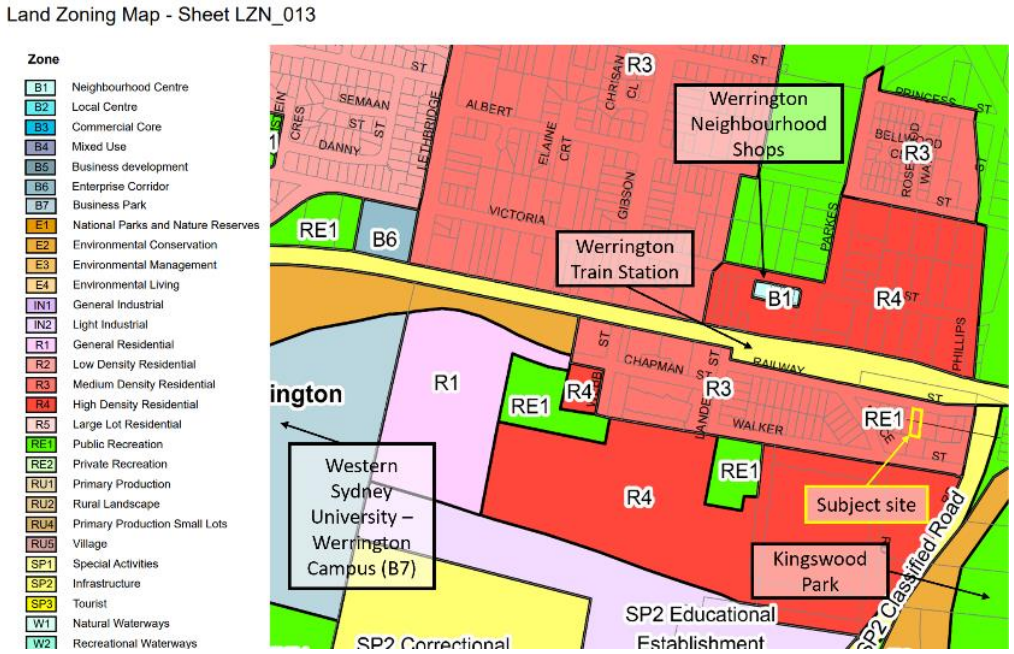


Figure 3 – Land Use Zone Map illustrating surrounding land uses intentions (Penrith Local Environmental Plan 2010)

Comment: The local area exhibits a veritable tapestry of land use zones within a relatively confined area (residential, special purposes, industrial, education, and environmental).

The subject site itself is located in an isolated portion of R3 (Medium Density Residential) zoning which is surrounded by higher order residential land use zonings (R4 and R1). These higher order land zones currently permit a maximum building height of 15m (R4) and 10m (R1), whereas the subject R3 zoning is limited to 8.5m.

It should be noted that the appropriateness of the current maximum height standards, and even the existing land use zoned within the local area, will likely be re-evaluated in light of the Penrith Local Strategic Planning Statement and the Penrith Local Housing Strategy, which has identified Werrington as strategically located land being within the Penrith East-West Economic Corridor, and in proximity of the proposed North-South Rail Line.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

B) Social and Historic Context

The land that currently makes up Werrington was granted to Mary King (land north of the rail corridor), and Mary Putland (land south of the rail corridor) in 1806 at which time the land was primarily used for farming and grazing purposes. By the 1880s the land was subdivided for residential and small farming lots.

The name of the suburb is derived from the Werrington House, which was the home of Mary King (the daughter of the third Governor of NSW) and her husband. The house was built in 1832. The Penrith Heritage Study (2008-2009) provides a good overview of the historic establishment of Werrington.

The social context of Werrington will continue to operate and function in a cohesive manner notwithstanding future development. There are various green open spaces and outdoor activity centres within walking distance from the subject site that will allow the occupants of the new development opportunities for social interaction (see Figure 4, indicated by red stars).

Nearby is Werrington Lakes, which is one of the largest passive recreational areas in Penrith and is a haven for wildlife and outdoor activities.

Comment: The occupants of the new development will benefit from the positive social context of Werrington.

Werrington house, being the nearest heritage listed home, is located 1.8km from the subject site. A heritage conservation zone is further not adopted in the subject or adjoining neighbourhoods. In this instance, and in accordance with *Project Venture Development Pty Ltd v Pittwater Council*, there is limited consistency with style, scale, or materials to be used.

This allows for the urban fabric to be malleable to change and develop to elevated modern designs with new housing stock.

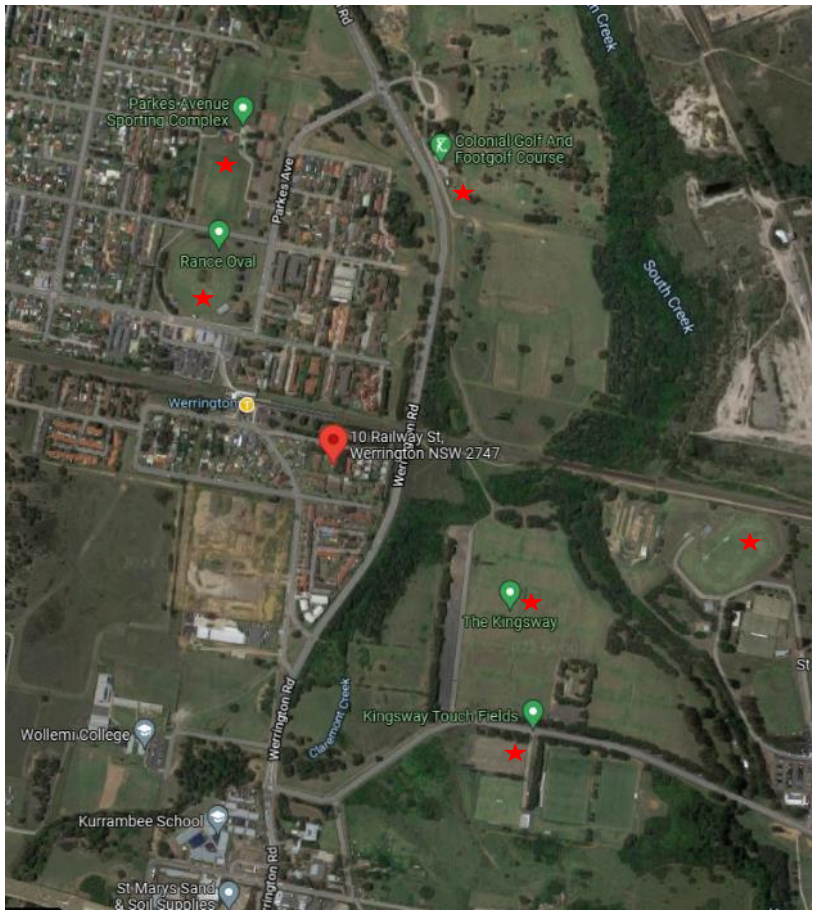


Figure 4 - Aerial image of the local area around Werrington showing opportunities for recreation and subsequent social interaction

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

C) Scale & Built Form

Existing Scale

The scale of the development within the local area of Werrington is primarily informed by the zoning, and maximum building height standard as permitted by the *Penrith Local Environmental Plan 2010*.

For the subject site and the immediate R3 zoned subdivision block, the scale of development is limited to 8.5m in height. The 8.5m height limit within neighbourhood, however, has not consistently been applied by Council with numerous height variations approved in nearby developments.

In general, the subject site is adjoined by larger and more intensive residential developments (apartment block and townhouse development), with a small pocket of detached dwellings located on the eastern end of the subject subdivision block (see Figure 5).

The scale of development increases in the subdivision blocks north of the rail corridor, and south of Walker Street, which both include residential flat buildings (apartments) that are 2 and 3 storeys in height.

Comment: The scale of development located within the subject subdivision block is variable and includes a range of typologies, those being apartment blocks, town houses and detached dwellings. A boarding house would not be in conflict within the existing housing diversity and will likely follow a similar footprint and scale as the existing apartment blocks.



Figure 5 - Aerial image showing existing residential typologies within the local area of Werrington (adapted google map image)

Built form

The built form expression within the local area and subject neighbourhood is guided by the *Penrith Development Control Plan 2010* which provides development controls specific to the 'land use' or proposed development. This means that there is variability between the controls applied to detached housing, multi-dwelling housing and boarding houses.

Built form is an integral element in the establishment of a streetscape character. Naturally, the streetscape character evolves over time as is guided by further future development permited by the relevant planning instruments and controls, as well as from architecural changes resulting from newer construction methods, materials and design styles.

The existing built form, with consideration of future built forms, within the immediate streetcape is discussed in the following.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- **Subject site: 10-11 Railway Street**

The subject site is vacant. In the background of Figure 6 you can see the unarticulated length of the residential apartment buildings at 16 Rance Rd (see Figure 6).

A Development Application (DA) has previously been approved for the subject site (DA12/0282) for 13 x residential units with basement car parking (See Figure 7). This DA was approved with an exceedance to the 8.5m height limit.



Figure 6 - South view looking into property at 10-11 Railway Street - i.e. the subject site (google street view image Jan 2019)



Figure 7 - Rendered image of approved DA for subject property (DA12/0282)

- **West adjoining property: 12-13 Railway Street**

The land immediately to the west of the subject site is also currently vacant.

A DA has been approved at this site (DA14/0936) for demolition of existing structures and construction of a Residential Flat Building (RFB) (two storey) comprising 8 units and associated basement parking, drainage, and landscaping works.



Figure 8 - south view looking into property at 12-13 Railway Street - - i.e. west adjoining site (google street view image Jan 2019)



Figure 9 - Rendered image of approved DA for property at 12 -13 Railway Street (DA14/0936)

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- **Further west adjoining property – 14 Railway Street and 2 Rance Rd**

The property at 14 Railway Street includes a two storey detached dwelling, and single storey dwelling at 2 Rance Road (see Figure 10).

Both these dwellings form part of the pocket of low density development within the subject residential block described earlier.



Figure 10 - South view into property at 14 Railway Street, and 2 Rance Road (google street view Jan 2019)

- **East adjoining property 8 Railway Street:**

The property at 8 Railway Street includes a 1970-80s style red brick two and three storey walk up residential flat buildings (apartment blocks) with ground level parking (Figure 11).

The maximum height of this development is understood to exceed 8.5m.



Figure 11 - South view looking into property at 8 Railway Street - i.e. the east adjoining site (google street view image Jan 2019)

- **East adjoining property – 6-7 Railway Street**

The property at 6-7 Railway Street includes multiple two storey terrace homes to the rear and two terraces fronting Railway Street (see Figure 12).

This development was constructed in 2005 and includes more modern articulation elements such as recessed first floor levels, skillion and lean-to roof types which are indicative of modern designs that achieves consistency with the future character of the immediate vicinity.



Figure 12 - South view looking into property at 6-7 Railway Street - i.e. the further east adjoining site (google street view image Jan 2019)

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- **North side of Railway Street**

The land immediately across Railway Street from the subject site and adjoining development is currently a vacant and fenced off site and owned by Sydney Trains (see Figure 13).

The Penrith Urban Study Strategy (2008-2009) marked this land as potential retail opportunities.



Figure 13 - North view of the vacant Sydney Trains land (google street view image Jan 2019)

Comment: The subject site is surrounded by residential flat buildings, two storey terraces, vacant land, and single dwelling houses. In this regard, there is limited observed consistency in the scale and built form within the immediate neighbourhood of the subject site.

The planning principal for 'compatibility with surrounding development' established in *Project Venture Development Pty Ltd v Pittwater Council* (2005 NSWLEC 191) identifies that compatibility with urban environment does not mean sameness but capable of existing in harmony, and that it is generally accepted that buildings can exist together in harmony without having the same density, scale or appearance.

Accordingly, for a new development to be visually compatible with its context, it should contain, or at least respond to, the essential elements that make up the character of the surrounding urban environment, which includes:

- *Height plane* - buildings do not have to be the same height to be compatible, however any change in height should be gradual in order to better achieve compatibility,
- *Setbacks* - uniformity in the streetscape is established through consistent front setbacks, and the urban rhythm of buildings and void is informed by side setbacks.
- *Landscaping* – strive for consistency with key urban landscape qualities, particularly whether landscape dominates buildings or buildings dominate the landscape.

In this regard, a boarding house development within the context of the subject neighbourhood, could easily demonstrate harmony with existing urban environment in terms of scale and built form as supported by appropriate street and side setbacks, contributing landscaping and continuance of a sympathetic gradual height plane.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

D) Natural Environment

Natural environment elements in Werrington

The local area of Werrington is benefited by a wealth of accessible natural environments (see Figure 14), the most notable:

- the riparian corridor of South Creek as protected by the E2 (Environmental Conservation) zoning,
- the Colonial Golf and Footgolf course,
- Kingsway sporting fields,
- Rance Oval and the Parkes Sporting Complex,
- Werrington Lake Reserve (not in Figure 4).

Natural environment elements in Railway Street

Mature tree (eucalyptus) plantings, reaching heights of up to 18 metres, are present on the northern side of Railway Parade (see Figure 15). Smaller street trees are present on the southern side of Railway Street.

The landscaping within the front setback areas of the properties within Railway Street is generally low in scale dominated by lawn area which is supported by limited plantings.

There is no perceived consistency in plantings and front fence treatment within the streetscape of the analysed area.



Figure 14 - Aerial image of the local area around Werrington showing natural environment elements within the vicinity of the subject site.







Figure 15- Street view images along Railway Street (google street view image Jan 2019)

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

E) Density

Density existing

The current density of the immediate area is underpinned by the existing urban fabric which is primarily comprised of two and three storey apartment blocks to the east and south and detached dwelling houses further west. North across the rail corridor are two and three storey apartment blocks (see Figure 16).

Much of the established urban fabric contains aged housing stock and will likely be experiencing smaller scale redevelopment soon, particularly noting the land use permissibility for the higher order residential development (see detached dwellings in Figure 16 which is zoned for medium density residential development).

Comment: The existing density in the local area is considered to be an underrepresentation of the density permitted by the existing planning controls as illustrated by the large vacant high density residential zoned land south of Walker Street and the renewal of aged housing stock in the established residential blocks.

Accordingly, the density of the local area will naturally increase even without further zoning changes as contemplated in the Penrith Local Strategic Statement.



Figure 16 - Existing urban density representation of south Werrington (adapted google map image)

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Density – future

The future density of the local area, at a minimum, is informed by underlying capacity afforded by the land use zoning (see discussion under Density – Existing above), and at a maximum, the density will increase in line with the strategic objectives and desires of the Penrith Local Strategic Planning Statement and Local Housing Strategy, both of which earmark Werrington as a strategic location to accommodate additional growth (see Figure 17).

It is evident that the local area will experience significant urban morphological change with the imminent development of the vacant high density zoned land located south-west of the site, and furthermore any changes initiated by the current strategic planning for the area.

This change will bring with it a change to the character of the local area and subsequently of the existing neighbourhoods in Werrington.

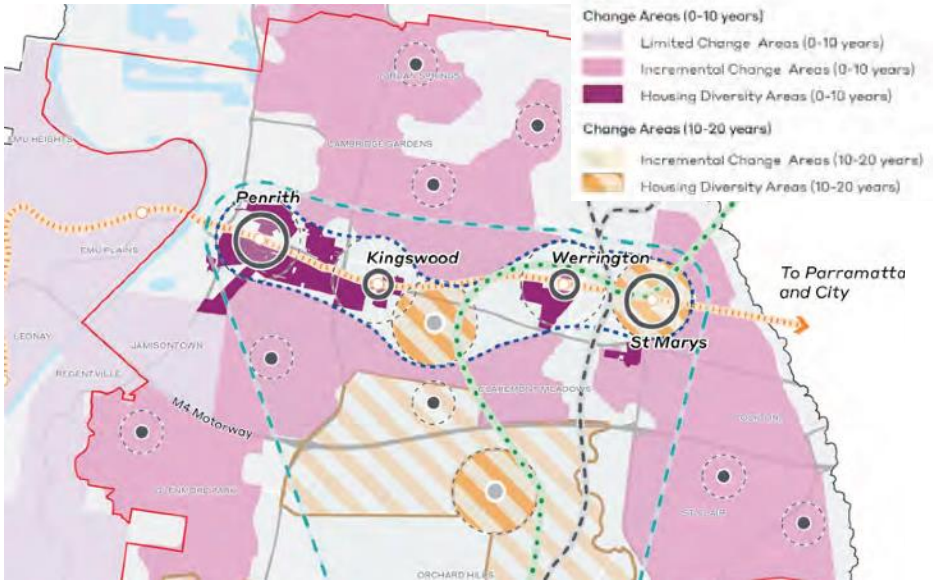


Figure 17 - Extract of Figure 3 of the Penrith Housing Strategy (2009), identifying Werrington as a 'Housing Diversity Area'.

Comment: The Penrith Local Housing Strategy (2019) notes Werrington as a Housing Diversity Area and acknowledges that change will occur over in the near term (0-10 years). Such change has a significant bearing on the consideration of future density and subsequently will inform future desired character. The strategy further notes that Forecast Demand by Location- Werrington (+4,000 residents), which is the fourth largest suburban increase demand behind Penrith, St Mary's, Jordan Springs.

Key relevant recommendation of the Penrith Local Housing Strategy (2009) includes:

- (A8) Support the revitalisation of existing centres in a manner that will deliver high quality built form outcomes and enhance the public domain and provide community benefit.
- (A10) Support medium density housing within proximity to Local Centres across Penrith's infill and new release areas to promote housing diversity.

The growth earmarked for Werrington will influence the ultimate neighbourhood character. The assessment of development within the subject neighbourhood will need to appropriately consider the influence Council's strategic direction has on the future desired character, most notably as a strategic area to accommodate greater growth and housing diversity.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

F) Amenity

The concept of amenity will generally include, where applicable, consideration of views, noise, odours, privacy, and solar access. The key elements currently impacting the amenity of the neighbourhood include:

- Noise impact of the operational rail corridor (north),
- Direct accessibility to a mass transport system with Werrington Train Station being within walking distance,
- Noise impacts from Werrington Road (to the east),
- Accessibility to the open space with Kingsway sporting fields to the east,
- Accessibility to the local neighbourhood with Werrington Neighbourhood Shops being within walking distance.

Comment: The neighbourhood currently provides a high degree of amenity to all occupants. Through appropriate design, the noise impacts of the rail corridor and nearby main roads can easily be mitigated.

G) Safety and Security

The developments in the immediate vicinity and surrounding suburb of Werrington appear to have adequate security measures in place to ensure the occupants are safe.

Comment: This will be continued in the proposed development on the subject site.

H) Social dimensions and housing affordability

Co-living dwellings are considered appropriate living arrangements for housing affordability under the State Environmental Planning Policy (SEPP) (Affordable Rental Housing) 2009.

Comment: The Penrith Local Housing Strategy (2009) notes that 19% of Werrington households are under housing stress which is significantly greater that the average of greater Sydney (11.8%). In this regard, a boarding house development will provide an appropriate housing typology that can assist with people in housing stress.

I) Aesthetics

The subject site is bound by residential development to the south, west and east and the railway line to the north. The aesthetics of Werrington, and particularly the developments along Railway Street, are generally old housing stock, notwithstanding the relatively modern development of Terrace houses at 6-7 Railway Street.

Comment: A proposed boarding house on the subject site represents an amazing opportunity to contribute to the aesthetics of the Railway Street streetscape and deliver more affordable housing typology in an area benefited by high quality natural aesthetic environment.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

General community sentiment – past consultation

Past community engagements undertaken by Penrith Council in response to draft precinct strategies, and more recently strategic planning documents, have been reviewed to better understand the community's future desired character. These are discussed as follows:

Werrington Enterprise Living + Learning (WELL) Precinct Strategy 2004

This report presents a Strategic Plan for the Precinct which outlines a framework within which the areas potential can evolve into realisable quality urban outcomes for the City of Penrith and greater metropolitan region. Importantly, it seeks to provide a blueprint for the future of the area which is understood and endorsed by landowners, the local community and government (see Figure 18).

To inform the future development of the WELL Precinct, forums were held with the community in July – August 2003. Although a little dated, the responses received from the community demonstrated a willingness to rethink and develop the vacant land in the Werrington Area.

A key issue raised by the community and stakeholders as part of the forum included the 'scale, design and social character of medium density housing in Kingswood / Werrington'. The community noted that much of the medium density housing in the Kingswood and Werrington localities are poorly designed and have resulted in undesirable social outcomes, and that some new multi-unit forms of housing should be established, including student housing and home based business activities would be appropriate.



Figure 18 - The precinct boundary of the Werrington Enterprise Living + Learning Stratgey

Comment: A boarding house proposed at 10-11 Railway Street delivers on the desired multi-unit form housing expressed in the community concern. The landowner looks forward to working with Council to deliver a development that is of a high standard and will present an attractive streetscape image.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Penrith Urban Design Study 2008-2009

The Penrith Urban Design Study (2008-2009) was prepared to identify issues, opportunities and constraints for accommodating growth in existing urban and new release areas within the Penrith local government area (LGA).

In the development of this study internal and external stakeholders were consulted. The internal stakeholders consisted of Penrith City Council staff, who represent the various strategic planning, engineering, development, and community sectors of the council. The external stakeholders consisted of community service providers, who provide "on the ground" services to a wide range of sectors within the Penrith LGA community.

The key issues facing Penrith as identified by the consulted stakeholders, which are relevant to subject analysis, included:

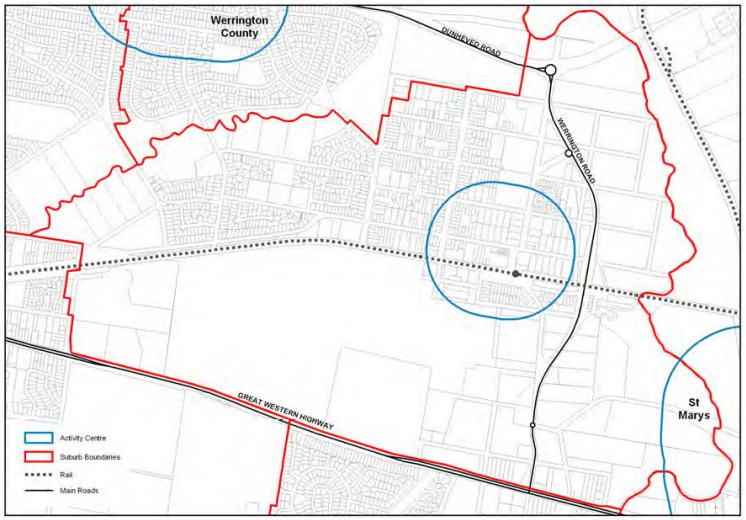


Figure 19 - Extract of Figure 5.9.1 of the Penrith Urban Design Study (2008-2009)

- *Housing and housing affordability* – due to high levels of housing stress experienced in the Penrith LGA, the stakeholders identified the need for housing to meet the changing needs of the population, and that future planning to include sustainable communities linked into services and facilities.
- *Housing Strategies* – a need for a range of housing types to enable aging in place and housing for the life span.
- *Urban Design Strategies* – a need to identify character statements for all existing and future form and design of development.
- *Infrastructure* – incentivise development in well serviced areas.

Comment: A boarding house development within the subject neighbourhood will assist in tackling the relevant key issues identified with the Penrith Urban Design Study. A boarding house will provide an additional housing typology that is suitable for younger, or time poor professionals, and students, living within the community.

As identified within this neighbourhood analysis, a harmonious and relatable neighbourhood character has not yet been established within the subject neighbourhood. The addition of a more contemporary designed co-living housing typology can provide a positive contribution to the development of the non-legible neighbourhood character of the immediate area, particularly noting the future change that is likely to be experienced within the local area of Werrington.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

The Penrith Local Strategic Planning Statement (LSPS) 2019

A range of community consultation activities for the draft Penrith LSPS 2019 were undertaken between September – November 2019. The activities included receiving written submission through a dedicated website, drop-in sessions, and weekly advertisement in the local paper.

The key relevant comments made, and ideas raised by the community in response to the draft Penrith LSPS (2019) included:

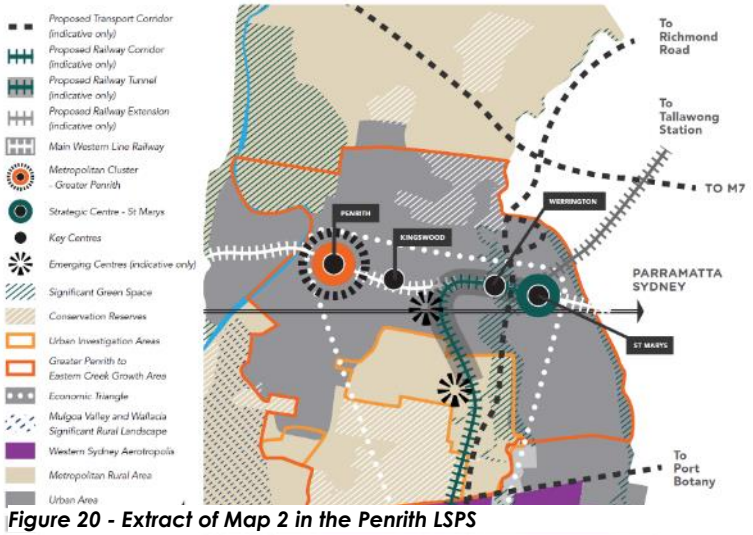


Figure 20 - Extract of Map 2 in the Penrith LSPS

- *Facilitate Sustainable Housing* – Provide housing in suitable locations of high amenity and accessible transport.
- *Facilitate Sustainable Housing* – Enrich the distinctive character of the residential and rural areas of Penrith and understanding the communities values and strengths.
- *Provide new homes to meet the diverse needs of our growing community* – Provide diverse localities through varying planning controls to support the various desires of a diverse community. This encourages Council to consider additional opportunities to provide housing which aligns with the delivery of proposed infrastructure such as the North-South Rail Line and the rapid transit connection between Penrith and Western Sydney Airport.
- *Western Sydney University submission* – this submission is supportive of the LSPS objectives and the inclusion of the Werrington campus as a site for high density / mixed use around the rail-based centres.

Furthermore, in response to a community criticism of boarding houses, Council acknowledged the importance of boarding housing in delivering affordable accommodation for students and hospital workers close to key strategic centres.

Comment: The subject site is located in an area with high amenity, with direct access to Werrington Train Station, is within the area of the proposed North – South Rail line (see Figure 20).

Furthermore, the existing zoning applied to the subject site and associated neighbourhood is likely to be reviewed since it sits within three LSPS defined growth areas: the proposed North – South Rail Line, the East to West Economic Corridor, and a key centre – Werrington. In this regard, it is a highly appropriate area to accommodate an increased density.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Conclusion

The completed Neighbourhood Character Analysis has determined the following:

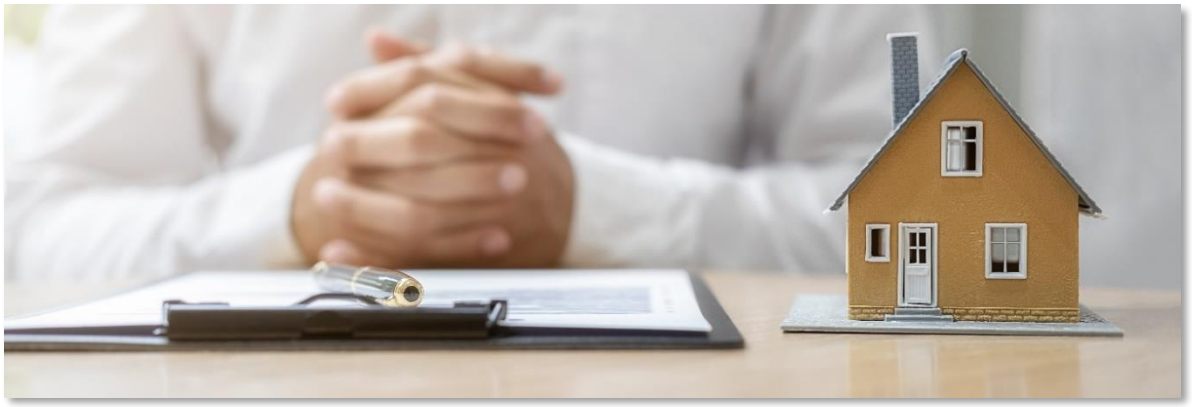
- The population of Werrington is changing with higher growth rates than compared to the average of greater Sydney with a burgeoning lone household population (27.7%).
- A large segment (19%) of the Werrington population is experiencing housing stress.
- The immediate neighbourhood lacks a consistency in urban fabric and landscape treatment which has generally resulted in a neighbourhood that lacks a uniform character and area of relevance to the community.
- South Werrington is set to experience significant development with large vacant areas of the Western Sydney University (Werrington Campus), and the old Sydney Water site (corner of Walker Street and Rance Road) ripe and ready for construction of high density residential premises. The development of these vacant parcels will have an immediate positive impact on the neighbourhood character of Werrington.
- Future planning for the local area has, on multiple occasions, earmarked Werrington as a key centre capable of accommodating additional housing and greater housing diversity.
- General community sentiment derived from past consultations confirms the community is supportive of increasing residential density within or nearby strategic centres, and particularly within proximity of mass transport systems.
- Past community sentiment has further expressed a desire for greater housing diversity in appropriately located areas to support the changing needs of the community.

Comment: This analysis suggests that a boarding house development is highly appropriate within the neighbourhood that has been analysed as it will support a growing population, provide additional housing opportunities for the large lone household segment of the population, and community members affected by housing stress.

The physical design, adopting a more contemporary style with the provision of contributory landscape treatment, will have a direct benefit to the undeveloped and incoherent streetscape within immediate vicinity, and subsequently will assist in anchoring the maturation of the greater neighbourhood character to becoming a more active, safer and pleasant neighbourhood that delivers against the desired character of Werrington suburb and objectives of the Penrith local government area.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Operational Plan of Management
10-11 Railway Street, Werrington



Document Control:

Document Title:	Operational Plan of Management 10-11 Railway Street Werrington
Document Version:	2
Version Date:	20 September 2021
Next review of document:	20 September 2022

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Contents

1. Introduction 4
2. Objectives 4
3. Staff Arrangements 5
4. House Rules 6
5. Details of Each Boarding Room 6
6. Measures to Minimise Unreasonable Impacts 7
7. Operational Waste Management Policy 8
8. Site Maintenance Strategy 8
8.1 Landscape Maintenance 8
8.2 Pest Management Plan 8
8.3 Cleaning, Sanitation and End-of-lease Arrangements 8
8.4 Quarterly External Cleaning and Building Maintenance 8
8.5 Waste Management Plan 9
8.6 Council's 12-month inspection 9
8.7 Complaint and Incident Register 9
9. Internal Signage and Arrangements 9
10. Lease Conditions and Tenancy Agreements 10
Attachment 1. House Rules 11
Attachment 2. Complaint Register 14

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

1. Introduction

This Plan of Management ('PoM') has been prepared in accordance with relevant development controls of the Penrith City Council's ('Council') Development Control Plan for Boarding Houses and applies to the 10-11Railway Street, Werrington ('the Site').

The subject Boarding House comprises 69 rooms, two levels of basement carparking, and affords internal communal living spaces on ground floor and landscaped outdoor open spaces in the front side and rear areas of the property.

This PoM outlines the operational guidelines for the Boarding House, including the staffing arrangements, house rules, details of the lodging rooms, measures to minimise unreasonable impacts to adjoining sites, management of operational waste, site maintenance strategy, house and lodging room signage, lease conditions, the complaint register and indicative arrangements for Council to monitor the operation of the Boarding House.

This PoM is a draft document that will become effective when the final occupation certificate has been issued. Each lodger will be provided with a copy of this PoM.

This document will be reviewed and updated on an annual basis, taking into consideration the lodgers' ongoing needs and expectations.

2. Objectives

The primary purpose of this PoM is to make certain the Boarding House provides a high degree of residential amenity for neighbouring properties and for all lodgers' living on the premises.

To achieve this, the following matters have been considered:

a) Ensuring the Boarding House is appropriately staffed, including making certain the Site Manager is available 24 hours a day for all lodgers' enquiries or concerns.
b) To ensure the Site is managed appropriately, including garden maintenance, so that the lodgers can enjoy the communal indoor and outdoor spaces.
c) To ensure the operation and management of the Boarding House does not detract from the amenity of surrounding properties and the wider community of Werrington.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

d) To provide all lodgers with a copy of this document and a copy of the House Rules to which the lodgers are to always adhere to while on the premises.
e) To provide Council with all relevant documentation relating to the operational practices of the Boarding House.
f) To ensure appropriate fire safety measures for the Boarding House are implemented, including an Emergency Management and Evacuation plan.
g) To reduce anti-social behaviour between the lodgers on, and in the vicinity of, the premises.
h) To create a Complaints Register, including procedures to respond to any complaints.

A copy of this PoM will be kept in an accessible location on the premises so all stakeholders involved in the operation and management of the boarding house including lodgers and Council can review the document.

3. Staff Arrangements

The Boarding House will be managed by an on-site Manager who will be responsible for ensuring the site is regularly and appropriately managed at a high level at all times.

The Site Manager will be available to all lodgers and neighbours by telephone on a 24-hour basis. The name and contact number for the Site Manager will be displayed in all private rooms (mounted to the door), at the entrance to the Site Manager room (mounted to the wall adjacent to the door) and in the foyer at the entrance of the premises (wall mounted).

The Site Manager will have overall responsibility for the operation, administration, cleanliness, maintenance, and fire safety of the premises.

The Site Manager's room will be provided on the ground level of the Boarding House and will be accessible for lodgers who have enquiries, complaints or to report any maintenance issues.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

4. House Rules

The House Rules will be displayed at the entrance to the premises, behind each entry door per room, as well as in all indoor and outdoor communal areas. The House Rules displayed outdoors will be protected from the natural elements so the lodgers and any visitors can clearly read the rules.

The House Rules will ensure that all lodgers will create positive social settings within, and in the immediate vicinity of, the premises in order to facilitate a quiet and safe environment whereby all lodgers can enjoy their privacy.

It is the responsibility of the Site Manager to ensure all lodgers are made away of the House Rules upon entry to the premises, and to ensure adherence to the House Rules.

The House Rules and Tenant Agreement will be signed by each lodger upon entry to the premises.

See **Attachment 1.** for the House Rules.

5. Details of Each Boarding Room

The boarding rooms will accommodate a minimum of one lodger, but no more than two.

Each boarding room will be equipped with private kitchen, bathroom, and laundry facilities. In addition to these private facilities, there will be communal kitchen and living facilities on the ground floor, of which will be equipped with typical kitchen and living room furniture and appliances. A communal open space is provided on the ground level within the front yard, with access obtained from the internal communal living area.

All levels with boarding rooms will be equipped with at least two accessible rooms which will be appropriately constructed to facilitate accessibility.

Each boarding room achieves compliance with the minimum room size, excluding kitchen, bathroom, and laundry areas.

Boarding rooms will be furnished with the following items:

- Bed (including a base, mattress with dimensions of 138cm x 188cm and mattress protector)
- Wardrobe
- Mirror
- Table and chair

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- A night light, or any other illumination apparatus, with easy access from each bed
- Waste container
- Appropriate safety latch device on the door
- Curtains, blinds, or any other type of privacy device affixed to the window

Pillows, and bed linen must be provided by the lodger.

The **kitchen** will include the following items:

- Mini combination fridge and freezer
- Sink
- Bench space for food preparation
- A 2-burner stove top
- Storage
- Microwave
- Items for cleaning (including but not limited to: dishwashing detergent, scrubbing brush, plug for the sink and dishwashing gloves)
- Dinnerware items (including but not limited to: cutlery, plates [small and large], glass tumbler and mug)
- Cooking utensils (including, but not limited to: tongs, spatula, wooden spoon, saucepan and frying pan).

The **bathroom** will include the following items:

- Toilet
- Shower
- Sink
- Mirror
- Towel rail and toilet roll holder.

The **laundry** will include the following item:

- Washing machine
- A clothes dryer, or space for a clothes dryer

6. Measures to Minimise Unreasonable Impacts

To ensure the Boarding House does not unreasonably impact upon the amenity of adjoining residential properties, House Rules have been prepared (see **Attachment 1.**).

Lodgers, the Site Manager, and all visitors are to respect each other and neighbouring residents and to keep noise at a reasonable level, particularly when entering and existing the premises at all times.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

7. Operational Waste Management Policy

Each boarding room, and the indoor and outdoor communal areas, will be equipped with instructions detailing how to dispose of certain waste appropriately. The bins in each boarding room, and communal areas, will have display signs indicating what waste goes where, including:

- General waste; and,
- Recycling:
    - Paper and cardboard; and,
    - Aluminium cans, glass and plastic bottles.

8. Site Maintenance Strategy

8.1 Landscape Maintenance

The proposed landscaping works will be maintained by a suitably qualified landscape gardening service on monthly basis, or where more regularly where specific work is requested.

8.2 Pest Management Plan

Where necessary, appropriate pest management will be implemented throughout the premises, including within communal and private spaces. Lodgers are encouraged to speak with the Site Manager if more specific pest management procedures are required.

8.3 Cleaning, Sanitation and End-of-lease Arrangements

All lodgers will keep their room clean and sanitised. At the end of their lease, the lodger will ensure their room, and all its furnishings, will be in a similar condition to which they found it.

8.4 Quarterly External Cleaning and Building Maintenance

External cleaning and building maintenance will be conducted on a need's basis.

The Site Manager will be responsible for inspecting the external surfaces and communal areas of the site and, where necessary, will employ the relevant services to properly clean the external surfaces of the site, or undertake maintenance work.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

8.5 Waste Management Plan

A Waste Management Plan has been prepared for the Development Application. The House Rules further ensure that all waste generated in private rooms and communal spaces are disposed of appropriately in private waste collection bins and, when full, in the waste storage area on Basement Level 1.

The Site Manager will be responsible for the placement of the Council bins on the footpath for collection. Further, the Site Manager will return the bins from the footpath to the waste storage area on Basement Level 1 **on the same day** after the waste collection.

8.6 Council's 12-month inspection

Once the Boarding House has commenced operation, the Site Manager will contact Council and organise a time and date for a Council Officer to inspect the premises. This date and time will remain in perpetuity.

However, if this needs to be changed, whoever is making the change must do so at least 4 weeks prior to the inspection date and the change must not be more than 1 week before/after the original inspection date.

8.7 Complaint and Incident Register

The Site Manager will deal with all complaints and incidents. This register will contain:

- The date of complaint or incident; and,
- The contact details of the person making the complaint. The complaint may come from nearby residents, tenants, the Police or a Council Officer; and,
- The name of the person who received the complaint or notice of incident; and,
- Outline the details of the complaint or incident; and,
- Detailed actions taken to address the complaint or incident; and,
- The status of the complaint or incident.

The Site Manager will endeavour to address the complaint or incident within 24 hours of receiving the complaint or incident notification. If the Site Manager will take longer than 24 hours, they must notify the complainant.

9. Internal Signage and Arrangements

The following details will be included in all private rooms and communal areas:

- Site Manager details (name and contact number)

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- Emergency contact numbers for essential services
- The House Rules
- A copy of the fire safety statement current fire safety schedule
- Information on local social services (including bus and train timetables)
- Floor plans of the building, including the basement levels, will be permanently fixed to the inside of the door for each sleeping room. These plans will indicate the available emergency egress routes from the respective sleeping room.

10. Lease Conditions and Tenancy Agreements

Prospective tenants will be given an option of leasing periods, with a minimum of 3 months, as well as 6 and 12-month rental terms.

The House Rules will be included in the tenancy agreement, which any prospective tenant must read, understand and sign upon entry to the Boarding House.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Attachment 1. House Rules

All lodgers, the Site Manager, and any visitors to the premises must sign the House Rules document upon entry to the premises and must conduct themselves in accordance with these rules.

1. ***Access Key***
    a. The access key to the front door of the Boarding House will not be provided to anyone other than the Boarding House occupants.
    b. Every lodger is responsible for their access key(s). If the lodger loses their access key(s) then they incur the fees for replacement.

2. ***Activities and Noise***
    a. Live music must not be performed at any time on the premises.
    b. Loud music is not be permitted at any time in all communal areas.
    c. Lodgers are permitted to play music in their private rooms between the hours of **8am and 8pm Monday to Thursday,** and between **8am and 10pm Friday to Sunday.**

3. ***Visitor Policy and Tenant Behaviour***
    a. All tenants and visitors must be cognisant of other lodgers on the premises and must be quiet when always entering and existing the premises.
    b. Lodgers are permitted to have friends in their room. However, no visitors are permitted on the premises between the hours of **10pm and 6am**.
    c. Any lodger inviting friends to visit will be responsible for their visitor (including their safety on the premises) and their behaviour while on the premises.
    d. In the event of serious misconduct by a visitor, the lodger will be held responsible and may be asked to leave the premises and their tenancy agreement may be terminated.
    e. In the event of any part of the property being damaged by the visitor of a lodger, the lodger may be asked to pay to fix the damages.
    f. At the end of their lease agreement, all lodger's will ensure their room and all furnishings are clean and sanitised and in a similar condition to which they were given.

4. ***The use of alcohol and/or drugs***
    a. Alcohol may be consumed by lodger's, 18 and over, in the privacy of their own room. This must be done in a respectable and responsible manner.

b. The consumption of alcohol in communal spaces (both internal and external) is, under no circumstances, permitted.
c. The use, sale or possession of any illegal substance, or the suspicion of any such acts being performed in or about the premises, or any person found using drugs, shall be immediately reported to the Police, and their tenancy agreement will be terminated immediately.

5. Use of Communal Areas

a. The communal outdoor open space in the north-western area of the site is not to be used between **10pm and 6am**, 7 days a week. The Site Manager will be responsible to restrict all access to the communal open space at the appropriate times.
b. The communal open space will not be used for parties, or other similar activities, at any time of the day/night.
c. All lodgers will be responsible for cleaning up after themselves following their use of the communal area.

6. Location of smoking area.

a. Under no circumstances will smoking be permitted indoors (this includes in the basement levels, waste storage rooms, lifts, stairwell, foyer, hallways, boarding rooms and internal communal areas).

7. Pets.

a. No pets are allowed within the boarding house at ANY time.

8. Misconduct

a. Any lodger that fails to adhere to the House Rules, and any cases of serious misconduct, will be dealt with by the Site Manager who may request the lodger leave the premises immediately and will terminate the tenancy agreement. And, depending on the extent of misconduct, the Police may be notified.
b. Serious misconduct includes, but is not limited to:
    i. Drug or alcohol use; and,
    ii. Sexual, racial, or religious harassment; and,
    iii. Theft; and,
    iv. Violence; and,
    v. Continued disregard for the House Rules.
c. Lodgers, as well as the Site Manager, are strongly encouraged to call the Police if they feel unsafe as a result of another lodger's actions, or if another lodger is performing an illegal activity on the premises.

9. Disposing of Waste

a. Lodgers must ensure that all rubbish and recycling generated in their rooms will be deposited in the respective bins provided in the waste storage areas on Basement Level 1.
b. The Site Manager must ensure that any waste collected in the communal areas, is deposited in the respective bins provided in the waste storage areas on Basement Level 1.

10. Parking

a. There is the provision of 36 car spaces (7 accessible), 14 motorcycle spaces and 14 bicycle spaces, with access obtained from Railway Street.
b. Tenants must only park their vehicle, motorcycle or bicycle in the space allocated to them in their tenancy agreement.
c. It is the responsibility of bicycle owners to secure their bicycle to the racks provided and lock their vehicles and motorcycles to ensure safety.
d. The Site Manager and/or owner of the Boarding House will not be responsible for any damage or theft of a vehicle, motorcycle or bicycle when parked on the premises.

11. Mail

a. Tenants will be allocated a lockable mailbox.
b. If the tenant misplaces or loses the key to their mailbox, they will be charged the replacement cost for the key, the lock, or both.

12. Internal Inspections

a. All private rooms must be made available for inspection upon written request from the owner(s) or Site Manager.

13. Occupancy of Private Rooms

a. The occupancy of private rooms is allocated **only** to the tenant(s) who signed the Tenancy Agreement.
b. Private rooms cannot be sublet to another tenant.

Attachment 2. Complaint Register

BOARDING HOUSE
COMPLAINT & INCIDENT REGISTER

Date	Contact Details	Received by	Details of Compalint / Incident	Actions Taken	Status

Social Impact Assessment:

Proposed Boarding House
10-11 Railway Street, Werrington



21 September 2021

This report has been prepared for

Level Architects

by

JUDITH STUBBS & ASSOCIATES

The Old Post Office
231 Princes Hwy, Bulli NSW 2516

Ph: 02 4283 7300
info@judithstubbs.com.au
www.judithstubbs.com.au

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

This Report has been prepared by:

Judith Stubbs BSW PhD MPIA

John Storer BE (Civil) Grad Dip (Econ)

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Table of Contents

Executive Summary **1**
Overview of proposal 1
Overview of the Social Impact Assessment 1
Overview of likely social impacts 2
Local demography & predicted demography of Boarding House 2
Affordability 3
Character and Amenity 4
Boarding House Management 5
Issues raised in Resident Survey 5
CPTED Assessment 5
Compliance with SEPPARH 6
Conclusions and Recommendations 6
1 The Proposal **9**
1.1 Description of proposal 9
1.2 Demographic context of the locality 9
1.3 Description of site and immediate surrounds 10
1.4 Locality Map 13
1.5 Businesses and services in the locality 15
1.6 Public transport accessibility 16
1.7 Open space 17
1.8 Pedestrian and car movements 18
1.9 Character of the area 18
2 Relevant Legislation **19**
2.1 Compliance with State Environmental Planning Policy (Affordable Rental Housing) 2009 19
2.1.1 General 19
2.1.2 Accessibility of the area 19
2.1.3 Private Open Space Requirements 19
2.1.4 Onsite Parking Requirements 20
2.1.5 Accommodation Size 20
2.1.6 Other Requirements for Boarding Houses 21
2.2 Penrith Local Environmental Plan 2010 21
2.3 Penrith Development Control Plan 2014 23
2.4 Boarding Houses Act 2012 23
3 Demographic and Housing Context **25**
3.1 Comparative Demography of the Boarding House 25
3.2 Rental Affordability 27
3.2.1 Overview 27
3.2.2 Affordable Rental Housing Definition and Benchmarks 27
3.2.3 The Local Affordability Context 28
3.2.4 Rental Stress – Lone Person & Couple Only Households Renting Privately 30
3.2.5 Groups that would benefit from the proposal 31
3.3 Existing Boarding House Accommodation 32
3.4 Social Housing 32

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

3.5 Snapshot of rental opportunities in Werrington and surrounding suburbs 33
3.6 Affordability of Proposed Boarding House 33
4 Crime context 35
5 CPTED Analysis 37
5.1 Introduction 37
5.2 Surveillance 37
5.3 Access Control 38
5.4 Territorial Reinforcement 38
5.5 Space Management/Maintenance 38
6 Amenity 39
6.1 Boarding House Residents 39
6.1.1 Internal Amenity 39
6.1.2 External Amenity 39
6.2 Residents living in the locality 39
6.2.1 Parking 39
6.2.2 Noise and privacy 40
6.3 Survey of neighbours & local residents 41
7 Appendix A: Demographic Profile of Locality 42
Statistical Area Level 1, 1146219 42
Werrington State Suburb 43
Penrith LGA 43
Greater Sydney 44
Overview 44
Socio-Economic Indexes for Australia (SEIFA) 45
Person Characteristics 46
Country of birth 47
Employment & Income 49
Dwelling Characteristics 50
Appendix B: NSW BoCSAR Crime Data & Maps 52
NSW BoCSAR Crime Hotspot Maps 53
Assault Domestic 53
Assault Non-Domestic 54
Robbery 55
Theft - Break and Enter Dwelling 56
Theft – Break and Enter Non-Dwelling 57
Theft – Motor Vehicle theft 58
Theft – Steal from Motor Vehicle 59
Theft – Steal from Dwelling 60
Theft – Steal from Person 61
Malicious Damage to Property 62

Figures

Figure 1.1: The site (10-11 Railway St Werrington), adjacent two and three storey residential flat buildings 11

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Figure 1.2: Multi dwelling housing (Social housing), 6 Railway Street 11
Figure 1.3: Multi dwelling housing (Social housing), 16 Rance Street 12
Figure 1.4: Separate Housing Rance Street 12
Figure 1.5: Residential Flat Building to east of site 13
Figure 1.6: Residential Flat Building and Multi Dwelling Housing to rear of site 13
Figure 1.7: Immediate Locality Map surrounding Proposal Site at 10-11 Railway Street Werrington 14
Figure 1.8: Werrington Shopping Centre 16
Figure 1.9: Werrington Railway Station showing disabled access 17
Figure 1.10: Rance Oval 18
Figure 2.1: Zoning Map, Penrith LEP 2010, 10-11 Railway St Werrington shown with star 22
Figure 2.2: Height of Buildings Map, Penrith LEP 2010, 22
Figure 6.1: Windows and balconies to adjoining property at 8 Railway Street 40
Figure 6.1: Windows, balconies and yards to adjoining properties at the rear of the proposed development 40
Figure A-1: Statistical Area Level 1, 1146219 with 10-11 Railway St Werrington indicated with star 42
Figure A-2: Werrington State Suburb 43
Figure A-3: Penrith Local Government Area 43
Figure A-4: Greater Sydney – Greater Capital City Statistical Area 44
Figure B-5: Incidents of Assault (Domestic assault) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified 53
Figure B-6: Incidents of Assault (Non-domestic assault) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified 54
Figure B-7: Incidents of Robbery from April 2020 to March 2021, Werrington suburb boundary & proposal site identified 55
Figure B-8: Incidents of Theft (Break & enter dwelling) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified 56
Figure B-9: Incidents of Theft (Break & enter non-dwelling) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified 57
Figure B-10: Incidents of Theft (Motor vehicle theft) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified 58
Figure B-11: Incidents of Theft (Steal from motor vehicle) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified 59
Figure B-12: Incidents of Theft (Steal from dwelling) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified 60
Figure B-13: Incidents of Theft (Steal from person) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified 61
Figure B-14: Incidents of Malicious Damage to Property from April 2020 to March 2021, Werrington suburb boundary & proposal site identified 62

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Tables

Table 1.1: Walking Distances from 10-11 Railway Street to Points of interest in the local area 15

Table 3.1: Predicted demography of residents of proposed Boarding House using Boarding House residents in Greater Sydney as a proxy compared to Werrington suburb 26

Table 3-2: Affordable Housing Income and Rental Benchmarks - Greater Sydney 28

Table 3-3: Weekly rents for new bonds for bedsitters (total), one and two bedroom flats and units in Penrith LGA and Greater Metropolitan Region 29

Table 3-4: Rental Stress, Lone Person & Couple Only Households Renting Privately, Penrith LGA compared with Greater Sydney, 2016 30

Table A.1: SEIFA Scores and Percentile Rankings for SA1 1146219 and Werrington Suburb 46

Table A-2: Selected person characteristics of residents of SA1 1146219, Werrington Suburb and Penrith LGA compared with Greater Sydney 46

Table A-3: Top 5 country of birth responses for residents of SA1 1146219, Werrington State Suburb and Penrith LGA compared with Greater Sydney 47

Table A-4: Secondary and Tertiary education completed by residents of SA1 1146219, Werrington State Suburb and Penrith LGA compared with Greater Sydney 48

Table A-5: Highest year of secondary education (people aged 15+) for SA1 1146219, Werrington State Suburb and Penrith LGA compared with Greater Sydney 48

Table A-6: Employment and Income demographics of SA1 1146219, Werrington State Suburb and Penrith LGA compared with Greater Sydney 49

Table A-7: Dwelling characteristics in SA1 1146219, Werrington State Suburb and Penrith LGA compared with Greater Sydney 50

Table B-8: NSW BoCSAR Incident Rates Werrington State Suburb & Proposal Site within Hotspot 52

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Executive Summary

Overview of proposal

The proposed development is a four storey 70 room lifted boarding house, with a maximum capacity of 140 residents including manager, located at **10-11 Railway Street, Werrington** under *State Environmental Planning Policy (Affordable Rental Housing) 2009* (SEPPARH). The proposal site is located in an R3 Medium Density Residential zone and Boarding Houses are permitted with consent. The immediate locality includes Residential flat buildings, Multi dwelling housing (townhouses) and separate houses.

The development includes:

- 70 rooms, each with ensuite, laundry and kitchenette, including 1 double manager's room. All rooms are double rooms, and include 7 accessible rooms;
- Basement parking for 36 cars, 14 motor cycles and 14 bicycles;
- One ground floor indoor common area with kitchen facilities; and
- Private outdoor open space of 39 m^2 on the north west corner of the site adjacent to the ground floor indoor common living area and two private outdoor spaces in the side setback at the rear of the building.

At maximum capacity, the proposal could accommodate 140 residents, including a couple in the manager's room.

The proposed site is located in good proximity to public transport, just over 200 metres walking distance to Werrington Railway Station providing high frequency services to Penrith, St Marys, Parramatta and Sydney City. The site meets the SEPPARH definition of an accessible area (800 metres from a railway station), although being in an R3 zone, this is not required. Bus services to Penrith and St Marys are available at Werrington Station Bus Stop, 352 metres walking distance from the site.

Shops and other facilities are available at Werrington Shopping Centre, with most daily needs available within 400 metres walking distance. A medical centre and pharmacy are 416 metres from the site and the Post Office is 604 metres from the site. Open space is located within walking distance of the development, including sporting fields and a children's playground. Each of these are located on the other side of the railway line, with disabled access available to shops and open space via a railway over bridge with lifts.

Overview of the Social Impact Assessment

This Social Impact Assessment (SIA) has been prepared by JSA to accompany the Applicant's development application to Penrith City Council. This SIA has assessed the proposal in terms of:

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

(i) its accessibility, facilities and design, internal and external amenity and social planning aspects of local character as per best-practice and with regard to compliance with relevant provisions of SEPPARH;

(ii) relevant provisions of the *Boarding House Act 2012*;

(iii) the demographic, housing and service context of the locality relevant to the need and demand for Boarding House accommodation; and

(iv) consultation with nearby residents via survey to understand the locality, identify concerns and to inform mitigations if required.

This assessment process identifies potential benefits/positive impacts and adverse/negative impacts of the proposed development, and provides recommendations to mitigate any identified adverse impacts to the greatest extent possible.

Overview of likely social impacts

Local demography & predicted demography of Boarding House

The SA1 where the proposed boarding house is located is a disadvantaged area compared to both the Penrith LGA average and to Greater Sydney. The SA1 in with the proposed Boarding House is located ranks among the bottom 20% of SA1s in NSW across each of the four SEIFA indices of wellbeing.

The demographic profile of the SA1 is characterised by a young age profile, which includes a large proportion of children and young adults (20-39 years). This suggests a local area with many young families with children. The area also has well above average proportions of those born in Australia. Educational and qualification levels in the area are much lower than the Greater Sydney average; the unemployment rate in the suburb at the time of the 2016 Census was much higher than that for Penrith LGA and Greater Sydney, and household income levels are correspondingly lower.

The dwelling structure of the locality is characterised by high levels of medium density dwelling types (62%) and high levels of flats and units (23%), indicating a relatively high density local context. The level of socially rented housing is three times the Greater Sydney average; and the rate of private rental is also higher than average, likely due to the nature of dwellings in the locality, with correspondingly lower rates of dwellings that are owned outright or with a mortgage.

The proposal site is located in high density hotspots for crime including Assault – non domestic, Assault – domestic, Malicious damage, Theft – break and enter dwelling, and Theft – steal from motor vehicle. It is located in a moderate density hotspot for Theft – Steal from Dwelling and Theft – Motor Vehicle.

While the two-year crime trend in Werrington suburb has been stable, the area has higher than NSW average crime rates for many of the offence types reviewed, with some offence types three and seven times the NSW average rate. This crime context has implications for safety and security of Boarding House residents, and any resident vehicles that are parked on or off site. It also has implications for the management of the Boarding House, as discussed later.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Compared to residents of Werrington suburb, if the proposed Boarding House were to reflect the demography of 'average' boarding houses in Greater Sydney, the boarding house is likely to have larger proportion of males; young adults; those never married, separated or divorced; and those in manager/professional roles than the suburb. There will be a lower proportion of those with a need for assistance (severe disability) compared with Werrington. Labour force participation and income levels are likely to be somewhat lower than the suburb, while the unemployment rate could be higher. Boarding house residents will be more likely than the Werrington population to be attending at educational institution and have higher levels of transience in terms of tenancy turnover.

As such, the proposed boarding house would likely provide flexible accommodation for very low and low income workers, casual or contract workers, students and people on aged pensions.

Affordability

The NSW DCJ *Rent and Sales Report* reported ten bonds for bedsits in the June Quarter 2021 in Penrith LGA, and median rental was not reported. The median one bedroom rental was $350, which was not affordable to a very low income household.

Based on JSA's recent rental snapshot, we would expect rooms in the proposed boarding house to rent for $220-$250 per week, in line with advertised prices for studio apartments and boarding house rooms in the LGA.

Within an approximately **five kilometre radius** of the proposal site there were 58 studio, one and two bedroom properties for rent during the rental snap shot period. Of these 58 properties, 31 would be affordable for **very low** income renters, 57 properties would be available to **low** income households and all properties would be available to **moderate** income households. However, it is noted that many of the lower cost one bedroom apartments or secondary dwellings were older and/or of lower amenity.

At the time of the 2016 Census, 85% of very low income privately renting small households (lone person and couple only) in Penrith LGA were in housing stress compared to 79% Greater Sydney average, with these households comprising 33% of all small privately renting households in the LGA. In absolute terms, there were more than 2,500 very low and low income renting household made up of lone persons and couples without children in housing stress in 2016 in Penrith LGA, and an additional 200 such moderate income households in housing stress. Given projected rates of household growth in the LGA, this would likely be at least 4,500 smaller households in housing stress by 2041 assuming current trends.

At the indicative rent levels rents would be affordable to all low income households and some very low income households. As such, the proposal would make a contribution to alleviating housing stress for very low income and low income private renting households in the Penrith LGA and Greater Sydney context.

As such, in the wider locality of Penrith LGA, there will be significant benefits, or positive impacts, from an increased supply of boarding house accommodation, whether owned/managed by a private agency or social housing provider, in the context of very high rates of housing stress and the large and growing number of smaller very low and low income households in housing stress.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Character and Amenity

Amenity of the Immediate Locality

The amenity of the surrounding locality for boarding house residents is good. It is within close walking distance to public transport, local shops and public open space.

Character of the Immediate Locality

The predominant character of the local area is of older 2-3 storey Residential flat buildings with hip and valley roofs, separate single houses with hip and valley or gable roofs and newly constructed Multi dwelling housing with skillion roofs. Cladding is typically brick and roofs are tiles or corrugated iron in the case of recently constructed Multi dwelling housing.

We are advised by the architect that the proposal has the pitched roof and dormer windows with brick facade and brick roof which is in-line with the character of the neighbourhood.

Potential Amenity Impacts in the Immediate Locality

There are privacy concerns related to the overlooking of windows, balconies and yards in dwellings to the east and rear of the proposed development by windows on the first, second and third floors of the proposed development. We are advised by the architect that the windows shrouds detailed will address the potential overlooking issue on the side elevations.

The location of the common areas is not adjacent to current developments and so usage is unlikely to result in adverse noise impacts.

JSA has not sighted an Acoustic Report for this proposal and would defer to an expert's view with regard to any noise impacts.

Parking and traffic impacts in the Immediate Locality

The development provides on-site parking in two basement levels accessed from Railway Street. The level of parking provided meets the requirements of SEPPARH. At the time of the site visit, there was on-street parking available in Railway Street, although this is likely to be affected by COVID19 restrictions, and the proximity of Werrington Railway Station would be expected to place demand on on-street parking.

The Parking and Traffic Report concludes that there are no traffic or parking related issues that should prevent approval of the subject application.

Within the Boarding House

The internal amenity of the proposed boarding house is good. All rooms contain private bathroom, kitchen and laundry facilities. Rooms are all double rooms with regard to size (excluding bathroom and kitchen areas), generally 16 m^2, with top floor rooms 22 m^2 to 25 m^2. The accessible rooms are 19m^2 in size. Ground floor rooms all have private court yards.

A common living room of 38 m^2 is provided for at ground level on the north western corner of the building, adjacent to the common outdoor area on the north western corner of the site, with an

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

adjacent toilet. Furnishings include a kitchenette, television, lounge seating for eight people and dining seating for three people.

While the common living room meets the requirements of the SEPP, the size is small relative to the number of lodging rooms. A single large room could be dominated by a few lodgers, and consideration should be given to provision of common rooms on each level given the size of the Boarding House and number of rooms on each level, and to avoid potential conflict for use of the space.

A covered 39 m^2 common outdoor open space area is shown at the north western corner of the building adjacent to the common room and is accessible from the common living room. This area will contain lounge seating for five and table and chairs for six people.

Additional outdoor common space is provided in two areas at the rear of the building in the side setback area. These areas are scaled at 40 m^2 each, and contain clothes drying racks and landscaping. No seating or shelter is provided.

We are advised that the development will be fenced with 1.8 metre timber fencing.

Boarding House Management

We have not been advised with regard to the proposed management of the boarding house. This is of particular concern given the scale and likely demography of the boarding house. A manager's room is shown on the ground floor, but this is accommodation only, and no office space or cleaning facilities are shown on the drawings.

Issues raised in Resident Survey

Due to Covid 19 restrictions and concerns, a door knock survey was not carried out, as would usually be the case. A letter box drop provided basic information about the proposal, and residents were invited to contact JSA to participate in a survey by phone or to email a completed survey by close of business on 9 September 2021.

Sixty-six surveys were hand- delivered by JSA staff. One response was received, suggesting a low level of community concern regarding the proposed development.[1]

The person surveyed was particularly concerned about the size of the boarding house and the difficulty in managing such a large facility. Particular concerns related to the welfare and safety of women and children in the Boarding House and concerns regarding other vulnerable people. Suggested mitigations were to reduce the scale of the boarding house and to ensure management had skills in supporting people, particularly in areas such as mental health and drugs and alcohol.

CPTED Assessment

The CPTED assessment identified a number of areas to improve surveillance and access control. These are identified in the body of the report, and in recommendations.

[1] Similar approaches in other communities surveyed by JSA have led to very high levels of response.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Compliance with SEPPARH

The proposed boarding house is compliant in all areas relevant to this assessment.

Conclusions and Recommendations

Conclusions

The proposed boarding house, with rents that will be affordable to 69 very low and low income lone persons and couples, will contribute significantly to housing choice and diversity for such renters, and will alleviate housing stress, which is large, at a high rate and growing in the LGA. Those accommodated are likely to include very low and low income workers, students and some people on pensions and benefits, although people in JobSeeker or other unemployment benefits are unlikely to be able to afford to live there. Further, the site is well located, and is walkable to high frequency public transport with excellent linkages to employment centres, and to local shops and public open space.

The location of shared private open space is unlikely to result in amenity impacts on neighbours, however seating could be provided to the areas at the rear of the development.

The proposal is generally compliant with the SEPP.

The internal amenity of the proposed boarding house is good. All rooms contain private bathroom, kitchen and laundry facilities. However, the common living room is small relative to the number of lodging rooms, although it is compliant with the SEPP. The boarding house is large, and spread over four levels, so that a common room on each level would be beneficial and likely warranted. The common outdoor space areas at the rear of the development lack seating.

Based on lack of response, there was a low level of concern about the proposal by those in nearby dwellings; although the high crime environment suggests that security measures will be required, with the CPTED assessment identifying matters related to surveillance, access control, territorial reinforcement and space management/maintenance that need to be addressed. There are likely to be amenity impacts on neighbours from overlooking of dwellings to the east and rear of the proposed development by windows on the first, second and third levels, with the architect advising that the shrouds detailed on the drawings will address this.

The scale of the boarding house, with up to 138 residents and possibilities for resident conflicts in relation to shared spaces and concentration of renters in relatively small and homogenous living environment, and likely high tenant turnover, suggests that excellent onsite of management will be required. We have not been advised with regard to the proposed management of the boarding house.

JSA's research[2] with regard to successful new generation Boarding Houses indicates that the most important aspects of Boarding Houses that are well accepted within the surrounding community are related to good design and amenity; appropriate location and physical integration with the

[2] Judith Stubbs and Associates (2017) Building Community Support for Community Housing, Toolkit for Providers and Research Reports, Prepared for the Community Housing Industry Association of NSW, Accessible online at https://communityhousing.org.au/information/resources/.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

surrounding community; and excellence in management, including a detailed Plan of Management, House Rules, transparent complaints procedures, proactive communication with neighbours and on-site management. This will be particularly important in a boarding house of this size, demography and in this locality.

A suitable Plan of Management, House Rules and presence of an onsite manager are likely to provide mitigations to some of the potential social impacts, as well as the potential for privacy and noise impacts to some extent; however the POM and House Rule will be need to be rigorously enforced, particularly if rents decrease to a level where the boarding house is more attractive to a wider range of very low income people in the current market context.

Recommendations

It is recommended that the Applicant:

- Consider designating the majority of rooms as single occupant, noting that this is likely to reflect actual tenure in other local boarding houses, and will reduce the concentration of very low and low income tenants.
- Provide a reception desk and office area (paid Concierge Service/Manager) at the front entrance to enhance surveillance of people coming and going and to improve security, with someone in attendance from 8 am to 10 pm each day.
- Provide a live-in onsite manager, who could be a remunerated tenant, on call for hours outide of the 8 am to 10 pm Concierge service.
- Provide secure access to the building, car parks and lifts.
- Provide a common living area on each level, with appropriate fittings and furnishings.
- Implement additional security measures including:
    - Provision of Concierge desk (see above)
    - Provision of CCTV system to car park and corridor areas
    - Consider amending plans to remove dead end corridors
    - Provide permanent lighting to public areas and to the front entrance area
    - Provide windows to doors accessing stairs, front escape stairs, garbage room, common room and access to outdoor common space
    - Provide secure entry to the building and to the car park area
- Provide a Plan of Management and House Rules, ensuring provision for:
    - Excellent on-site management with appropriate and transparent complaints and response procedures;
    - Maintenance procedures;
    - Care in the selection and screening of tenants, including awareness of the need to accommodate a diversity of tenures with regard to income, employment or student status; and other provisions related to accommodation of children should this occur;

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- Hours of operation of relevant spaces to ensure noise and privacy impacts are avoided;
- Provision for both short-term (3 month) of longer-term (6-12 months) Occupancy Agreements to increase stability and reduce turnover; and
- Strict House Rules, with appropriate penalties for non-compliance.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

1 The Proposal

1.1 Description of proposal

The proposed development is a four storey 70 room boarding house, with a maximum capacity of 140 residents including manager, located at **10-11 Railway Street, Werrington**. The development includes:

- 70 rooms, each with ensuite, laundry and kitchenette, including 1 double manager's room. All rooms are double rooms, and include 7 accessible rooms;
- Basement parking for 36 cars, 14 motor cycles and 14 bicycles;
- One ground floor indoor common area with kitchen facilities; and
- Private outdoor open space of 39 m^2 on the north west corner of the site adjacent to the ground floor indoor common living area and two private outdoor spaces in the side setback at the rear of the building.

1.2 Demographic context of the locality

The SA1 where the proposed boarding house is located is characterised as a disadvantaged area compared to both the Penrith LGA average and to Greater Sydney.

The SA1 area around the proposal site ranks among the bottom 20% of SA1's in NSW across each of the four SEIFA indices. However, the SA1 has lower levels of disadvantage than the Werrington suburb in the areas of Economic Resources and Education and Occupation. The Werrington suburb is among the most disadvantaged 10% of suburbs in NSW for index of relative socio-economic disadvantage, advantage and disadvantage, education and occupation and economic resources.

The SA1 of the proposal site, 1146219, has a greater proportion of females and younger age structure compared to Werrington suburb, Penrith LGA and Greater Sydney; as does Werrington suburb compared to Penrith LGA and Greater Sydney. The SA1, Werrington suburb and Penrith LGA have higher proportions of residents from an Indigenous background compared to Greater Sydney, between 4-5% of these populations compared to 1.5%. Werrington suburb has a higher proportion of those in need of assistance with a core daily activity at 6.2% of residents compared to the SA1 (5.3%), Penrith LGA (5.5%) and Greater Sydney (5.2%).

The SA1, Werrington Suburb and Penrith LGA are characterised by high proportions of those born in Australia (67%, 70% and 72% respectively) compared with Greater Sydney (57%). Predominate countries of birth amongst SA1 resident population include Philippines, India, New Zealand and Nepal which is a similar profile to the suburb and LGA.

The SA1 has similar levels of post-schooling qualifications to Werrington suburb and Penrith LGA, which are below Greater Sydney. Between 9-11% of residents hold a Bachelor's Degree is

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

the SA1, suburb or LGA compared to 22% for the Greater Sydney average; correspondingly larger proportions of residents in these areas hold Certificate Level qualifications than average.

School completion rates are lower in the SA1 compared to Greater Sydney but higher than the suburb and LGA, with 55% of residents completing Year 12 in the SA1 compared with 65% for Greater Sydney.

The SA1 has a similar proportion of those not in the labour force at 32% compared to the Werrington suburb (33%), Penrith LGA (31%) and Greater Sydney (34%). As at the 2016 Census, the unemployment rate in the SA1 and Werrington suburb was 9.0%, greater than the LGA at 5.7% and Greater Sydney at 6%.

The main industries of employment in the SA1 are health care and social assistance, retail trade, public administration and safety and transport, postal and warehousing. The main industries in Werrington suburb are health care and social assistance, retail trade, construction and manufacturing.

Personal income levels are higher in the SA1 than the Werrington suburb, but below the Penrith LGA and Greater Sydney. Household income levels in the SA1 are below the Werrington suburb, and further below the Penrith LGA and Greater Sydney averages.

The SA1 is characterised by high levels of medium density housing forms (62%) compared to all benchmarks and high levels of flats and units (23%) compared to the LGA, showing a relatively high density area. Werrington suburb has higher densities than Greater Sydney, with fewer dwellings as separate houses. Penrith LGA is very low density compared to all areas, with 80% of dwellings as separate houses.

The SA1 and suburb have lower levels of ownership (52%) compared to the LGA (68%) and Greater Sydney (64%). Social rental is particularly high in the SA1 (15%) and in the suburb (11%) compared to the LGA and Greater Sydney (5%).

The SA1 and suburb have a lower level of car ownership (87% and 89%) compared to the LGA (94%) but similar to Greater Sydney.

This is looked at in detail in **Appendix A**.

1.3 Description of site and immediate surrounds

The proposal site at 10-11 Railway Street Werrington is located within an **R3 Medium Density Residential** zoned area as per the Penrith Local Environmental Plan 2010.

A visit to the proposed site and its immediate surrounds was undertaken by JSA researcher Colleen John Storer on Wednesday 6 September 2021 as part of the field work conducted for this Social Impact Assessment. Actual walking distance measurements were undertaken using a Bosch Professional GWM 32 trundle wheel.

The proposal site is currently vacant.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



Figure 1.1: The site (10-11 Railway St Werrington), adjacent two and three storey residential flat buildings
Source: JSA, 2021

Surrounding uses consist of:

- Vacant land in the railway reserve opposite across Railway Street;
- Vacant land to the west;
- Two storey residential flat building with undercroft parking to the east; and
- Two storey residential flat building to the rear.

There are two social housing developments in the precinct; 6 Railway Street and 16 Rance Street.

Proximate land uses are shown in the figures below.



Figure 1.2: Multi dwelling housing (Social housing), 6 Railway Street
Source: JSA, 2021

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



Figure 1.3: Multi dwelling housing (Social housing), 16 Rance Street
Source: JSA, 2021



Figure 1.4: Separate Housing Rance Street
Source: JSA, 2021

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



Figure 1.5: Residential Flat Building to east of site
Source: JSA, 2021



Figure 1.6: Residential Flat Building and Multi Dwelling Housing to rear of site
Source: JSA, 2021

1.4 Locality Map

The proposal site is located in relatively close proximity to public transport (Werrington Railway Station and Werrington Station Bus Stop), open space at Rance Oval and shops and services at Werrington Shopping Centre.

The map and table below show the location and walking distance of these points of interest.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



Figure 1.7: Immediate Locality Map surrounding Proposal Site at 10-11 Railway Street Werrington

Source: JSA, 2021 using Google Maps

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Table 1.1: Walking Distances from 10-11 Railway Street to Points of interest in the local area

Place of Interest	Walking Distance from proposal site	Details
Werrington Railway Station	208 metres	Services: - Eastbound to St Marys, Parramatta and Sydney City - Westbound to Penrith
Werrington Station Bus Stop (ID 2747210).	352 metres	Services: - 782 to Penrith and St Marys - 783 to Penrith - 785 to Penrith
Rance Oval	380 metres	Public reserve with playing fields and toilets
Cafe	370 metres	
Baker	378 metres	
Supermarket/Convenience Store	398 metres	
Medical Centre/Pharmacy	416 metres	
Bottle Shop	437 metres	
Post Office	604 metres	

Source: JSA, 2020

1.5 Businesses and services in the locality

A range of shops providing daily needs are located at Werrington Shopping Centre, between 370 and 604 metres from the proposed development using the railway overbridge. A paved footpath with pram ramps is available along Railway Street connection to the railway station and Werrington Shopping Centre. The railway overbridge has disabled access.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



Figure 1.8: Werrington Shopping Centre
Source: JSA, 2021

A wider range of services are available at Penrith and at St Marys, with both accessible by public transport.

1.6 Public transport accessibility

Trains are available from Werrington Railway Station, providing services on the T1 line. Services operate between 3 am and midnight, seven days a week. Weekday services operate eight times an hour in peak periods and four times during the day, with reduced frequency on weekends and public holidays.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



Figure 1.9: Werrington Railway Station showing disabled access
Source: JSA, 2021

Buses are available from the bus stop located on Kazanis Court, **352 metres** walking distance from the proposal site, with access to services 782 to Penrith and St Marys and 783 and 785 to Penrith.

The 782 typically operates hourly between 5 am and 9 pm, the 783 typically operates hourly between 5 am and 9 pm with higher frequencies during peak hours and the 785 typically operates hourly between 5 am and 9 pm with higher frequencies during peak hours.

1.7 Open space

Rance Oval is accessed via the Railway overbridge. The reserve includes a cricket pitch, amenities, basketball court and playground.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

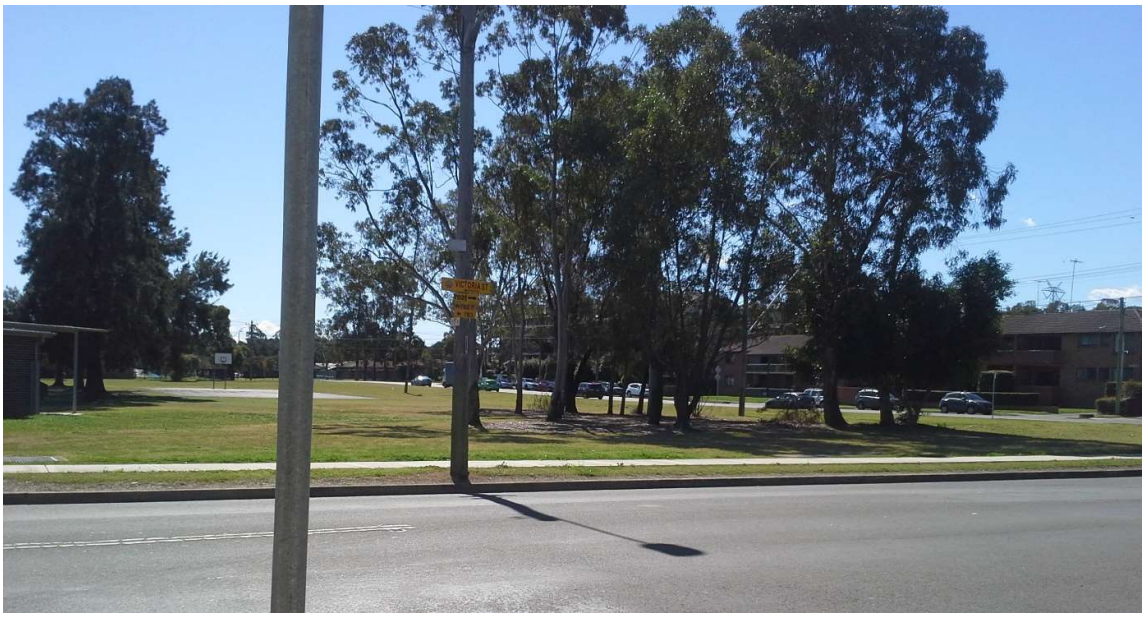


Figure 1.10: Rance Oval
Source: JSA, 2021

1.8 Pedestrian and car movements

At the time of the site visit, the morning of Monday 6 September, Railway Street was observed to be a quiet with regard to vehicle and pedestrian movements, and with little of the onstreet parking utilised. The site visit was undertaken during COVID19 restrictions, and there may be demand from parking from commuters using the nearby Werrington Railway Station in more normal times.

1.9 Character of the area

Clause 30A of *SEPP (Affordable Rental Housing) 2009* requires Council to consider whether the design of the development is compatible with the character of the local area. Character is understood to primarily consist of the relationship to other buildings with respect to building height, setbacks and landscaping and other physical aspects, although there are often quite subjective elements related to this test.

The predominant character of the local area is of older 2-3 storey residential flat buildings with hip and valley roofs, separate single houses with hip and valley or gable roofs and newly constructed multi dwelling housing with skillion roofs. Cladding is typically brick and roofs are tiles or corrugated iron in the case of recently constructed multi dwelling housing.

We are advised by the architect that the proposal has the pitched roof and dormer windows with brick facade and brick roof which is in-line with the character of the neighbourhood.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

2 Relevant Legislation

2.1 Compliance with State Environmental Planning Policy (Affordable Rental Housing) 2009

2.1.1 General

As Boarding Houses are permitted with consent in R3 zones under Penrith Local Environmental Plan 2010, the relevant application of *State Environmental Planning Policy (Affordable Rental Housing) 2009 (SEPPARH)* is in relation to design standards specific to Boarding Houses and to good practice as per Division 3. The proposal is not required to comply with other Divisions of the SEPPARH, however some aspects (such as the accessibility of the area) are included here for completeness of the Social Impact Assessment.

2.1.2 Accessibility of the area

As the proposal site is in an R3 zoned area, accessibility of the area is not expressly required by the SEPPARH; however, it is a consideration of this SIA.

The Penrith LGA is within the **Greater Sydney Region**.

A development is in an accessible area if it is within:

> *(a) 800 metres walking distance of a public entrance to a railway station or a wharf from which a Sydney Ferries ferry service operates, or*
>
> *(b) 400 metres walking distance of a public entrance to a light rail station or, in the case of a light rail station with no entrance, 400 metres walking distance of a platform of the light rail station, or*
>
> *(c) 400 metres walking distance of a bus stop used by a regular bus service (within the meaning of the Passenger Transport Act 1990) that has at least one bus per hour servicing the bus stop between 06.00 and 21.00 each day from Monday to Friday (both days inclusive) and between 08.00 and 18.00 on each Saturday and Sunday.*

As the proposed development is 208 metres from Werrington Railway Station, it meets the criteria of Clause 4(1)(c) of the SEPP as set out above and is **within an accessible area**.

2.1.3 Private Open Space Requirements

Clause 29(2)(d) of *SEPPARH* gives the following standards regarding the provision of private open space areas.

(i) One area of at least 20 square metres with a minimum dimension of three metres is provided for the use of the lodgers,

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

(ii) If accommodation is provided on site for a Boarding House manager – one area of at least eight square metres with a minimum dimension of 2.5 metres is provided adjacent to that accommodation.

Plans reviewed include a private open space area of 39 m^2 in the northern facing front set back of the lot. The private open space is adjacent to the common living room.

The proposed Boarding House, with 69 rooms and a maximum capacity of 138 lodgers, requires the provision of on-site accommodation for a manager. The proposal includes a manager's room at ground level with adjoining private outdoor space of 15 m^2 adjacent to the room.

2.1.4 Onsite Parking Requirements

Clause 29(2)(e) of SEPPARH sets out the following standards regarding provision of onsite car parking spaces:

(i) in the case of development carried out by or on behalf of a social housing provider in an accessible area – at least 0.2 parking spaces are provided for each boarding room, and

(ii) in the case of development carried out by or on behalf of a social housing provider not in an accessible area – at least 0.4 parking spaces are provided for each boarding room, and

(iia) in the case of development not carried out by or on behalf of a social housing provider – at least 0.5 parking spaces are provided for each boarding room, and

(iii) in the case of any development – not more than 1 parking space is provided for each person employed in connection with the development and who is resident on site

As the development is not being carried out by or on behalf of a social housing provider, the number of car parking spaces required onsite to comply with Clause 29(e)(iia) of the SEPPARH is 0.5 per boarding room (i.e. 0.5 x 69 lodger rooms = 35 lodger spaces), plus one manager's space as per Clause 29(e)(iii).

The plans comply with the provisions of SEPPARH with **36 on-site car parking spaces**.

SEPPARH 2009 also requires the following:

Clause 30(1)(h) at least one parking space will be provided for a bicycle and one will be provided for a motorcycle, for every 5 boarding rooms.

The plans for the proposed Boarding House provide for **14 motor bike spaces** and **14 bicycle spaces**, which is also compliant with the SEPPARH requirements for 14 motorbike and 14 bicycle spaces (i.e. 69/5 = 13.8 spaces).

2.1.5 Accommodation Size

Clause 29(2)(f) of SEPPARH requires that boarding rooms be a minimum of 12m^2 for single rooms and 16m^2 for double rooms, excluding kitchen or bathroom facilities.

Plans provided show that all rooms meet the minimum accommodation sizes of the SEPP.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

2.1.6 Other Requirements for Boarding Houses

SEPPARH 2009 sets out several other requirements for Boarding Houses in Clause 30(1).

Communal living area

The proposed Boarding House plans meet the requirements in subclause (a) that a Boarding House with five or more boarding rooms must have at least one communal living area.

Plans show one indoor communal area at ground level with kitchen facilities and toilet of 61 m^2 in size. No details are provided for inclusions.

Maximum floor area, number of lodgers per room,

The proposed Boarding House plans show that the gross floor area of all boarding rooms (excluding bathroom and kitchen facilities) are less than 25m^2, as required by the SEPP.

Subclause (c) states that boarding rooms are to be occupied by no more than two lodgers. The rooms proposed are configured to suit couples.

Adequate kitchen & bathroom facilities

Subclause (d) states that adequate bathroom and kitchen facilities will be available within the Boarding House for use of each lodger.

All 69 rooms will be fully self-contained with kitchen and bathroom facilities. Details of kitchen and bathroom inclusions are not shown on the drawings.

- In-room bathroom facilities will include toilet, basin and shower;
- In-room kitchen facilities will include sink, two-burner cooktop, refrigerator, microwave, kettle, bench space and storage cupboards;

Additional common kitchen facilities are provided in the ground floor common area.

2.2 Penrith Local Environmental Plan 2010

Under the Penrith Local Environmental Plan 2010 (PLEP 2010), the land at 10-11 Railway Street, Werrington is zoned as **R3 Medium Density Residential**. Under this zoning, Boarding Houses are permitted with consent.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

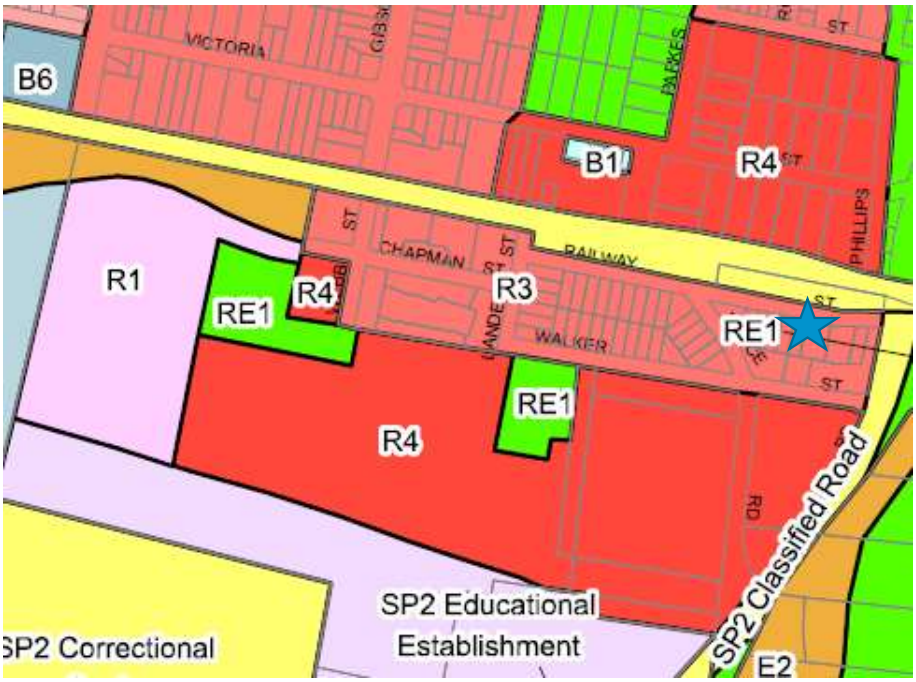


Figure 2.1: Zoning Map, Penrith LEP 2010, 10-11 Railway St Werrington shown with star
Source: Penrith LEP 2010

Height limit for the proposal site is 8.5 metres as per the Height of Buildings Map in the Penrith LEP 2010.



Figure 2.2: Height of Buildings Map, Penrith LEP 2010,
Source: Penrith LEP 2010

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

2.3 Penrith Development Control Plan 2014

The Penrith Development Control Plan 2014, Chapter D5 Other Land Uses, Section 5.11 Boarding Houses provides supplementary directions for Boarding Houses to the SEPPARH and general controls elsewhere in the DCP.[3]

This section of the DCP includes controls related to local character, built form, scale and appearance, tenant amenity, safety and privacy, visual and acoustic amenity impacts, location and a proposal's plan of management.

This Assessment has reviewed the proposed boarding house plans against the relevant considerations contained in this Section of the DCP that relate to social planning. The proposed Plan of Management has not been provided for review.

2.4 Boarding Houses Act 2012

The proposed boarding house is a registrable Boarding House within the meaning of part 1, section 5 of the Boarding Houses Act 2012. Consequently, a range of provisions of the Boarding Houses Act 2012 are applicable to the development, including inspections by council and the requirement to enter into Occupancy Agreements.

We understand that the proposed boarding house will be a general Boarding House under the Boarding House Act, and consequently will not house more than one person with additional needs.[4]

> *1) For the purposes of this Act, a person is a **person with additional needs** if:*
>
> *(a) the person has any one or more of the following conditions:*
>
> *(i) an age related frailty,*
>
> *(ii) a mental illness within the meaning of the Mental Health Act 2007,*
>
> *(iii) a disability (however arising and whether or not of a chronic episodic nature) that is attributable to an intellectual, psychiatric, sensory, physical or like impairment or to a combination of such impairments, and*
>
> *(b) the condition is permanent or likely to be permanent, and*
>
> *(c) the condition results in the need for care or support services (whether or not of an ongoing nature) involving assistance with, or supervision of, daily tasks and personal care such as (but not limited to) showering or bathing, the preparation of meals and the management of medication.*[5]

[3] Penrith City Council (2014) Penrith Development Control Plan, D5 Other Land Uses, 5.11 Boarding Houses, Pg 25.
[4] Boarding House Act, clause 37(1).
[5] Boarding House Act, clause 36.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Under the Act, the proprietor is required to notify the Commissioner of a range of particulars with respect to the development.

Under Clause 17 of the Act, Council has the power to carry out inspections of the premises.

Under Clause 28 of the Act, the Proprietor is required to enter into a written occupancy agreement with each lodger.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

3 Demographic and Housing Context

3.1 Comparative Demography of the Boarding House

The proposed Boarding House will have 70 double rooms. At capacity the Boarding House will have a maximum of 140 residents, including a couple in the manager's room.

We have used data from the Australian Bureau of Statistics' Census of Population and Housing 2016 for Boarding House residents (i.e. those enumerated in 'Boarding House, private hotel') in Greater Sydney as this provides more reliable data due to the number of such residents compared with the locality. Assuming that the population of this Boarding House will be similar to the population of Boarding House residents for the Greater Sydney Capital City Statistical Area, the following profile is likely compared to the surrounding area of the Werrington Suburb:

(v) Larger proportion of males

(vi) Larger proportion of young adults (18-24 years)

(vii) Much higher proportion of those never married

(viii) Somewhat lower weekly personal income levels

(ix) Lower level of labour force participation, smaller proportion of those employed and higher unemployment rate, although this will depend on rental costs and affordability of boarding house rooms for unemployed persons with very low income levels

(x) Equivalent levels of occupation in trades/technical roles among those employed

(xi) Higher levels of occupation in manager/professional roles among those employed

(xii) Higher levels of attendance of an educational institution

(xiii) Lower levels of need for assistance

(xiv) Higher levels of transience

Details are shown in the table below.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Table 3.1: Predicted demography of residents of proposed Boarding House using Boarding House residents in Greater Sydney as a proxy compared to Werrington suburb

	Werrington Suburb	**Proposed Boarding House**	**Boarding House Residents in Greater Sydney**
	Proportion	Likely # BH residents when at capacity	Proportion
Males	45.8%	94	67.2%
Age 18-24 years	9.6%	31	21.9%
Age 25-39 years	26.8%	38	27.0%
Age 40-54 years	18.6%	31	21.9%
Age 55-69 years	14.9%	30	21.1%
Aged 70+ years	6.3%	9	6.2%
Aged 20-69 years	67.4%	122	86.8%
Never married (aged 15+ years)	41.4%	98	70.3%
Separated or divorced (aged 15+ years)	15.8%	23	16.6%
Median total weekly personal income	$643	$505	$505
Unemployment rate	9.0%	27	19.0%
Not in labour force	33.1%	60	42.5%
Employed	62.8%	65	46.7%
Work as trades or technical, machinery operator, labourer (% of workers 2016)	40.0%	59	42.4%
Work as manager or professional (% of workers 2016)	21.5%	35	24.9%
Attending educational institution (aged 20+) (2016)	9.2%	37	26.7%
Attending technical or further educational institution, university or other tertiary institution (all ages) (2016)	6.6%	24	16.9%
Needs assistance with core daily activities (disabled) (2016)	6.2%	6	4.5%
Will change address in less than one year (2016)	19.9%	53	37.8%
Will change address in less than five years (2016)	47.9%	92	65.8%

Source: JSA, calculations 2020, based on data from ABS (2016) Census of Population and Housing, Table Builder.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

If the proposed Boarding House were to reflect the demography and occupancy of 'average' Boarding Houses in Greater Sydney, it is also likely that it would to provide flexible and more long-term accommodation for very low and low income workers, students and people on aged pensions and on benefits. The likely rents would also make rooms attractive and affordable to low income singles and couples and to some very low income households.

3.2 Rental Affordability

3.2.1 Overview

Given the application for the proposed Boarding House is being made with regard to the provisions of *SEPP Affordable Rental Housing 2009* (SEPPARH) it is relevant to consider the housing affordability context of the locality, and the extent to which the proposed Boarding House in this locality is likely to contribute to the stock of affordable rental dwellings.

Although there is no requirement for Boarding House rooms to be affordable (unlike definitions for 'affordable rental housing' elsewhere in SEPPARH), there is a presumption that Boarding Houses will in fact be affordable by virtue of the reduced size and standards such as car parking that apply to such accommodation under the SEPP. The extent to which the proposed Boarding House will contribute to the stock of affordable rental stock in the locality also goes to the question of the likely benefit of the proposed development.

This section therefore sets out relevant affordability benchmarks in accordance with relevant legislation, provides an overview of the affordability context of the locality, and predicts the likely affordability of the proposed Boarding House rooms in this context.

3.2.2 Affordable Rental Housing Definition and Benchmarks

Housing is generally considered to be 'affordable' when households that are renting or purchasing are able to meet their housing costs and still have sufficient income to pay for other basic needs such as food, clothing, transport, medical care and education.

'Affordable housing' has a statutory definition under the NSW Environmental Planning and Assessment Act 1979 (NSW), being housing for very low, low or moderate income households, where 'very low-income' households as those on less than 50% of median household income; 'low-income' households' as those on 50-80% of median household income, and 'moderate-income' households as those on 80-120% of median household income for Greater Sydney (referred to as 'Greater Sydney Statistical Area' in 2016 ABS Census of Population and Housing).

As a commonly used rule of thumb, housing is considered to be affordable where households pay no more than 30% of their gross household income on their rent or mortgage payments. This is often regarded as the point at which such households are at risk of having insufficient income to meet other living costs, and deemed to be in 'housing stress'. Those paying more than 50% of gross income are regarded as being in 'severe housing stress'.

The following table provides benchmarks that are used in this policy when referring to 'affordable housing', in June Quarter 2021 dollars, and are consistent with relevant NSW legislation.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Table 3-2: Affordable Housing Income and Rental Benchmarks - Greater Sydney

	Very Low Income Household	Low Income Household	Moderate Income Household
Income Benchmark	<50% of Gross Median Household Income for Greater Sydney	50%-80% of Gross Median Household Income for Greater Sydney	80%-120% of Gross Median Household Income for Greater Sydney
Income Range (2)	<$950 per week	$951-$1,520 per week	$1,521-$2,280 per week
Affordable Rental Benchmarks (3)	<$285 per week	$286-$456 per week	$457-$684 per week

Source: JSA 2021, based on data from ABS (2016) Census of Population and Housing, ABS (2021) Consumer Price Index, indexed to June Quarter 2021 dollars

(1) All values reported are in June Quarter 2021 dollars

(2) Total weekly household income

(3) Calculated as 30% of total household income

It can be seen from the above that for rental to be 'affordable' under statutory definitions, rental would need to be **less than $285 per week** for a very low income household, between **$286 and $456 per week** for a low income household, and between **$457 and $684 per week** for a moderate income household as per the **Greater Sydney benchmarks**.

3.2.3 The Local Affordability Context

For the June Quarter 2021, there were ten or less new bonds registered for bedsitters in the Penrith LGA, and a total of 94 bonds held. The median rental for a bedsitter in Greater Sydney is $330, more expensive than a first quartile two-bedroom property in the Penrith LGA at $310.

The median rental price for new bonds for single bedroom flats and units in the Penrith LGA was well below the median for Greater Sydney at $350 compared with $460. The median rental price for two bedroom flats and units in Penrith LGA was also below Greater Sydney at $370 compared to $475, with similar trends at the lower and upper ends of the market.

Penrith LGA is a more 'affordable' area than the Greater Sydney average, however it remains out of reach or 'unaffordable' by definition for most households on very low incomes. This group would find it very difficult to find affordable rental accommodation in Penrith LGA, even for bedsits and single bedroom apartments at the lower end of the market. Very low income households requiring affordable rents less than $268 per week are largely excluded from the local market.

The affordability situation for different income groups, using the above benchmarks, for various smaller housing products in Penrith LGA and Greater Sydney are shown in the table below.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Table 3-3: Weekly rents for new bonds for bedsitters (total), one and two bedroom flats and units in Penrith LGA and Greater Metropolitan Region

		Bedsitter (Total)			One Bedroom Flats & Units			Two Bedroom Flats & Units		
		First Quartile	Median	Third Quartile	First Quartile	Median	Third Quartile	First Quartile	Median	Third Quartile
Penrith LGA	**Weekly rent**	-	-	-	$268	$350	$380	$310	$370	$420
	Affordability				Affordable to upper 6% of very low income band	Affordable to upper 62% of low income band	Affordable to upper 44% of low income band	Affordable to upper 86% of low income band	Affordable to upper 51% of low income band	Affordable to upper 21% of low income band
Greater Metropolitan Region	**Weekly rent**	$280	$330	$400	$370	$460	$580	$375	$475	$600
	Affordability	Affordable to upper 2% of very low income band	Affordable to upper 74% of low income band	Affordable to upper 33% of low income band	Affordable to upper 51% of low income band	Affordable to upper 99% of moderate income band	Affordable to upper 46% of moderate income band	Affordable to upper 48% of low income band	Affordable to upper 92% of moderate income band	Affordable to upper 37% of moderate income band

Source: Department of Communities & Justice, Rent & Sales Report No 136, Rent Tables June Quarter 2021, JSA calculations

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

3.2.4 Rental Stress – Lone Person & Couple Only Households Renting Privately

As at the time of the 2016 ABS Census, the rate of rental stress for lone person and couple only households (small households) renting privately in the Penrith LGA is lower than the rate for Greater Sydney (58% compared with 67%).

Levels of rental stress for very low income privately renting small households are higher in Penrith LGA than for Greater Sydney (85% compared to 79%), with such households making up a greater proportion of all small private renting households (33% in Penrith LGA compared to 25% in Greater Sydney).

Levels of rental stress for low income privately renting small households are lower in Penrith LGA than for Greater Sydney (59% compared to 75%), and levels of rental stress for moderate income privately renting small households are much lower in Penrith compared to Greater Sydney (14% compared to 42%).

This analysis suggests that whilst private rental housing in the Penrith LGA is likely to be affordable for a large proportion of lone person and couple only households renting privately earning moderate or higher incomes, there is a shortage of affordable private rental housing for low and very low income singles and couples – particularly very low income earners where 53% of these households were in severe stress at the time of the Census.

Table 3-4: Rental Stress, Lone Person & Couple Only Households Renting Privately, Penrith LGA compared with Greater Sydney, 2016

Lone Person & Couple Only Households Renting Privately	**Penrith LGA**		**Greater Sydney**
	No.	**5,940 households**	**203,958 households**
Very low, low and moderate income	**4,650**	**78% of all privately renting lone person & couple only households**	**61% of all privately renting lone person & couple only households**
Not in Stress	1,929	41%	33%
Moderate Stress	1,647	35%	37%
Severe Stress	1,074	23%	29%
Total Stress	2,721	58%	67%
Very Low Income	**1,934**	**33% of all privately renting lone person & couple only households**	**25% of all privately renting lone person & couple only households**
Not in Stress	295	15%	21%
Moderate Stress	614	32%	20%
Severe Stress	1,026	53%	59%

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Lone Person & Couple Only Households Renting Privately	Penrith LGA		Greater Sydney
	No.	**5,940 households**	**203,958 households**
Total Stress	1,639	85%	79%
Low Income	**1,564**	**26% of all privately renting lone person & couple only households**	**19% of all privately renting lone person & couple only households**
Not in Stress	641	41%	25%
Moderate Stress	876	56%	58%
Severe Stress	47	3%	17%
Total Stress	923	59%	75%
Moderate Income	**1,152**	**19% of all privately renting lone person & couple only households**	**18% of all privately renting lone person & couple only households**
Not in Stress	994	86%	58%
Moderate Stress	157	14%	39%
Severe Stress	1	0%	3%
Total Stress	158	14%	42%
Very Low and Low Income	**3,498**	**59% of all privately renting lone person & couple only households**	**43% of all privately renting lone person & couple only households**
Not in Stress	936	27%	23%
Moderate Stress	1,490	43%	36%
Severe Stress	1,073	31%	41%
Total Stress	2,562	73%	77%
Higher Income Households	**1,290**	**22% of all privately renting lone person & couple only households**	**39% of all privately renting lone person & couple only households**

Source: JSA, calculations 2020, based on data from ABS Census of Population and Housing 2016

3.2.5 Groups that would benefit from the proposal

The proposed Boarding House has the potential to be a significant benefit to very low and low income lone person and couple only private renters that are currently experiencing moderate and severe housing stress, including very low and low income workers and students, and people on

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

pensions and benefits, particularly if rental costs for the proposed development are set at prices that are genuinely affordable for these key groups in locality.

3.3 Existing Boarding House Accommodation

Across the Penrith LGA on Census night 2016, there were a total of 24 persons enumerated in a 'Boarding House, private hotel', representing 0.01% of the resident population of the area. In 2016, the ABS data indicated that there were 3 'Boarding House, private hotels' in the Penrith LGA, but no Boarding Houses/private hotels were enumerated in Werrington Suburb. By comparison, 0.15% of the population of Greater Sydney was counted in Boarding Houses or private hotels at this time, suggesting that Penrith LGA is significantly under supplied with this form of accommodation.

The NSW Department of Fair Trading Boarding House Register shows ten (General Registerable) Boarding House registered in the Penrith LGA including seven registered Boarding Houses in the Kingswood suburb and three in St Marys /North St Marys.[6]

3.4 Social Housing

At the time of the 2016 Census, the supply of social housing in the Penrith LGA at 4.8% of occupied private dwellings is equivalent to the Greater Sydney average of 4.6%.

In 2016, there were around 2,969 social housing dwellings in the Penrith LGA, including 2,609 (88%) rented through the Department of Communities and Justice and 360 (12%) rented through a housing co-operative, community or church group.

Of these social housing dwellings, 18% were one bedrooms or bedsits. Around 91% percent of these one bedroom and bedsit dwellings were occupied by single persons, 3% were occupied by single parent families and 4% by couples without children.[7]

The Werrington suburb has a much higher rate of social housing dwellings compared to Greater Sydney, with 137 social housing dwellings or 9.2% of all dwellings in the suburb.

The SA1 in which the proposed boarding house is located had 36 social housing dwellings enumerated at the 2016 Census, 14.9% of occupied private dwellings.

[6] NSW Fair Trading, Boarding House Register, http://parkspr.fairtrading.nsw.gov.au/BoardingHouse.aspx, accessed 8/9/2021.
[7] ABS (2016) Census of Population and Housing, Place of Enumeration, accessed via Table Builder.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

3.5 Snapshot of rental opportunities in Werrington and surrounding suburbs

A search of www.domain.com.au was conducted on 8 September, 2021 for studio, one and two bedroom apartments (including granny flats and villas) in Werrington and suburbs within approximately five kilometres of the proposed site. These suburbs included St Marys, North St Marys, Ropes Crossing, Kingswood, Jordan Springs, Colyton and Cambridge Park.

In the suburb of **Werrington** there was no **studio** or **one bedroom** accommodation advertised. Four **two bedroom** apartments were available. The median rental was $310.00 per week with first quartile rental being $288.00 and third quartile rental $326.00 per week. These four properties made up 27% of all rental stock in Werrington. One of these two bedroom units would be affordable to the upper range of **very low** income households, whilst the balance would be affordable to **low** and **moderate** income households.[8]

Within an approximately **five kilometre radius** of the proposal site there were an additional 58 studio, one and two bedroom properties for rent.

Seven **studio** properties were available with a median rental of $250.00 per week. Four of these studios were located within registered boarding houses, with rents ranging from $180 to $260.

Ten **one bedroom** properties were advertised (made up of three granny flats, two villas and five apartments) with a median rent of $258.00.

Forty-one **two bedroom** units were located with a median rental of $300.00 per week.

These 58 properties comprised 34% of all the surrounding rental stock. Of these 58 properties, 31 would be affordable for **very low** income renters, 57 properties would be available to **low** income households and all properties would be available to **moderate** income households.[9]

In the Penrith LGA the Rent and Sales Report for June Quarter 2021[10] did not report a median rental for studio accommodation flats/units. M**edian rental** for a one bedroom unit was **$350.00** and for a two bedroom unit **$370.00**.[11]

3.6 Affordability of Proposed Boarding House

We have been advised by the Applicant that the average rental cost for a boarding house room will be $300-320. This rent will be affordable to 85% of low income households.

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[8] JSA 2021 based on data from ABS (2016) Census of Population and Housing, ABS (2021) Consumer Price Index, indexed to June Quarter 2021 dollars
[9] JSA 2021 based on data from ABS (2016) Census of Population and Housing, ABS (2021) Consumer Price Index, indexed to June Quarter 2021 dollars
[10] Department of Communities & Justice, Rent and Sales Report – Interactive Dashboard, www.facs.nsw.gov.au/resources/statistics/rent-and-sales/dashboard
[11] JSA 2020 based on data from ABS (2016) Census of Population and Housing, ABS (2020) Consumer Price Index, indexed to March Quarter 2020 dollars

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Based on the rental snapshot, we would expect rooms in the proposed boarding house to rent for $220-$250 per week.

These rents would be affordable to all low income households and some very low income households.

Given the affordability context of the Penrith LGA, which includes high levels of housing stress among very low income private renting single and couple households, this would be a benefit of the project.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

4 Crime context

NSW Bureau of Crime Statistics and Research (BoCSAR) reports that,

> "Hotspot maps illustrate areas of high crime density relative to crime concentrations in NSW. The hotspots indicate areas with a high level of clustering of recorded criminal incidents for the selected offence…LGAs with crime hotspots do not necessarily have high count of incidents relative to other LGAs. This is because hotspots reflect the density of incidents in specific areas and not the number of incidents in the entire LGA. Hotspots are not adjusted for the number of people residing in or visiting the LGA and so do not necessarily reflect areas where people have a higher than average risk of victimisation."[12]

Appendix B provides a review of NSW BOCSAR crime statistics (two year trend to March 2021 and rate per 100,000 population year to March 2021) and the most recent hotspot maps for the Werrington suburb, with the proposal site identified.

The two-year trend in Werrington suburb for offence types assessed has been **stable (**apart from Robbery, Theft – steal from dwelling, Theft - motor vehicle, Theft – break and enter non-dwelling, and Theft – steal from person which could not be calculated). Werrington suburb has a higher than NSW average rate of incidents for most offence types assessed including:

- Assault (Non-Domestic) (rate 2.6 times NSW average)
- Assault (Domestic) (rate 2.1 times NSW average)
- Malicious damage to property (rate 2.5 times NSW average)
- Robbery (rate 4.4 times NSW average)
- Theft -break and enter dwelling (rate 2.3 times NSW average)
- Theft – motor vehicle (rate 1.9 times NSW average)
- Theft – steal from motor vehicle (rate 2.6 times NSW average)
- Theft – break and enter non dwelling (rate 2.6 times NSW average)
- Theft – steal from person (rate 7.1 times NSW)

Werrington has lower than NSW average rates for Theft – Steal from Dwelling.

The proposed Boarding House is located in **high density** hotspots for offences including:

- Assault – non domestic
- Assault – domestic
- Malicious damage
- Theft – break and enter dwelling

[12] Burgess, M (2011) Understanding crime hotspot maps, NSW Bureau of Crime Statistics and Research, Crime and Justice Statistics, Bureau Brief, Issue paper no 60, April, Pg 3.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- Theft – steal from motor vehicle

It is located in a **moderate density** hotspot for:

- Theft – Steal from Dwelling
- Theft – Motor Vehicle

Details are shown in **Appendix B**.

This crime context has safety and security implications for future Boarding House residents and their vehicles parked on or off site in the local area.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

5 CPTED Analysis

5.1 Introduction

The design has been reviewed with regard to the CPTED principles of surveillance, access control, territorial reinforcement and space management.[13]

5.2 Surveillance

Basement levels. There are generally good sight lines within the car park from the lift entrances, however there are concealment opportunities near spaces 33-36 and 1-9. Surveillance could be improved by provision of mirrors to see into this area. Given crime levels in the locality, provision of CCTV surveillance in the car park area is supported. Lighting details are not provided on the drawings, however permanent, rather than sensor activated, lighting would provide increased surveillance. Windows could be provided to doors to stairs, the front escape stairs and to the garbage room to improve surveillance for people entering these areas.

Ground floor. There appear to be good site lines from the front door to the street. Planting adjacent to the entrance pathway is low and will minimise opportunities for concealment. There are dead end corridors with low surveillance and opportunities for concealment near rooms at the rear of the building. Surveillance could be improved in this area by CCTV surveillance or by use of mirrors. Due to the likely high number of residents, provision of a staffed reception desk near the front entrance should be considered. Lighting details are not provided on the drawings, however permanent, rather than sensor activated, lighting would provide increased surveillance. The entrance to the common room is open, so that people entering the room can see who is in there.

There are four dead end corridors on each of levels one, two and three and these should be provided with CCTV surveillance or appropriate mirrors to improve surveillance, or reconfigured to improve sight lines.

There is generally good surveillance to outdoor areas with windows overlooking all set back areas. Side and rear set back areas are shown as private courtyards to ground floor rooms, with two areas shown as common outdoor space. Landscaping in these areas is appropriate, and provides for sightlines from entrances. Similarly, planting around the front entrance is low and so does not provide opportunities for concealment.

[13] Department of Urban Affairs and Planning (2001) *Crime prevention and the assessment of development applications*

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Permanent lighting should be provided to the front entrance area, and CCTV surveillance should be provided in this area.

5.3 Access Control

Secure fencing, with appropriate security gates should be provided to the front, sides and rear of the development. As a minimum, security access, such as card operated doors, is required to the front door, side doors and to the basement parking area.

5.4 Territorial Reinforcement

Territorial reinforcement is likely to be of particular concern in the foyer area. This will be improved by a manned concierge desk and by high levels of maintenance. The common living areas and private open space need to be inviting with good facilities to encourage usage. Territorial reinforcement will be facilitated by space management in common areas as discussed below. A low fence should be provided to the front of the development with an entrance gate to the front walkway.

5.5 Space Management/Maintenance

The operator will need a program in place to manage and maintain space.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

6 Amenity

6.1 Boarding House Residents

6.1.1 Internal Amenity

The most recent plans show that all rooms exceed the minimum allowable size under clause 29 of SEPPARH. All rooms contain private bathroom, kitchen and laundry facilities. We are advised that fittings comprise cooktop, oven, refrigerator, dishwasher, clothes washer and clothes drier. All first, second and third floor rooms have one window. Ground floor rooms have a private courtyard with sliding glass door access.

A common living room of 38 m^2 is provided for at ground level on the north western corner of the building, adjacent to the common outdoor area on the north western corner of the site, with an adjacent toilet. Furnishings include a kitchenette, television, lounge seating for eight people and dining seating for three people.

While the common living room meets the requirements of the SEPP, the size is small relative to the number of lodging rooms. A single large room could be dominated by a few lodgers, and consideration should be given to provision of common rooms on each level.

6.1.2 External Amenity

A covered 39 m^2 common outdoor open space area is shown at the north western corner of the building adjacent to the common room and is accessible from the common living room. This area will contain lounge seating for five and table and chairs for six people.

Additional outdoor common space is provided in two areas at the rear of the building in the side setback area. These areas are scaled at 40 m^2 each, and contain clothes drying racks and landscaping. No seating or shelter is provided.

We are advised that the development will be fenced with 1.8 metre timber fencing.

6.2 Residents living in the locality

6.2.1 Parking

The development provides on-site parking in two basement levels accessed from Railway Street. The level of parking provided meets the requirements of SEPPARH. At the time of the site visit, there was on-street parking available in Railway Street, although this is likely to be affected by COVID19 restrictions, and the proximity of Werrington Railway Station would be expected to place demand on on street parking.

The Parking and Traffic Report concludes that there are no traffic or parking related issues that should prevent approval of the subject application.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

6.2.2 Noise and privacy

There are privacy concerns related to the overlooking of windows, balconies and yards in dwellings to the east and rear of the proposed development by windows on the first, second and third levels of the proposed development. Details are shown in the figures below. Consideration could be given to provision of screens to these windows.

The location of the common areas is not adjacent to current developments and so usage is unlikely to result in adverse noise impacts.



Figure 6.1: Windows and balconies to adjoining property at 8 Railway Street
Source: JSA, 2021



Figure 6.2: Windows, balconies and yards to adjoining properties at the rear of the proposed development
Source: JSA, 2021

JSA has not sighted an Acoustic Report for this proposal and would defer to an expert's view with regard to these issues.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

6.3 Survey of neighbours & local residents

Due to COVID19 restrictions, JSA carried out a letter box drop to households in proximity to the proposed boarding house on 6 September 2021. Sixty-six dwellings in Railway Street, Rance Road and Walker Street were letterboxed. These households would be most likely to experience any adverse amenity impacts from the proposed Boarding House.

Households were provided with basic information about the proposal, and were invited to contact us to conduct a survey or to email a completed survey by 5 pm 9 September 2021.

One response was received, suggesting a low level of community concern regarding the proposed development.[14]

The person surveyed was particularly concerned about the size of the boarding house and the difficulty in managing. Particular concerns related to the welfare and safety of women and children in the Boarding House and concerns regarding other vulnerable people. Proposed mitigations were to reduce the scale of the boarding house and to ensure management had skills in supporting people, particularly in areas such as drugs and alcohol.

[14] Similar approaches in other communities surveyed by JSA have led to very high levels of response.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

7 Appendix A: Demographic Profile of Locality

To gain an understanding of the context of the proposed boarding house site, a demographic profile has been provided for SA1 1146219 (the smallest Census area containing the proposal site with a population of 664 people in 2016) in comparison with demographics for Werrington State Suburb, Penrith City LGA and Greater Sydney. This information has been separated into selected person characteristics, education, employment and income and dwelling characteristics using data for place of usual residence.

Statistical Area Level 1, 1146219

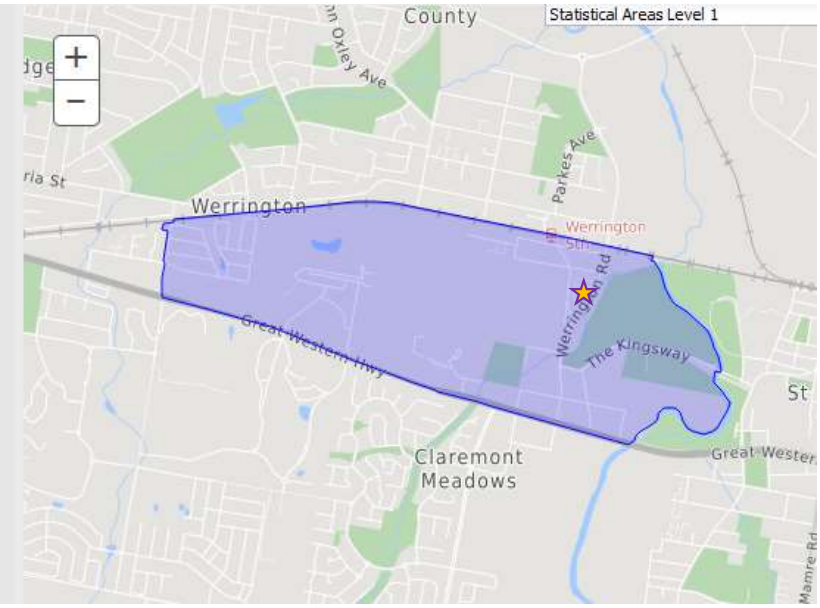


Figure A-1: Statistical Area Level 1, 1146219 with 10-11 Railway St Werrington indicated with star

Source: www.abs.gov.au

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Werrington State Suburb

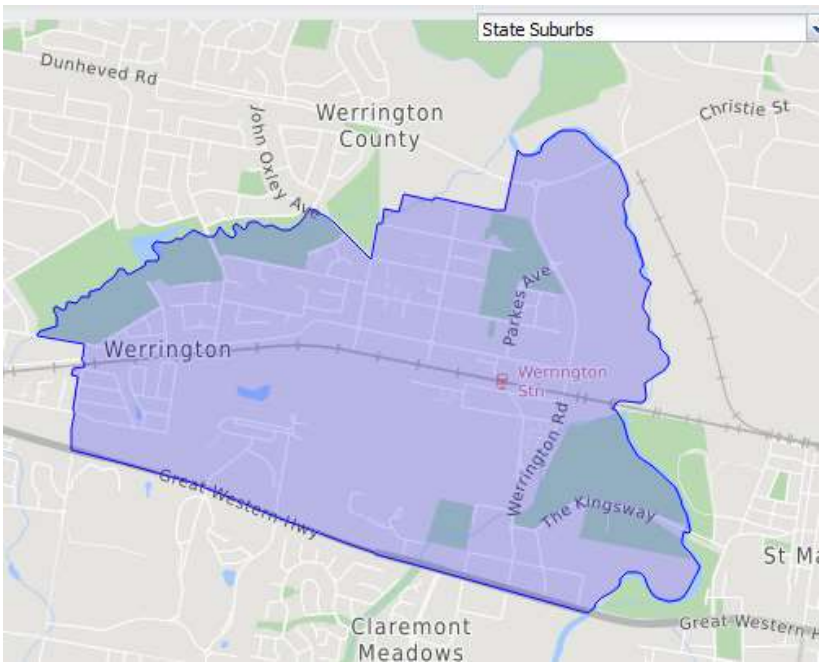


Figure A-2: Werrington State Suburb

Source: www.abs.gov.au

Penrith LGA

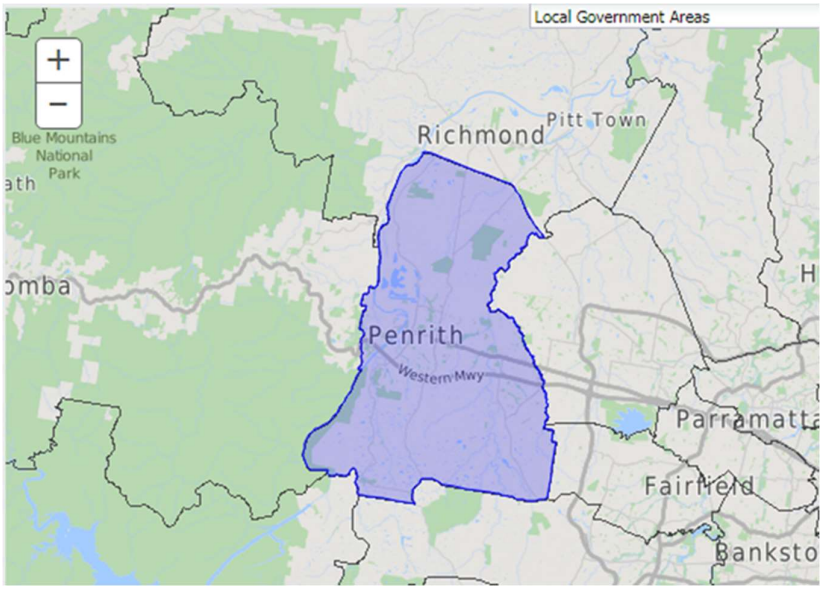


Figure A-3: Penrith Local Government Area

Source: www.abs.gov.au

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Greater Sydney

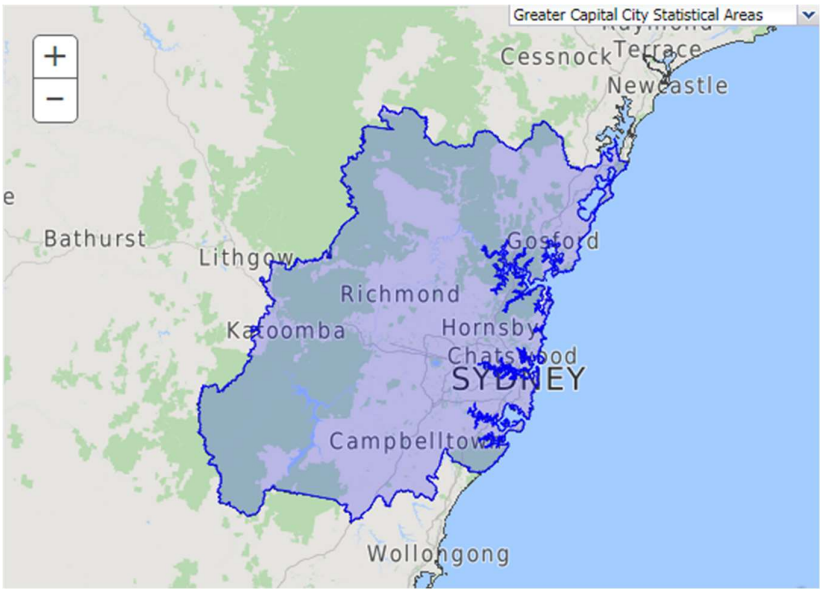


Figure A-4: Greater Sydney – Greater Capital City Statistical Area
Source: www.abs.gov.au

Overview

The SA1 where the proposed boarding house is located is characterised as a disadvantaged area compared to both the Penrith LGA average and to Greater Sydney.

The SA1 area around the proposal site ranks among the bottom 20% of SA1's in NSW across each of the four SEIFA indices. However, the SA1 has lower levels of disadvantage than the Werrington suburb in the areas of Economic Resources and Education and Occupation. The Werrington suburb is among the most disadvantaged 10% of suburbs in NSW for index of relative socio-economic disadvantage, advantage and disadvantage, education and occupation and economic resources.

The SA1 of the proposal site, 1146219, has a greater proportion of females and younger age structure compared to Werrington suburb, Penrith LGA and Greater Sydney; as does Werrington suburb compared to Penrith LGA and Greater Sydney. The SA1, Werrington suburb and Penrith LGA have higher proportions of residents from an Indigenous background compared to Greater Sydney, between 4-5% of these populations compared to 1.5%. Werrington suburb has a higher proportion of those in need of assistance with a core daily activity at 6.2% of residents compared to the SA1 (5.3%), Penrith LGA (5.5%) and Greater Sydney (5.2%).

The SA1, Werrington Suburb and Penrith LGA are characterised by high proportions of those born in Australia (67%, 70% and 72% respectively) compared with Greater Sydney (57%). Predominate countries of birth amongst SA1 resident population include Philippines, India, New Zealand and Nepal which is a similar profile to the suburb and LGA.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

The SA1 has similar levels of post-schooling qualifications to Werrington suburb and Penrith LGA, which are below Greater Sydney. Between 9-11% of residents hold a Bachelor's Degree is the SA1, suburb or LGA compared to 22% for the Greater Sydney average; correspondingly larger proportions of residents in these areas hold Certificate Level qualifications than average.

School completion rates are lower in the SA1 compared to Greater Sydney but higher than the suburb and LGA, with 55% of residents completing Year 12 in the SA1 compared with 65% for Greater Sydney.

The SA1 has a similar proportion of those not in the labour force at 32% compared to the Werrington suburb (33%), Penrith LGA (31%) and Greater Sydney (34%). As at the 2016 Census, the unemployment rate in the SA1 and Werrington suburb was 9.0%, greater than the LGA at 5.7% and Greater Sydney at 6%.

The main industries of employment in the SA1 are health care and social assistance, retail trade, public administration and safety and transport, postal and warehousing. The main industries in Werrington suburb are health care and social assistance, retail trade, construction and manufacturing.

Personal income levels are higher in the SA1 than the Werrington suburb, but below the Penrith LGA and Greater Sydney. Household income levels in the SA1 are below the Werrington suburb, and further below the Penrith LGA and Greater Sydney averages.

The SA1 is characterised by high levels of semi detached etc housing (62%) compared to all benchmarks and high levels of flats etc (23%) compared to the LGA, showing a high density area. Werrington suburb has higher densities than Greater Sydney, with fewer dwellings as separate houses. Penrith LGA is very low density compared to all areas, with 80% of dwellings as separate houses.

The SA1 and suburb have lower levels of ownership (52%) compared to the LGA (68%) and Greater Sydney (64%). Social rental is particularly high in the SA1 (15%) and in the suburb (11%) compared to the LGA and Greater Sydney (5%).

The SA1 and suburb have a lower level of car ownership (87% and 89%) compared to the LGA (94%) but similar to Greater Sydney.

Socio-Economic Indexes for Australia (SEIFA)

The table below shows the scores and decile rankings for areas in NSW and Australia for the SA1 and Werrington suburb for the four SEIFA indexes.

The SA1 area around the proposal site ranks among the bottom 20% of SA1's in NSW across each of the four SEIFA indices. However, the SA1 has lower levels of disadvantage than the Werrington suburb in the areas of Economic Resources and Education and Occupation. The Werrington suburb is among the most disadvantaged 10% of suburbs in NSW for index of relative socio-economic disadvantage, advantage and disadvantage, education and occupation and economic resources.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Table A.1: SEIFA Scores and Percentile Rankings for SA1 1146219 and Werrington Suburb

	SA1 1146219	Werrington Suburb
Index of Relative Socio Economic Disadvantage		
Score	890	921
Percentile ranking within NSW	14	13
Index of Relative Socio Economic Advantage and Disadvantage		
Score	884	909
Percentile ranking within NSW	13	12
Index of Economic Resources		
Score	866	908
Percentile ranking within NSW	10	6
Index of Education and Occupation		
Score	916	911
Percentile ranking within NSW	21	12

Source: ABS (2016) SEIFA

Person Characteristics

The SA1 of the proposal site, 1146219, has a greater proportion of females and younger age structure compared to Werrington suburb, Penrith LGA and Greater Sydney; as does Werrington suburb compared to Penrith LGA and Greater Sydney. The SA1, Werrington suburb and Penrith LGA have higher proportions of residents from an Indigenous background compared to Greater Sydney, between 4-5% of these populations compared to 1.5%. Werrington suburb has a higher proportion of those in need of assistance with a core daily activity at 6.2% of residents compared to the SA1 (5.3%), Penrith LGA (5.5%) and Greater Sydney (5.2%).

Table A-2: Selected person characteristics of residents of SA1 1146219, Werrington Suburb and Penrith LGA compared with Greater Sydney

	SA1 1146219	Werrington State Suburb	Penrith LGA	Greater Sydney
Sex				
Male	45.8%	48.9%	49.4%	49.3%
Female	54.2%	51.1%	50.6%	50.7%
Age				
0-9	19.9%	15.3%	14.6%	12.8%

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

	SA1 1146219	Werrington State Suburb	Penrith LGA	Greater Sydney
10-19	10.1%	11.1%	13.1%	11.8%
20-29	19.6%	16.7%	14.9%	15.0%
30-39	17.4%	17.7%	14.9%	15.5%
40-49	13.7%	13.0%	13.3%	13.7%
50-59	8.1%	10.4%	12.3%	12.2%
60-69	7.1%	9.8%	9.7%	9.5%
70-79	3.5%	4.3%	4.8%	5.7%
80-89	0.7%	1.6%	2.0%	3.0%
90+	0.0%	0.1%	0.4%	0.7%
Indigenous Profile (INGP)	4.7%	5.2%	4.2%	1.5%
Needs Assistance with Core Daily Activities	5.3%	6.2%	5.5%	5.2%

Source: JSA, calculations 2021, based on data from ABS Census of Population and Housing 2016, Place of Usual Residence.

Country of birth

The SA1, Werrington Suburb and Penrith LGA are characterised by high proportions of those born in Australia (67%, 70% and 72% respectively) compared with Greater Sydney (57%). Predominate countries of birth amongst SA1 resident population include Philippines, India, New Zealand and Nepal which is a similar profile to the suburb and LGA.

Table A-3: Top 5 country of birth responses for residents of SA1 1146219, Werrington State Suburb and Penrith LGA compared with Greater Sydney

	SA1 1146219	Werrington State Suburb	Penrith LGA	Greater Sydney
1	Australia (67%)	Australia (70%)	Australia (72%)	Australia (57%)
2	Philippines (7%)	Philippines (5%)	England (3%)	China (excludes SARs and Taiwan) (5%)
3	India (5%)	India (4%)	New Zealand (2%)	England (3%)
4	New Zealand (3%)	New Zealand (3%)	Philippines (2%)	India (3%)
5	Nepal (2%)	England (3%)	India (2%)	New Zealand (2%)

Source: JSA, calculations 2021, based on data from ABS Census of Population and Housing 2016, Place of Usual Residence.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Education

The SA1 has similar levels of post-schooling qualifications to Werrington suburb and Penrith LGA, which are below Greater Sydney. Between 9-11% of residents hold a Bachelor's Degree is the SA1, suburb or LGA compared to 22% for the Greater Sydney average; correspondingly larger proportions of residents in these areas hold Certificate Level qualifications than average.

Table A-4: Secondary and Tertiary education completed by residents of SA1 1146219, Werrington State Suburb and Penrith LGA compared with Greater Sydney

Indicator	SA1 1146219	Werrington State Suburb	Penrith LGA	Greater Sydney
Post-Schooling Qualification (All people)				
Post-Graduate	2%	4%	3%	8%
Grad. Dip/Grad Cert.	1%	1%	1%	2%
Bachelor Degree	10%	9%	11%	22%
Adv. Dip/Dip Level	7%	7%	10%	11%
Cert. Level (I, II, III & IV)	16%	15%	23%	14%

Source: JSA, calculations 2021, based on data from ABS Census of Population and Housing 2016, Place of Usual Residence.

School completion rates are lower in the SA1 compared to Greater Sydney but higher than the suburb and LGA, with 55% of residents completing Year 12 in the SA1 compared with 65% for Greater Sydney.

Table A-5: Highest year of secondary education (people aged 15+) for SA1 1146219, Werrington State Suburb and Penrith LGA compared with Greater Sydney

Indicator	SA1 1146219	Werrington State Suburb	Penrith LGA	Greater Sydney
Highest Year of Secondary Education (people aged 15+)				
Year 12	55%	49%	47%	65%
Year 11	7%	7%	8%	5%
Year 10	28%	29%	32%	18%
Year 9	6%	8%	8%	5%
Year 8 or below	3%	5%	5%	4%
Did not go to school	1%	1%	1%	1%

Source: JSA, calculations 2021, based on data from ABS Census of Population and Housing 2016, Place of Usual Residence.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Employment & Income

The SA1 has a similar proportion of those not in the labour force at 32% compared to the Werrington suburb (33%), Penrith LGA (31%) and Greater Sydney (34%). As at the 2016 Census, the unemployment rate in the SA1 and Werrington suburb was 9.0%, greater than the LGA at 5.7% and Greater Sydney at 6%.

The main industries of employment in the SA1 are health care and social assistance, retail trade, public administration and safety and transport, postal and warehousing. The main industries in Werrington suburb are health care and social assistance, retail trade, construction and manufacturing.

Personal income levels are higher in the SA1 than the Werrington suburb, but below the Penrith LGA and Greater Sydney. Household income levels in the SA1 are below the Werrington suburb, and further below the Penrith LGA and Greater Sydney averages.

Table A-6: Employment and Income demographics of SA1 1146219, Werrington State Suburb and Penrith LGA compared with Greater Sydney

Indicator	SA1 1146219	Werrington State Suburb	Penrith LGA	Greater Sydney
Labour Force Status				
Employed	62.8%	60.5%	65.0%	61.7%
Not in the Labour Force	31.8%	33.1%	31.1%	34.4%
Unemployment rate	9.0%	9.0%	5.7%	6.0%
Top Industries of Employment				
-	Health Care & Social Assistance (17%)	Health Care & Social Assistance (14%)	Construction (12%)	Health Care & Social Assistance (12%)
-	Retail Trade (12%)	Retail Trade (12%)	Health Care & Social Assistance (12%)	Professional, Scientific & Technical Services (10%)
-	Public Administration and Safety (9%)	Construction (9%)	Retail Trade (11%)	Retail Trade (10%)
-	Transport, Postal and Warehousing (9%)	Manufacturing (8%)	Manufacturing (8%)	Construction (10%)
Median Weekly Income (2016 $)				
Personal	$672	$643	$728	$719
Household	$1,178	$1,228	$1,656	$1,747

Source: JSA, calculations 2021, based on data from ABS Census of Population and Housing 2016, Place of Usual Residence.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Dwelling Characteristics

The SA1 is characterised by high levels of semi detached etc housing (62%) compared to all benchmarks and high levels of flats etc (23%) compared to the LGA, showing a high density area. Werrington suburb has higher densities than Greater Sydney, with fewer dwellings as separate houses. Penrith LGA is very low density compared to all areas, with 80% of dwellings as separate houses.

The SA1 and suburb have lower levels of ownership (52%) compared to the LGA (68%) and Greater Sydney (64%). Social rental is particularly high in the SA1 (15%) and in the suburb (11%) compared to the LGA and Greater Sydney (5%).

The SA1 and suburb have a lower level of car ownership (87% and 89%) compared to the LGA (94%) but similar to Greater Sydney.

Table A-7: Dwelling characteristics in SA1 1146219, Werrington State Suburb and Penrith LGA compared with Greater Sydney

Indicator	SA1 1146219	Werrington suburb	Penrith LGA	Greater Sydney
Dwelling Structure				
Separate House	14.7%	41.9%	80.3%	55.3%
Semi-detached, row or terrace house, town house etc	61.9%	30.8%	12.3%	14.0%
Flat, unit or apartment	23.4%	27.0%	6.9%	30.0%
Other dwelling type (caravan, cabin, houseboat, improvised, house or flat attached to shop, office, etc)	0.0%	0.2%	0.5%	0.7%
Tenure & Landlord Type				
Owned outright/with mortgage	51.8%	52.1%	68.4%	63.9%
Rented (private)	33.4%	38.6%	25.9%	29.8%
Rented (public)	12.4%	7.6%	4.2%	4.3%
Rented (community)	2.5%	1.6%	0.6%	0.7%
Number of motor vehicles per dwelling				
None	12.9%	11.3%	6.3%	11.6%
One	57.4%	49.7%	32.1%	38.5%
Two	21.9%	28.1%	38.4%	33.8%
Three	5.1%	6.3%	14.1%	10.5%
Four or more	2.7%	4.6%	9.1%	5.7%

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Source: JSA, calculations 2021, based on data from ABS Census of Population and Housing 2016, Place of Usual Residence.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Appendix B: NSW BoCSAR Crime Data & Maps

The Table below shows the two year trend to March 2021 and the incident rate (per 100,000 population) for the Year to March 2021, for the **Werrington suburb** compared to NSW for a range of offence types. Crime hotspot maps for a range of offences for the Werrington suburb for the period April 2020 to March 2021 (the most recent period available at the time of writing) follow.

Table B-8: NSW BoCSAR Incident Rates Werrington State Suburb & Proposal Site within Hotspot

Offence Type	Area	2 Year Trend to March 2021	Rate (per 100,000 population) Year to March 2021	10-11 Railway St w/in Hotspot?
Assault – Non Domestic	Werrington Suburb	Stable	942	Yes – high density
	NSW	Stable	361	
Assault - Domestic	Werrington Suburb	Stable	856.3	Yes – high density
	NSW	Up 1.1% per year	394.9	
Malicious Damage	Werrington Suburb	Stable	1648.5	Yes – high density
	NSW	Stable	650.1	
Robbery	Werrington Suburb	n.c.[15]	107	No
	NSW	Down 20.4%	24.3	
Theft- steal from Dwelling	Werrington Suburb	n.c.	192.7	Yes – medium density
	NSW	Down 13.8%	201.0	
Theft – Break and Enter dwelling	Werrington Suburb	Stable	535.2	Yes – high density
	NSW	Down 27.1%	227.7	
Theft - motor vehicle	Werrington Suburb	n.c.	256.9	Yes – medium density
	NSW	Down 16.3%	138.4	
Theft – steal from motor vehicle	Werrington Suburb	Stable	856.3	Yes – high density
	NSW	Down 29.1%	330.3	
Theft - break & enter non-dwelling	Werrington Suburb	n.c.	214.1	No
	NSW	Down 32.6%	82.9	
Theft - steal from person	Werrington Suburb	n.c.	170.2	No
	NSW	Down 45.2% per year	23.9	

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021.

[15] not calculable

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

NSW BoCSAR Crime Hotspot Maps

Assault Domestic

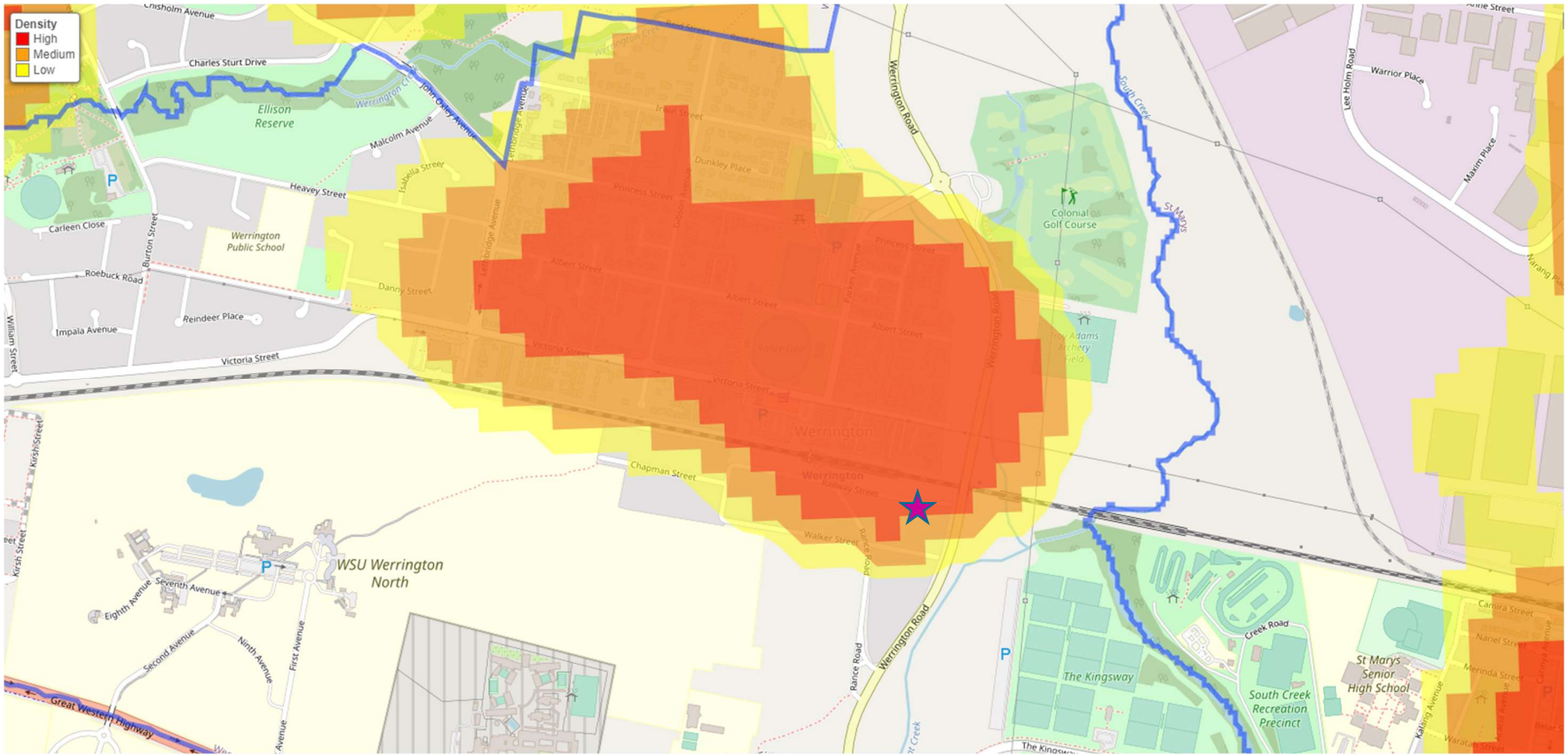


Figure B-5: Incidents of Assault (Domestic assault) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Assault Non-Domestic

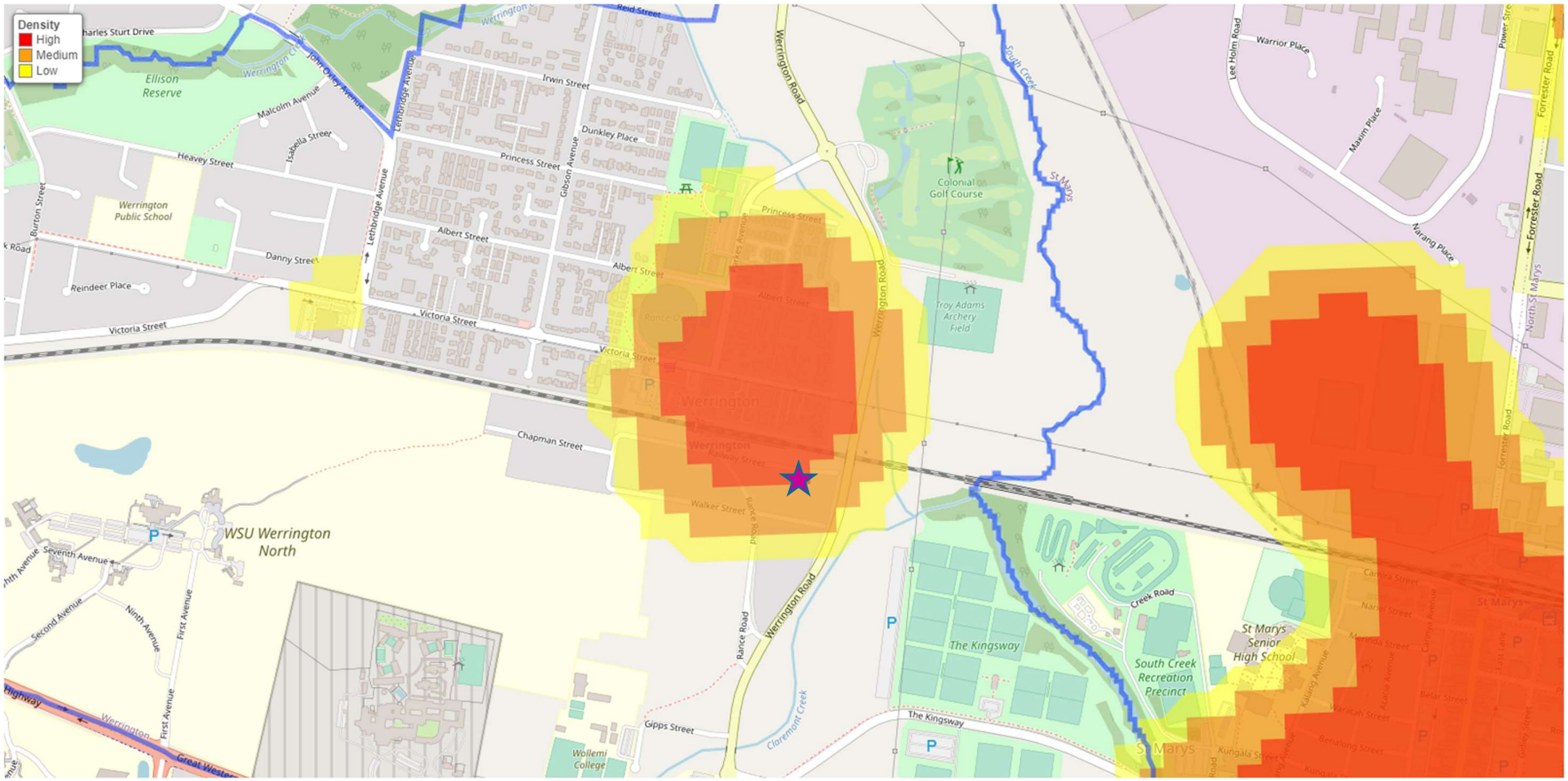


Figure B-6: Incidents of Assault (Non-domestic assault) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Robbery

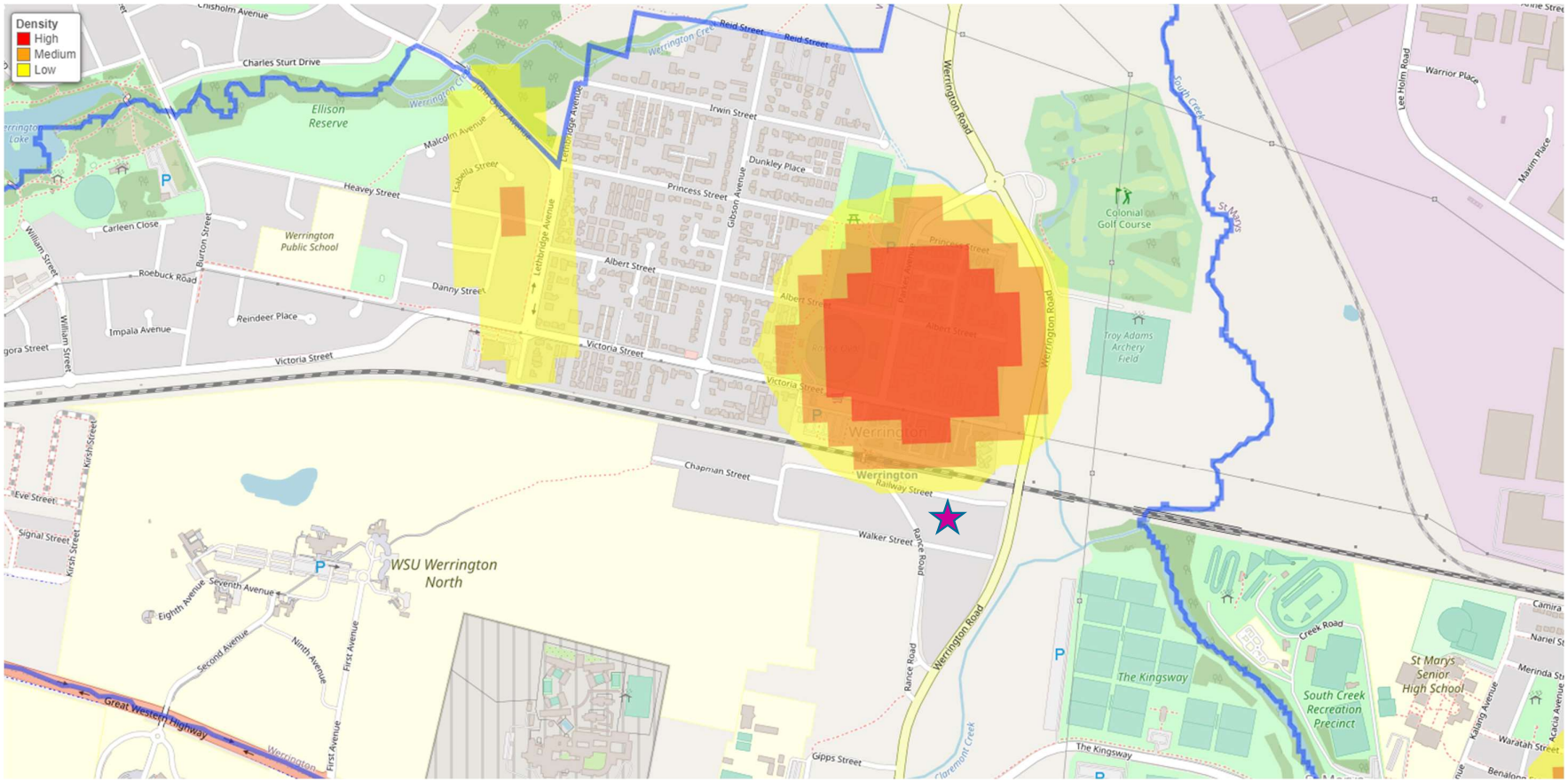


Figure B-7: Incidents of Robbery from April 2020 to March 2021, Werrington suburb boundary & proposal site identified

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Theft - Break and Enter Dwelling

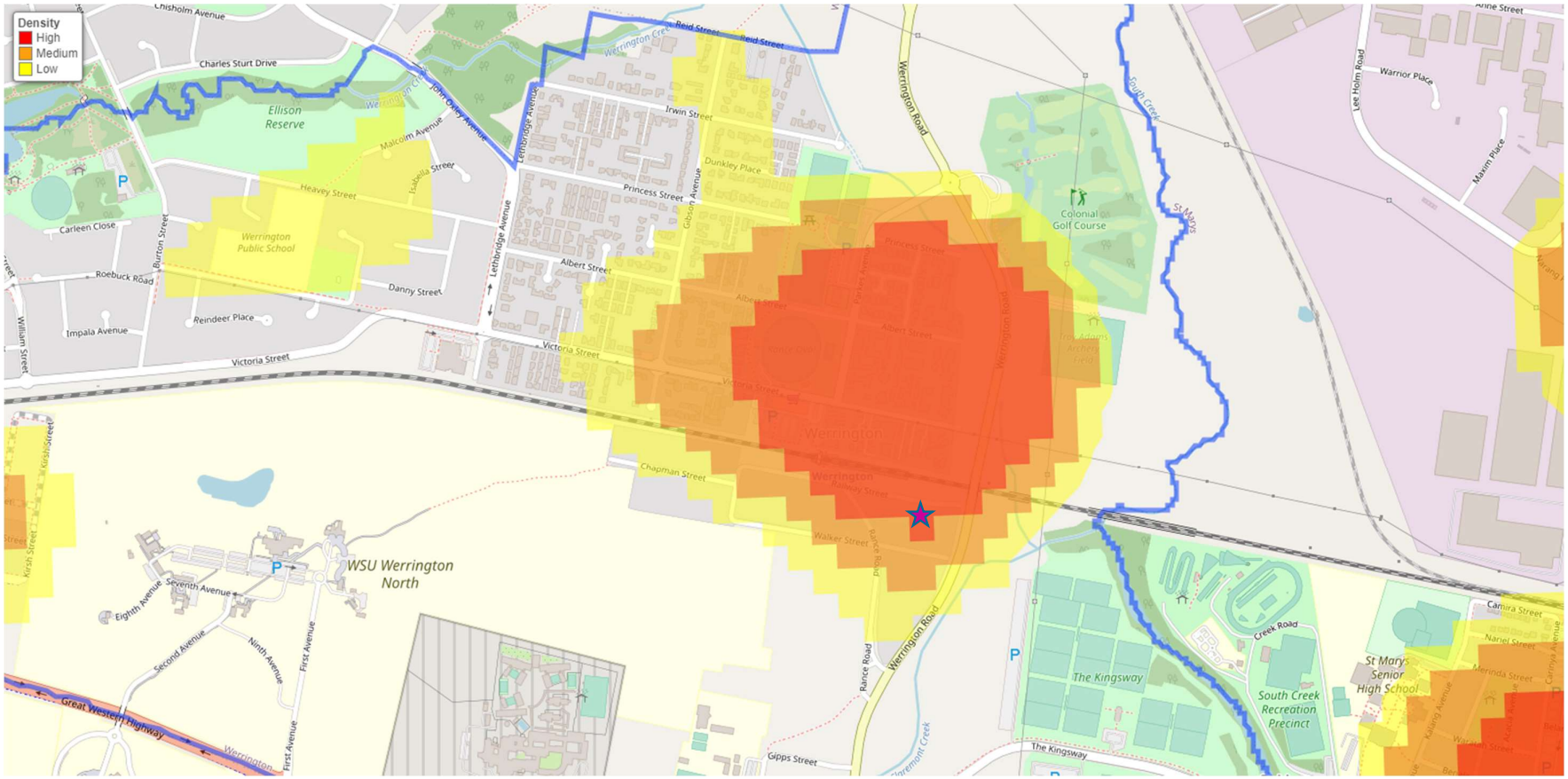


Figure B-8: Incidents of Theft (Break & enter dwelling) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Theft – Break and Enter Non-Dwelling

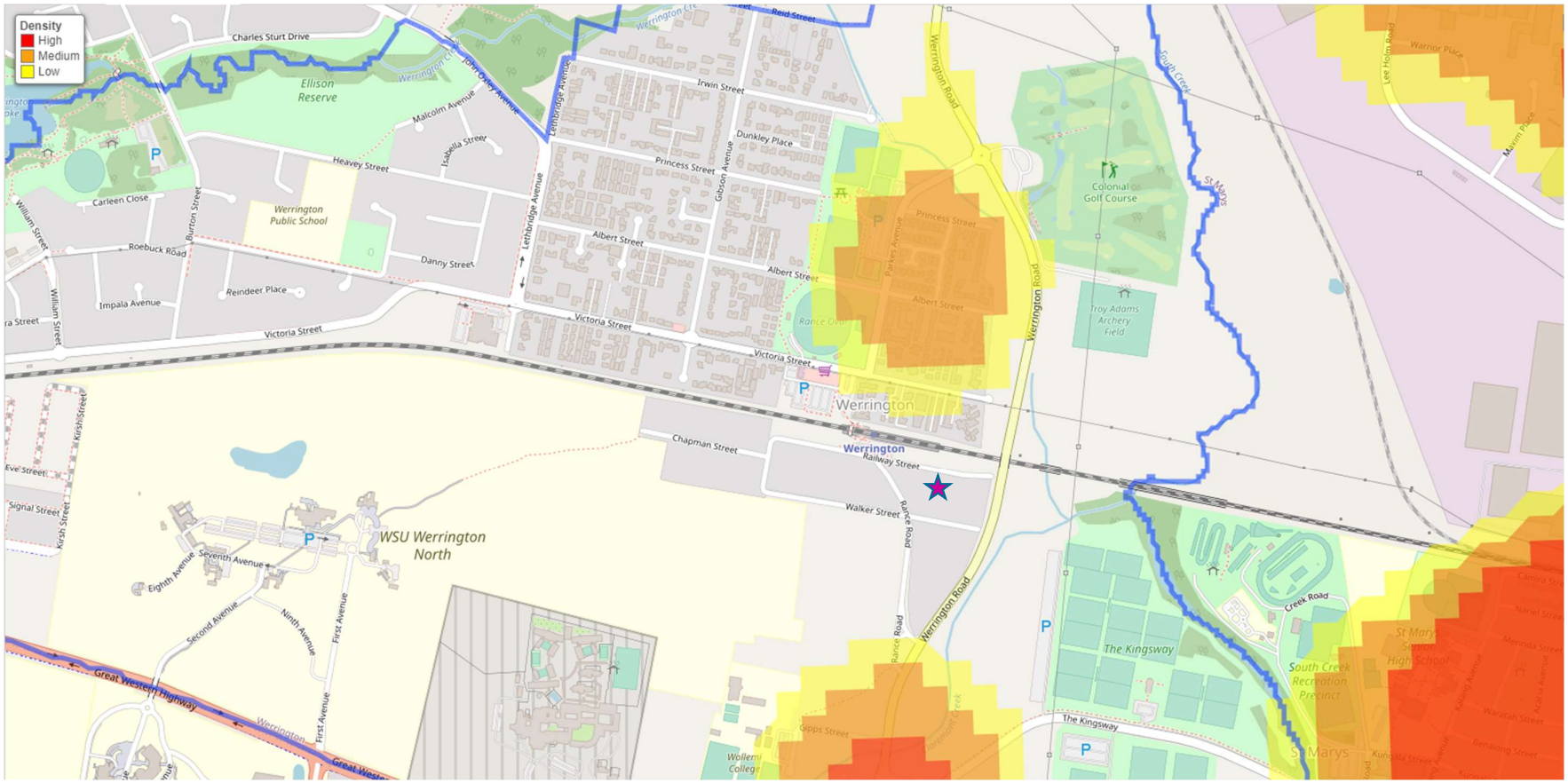


Figure B-9: Incidents of Theft (Break & enter non-dwelling) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Theft – Motor Vehicle theft

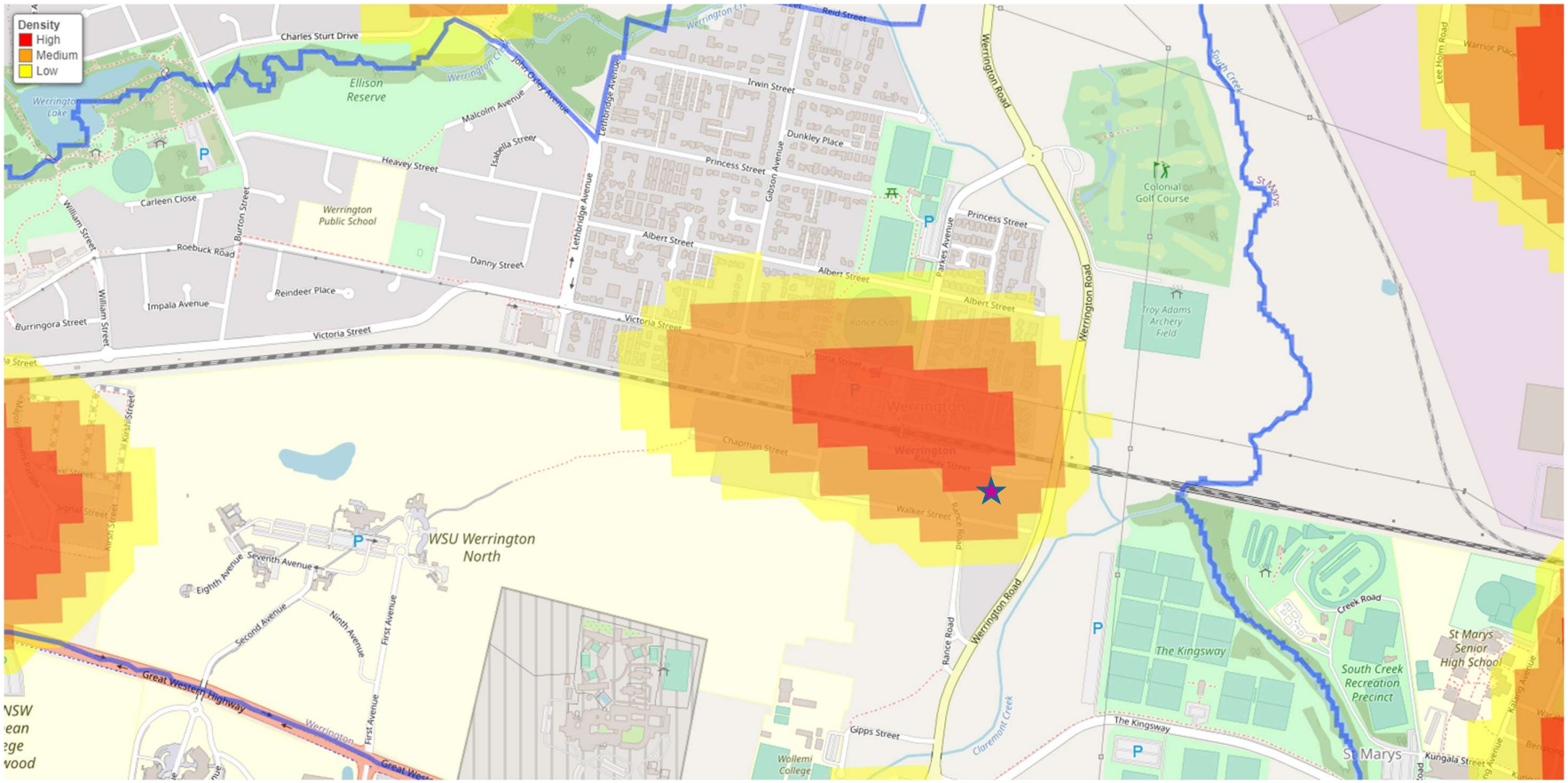


Figure B-10: Incidents of Theft (Motor vehicle theft) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Theft – Steal from Motor Vehicle

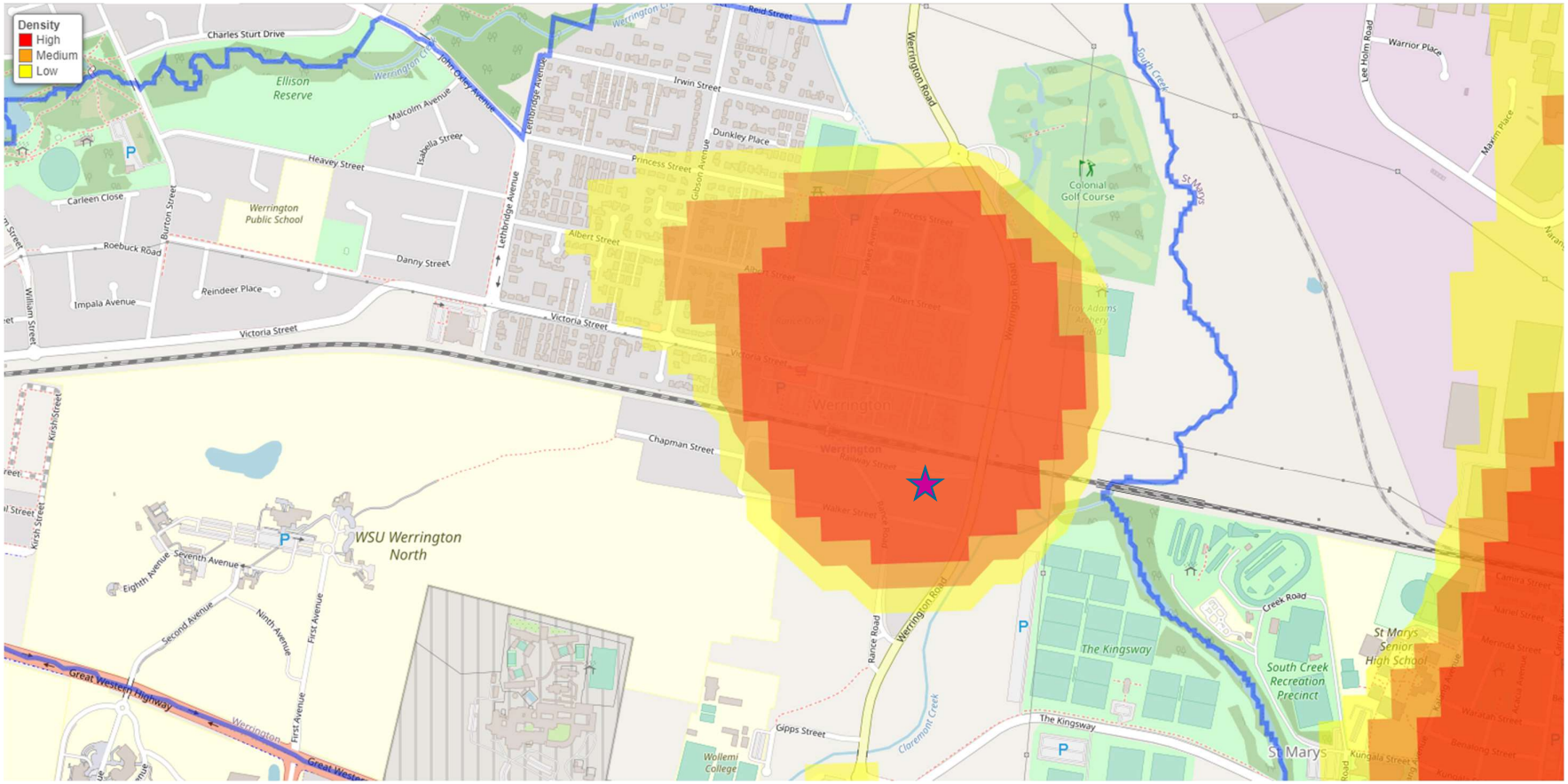


Figure B-11: Incidents of Theft (Steal from motor vehicle) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Theft – Steal from Dwelling

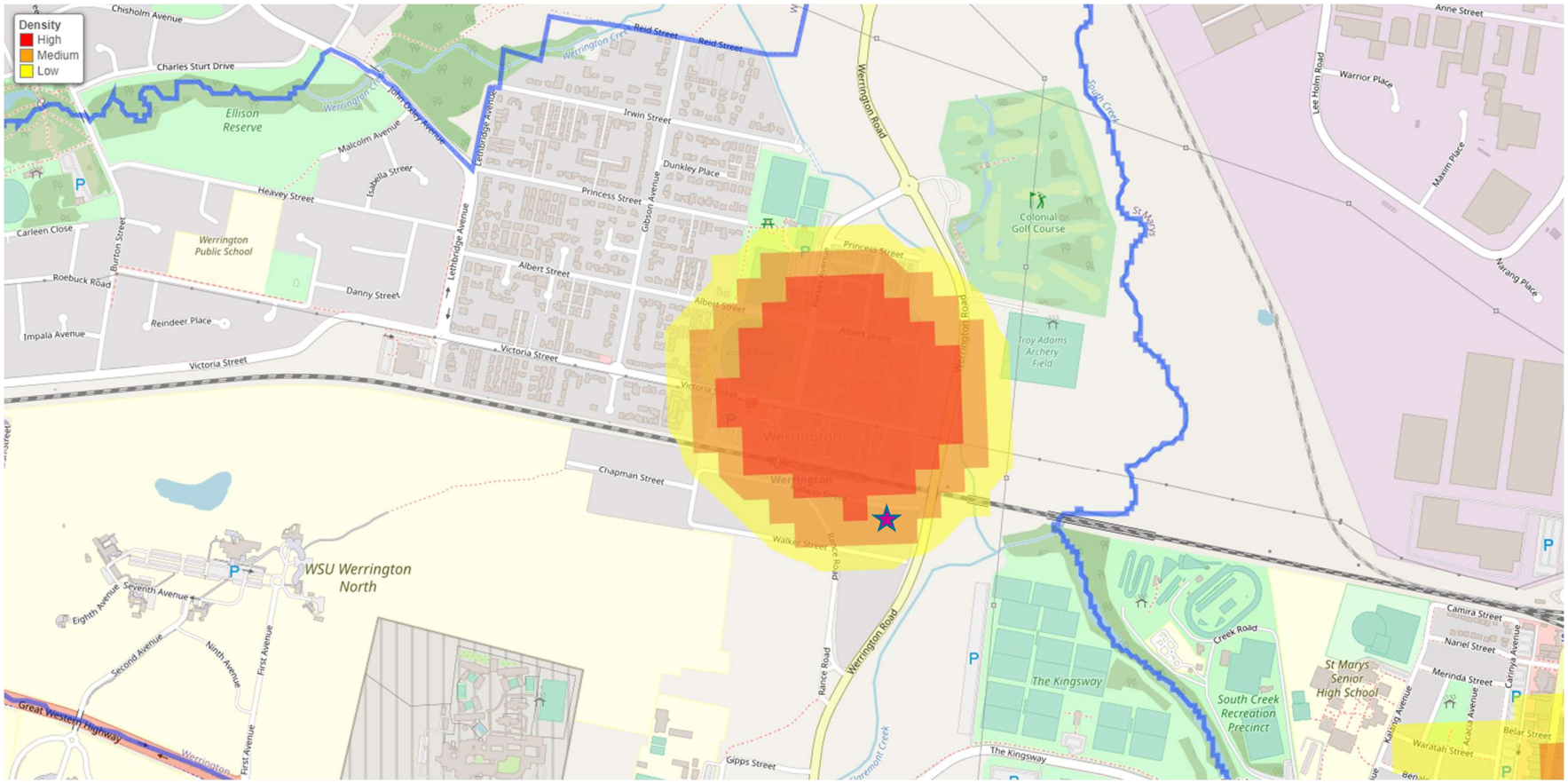


Figure B-12: Incidents of Theft (Steal from dwelling) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Theft – Steal from Person



Figure B-13: Incidents of Theft (Steal from person) from April 2020 to March 2021, Werrington suburb boundary & proposal site identified

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Malicious Damage to Property

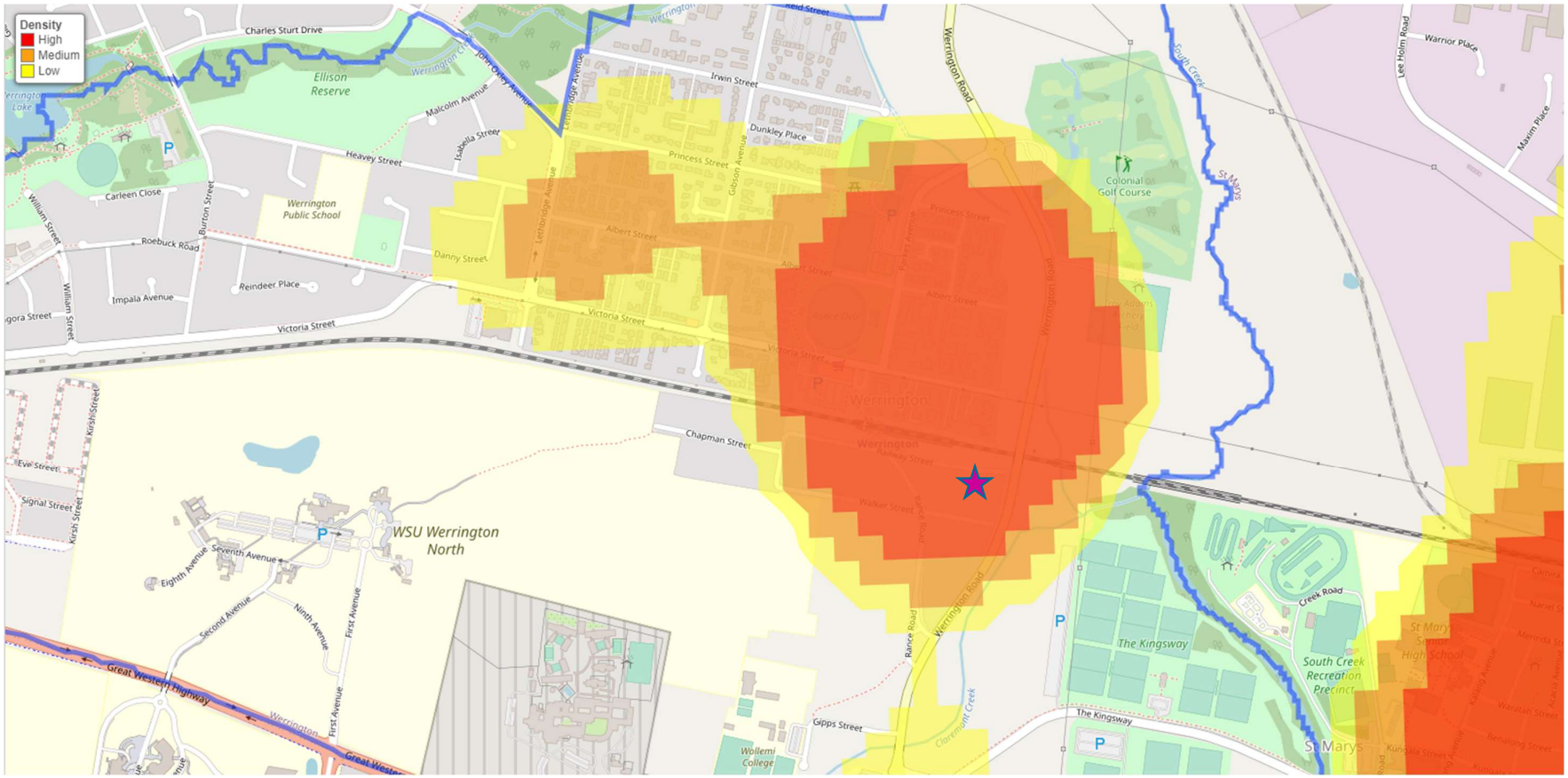


Figure B-14: Incidents of Malicious Damage to Property from April 2020 to March 2021, Werrington suburb boundary & proposal site identified

Source: NSW BoCSAR, NSW Crime Tool, http://crimetool.bocsar.nsw.gov.au/bocsar/, accessed on 07/09/2021

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

STANBURY TRAFFIC PLANNING

TRAFFIC, PARKING & TRANSPORT CONSULTANTS

TRAFFIC & PARKING IMPACT ASSESSMENT

PROPOSED BOARDING HOUSE DEVELOPMENT
10 – 11 RAILWAY STREET
WERRINGTON

PREPARED FOR LEVEL ARCHITECTS
OUR REF: 20-233-3

SEPTEMBER 2021

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401/380 Harris Street,
Pyrmont NSW 2009

info@stanburytraffic.com.au
www.stanburytraffic.com.au

ph : 02 8971 8314
abn : 23 613 111 916

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

TABLE OF CONTENTS

1. INTRODUCTION 4

1.1 SCOPE OF ASSESSMENT 4
1.2 REFERENCE DOCUMENTS 4
1.3 SITE DETAILS 5
1.3.1 SITE LOCATION 5
1.3.2 SITE DESCRIPTION 6
1.3.3 EXISTING SITE USE 6
1.3.4 SURROUNDING USES 6

2. PROPOSED DEVELOPMENT 7

2.1 BUILT FORM 7

3. SITE ACCESS & INTERNAL CIRCULATION 8

3.1 ACCESS ARRANGEMENTS 8
3.1.1 PASSENGER VEHICLE ACCESS 8
3.1.2 PEDESTRIAN ACCESS 8
3.2 PARKING PROVISION 9
3.2.1 PASSENGER VEHICLE PARKING 9
3.2.2 MOTORCYCLE AND BICYCLE PARKING 9
3.3 INTERNAL CIRCULATION AND MANOEUVRABILITY 10
3.3.1 INTERNAL ACCESS RAMPS 10
3.3.2 PASSENGER VEHICLE PARKING AREA DESIGN 10
3.3.3 MOTORCYCLE PARKING DESIGN 11
3.3.4 BICYCLE PARKING DESIGN 12
3.4 SITE SERVICING 12

4. EXISTING TRAFFIC CONDITIONS 13

4.1 SURROUNDING ROAD NETWORK 13
4.2 EXISTING TRAFFIC VOLUMES 14
4.3 EXISTING ROAD NETWORK OPERATION 14
4.4 PUBLIC TRANSPORT 15
4.4.1 BUSES 15
4.4.2 HEAVY RAIL 15
4.4.3 PEDESTRIANS / CYCLISTS 16

5. PROJECTED TRAFFIC CONDITIONS 17

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

5.1 TRAFFIC GENERATION 17
5.2 TRAFFIC IMPACTS 17
5.3 TRANSPORT IMPACTS 18

6. CONCLUSION 19

APPENDICES

1. **Architectural Plans**
2. **Swept Path Plans**

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

1. INTRODUCTION

1.1 Scope of Assessment

Stanbury Traffic Planning has been commissioned by Mr Georges Wehbe to prepare a Traffic & Parking Impact Assessment to accompany a Development Application to be lodged with Penrith City Council. The Development Application seeks consent for the construction of a boarding house development comprising 69 rooms in conjunction with a manager's residence at 10 – 11 Railway Street, Werrington (hereafter referred to as the 'subject site'). The development is to be provided in accordance with *State Environmental Planning Policy (Affordable Rental Housing) 2009*.

The aim of this assessment is to investigate and report upon the potential traffic and parking consequences of the development application and to recommend appropriate ameliorative measures where required. This report provides the following scope of assessment:

- Section 1 provides a summary of the site location, details, existing and surrounding land-uses;
- Section 2 describes the proposed development;
- Section 3 assesses the adequacy of the proposed site access arrangements, parking provision, internal circulation and servicing arrangements with reference to relevant Council, Transport for NSW (TfNSW, formerly Roads & Maritime Services), Australian Standard and State Environmental Planning Policy specifications;
- Section 4 assesses the existing traffic, parking and transport conditions surrounding and servicing the subject development site including a description of the surrounding road network, traffic demands, operational performance and available public transport infrastructure; and
- Section 5 estimates the traffic generating ability of the proposed development and assesses the ability or otherwise of the surrounding road network to be capable of accommodating the altered demand in a safe and efficient manner.

The report has been prepared pursuant to State Environmental Planning Policy (Infrastructure) 2007. The application is not of sufficient scale to be referred to TfNSW under this Instrument.

1.2 Reference Documents

Reference is made to the following documents throughout this report:

- *State Environmental Planning Policy (Affordable Rental Housing) 2009* (hereafter referred to as the 'Affordable Housing SEPP');
- TfNSW's *Guide to Traffic Generating Developments*;

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- Penrith City Council's *Penrith Development Control Plan 2014* (DCP 2014);
- Australian Standard for *Parking Facilities Part 1: Off-Street Car Parking* (AS2890.1:2004);
- Australian Standard for *Parking Facilities Part 3: Bicycle Parking Facilities* (AS2890.3:2015); and
- Australian Standard for *Parking Facilities Part 6: Off-Street Parking for People with Disabilities* (AS2890.6:2009).

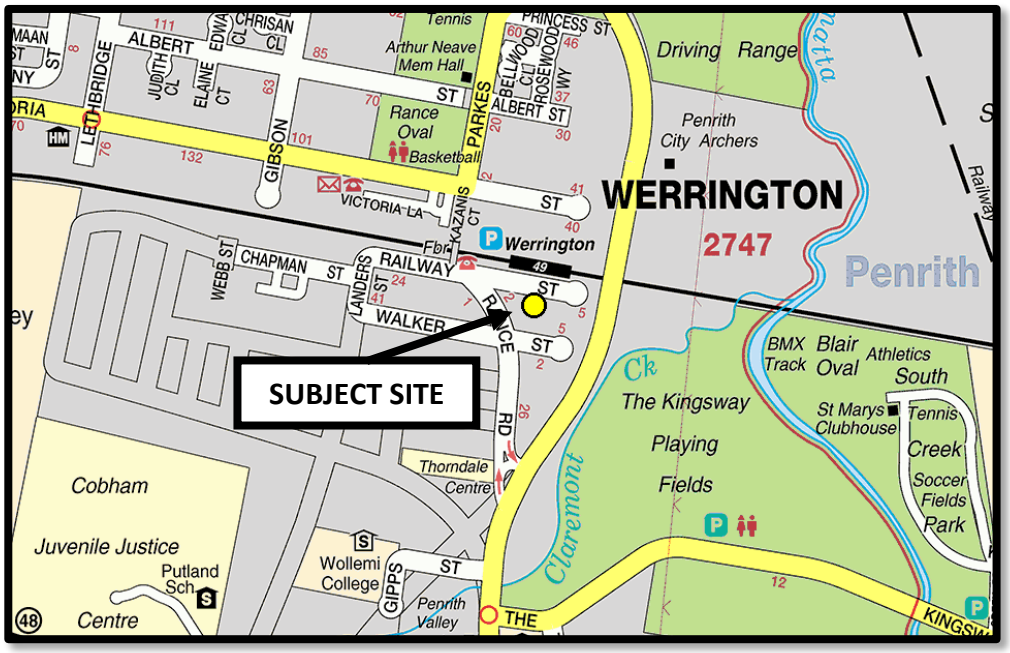
Architectural plans have been prepared by Level Architects and should be read in conjunction with this report, reduced copies of a selection of which are included as **Appendix 1** for reference.

1.3 Site Details

1.3.1 Site Location

The subject site is situated on the southern side of Railway Street, approximately 70m east of Rance Road, Werrington. The site location is illustrated below and overleaf within a local and aerial context by **Figure 1** and **Figure 2**, respectively.

FIGURE 1
SITE LOCATION WITHIN A LOCAL CONTEXT



Source: UBD's Australian City Streets – Version 8

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

FIGURE 2
SITE LOCATION WITHIN AN AERIAL CONTEXT



Source: Nearmap (image date: 12/08/21)

1.3.2 Site Description

The subject site provides a real property address of Lots 5 & 6 within DP 1605 and a street address of 10 – 11 Railway Street, Werrington.

The allotment provides a predominantly rectangular shaped parcel of land with an approximate frontage of 30m to Railway Street, extending to the south approximately 46m, resulting in a total site area in the order of 1,410m^2.

1.3.3 Existing Site Use

The subject site is currently vacant.

1.3.4 Surrounding Uses

A similar vacant property adjoins the site to the west.

The site is adjoined by medium-density residential apartment buildings to the east and south fronting and being serviced by Railway Street and Rance Road, respectively.

The T1 (North Shore & Western) rail line and Werrington Station is situated to the north of the site.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

2. PROPOSED DEVELOPMENT

2.1 Built Form

The subject application seeks Council's approval for the construction of a boarding house development comprising 69 rooms, a manager's residence and a common room.

The development is proposed to be contained within a four-storey building, situated approximately central to the site.

The site is to be serviced by two levels of basement parking proving a total of 36 parking spaces (including seven accessible spaces). In addition, 14 motorcycle and 14 bicycle parking spaces are provided within the basement parking levels.

Vehicular access to the on-site parking area is proposed via a single combined ingress / egress driveway connecting with Railway Street in the north-eastern corner of the site.

Pedestrian access is proposed via a pedestrian walkway providing access to the boarding house entrance foyer and connecting with the southern Railway Street footway, to the west and separate from the abovementioned vehicular access driveway.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

3. SITE ACCESS & INTERNAL CIRCULATION

3.1 Access Arrangements

3.1.1 Passenger Vehicle Access

Vehicular access between the development and Railway Street is proposed to be provided via a 6.1m wide combined ingress / egress driveway located within the north-eastern corner of the site.

AS2890.1:2004 provides driveway design specifications based on the proposed primary land use, the functional order of the access road and the number of spaces the driveway is to serve. Tables 3.1 and 3.2 of AS2890.1:2004 specify that, at minimum, a Category 1 type driveway is required, providing a combined ingress / egress driveway width of between 3m and 5.5m based on the functional (non-arterial) order of Railway Street, the land-use proposed and the passenger vehicle parking provision within the parking area of 36 spaces. The proposed combined ingress / egress driveway width of 6.1m therefore exceeds the minimum AS2890.1-2004 specifications and accordingly, is considered to be satisfactory.

Swept path plans have been prepared in order to demonstrate the ability of passenger vehicles to enter and exit the site, copies of which are included as **Appendix 2**. These swept paths also indicate that all vehicles are able to enter and exit the site in a forward direction.

The safety and efficiency of access / egress movements are also proposed to be assisted by the following:

- The provision of a relatively level (less than 1:20) grade within the first 6m inside the property boundary;
- The consistent horizontal and vertical alignment of Railway Street in the vicinity of the subject site resulting in satisfactory sight distance between the frontage road and the proposed site driveway, based on the prevailing 50km/h speed limit; and
- No obstructions to visibility adjacent to the driveway facilitating appropriate sight distance between exiting motorists and pedestrians within the southern Railway Street footway.

The proposed site access driveway design is therefore considered to be satisfactory.

3.1.2 Pedestrian Access

Pedestrian connectivity is proposed to be provided via a separate walkway to the west of the vehicular access driveway, connecting with the southern Railway Street footpath. The pedestrian walkway provides direct access to the boarding house entrance foyer.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

3.2 Parking Provision

The development is proposed to provide the following parking provision:

- 36 passenger vehicle parking spaces (including one manager's space and seven disabled spaces);
- 14 motorcycle parking spaces; and
- 14 bicycle parking spaces.

3.2.1 Passenger Vehicle Parking

The Affordable Housing SEPP provides state wide relevant parking requirements for boarding houses, relevant to the proposed co-living development. Clause 29(2) of the Affordable Housing SEPP states the following with respect to car parking:

A consent authority must not refuse consent to development to which this Division applies on any of the following grounds:

(e) Parking if:

(iia) in the case of development not carried out by or on behalf of a social housing provider—at least 0.5 parking spaces are provided for each boarding room, and

(iii) in the case of any development—not more than 1 parking space is provided for each person employed in connection with the development and who is resident on site,

On the basis of the development providing 69 rooms and one manager's residence, a minimum of 34.5 (adopt 35) spaces are required for the boarders of the development and a maximum of one space for the manager is allowed in order to comply with Clause 29(2)(e)(ii) of the Affordable Housing SEPP.

A consenting authority accordingly cannot refuse consent to the proposed development on the grounds of car parking as 35 boarder parking spaces and one manager space is proposed to be provided.

3.2.2 Motorcycle and Bicycle Parking

Clause 30(1) of the Affordable Housing SEPP states:

(h) At least one parking space will be provided for a bicycle, and one will be provided for a motorcycle, for every 5 boarding rooms

The following parking rates from clause 30(1) therefore apply:

69 boarding rooms / 5 = 13.8 (adopt 14) spaces

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

The proposed provision of 14 bicycle and 14 motorcycle spaces within the on-site parking area therefore exceeds or accords with the abovementioned minimum Affordable Housing SEPP requirements and accordingly, are considered to be satisfactory.

3.3 Internal Circulation and Manoeuvrability

3.3.1 Internal Access Ramps

Vehicular connectivity between the access driveway and Basement Level 1 and between Basement Level 1 and Basement Level 2 is proposed to be serviced by two-way vehicular ramps. These ramps have been designed with the following minimum dimensions in accordance with the relevant requirements of AS2890.1:2004:

- Two-way ramp width = 5.5m between kerbs;
- Maximum grade = 1:4;
- Maximum change in grade = 1:8; and
- Maximum grade within 6m of the property boundary = 1:20.

Swept path plans have been prepared in order to demonstrate the ability of two-way traffic flow to occur throughout the internal ramps, copies of which are included as **Appendix 2**.

3.3.2 Passenger Vehicle Parking Area Design

Passenger vehicles, upon entry to the site, will travel in a forward direction via the internal roadway to access the first level of basement parking, forming a continuation of the site access driveway. The basement parking areas are proposed to comprise 90-degree angled parking spaces, situated generally along the eastern and southern walls of the basement parking area serviced by a parking circulation aisle which forms an extension of the internal access roadway.

The passenger vehicle parking areas have been designed to accord with the minimum requirements of AS2890.1:2004 and AS2890.6:2009, providing the following base dimensions:

- Standard parking space width = 2.4m;
- Disabled parking space width = 2.4m (plus adjacent 2.4m wide shared area);
- Additional vehicular space width where parking spaces adjoins an obstruction = 0.3m;
- Standard parking space length = 5.4m;
- Aisle width servicing parking spaces = 6.1m;

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- Parking aisle extension past dead end 90-degree parking bays = 1m;
- Headroom = 2.2m; and
- Headroom above disabled parking spaces and adjoining shared areas = 2.5m.

Safe and efficient internal manoeuvring and parking space accessibility is anticipated to result, taking into consideration the above compliance with the relevant AS2890.1:2004 and AS2890.6:2009 specifications.

In order to further demonstrate the suitability of the abovementioned arrangement and internal passenger vehicle manoeuvrability within the parking area, this Practice has prepared a number of swept path plans which are included as **Appendix 2**. The turning paths provided on the plans have been generated using Autoturn software and derived from B85 and B99 vehicle specifications provided within AS2890.1:2004.

Section B4.4 of AS2890.1:2004 states the following with regard to the use of templates to assess vehicle manoeuvring:

'Constant radius swept turning paths, based on the design vehicle's minimum turning circle are not suitable for determining the aisle width needed for manoeuvring into and out of parking spaces. Drivers can manoeuvre vehicles within smaller spaces than swept turning paths would suggest.'

It would therefore appear that whilst the turning paths provided within AS2890.1:2004 can be utilised to provide a 'general indication' of the suitability or otherwise of internal parking and manoeuvring areas, vehicles can generally manoeuvre more efficiently than the paths indicate. Notwithstanding this, the swept path plans illustrate that passenger vehicles can manoeuvre throughout the basement parking area and enter and exit the most difficult passenger vehicle parking spaces.

In consideration of the abovementioned general compliance of the development design with the relevant requirements of the Australian Standards, the proposed internal passenger vehicle circulation arrangements are considered to be satisfactory.

3.3.3 Motorcycle Parking Design

14 motorcycle parking spaces have been provided within the two levels of basement parking providing the following dimensions in accordance with the relevant requirements of AS2890.1:2004:

- Motorcycle parking space width = 1.2m; and
- Motorcycle parking space length = 2.5m.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

3.3.4 Bicycle Parking Design

14 bicycle parking spaces are proposed to be provided within the two levels of basement parking via the provision of horizontal bicycle rails providing the following minimum dimensions in accordance with the relevant requirements of AS2890.3:2015:

- Parking rack depth / length = 1.2m;
- Rack separation = 0.5m; and
- Adjoining manoeuvring aisle = 1.5m.

3.4 Site Servicing

The subject development is anticipated to generate the requirement for regular waste collection vehicle servicing. Garbage bins are proposed to be contained within a dedicated storage room situated within the north-western corner of the first level of basement parking. These bins are to be transported to the adjoining Railway Street frontage for collection in a similar manner to other properties in the subject vicinity.

Given the nature of the development, boarding rooms are generally provided furnished to tenants. Thus, it is anticipated there will not be a regular requirement for large removalist vehicles to access the site, as tenants moving in and out of the accommodation will do so using utilities and vans capable of utilising regular car spaces provided on site.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

4. EXISTING TRAFFIC CONDITIONS

4.1 Surrounding Road Network

The following provides a description of the local road network surrounding the subject site:

- **Railway Street** performs a local access function under the care and control of Penrith City Council, providing an east-west connection between Landers Street in the west and an informal termination in the east.

  To the east of Rance Road, Railway Street generally provides a prevailing pavement width of approximately 9.5m, providing one through lane of traffic in each direction in conjunction parallel parking along the southern kerb alignment. The northern shoulder of Railway Street is generally unsealed, being capable of accommodating parallel parking in an informal arrangement, clear of the trafficable pavement. Traffic flow within Railway Street is governed by a local area speed limit of 50km/h.

  To the west of the subject site, Railway Street forms a T-junction with Rance Road operating under 'Give Way' signage control with the southern Rance Road approach and the western Railway Street approach forming the priority route.

- **Rance Road** performs a lower order collector function under the care and control of Penrith City Council, linking the surrounding precinct with Werrington Road to the south.

  Rance Road primarily provides a 12.8m wide pavement with one lane of traffic in each direction, in conjunction with parallel parking along both kerb alignments. Notwithstanding this, the Rance Road reservation widens on approach to Werrington Road to provide a devided carriageway, with each carriageway intersecting separately with Werrington Road, with the southbound carriageway junction being governed by 'Give Way' control, with Werrington Road performing the priority route.

  The northbound Rance Road junction with Werrington Road is assisted by a dedicated left turn lane within the northbound Werrington Road approach, and pavement widening within the southbound approach, to allow turning movements to occur within Werrington Road clear of trailing through movements.

  Rance Road is governed by a local area speed limit of 50km/h.

- **Werrington Road** provides a higher order collector road function operating under the care and control of Penrith City Council, providing access between Christie Street / Dunheved Road in the north and Great Western Highway in the south.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

In the vicinity of the subject precinct, Werrington Road primarily provides a one through lane of traffic in each direction with unsealed shoulders. However, as previously presented, Werrington Road provides additional turning lanes on approach to its junction with the northbound Rance Road junction.

Traffic flow within Werrington Road is governed by a sign posted speed limit of 60km/h in the vicinity of its junction with Rance Road, increasing to 70km/h to the north. It is however noted that a 40km/h school zone speed limit is applicable during prescribed school start / finish times provided in association with Penrith Valley School / Kurrambee School to the south of Rance Road.

Werrington Road forms T-junctions with Parkes road and The Kingsway to the north and south of the site, respectively, operating under one lane circulating roundabout control. Further to the north, Werrington Road intersects with Dunheved Road and Christie Street under two lane circulating roundabout control. Further to the south, Werrington Road intersects with Great Western Highway and Reserve Road under traffic signal control.

4.2 Existing Traffic Volumes

Staff of Stanbury Traffic Planning have undertaken observations of traffic demands within Railway Street and Rance Road in the vicinity of the site in order to accurately ascertain the traffic demands.

The above observations have indicated the following, during the morning weekday peak periods:

- Railway Street accommodates low traffic demands (less than 100 vehicles per hour) commensurate with its access function to a small number of abutting properties in conjunction with egress function to a small public car park associated with Werrington Railway Station; and

- Rance Road accommodates slightly increased demands commensurate with its slightly higher functional order in the road network, however traffic demands of less than 300 vehicles per hour still prevail.

Traffic volumes within Werrington Road have been obtained from a survey previously undertaken by this Practice associated with a separate project within the immediate precinct in February 2020. Directional traffic demands within Werrington Road (immediately to the north of Great Western Highway) were surveyed to be between approximately 300 – 700 vehicles during weekday commuter peak hours.

4.3 Existing Road Network Operation

Reference is made to TfNSW's *Guide to Traffic Generating Developments* in order to undertake an assessment of the operational performance of the surrounding local road network. This publication indicates a single lane of traffic accommodating up to peak hour traffic demands between up to 200 vehicles, as

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

observed within Railway Street and generally within Rance Road provides a level of service 'A', representing free flow.

Whilst traffic demands within Werrington Road are more considerable, the nearby roundabout junction controls governing the Werrington Road junctions with The Kingsway and Parkes Avenue notably punctuate directional traffic flows within Werrington Road. This has been observed to result in regular and extended gaps, facilitating opportunities for turning movements to and from the Rance Road. This, combined with the additional / turning lanes within Werrington Road ensure that motorists are capable of entering and exiting the subject precinct in a safe and efficient manner.

4.4 Public Transport

4.4.1 Buses

The following bus services operate out of Werrington Railway Station (via Kazanis Circuit) in the immediate vicinity of the site:

- Route 782 – St Marys to Penrith via Werrington;
- Route 783 – Penrith to Werrington via Jordan Springs; and
- Route 785 – Werrington to Penrith via Cambridge.

Routes 782, 783 and 785 provides a bus stop at approximately 330m walking distance to the north-west of the site providing a collective service frequency of approximately 30 minutes on weekdays and an hourly service on weekends and public holidays.

Whilst the above bus service information is correct as of September 2021, it is understood current service frequencies may have been reduced in light of current COVID-19 travel restrictions. It is therefore anticipated that public transport services in the vicinity of the site may increase as COVID-19 restrictions ease.

4.4.2 Heavy Rail

The site is located approximately 180m to the east of Werrington Railway Station. Werrington Railway Station provides access to train services which operate along the T1 North Shore & Western Line.

The T1 Line provides regular services between the Richmond, Penrith (and beyond) and the City as well as Hornsby (and beyond) linking with numerous other lines servicing the greater Sydney metropolitan area and beyond via interchanges at Blacktown, Parramatta, Granville, Clyde, Lidcombe, Strathfield and the City.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

4.4.3 Pedestrians / Cyclists

Pedestrians are provided with the following access and mobility infrastructure within the immediate vicinity of the subject site:

- A footpath is provided along the southern side of Railway Street;
- A footpath is provided along the western side of Rance Road; and
- A pedestrian pathway and marked pedestrian crossing is provided within the public car park situated to the south of Werrington Railway Station providing direct pedestrian access to the station and across to the northern side of the Railway Line to Kazanis Circuit.

Cyclists are provided with the following access and mobility infrastructure within the immediate vicinity of the subject site:

- Gibson Road and Victoria Street provides an on-road bicycle-friendly route in the vicinity of the site.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

5. PROJECTED TRAFFIC CONDITIONS

5.1 Traffic Generation

Traffic generation rates for various land-uses have been established through extensive surveys undertaken throughout NSW and published within TfNSW's *Guide to Traffic Generating Developments* and the more recently released *Technical Direction TDT 203/04a*.

TfNSW's *Guide to Traffic Generating Developments* does not provide generation rates for boarding house developments. Boarding houses, as demonstrated by the aims and objectives of the Affordable Housing SEPP, provide residential accommodation for low-income earners. Accordingly, vehicle ownership would not be common amongst the occupants of the development, with a much stronger reliance on cheaper public transport options. The most consistent use assessed by TfNSW and relevant to the proposed development is that of high-density residential developments, for which it provides the following peak hour traffic generation rate:

0.15 – 0.19 trips per dwelling

In order to provide a worst-case scenario, application of the above maximum rate to the proposed 70 boarding rooms / managers residence, the subject development is projected to generate up to approximately 13 peak hour trips.

5.2 Traffic Impacts

The development has been projected to generate in the order of 13 vehicle movements to and from the subject site during peak hours.

These vehicle movements are primarily likely to comprise egress movements during the morning peak period and ingress movements during the evening peak period, associated with normal journey to and from work patterns of residential development.

The abovementioned peak hour traffic generation equates to one vehicle movement every four to five minutes during commuter peaks. Such a level of additional traffic is not projected to, in itself, result in any unreasonable impact on the existing operational performance of the surrounding local road network.

The previous assessment contained within this report has revealed that traffic demands within the surrounding local road network are reasonably low and accordingly motorists are provided with a good level of service with spare capacity.

Whilst it is acknowledged that traffic demands within the surrounding regional and arterial road network are more considerable, the positive intersection controls at the Werrington Road intersections with Great Western Highway to the south and Dunheved Road / Christie Street to the north provide motorists with safe and efficient means with which to access and exit the area.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Further, the pavement widening within Werrington Road, facilitating a dedicated left turn lane within the northbound Werrington Road approach, and an additional travel lane within the southbound approach, allows turning movements to the immediate precinct to occur within Werrington Road clear of trailing through movements. It has further been previously presented that precinct egress movements from Rance Road are assisted by the punctuation of Werrington Road through traffic volumes afforded by nearby roundabout intersection controls at Parkes Road to the north and The Kingsway to the south.

In consideration of the above, the impact of the development is most likely to be a result of the safety and efficiency with which motorists are capable of entering and exiting the development. The low traffic demands within Railway Street immediately adjacent to the site, in conjunction with the good sight distance provisions between the frontage road and the driveway location, is such that it is envisaged that motorists will be capable of entering and exiting the site in a safe and efficient manner.

5.3 Transport Impacts

The subject site is located within close walking distance of bus and rail services operating out of Werrington Railway Station to the west of the site. It is accordingly expected that a proportion of the future occupants of the development will utilise the surrounding public transport infrastructure to access destinations throughout the Sydney metropolitan area. The capacity of the existing public transport system is however not envisaged to be measurably affected by any additional demand associated with the development, given its limited scale.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

6. CONCLUSION

This report assesses the potential traffic and parking implications associated with a boarding house development containing 69 boarding rooms and one manager's residence at 10 – 11 Railway Street, Werrington. Based on this assessment, the following conclusions are now made:

- The proposed site access arrangements are projected to result in motorists being capable of entering and exiting the subject site in a safe and efficient manner;
- The proposed off-street vehicular parking provision complies with the minimum requirements specified by the Affordable Housing SEPP;
- The proposed off-street bicycle and motorcycle parking provision complies with the relevant requirements of the Affordable Housing SEPP;
- The internal passenger vehicle circulation arrangements are capable of providing for safe and efficient internal manoeuvring;
- The surrounding road network operates with a reasonable level of service during peak periods;
- The subject development has been projected to generate up to 13 peak hour vehicle trips to and from the subject site; and
- It is considered that the adjoining road network is capable of accommodating the traffic projected to be generated by the subject development.

It is considered, based on the contents of this report and the conclusions contained herein, there are no traffic or parking related issues that should prevent approval of the subject application. This action is therefore recommended to Council.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

APPENDIX 1

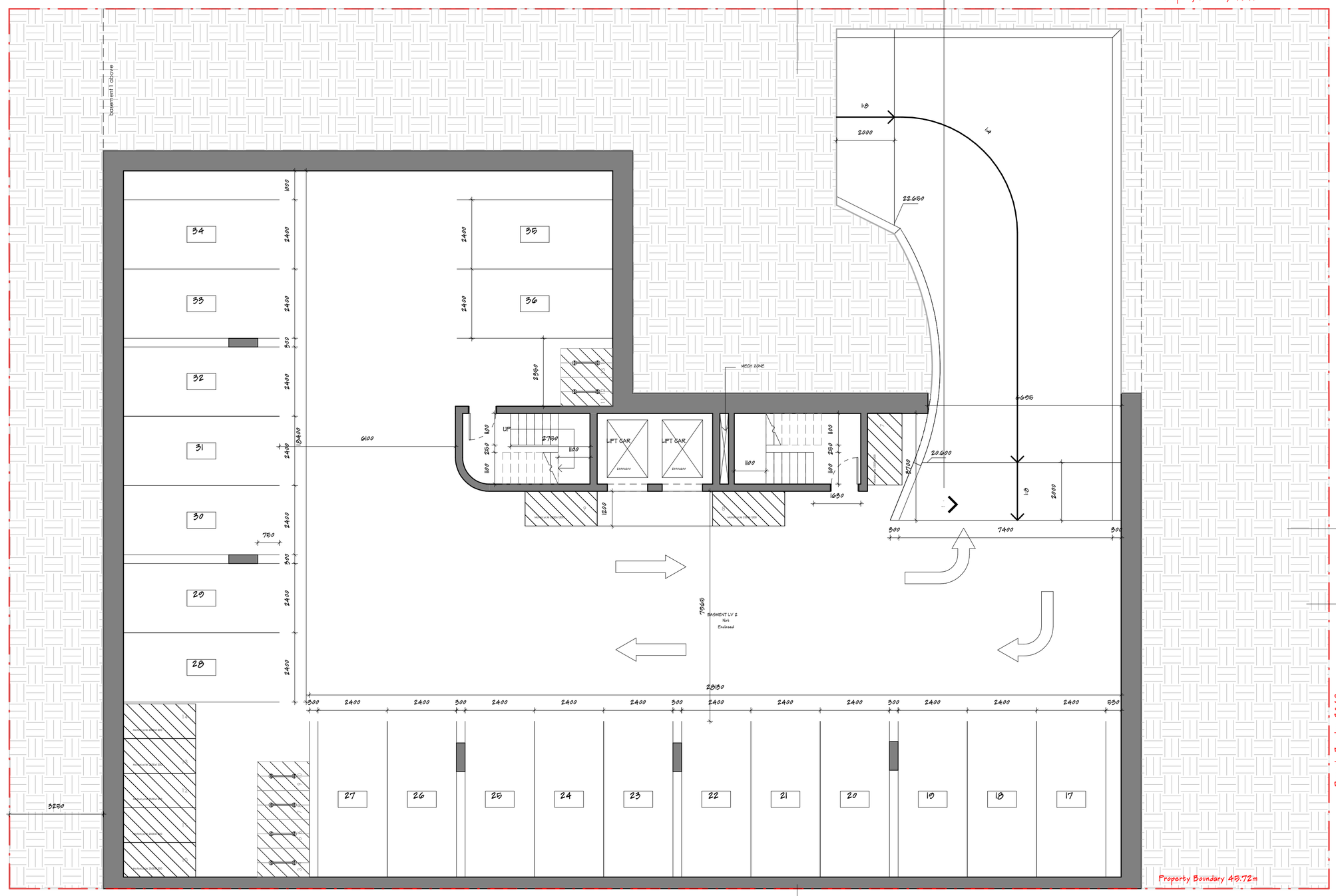
No. 12 Railway Street

Property Boundary 45.72m

No. 16 Rance Road

Property Boundary 30.48m

basement 1 above



No. 13 Walker Street

Property Boundary 30.48m

RAILWAY STREET

Property Boundary 45.72m

No. 8 Railway Street

DA302

DA301

BASEMENT LEVEL 2

1 : 100

DEVELOPEMENT APPLICATION -- NOT FOR CONSTRUCTION

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Do not scale the drawing, read all dimensions shown.
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DA drawings are not for construction.

CONSTRUCTION CERTIFICATE NOTES:
The contractor shall check and verify all dimensions before commencing new work, and shall ask if in doubt.
The contractor shall comply with all relevant Australian Standards.
The contractor shall comply with "National Construction Code" NCC.
The drawings are to be read in conjunction with NatHERS requirements. If any variations, NatHERS will take precedence.

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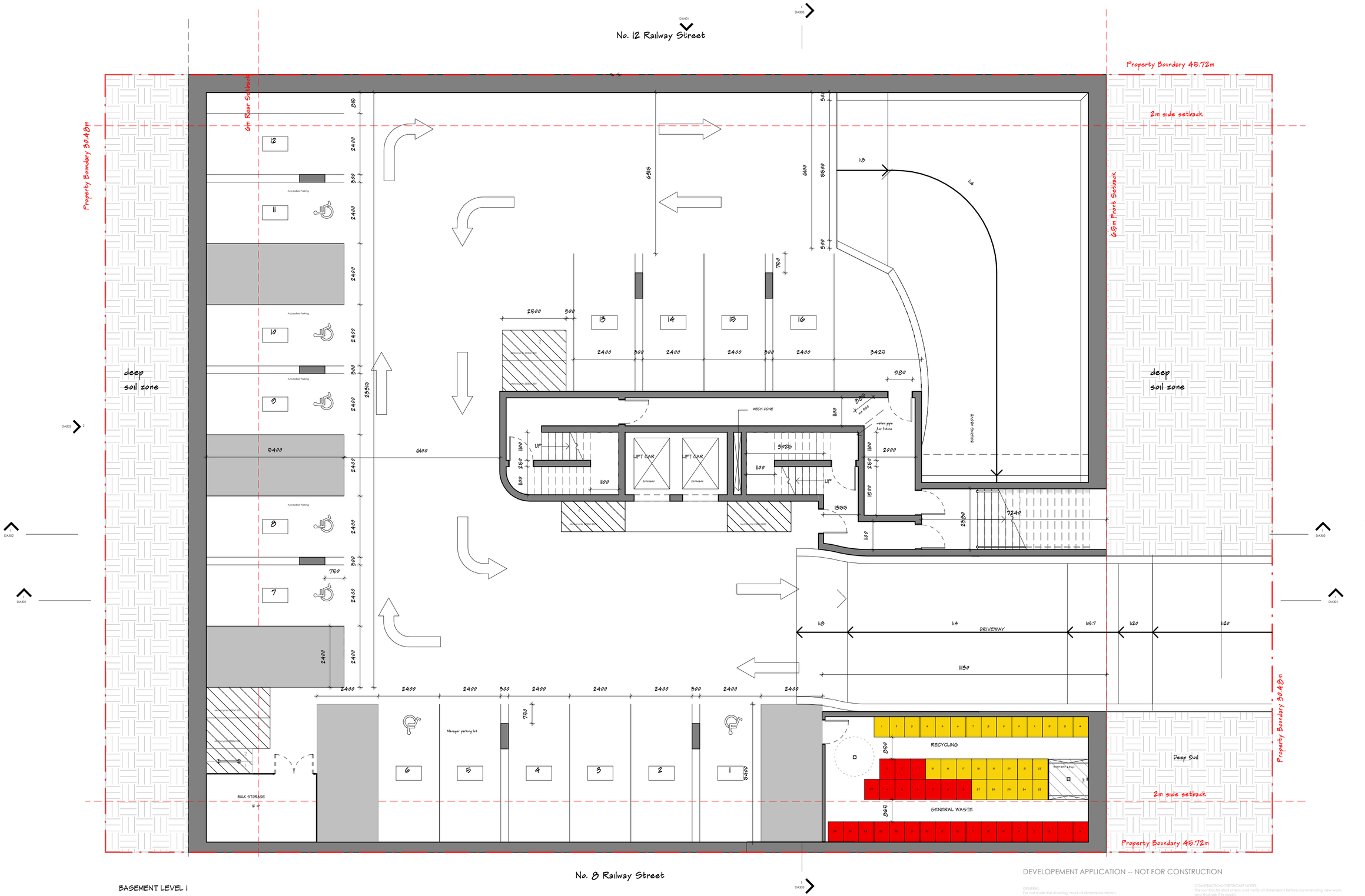
No	Description	Date	Issued to
1	Pre DA Submission	21.05.25	Penrith City Council
2	Pre-DA Revised Scheme	21.06.16	Penrith City Council
3	Development Application	21.09.17	Penrith City Council

10-11 RAILWAY STREET WERRINGTON NSW 2747

construction of a new boarding house

Date	20.07.2021
Project number	200.12
Prepared by	S.L
Designed by	M.S
Designed for	Mr Georges Wehbe
BASEMENT LEVEL 2	
Scale	1 : 100
SCALE 1:100	0 1 2 3 4 5 6

DA101



BASEMENT LEVEL 1

1 : 100

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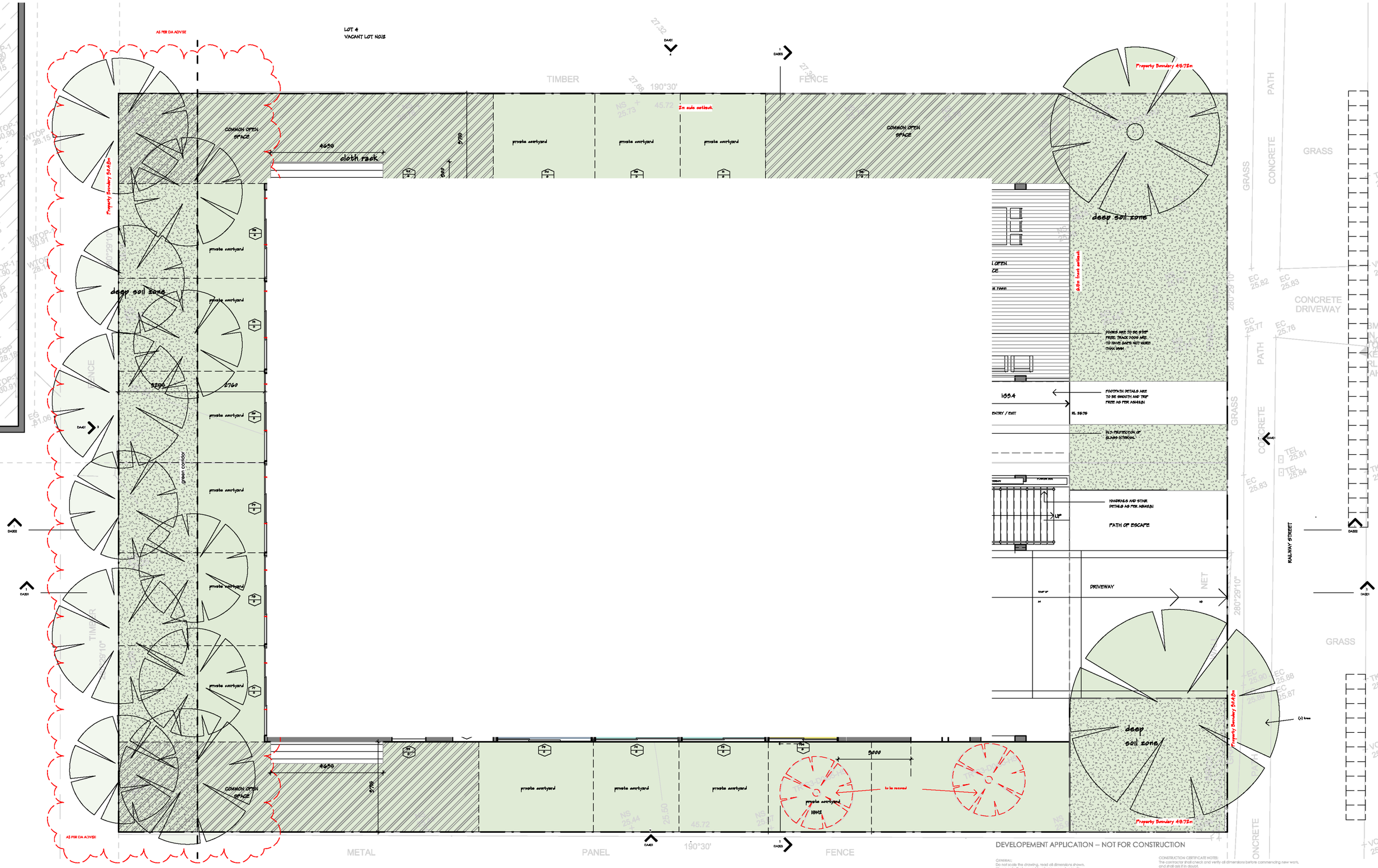
BASEMENT LEVEL 1

Scale 1 : 100

SCALE 1:100

DA102

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GROUND FLOOR PLAN

1 : 100

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Prepared by			S.L
Designed by			M.S
Designed for			Mr Georges Wehbe

GROUND FLOOR PLAN

Scale 1 : 100

SCALE:1:100

DA103

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LOT 1/DP
BUILDING NO.1&2

LOT 4
VACANT LOT NO.12

Property Boundary 50.42m

6m rear setback

AS PER PRE DA ADVICE

Property Boundary 49.72m

GLAZING TO BE SMOKE SEALED AS PER CL2.4

RAILWAY STREET

Property Boundary 49.72m

AS PER PRE DA ADVICE

Property Boundary 50.42m

DA401 2
DA302 1
DA301 1
DA402 1
DA303 1
DA401 1

"DEVELOPEMENT APPLICATION – NOT FOR CONSTRUCTION"

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FIRST FLOOR PLAN

1 : 100

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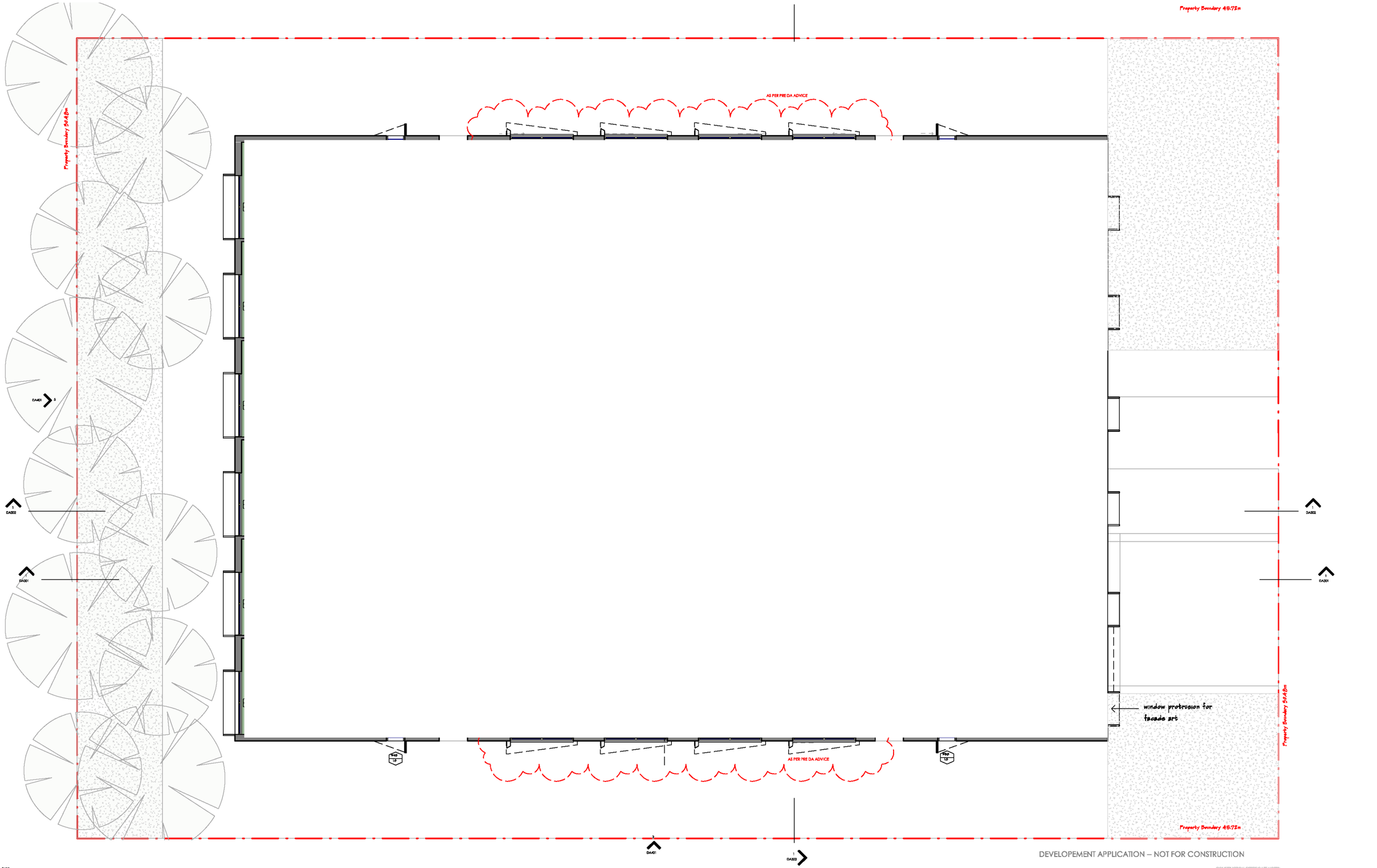
FIRST FLOOR PLAN

Scale 1 : 100

SCALE:1:100

DA104

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SECOND LEVEL

1 : 100

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10-11 RAILWAY STREET WERRINGTON NSW 2747

construction of a new boarding house

Date	20.07.2021	Project number	200.12
Prepared by	S.L		
Designed by	M.S		
Designed for	Mr Georges Wehbe		

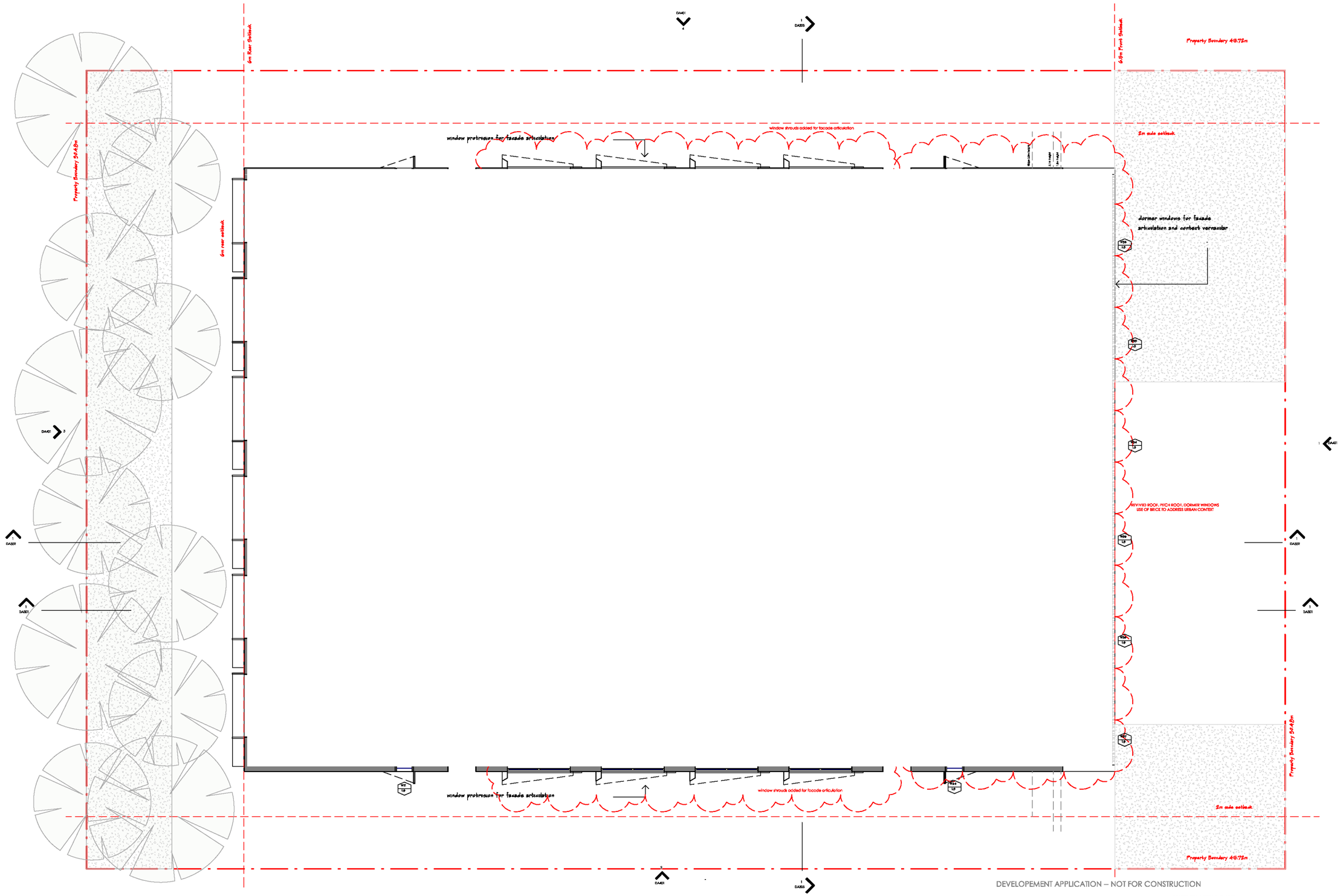
SECOND FLOOR PLAN

Scale 1 : 100

SCALE 1:100

DA105

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



THIRD LEVEL

1 : 100

DEVELOPEMENT APPLICATION – NOT FOR CONSTRUCTION

GENERAL:
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CONSTRUCTION CERTIFICATE NOTES:
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2	Pre-DA Revised Scheme	21.06.16	Penrith City Council
3	Development Application	21.09.17	Penrith City Council

10-11 RAILWAY STREET WERRINGTON NSW 2747

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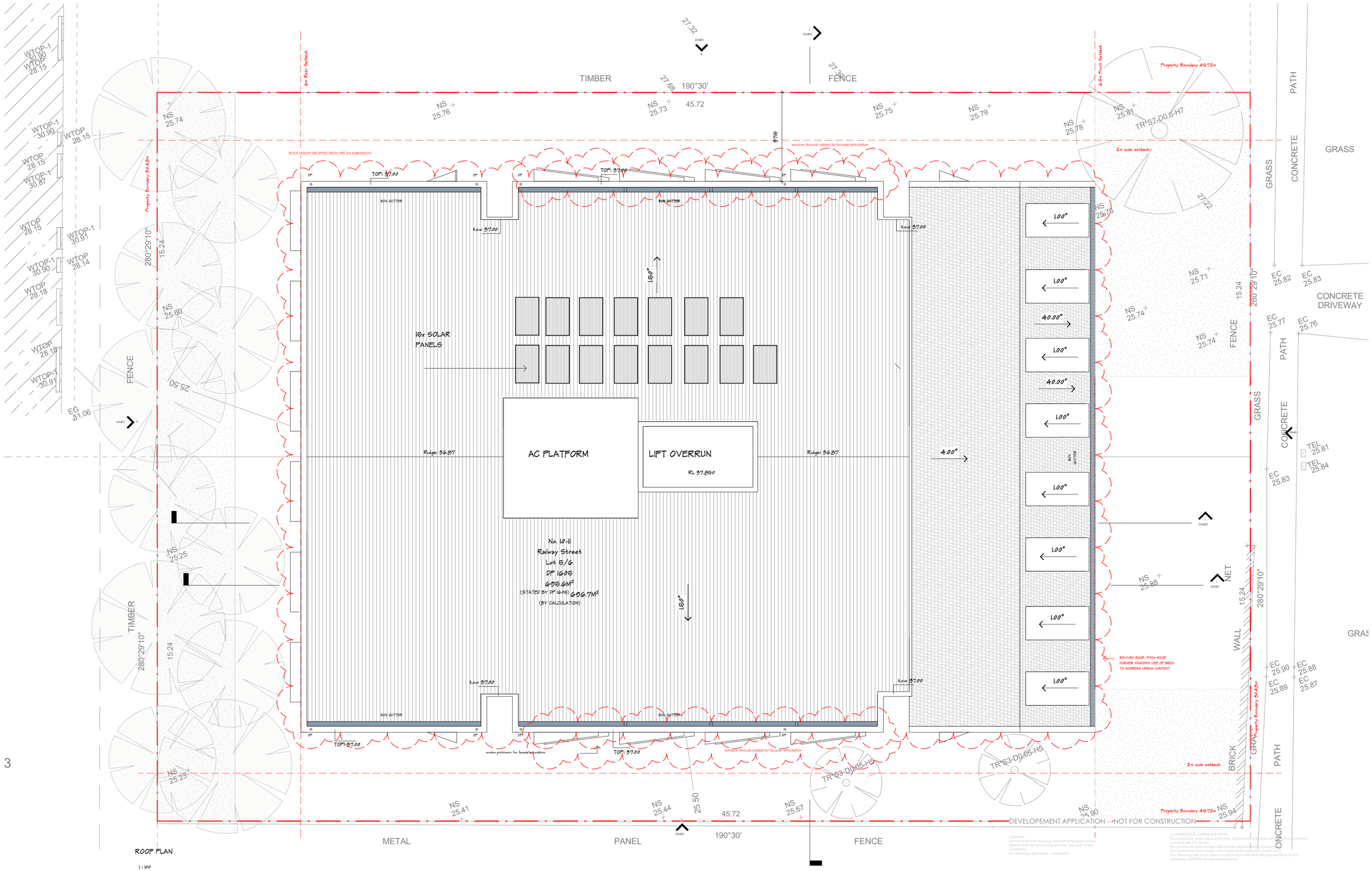
THIRD FLOOR PLAN

Scale 1 : 100

SCALE 1:100

DA106

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



ROOF PLAN

1 : 100

3

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construction of a new boarding house

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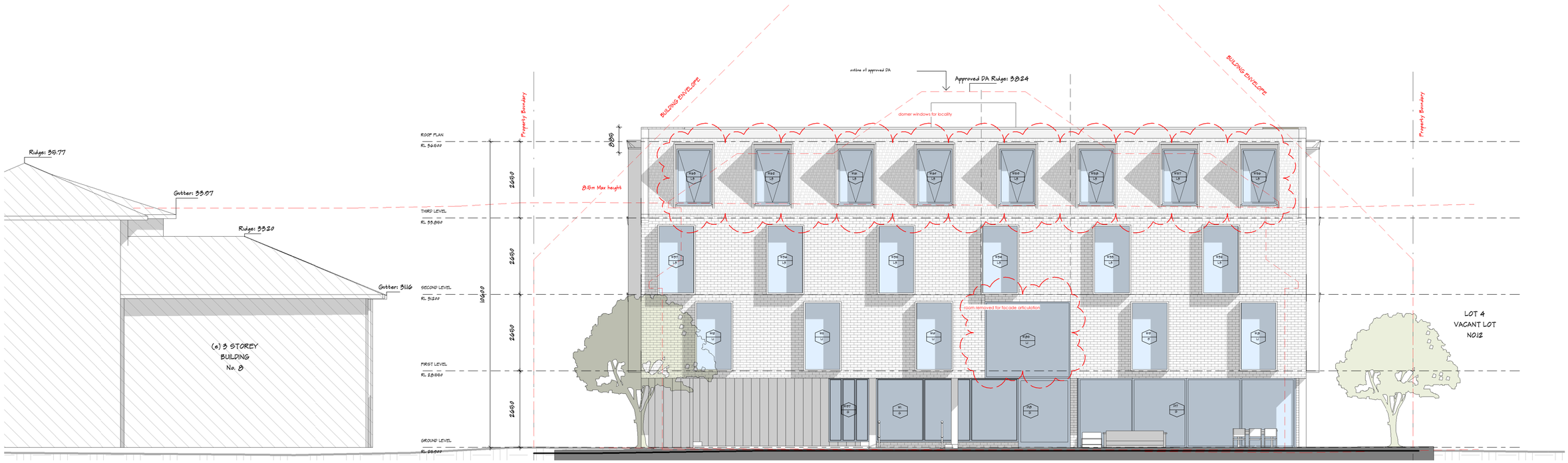
ROOF PLAN

Scale 1 : 100

SCALE 1:100

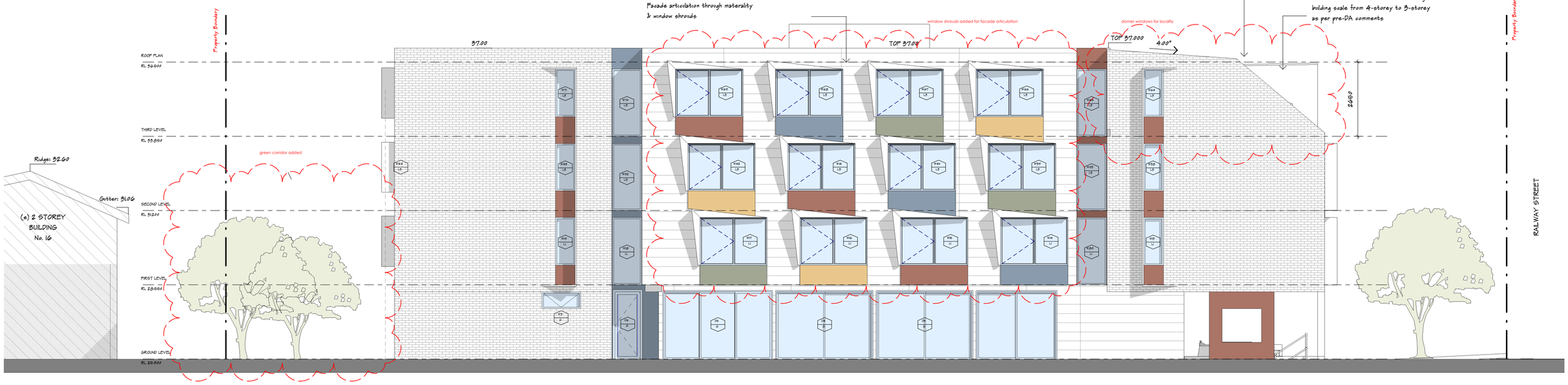
DA107

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



NORTH ELEVATION

1 : 100



EAST ELEVATION

1 : 100

DEVELOPEMENT APPLICATION -- NOT FOR CONSTRUCTION

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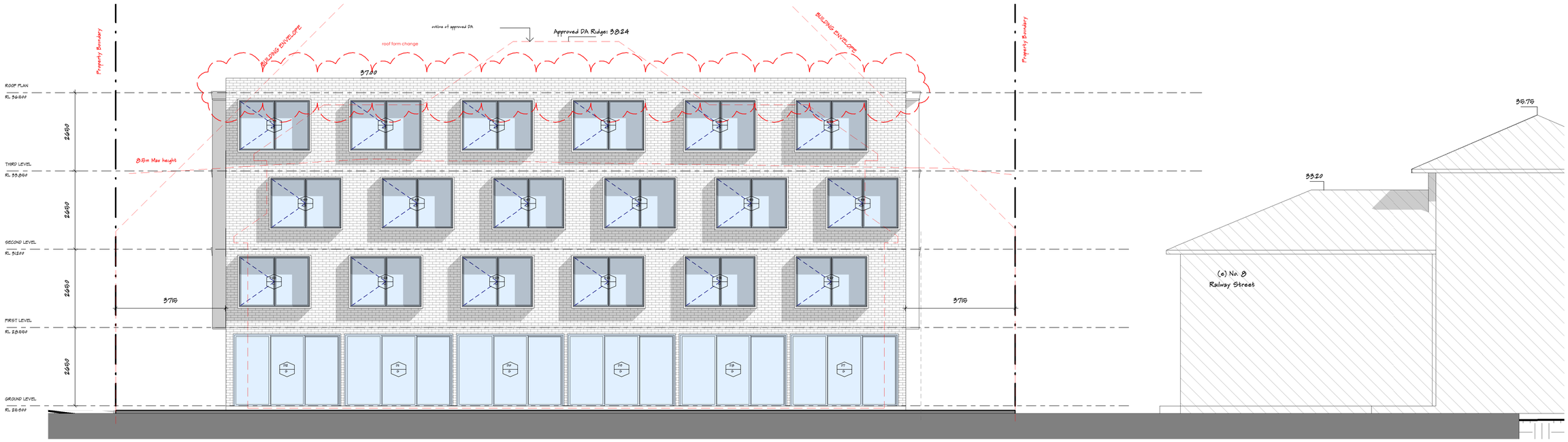
ELEVATIONS

Scale 1 : 100

SCALE 1:100

DA201

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



SOUTH ELEVATION

1 : 100



WEST ELEVATION

1 : 100

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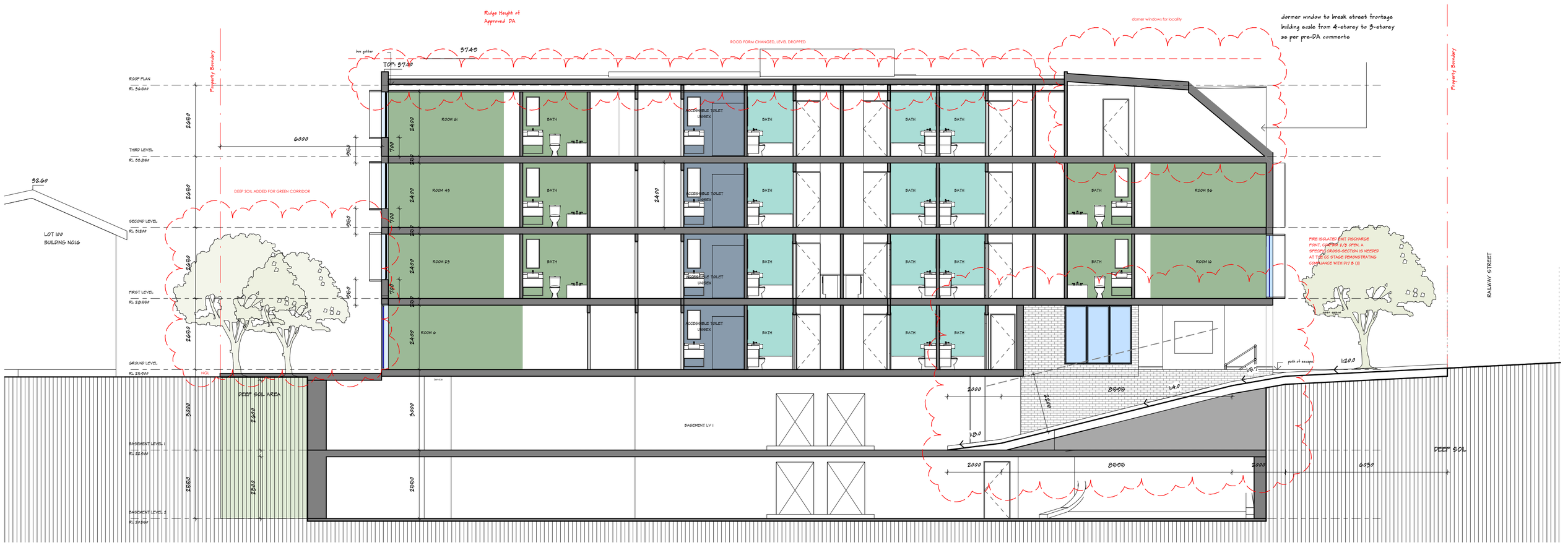
ELEVATIONS

Scale 1 : 100

SCALE 1:100

DA202

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



SECTION A-A

1 : 100

DEVELOPEMENT APPLICATION -- NOT FOR CONSTRUCTION

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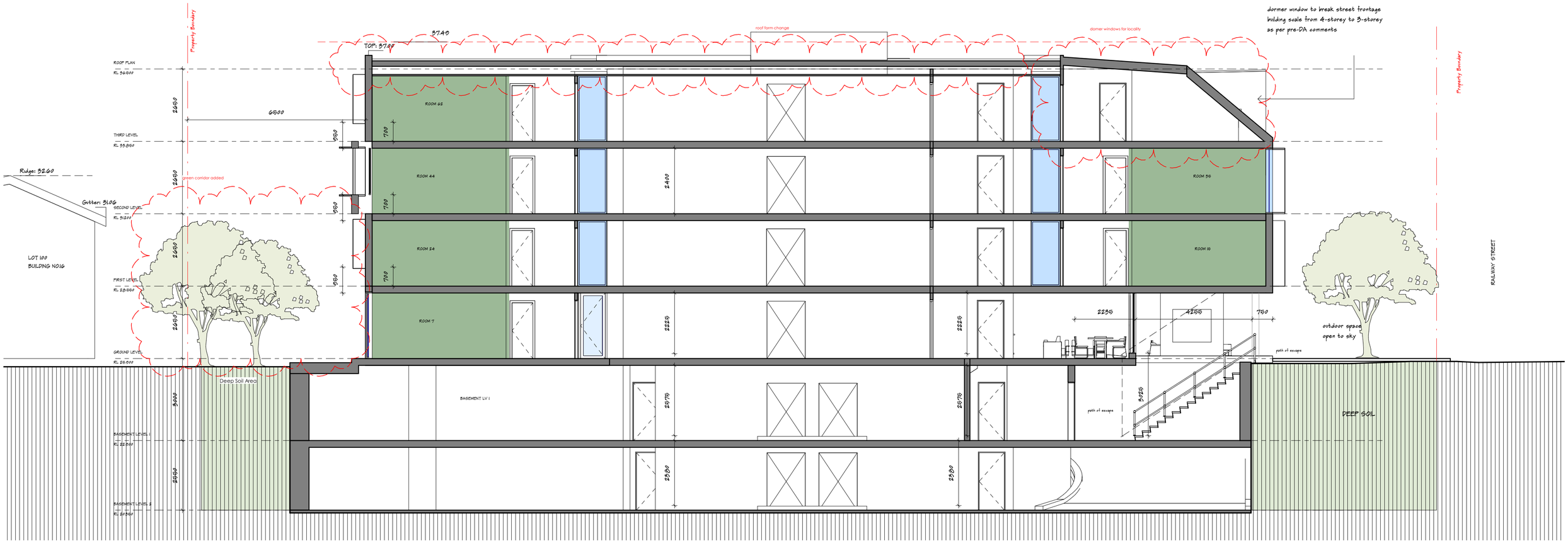
SECTION A-A

Scale 1 : 100

SCALE 1:100

DA301

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



SECTION B-B

1 : 100

DEVELOPEMENT APPLICATION -- NOT FOR CONSTRUCTION

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construction of a new boarding house

Date	20.07.2021	Project number	200.12
Prepared by	S.L		
Designed by	M.S		
Designed for	Mr Georges Wehbe		

SECTION B-B

Scale 1 : 100

SCALE 1:100

DA302

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



SECTION C-C

1 : 100

DEVELOPEMENT APPLICATION -- NOT FOR CONSTRUCTION

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construction of a new boarding house

Date	20.07.2021	Project number	200.12	SECTION C-C	
Prepared by	S.L			Scale	1 : 100
Designed by	M.S				
Designed for	Mr Georges Wehbe				

DA303

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



NORTH ELEVATION FINISHES

1 : 200



EAST ELEVATION FINISHES

1 : 200



SOUTH ELEVATION FINISHES

1 : 200



WEST ELEVATION FINISHES

1 : 200



1. PGH BRICK MYSTIQUE



2. BLACK ALUMINUM SHROUD
OR SIMILAR



3. ROOF TILES MONIER
HORIZON CARAWAY



4. FC SHEET JAMES HARDIE
STRIA - RENDERED DULUX
MOROCCAN DUSK



5. CEMBRIT FACADE PANEL
COLOR RANGE SELECTION

DEVELOPEMENT APPLICATION -- NOT FOR CONSTRUCTION

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10-11 RAILWAY STREET WERRINGTON NSW 2747

construction of a new boarding house

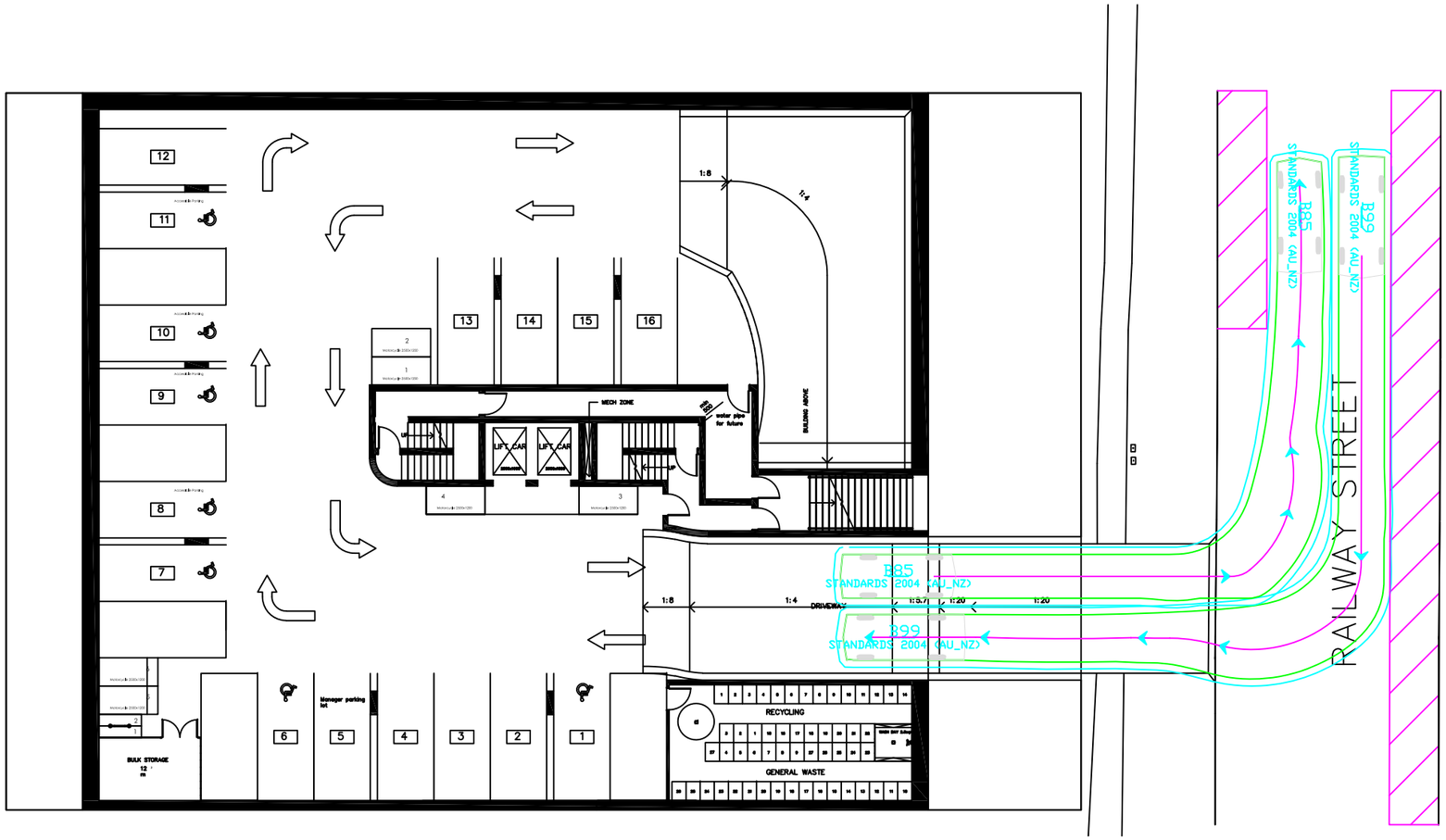
Date 20.07.2021
Project number 200.12
Prepared by S.L
Designed by Designer
Designed for Mr Georges Wehbe
Scale 1 : 200
GRAPHIC SCALE 1:25

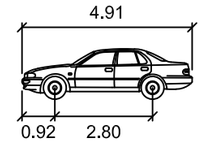
EXTERIOR FINISHES SCHEDULE

DA401

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

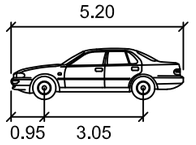
APPENDIX 2





B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1



B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

LEGEND

- VEHICLE BODY PATH (INCLUDING OVERHANG)
- MANOEUVRING CLEARANCE (300mm)
- POTENTIAL KERB SIDE PARKING

STANBURY TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

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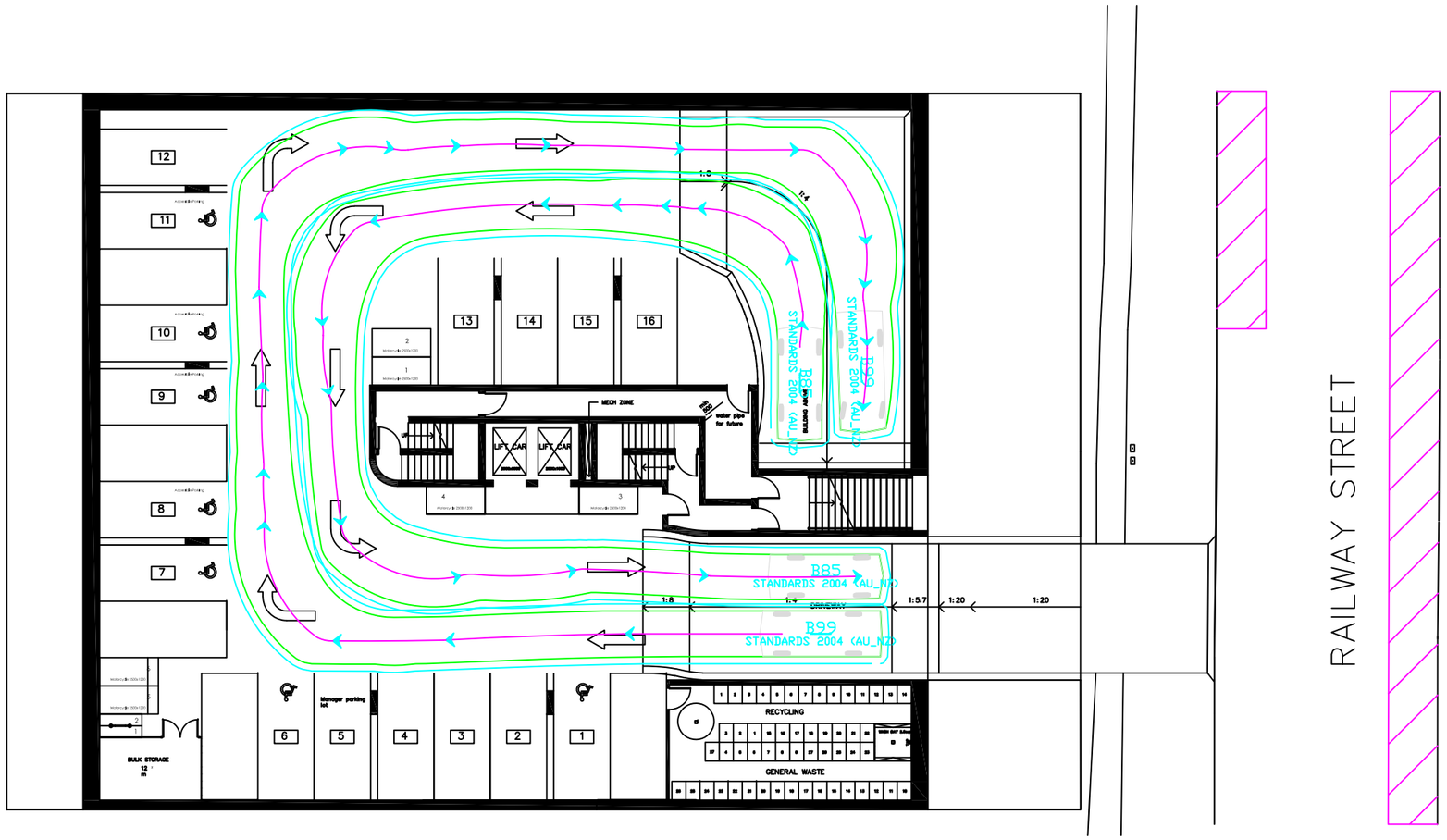
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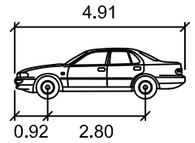
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2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 11 IN CONJUNCTION WITH B99 AND B85 PASSENGER VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD FOR PARKING FACILITIES PART 1:OFF-STREET CAR PARKING (AS2890.1:2004).

STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS
SITE INGRESS / EGRESS MOVEMENTS
PROPOSED BOARDING HOUSE DEVELOPMENT
10 - 11 RAILWAY STREET, WERRINGTON

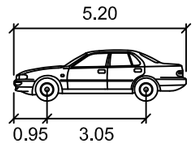
SCALE: 1:250 AT A3
ISSUE: A
FILE: 20-233
SUPERSEDES SHEET/ISSUE: -
DATE: 17/09/2021
SHEET: 1





B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1



B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)

POTENTIAL KERB SIDE PARKING

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TRAFFIC, PARKING & TRANSPORT CONSULTANTS

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STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS

BASEMENT LEVEL 2 INTERNAL CIRCULATION PASSING MOVEMENTS

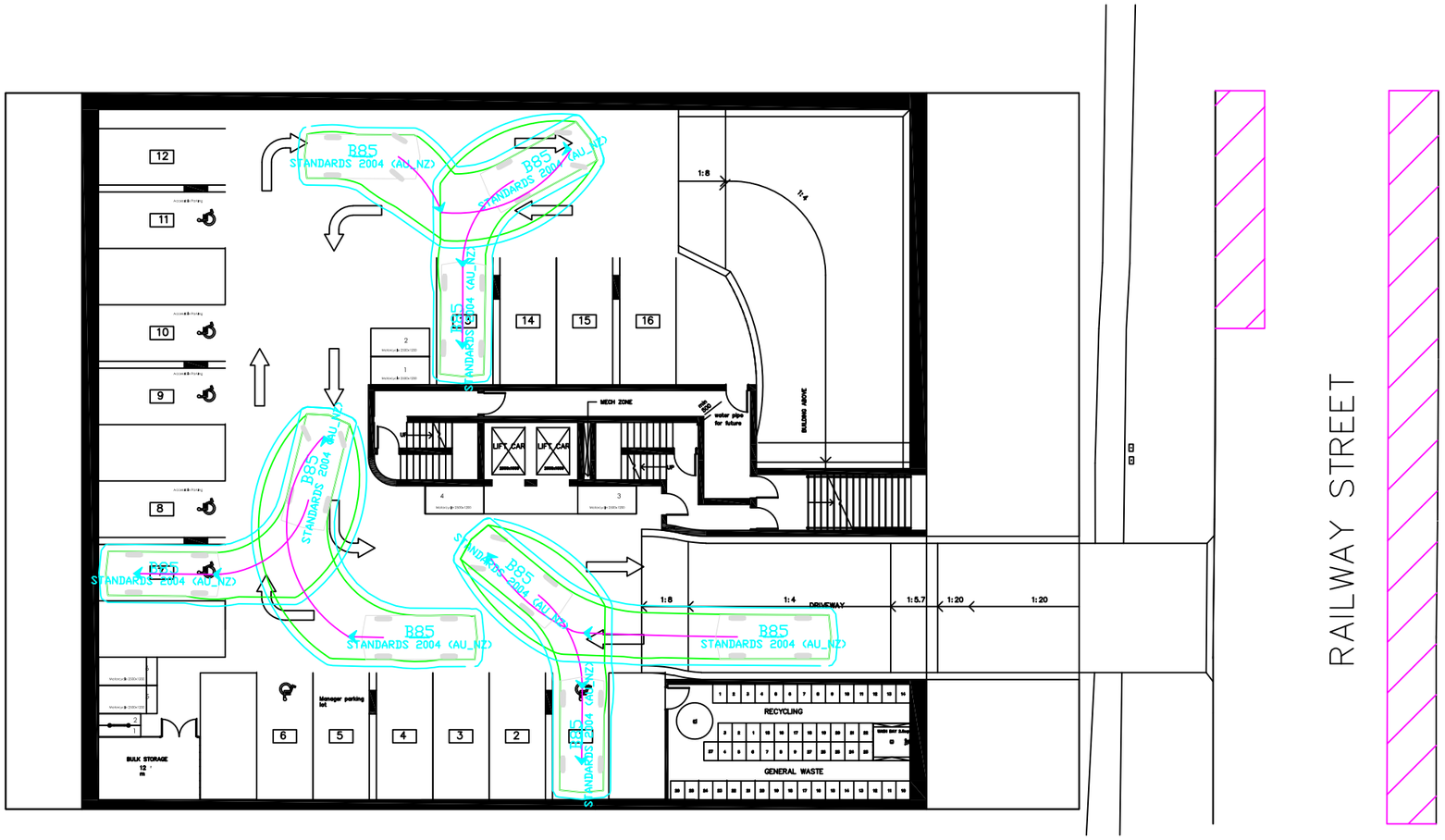
PROPOSED BOARDING HOUSE DEVELOPMENT

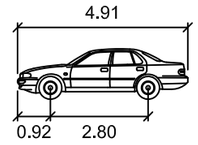
10 - 11 RAILWAY STREET, WERRINGTON

SCALE: 1:250 AT A3 | ISSUE: A

FILE: 20-233 | SUPERSEDES SHEET/ISSUE: -

DATE: 17/09/2021 | SHEET: 2





B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

LEGEND

- VEHICLE BODY PATH (INCLUDING OVERHANG)
- MANOEUVRING CLEARANCE (300mm)
- POTENTIAL KERB SIDE PARKING

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STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS

BASEMENT LEVEL 1 INTERNAL PARKING SPACE INGRESS MOVEMENTS

PROPOSED BOARDING HOUSE DEVELOPMENT

10 - 11 RAILWAY STREET, WERRINGTON

SCALE: 1:250 AT A3

FILE: 20-233

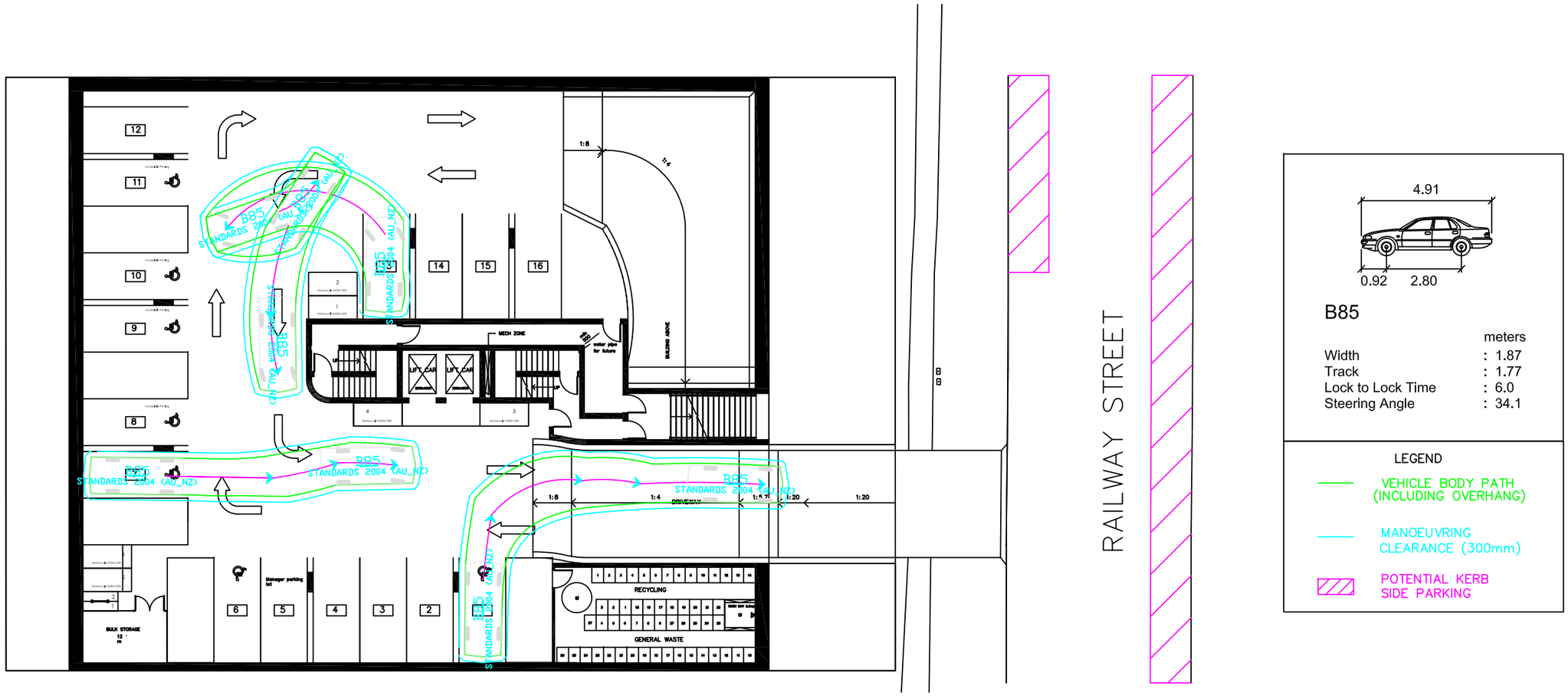
SUPERSEDES SHEET/ISSUE -

DATE: 17/09/2021

ISSUE A

SHEET 3

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

LEGEND

- VEHICLE BODY PATH (INCLUDING OVERHANG)
- MANOEUVRING CLEARANCE (300mm)
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STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS

BASEMENT LEVEL 1 INTERNAL PARKING SPACE EGRESS MOVEMENTS

PROPOSED BOARDING HOUSE DEVELOPMENT

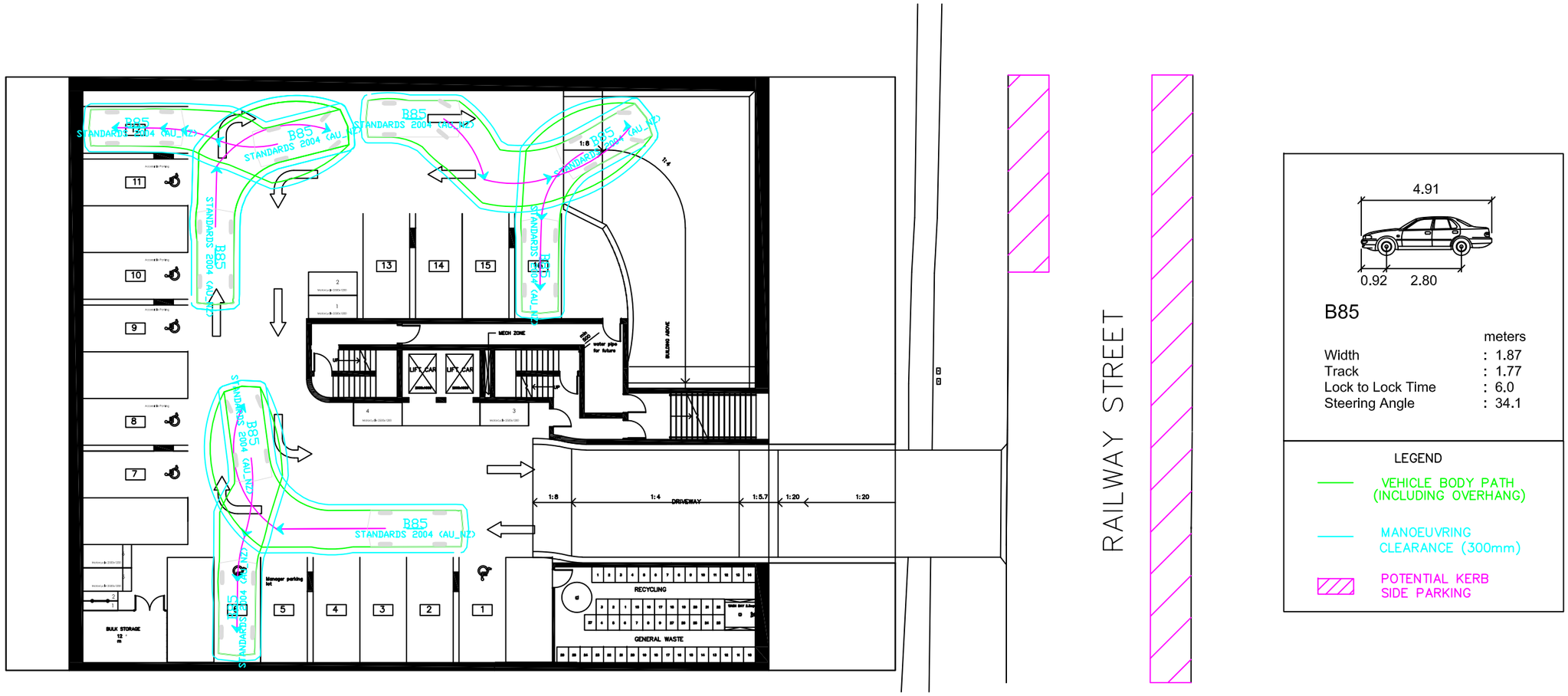
10 - 11 RAILWAY STREET, WERRINGTON

SCALE: 1:250 AT A3 | ISSUE: A

FILE: 20-233 | SUPERSEDES SHEET/ISSUE: - | SHEET: 4

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Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



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PH: (02) 8971 8314
MOB: 0410 561 848
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STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS

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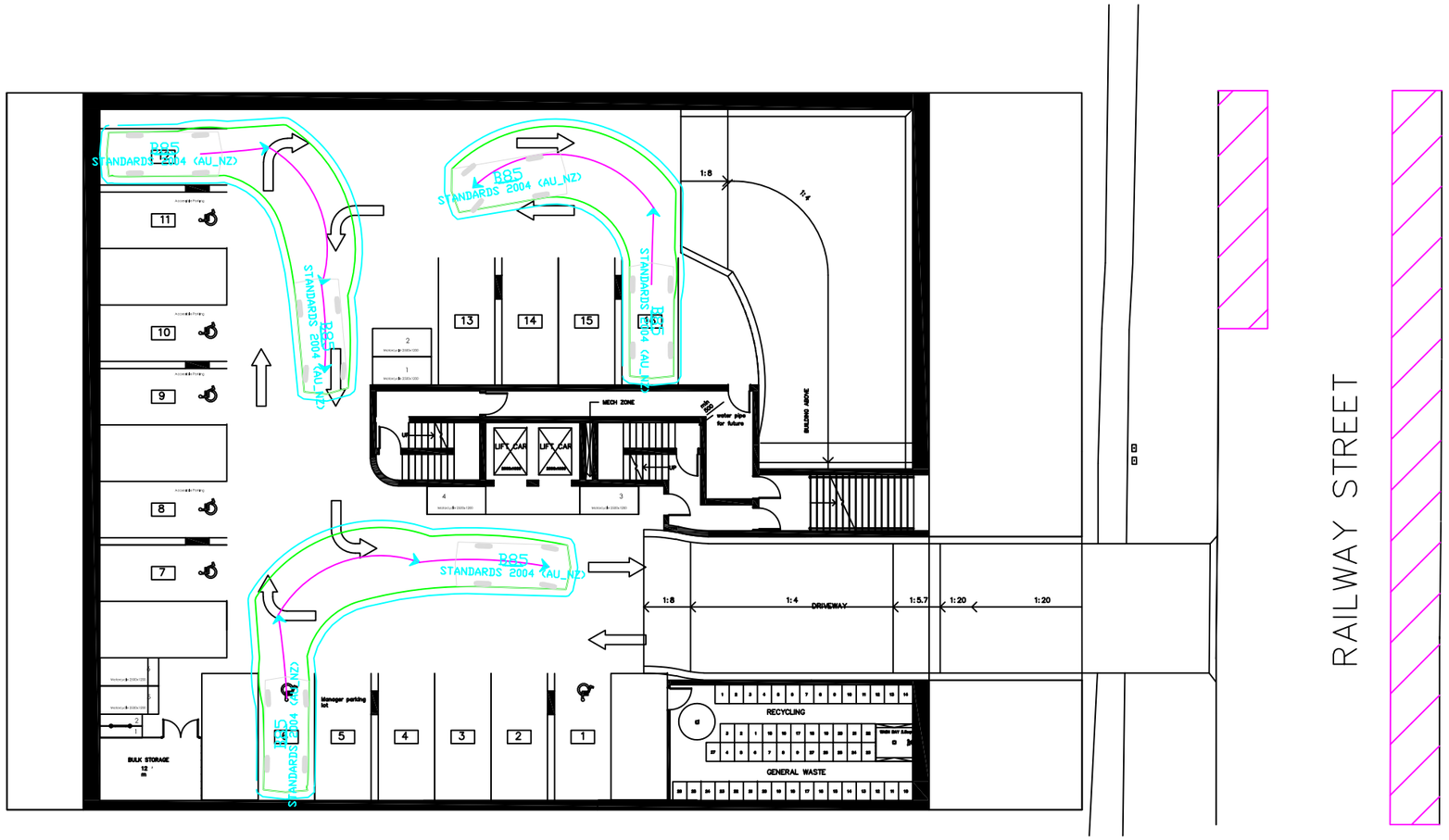
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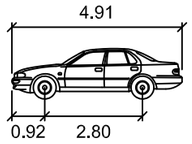
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DATE: 17/09/2021 | SHEET: 5

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021





B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

LEGEND

- VEHICLE BODY PATH (INCLUDING OVERHANG)
- MANOEUVRING CLEARANCE (300mm)
- POTENTIAL KERB SIDE PARKING

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STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS

BASEMENT LEVEL 1 INTERNAL PARKING SPACE EGRESS MOVEMENTS

PROPOSED BOARDING HOUSE DEVELOPMENT

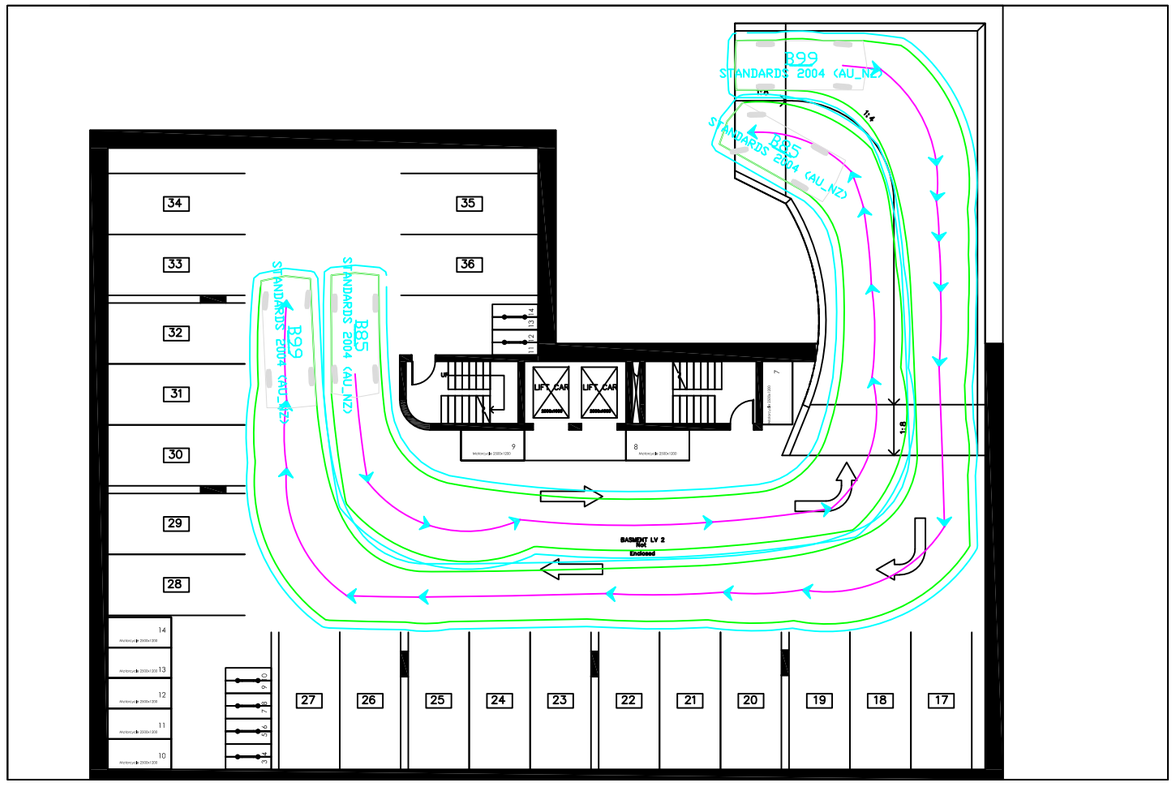
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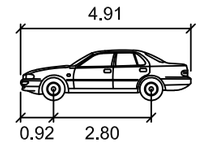
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DATE: 17/09/2021 | SHEET: 6

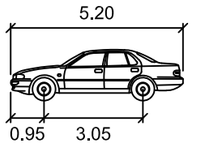
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Version: 1, Version Date: 18/11/2021





B85

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Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1



B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)

POTENTIAL KERB SIDE PARKING

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STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS

BASEMENT LEVEL 2 INTERNAL CIRCULATION PASSING MOVEMENTS

PROPOSED BOARDING HOUSE DEVELOPMENT

10 - 11 RAILWAY STREET, WERRINGTON

SCALE: 1:250 AT A3

FILE: 20-233

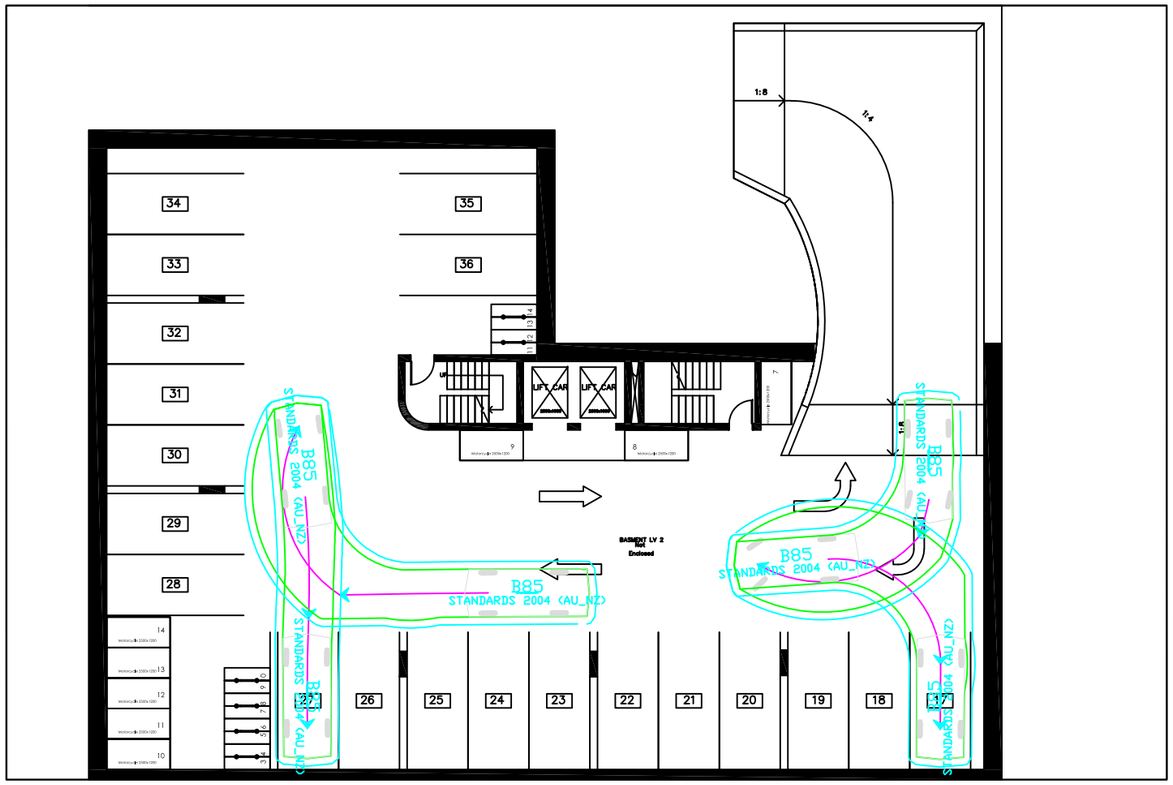
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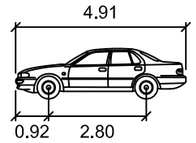
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ISSUE A

SHEET 7

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021





B85

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Width	: 1.87
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Steering Angle	: 34.1

LEGEND

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- MANOEUVRING CLEARANCE (300mm)
- POTENTIAL KERB SIDE PARKING

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STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS

BASEMENT LEVEL 2 INTERNAL PARKING SPACE INGRESS MOVEMENTS

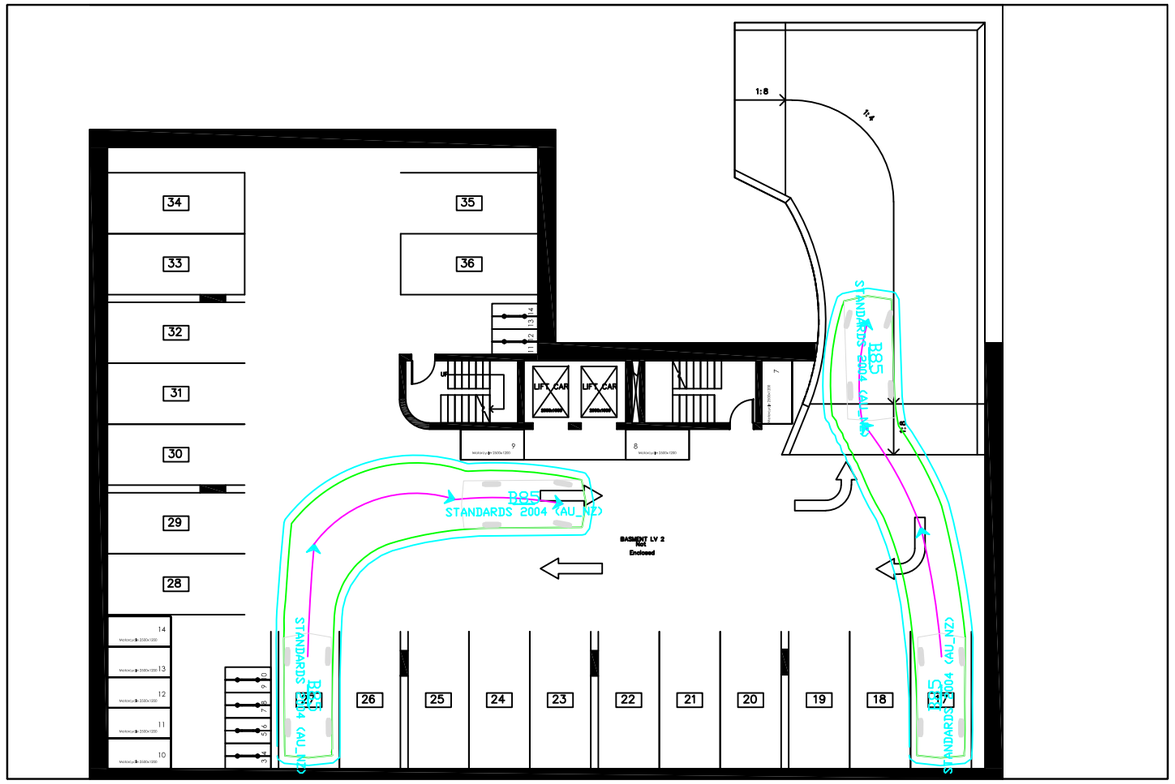
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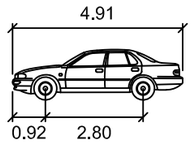
10 - 11 RAILWAY STREET, WERRINGTON

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FILE: 20-233 | SUPERSEDES SHEET/ISSUE: -

DATE: 17/09/2021 | SHEET: 8





B85

	meters
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Lock to Lock Time	: 6.0
Steering Angle	: 34.1

LEGEND

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- POTENTIAL KERB SIDE PARKING

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STANBURY TRAFFIC PLANNING

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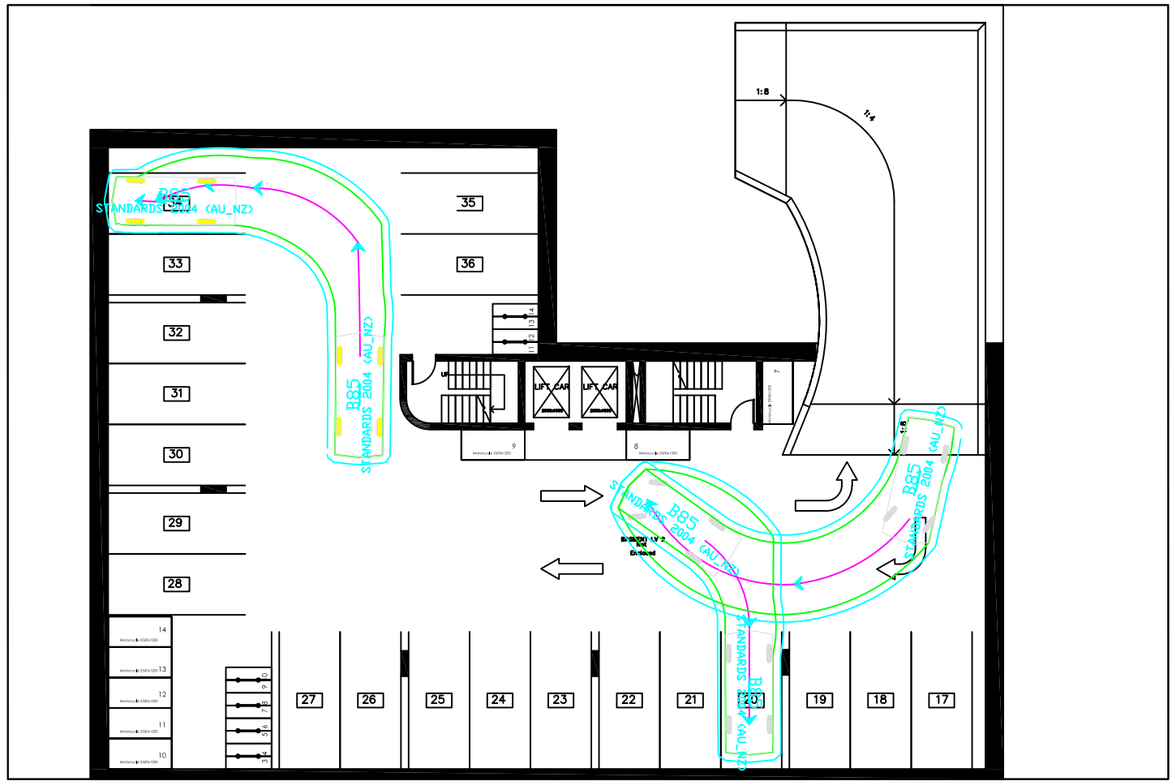
PROPOSED BOARDING HOUSE DEVELOPMENT

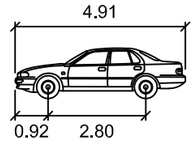
10 - 11 RAILWAY STREET, WERRINGTON

SCALE: 1:250 AT A3 | ISSUE: A

FILE: 20-233 | SUPERSEDES SHEET/ISSUE: -

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Steering Angle	: 34.1

LEGEND

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STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS

BASEMENT LEVEL 2 INTERNAL PARKING SPACE EGRESS MOVEMENTS

PROPOSED BOARDING HOUSE DEVELOPMENT

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SCALE: 1:250 AT A3

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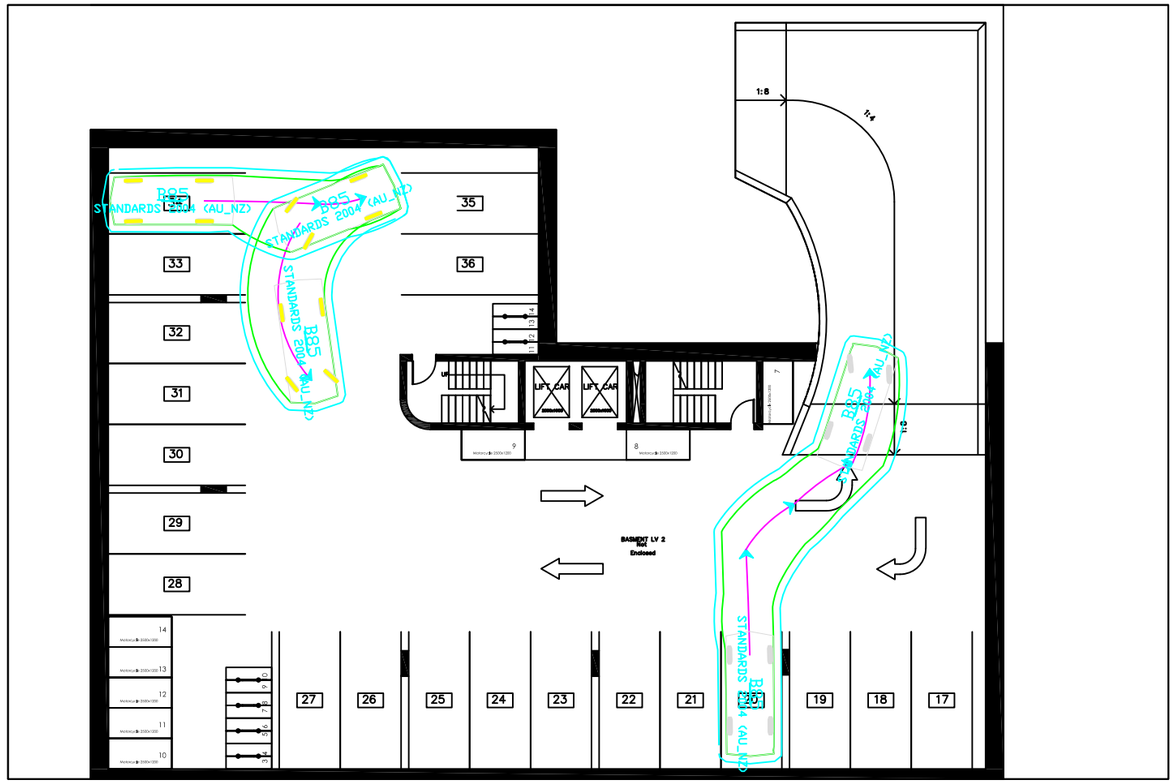
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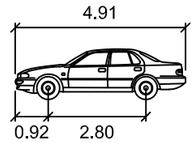
ISSUE A

DATE: 17/09/2021

SHEET 10

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021





B85

	meters
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LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)

POTENTIAL KERB SIDE PARKING

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PASSENGER VEHICLE SWEPT PATHS

BASEMENT LEVEL 2 INTERNAL PARKING SPACE EGRESS MOVEMENTS

PROPOSED BOARDING HOUSE DEVELOPMENT

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ISSUE A

DATE: 17/09/2021

SHEET 11

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

10–11 RAILWAY STREET
WERRINGTON NSW 2747

CONSTRUCTION WASTE MANAGEMENT PLAN
(WASTE MINIMISATION)

- DEMOLITION WASTE
- CONSTRUCTION WASTE
- ENVIRONMENTAL MANAGEMENT
- INCORPORATING STANDARD WASTE MANAGEMENT FORMS AND ONGOING WASTE MANAGEMENT.

SEPTEMBER 2021 (Rev B)

PREPARED BY

Caverstock Group

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

CONTENTS

1.00 INTRODUCTION - WASTE MANAGEMENT PLAN

2.00 DEMOLITION PHASE WASTE MANAGEMENT

3.00 CONSTRUCTION PHASE WASTE MANAGEMENT

4.00 ENVIRONMENTAL MANAGEMENT

APPENDIX

A WASTE MANAGEMENT PLAN - Penrith Council - Forms INCLUDING ONGOING WASTE MANAGEMENT

B FACT SHEETS

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Caverstock Group

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Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

1.00 INTRODUCTION - WASTE MANAGEMENT PLAN

1.01 This Construction Waste Management Plan for the development at 10-11 Railway Street, Werrington, NSW has been compiled with reference to the following documentation from Penrith Council and NSW Government:

- Penrith Council DCP 2014 – Part C3 - Waste Management.
- Penrith Council DCP 2014 – Part C5.3.3 Design for Waste Minimisation.
- Penrith Council – Multi Unit Waste Guidelines – Boarding House.
- ALSO – Environmental Planning and Assessment Regulation 2000.
- Waste Avoidance and Recovery Act 2001.
- Protection of the Environment Operations Act 1997.
- NSW – EPA Waste Classification Guidelines Part 1 – Classifying Waste Nov 2014.

1.02 The General Objectives of the Construction Waste Management Plan

1. Reduce demand for waste disposal.
2. Maximise re-use and recycling of materials.
3. Assist in achieving Federal, State and Local Government waste minimisation targets.
4. Minimise environmental impact of waste.
5. Source separation and design to complement Council's and private providers waste management.
6. Encourage building design and construction techniques to minimise future waste generation.

1.03 This Construction Waste Management Plan is based on the following Level Architect's drawings:

- Basement One and Two – DA 101 and 102
- Ground Floor – DA 103
- Upper Levels – DA 104, 105 and 106
- Sections – DA 301, 302 and 303
- Coloured Sketch of Building

1.04 This Construction Waste Management Plan covers two phases of new development work. Refer to Appendix A.

- Demolition Phase Waste Management
- Construction Phase Waste Management
- Ongoing Waste Management

The Operational Ongoing Residential Waste Management Plan Is found in APPENDIX A as it is Separate from the Earlier Demolition / Construction Works.

1.05 Special care is to be taken for all existing in-ground and visible cables and services conduits. The builder is to locate all underground services and also to protect all services above and below ground. Any Service to be removed is to be cut off and made safe by the appropriate licenced tradesman.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

2.00 DEMOLITION PHASE WASTE MANAGEMENT

2.01 Demolition works consist of the complete and careful demolition of what remains on site following past demolition by Others of existing house structures. It includes demolition of existing concrete driveway, brick footings and ground floors, concrete slabs, pits, brick fence and vegetation. The demolition is required to remove a good bit of rubbish and debris strewn across the yards which comprises metal fencing, metal sheeting, and drywalling this material is covered with vegetation. Workers to wear Personal Protection Equipment as required by Workcover NSW – Hard Hat, adequate clothes, gloves, dust mask and ear plugs.

2.02 Materials in Existing Building and Improvements

The following are generally materials found in this demolition works:

- Some metal roofing scrap.
- Brick foundations.
- PVC and Steel pipes.
- Copper pipes.
- Concrete paths and pads.
- Concrete driveways.
- Concrete pits
- Trees and shrubs.
- Parts of masonry fences.

2.03 The Objective

- Waste minimisation by recycling as much demolished material possible by removing to recycling yards or re-use of materials on site.
- Refer to the required Council's Waste Management Plan Forms - Waste Management Plan - for Demolition & Construction - **Appendix A**.
- Refer to the Facts Sheets – for the Site Control – **Appendix B**.

2.04 Resource Recovery Contacts

Demolisher to contact for material acceptance requirements at each Recovery Centre.

Veola Environmental Services –
CAMELIA - 8844 4200
NORTH ROCKS - 132955
HORSLEY PARK - 9620 2867
CHULLORA - 9707 1709

Bingo Resource Recovery – 165 Woolpack Road, Smithfield

Concrete Recyclers – 14 Thakery Road, Camelia

Kimbriki Resource Recovery Centre Terry Hills – 9486 3512

Suez Recovery Centres – 1300 651 116 – Ryde, Artarmon, Belrose.

Penrith Community Recycling Centre – St Marys – 4732 7777

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

3.00 CONSTRUCTION PHASE WASTE MANAGEMENT

3.01 With knowledgeable site supervision, waste minimisation can occur during construction of the building. The objective is to remove as little as possible those items that may be classified as Building Waste to land fill as there would be many items in the construction phase that could be used or recycled within the work methodology of the builder. Workers to wear Personal Protection Equipment.

The reuse of broken concrete paving and bricks for working surfaces for safe dry access and truck movement on site, also these items would be used as granular fill around pipes and is a good example. Timber re-used for set-out pegs and formwork bracing is another example. These items can save the builder the cost of purchasing new materials.

3.02 The new construction works will entail the following items of works:

- Excavation into soils.
- Concrete reinforced structure.
- Masonry walls internal and external.
- Drainage works and external Services.
- Internal Services.
- Internal Gyprock stud walls.
- Floor surfaces - Tiles & carpet.
- Miscellaneous metal works.
- Timber and glass screens and windows.
- Painting internal and some external surfaces.
- External Paving.
- General landscaping.

3.03 Controlled Workers Rubbish

Food scraps to be placed into 240 litre General Waste Bins and recyclable materials (bottles and cans, paper and cardboard) to be placed in two 240 litre Recyclable Bins. The Site Forman is to ensure that no rubbish is all placed into the bins provided.

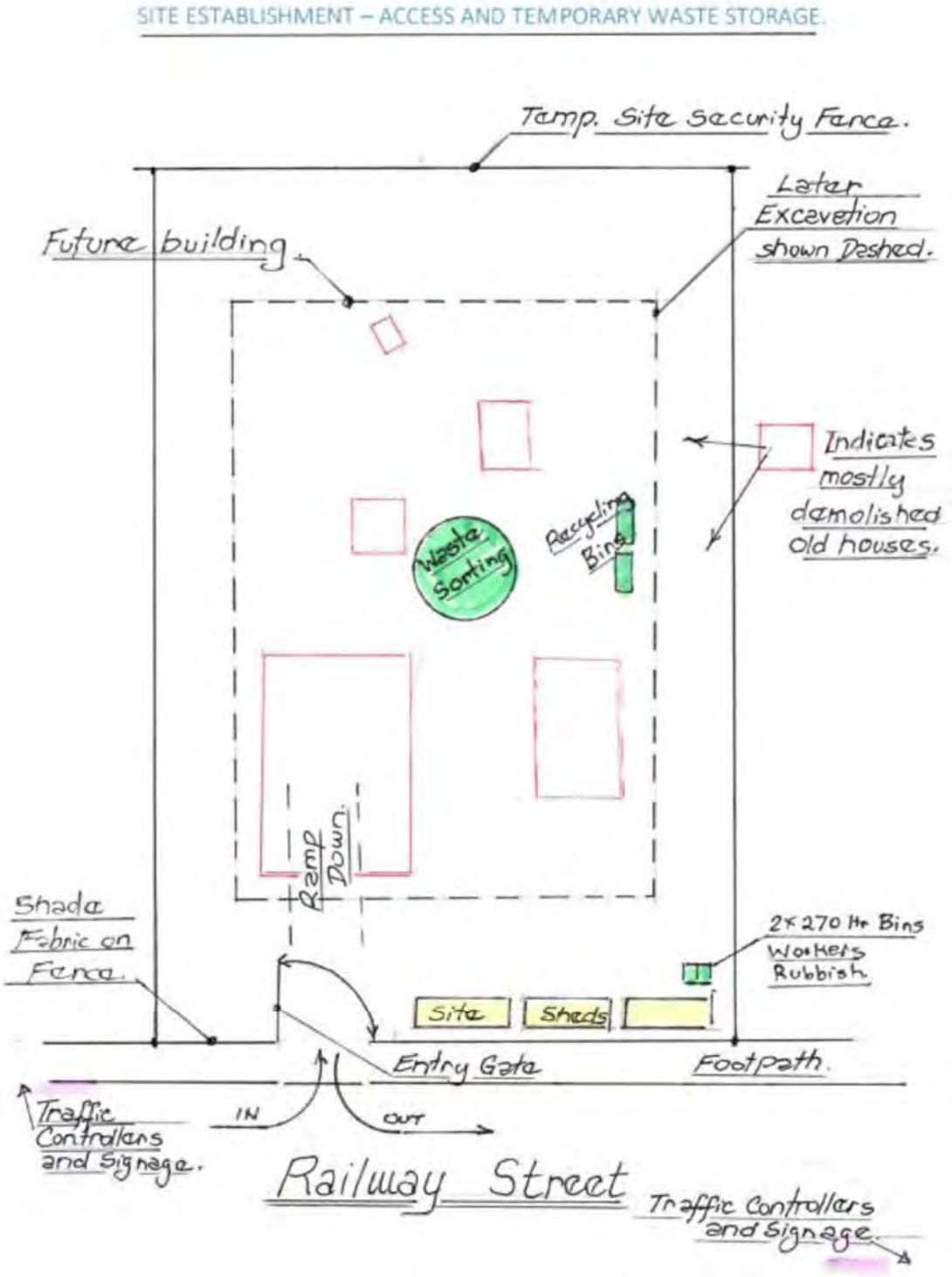
Both types of bins are to be removed every few days (or as needed) and either tipped at approved waste tip or recycled at the tip. These bins are to be managed by the builder who will engage the Waste Removal company.

3.04 The Objective

- Maintain a clean, healthy and safe workplace.
- Waste minimisation by recycling/reusing as much builders' waste material as possible. The builder is to manage Construction Waste to enable as much waste to be recycled On Site or removed to a Resource Recovery Centre.
- Refer to the attached Penrith Council's Required Form - Waste Management Plan - **Appendix A**.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

SITE ESTABLISHMENT – ACCESS AND TEMPORARY WASTE STORAGE AREAS



Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

4.00 ENVIRONMENTAL MANAGEMENT

a. Introduction

The aim of this report is to also promote sustainable development principals in both the operations of the building and the construction of the building structure and finishes. General thoughtful product selection by the Architect will enable the promotion of these principals.

Certain Council requirements are available to sensibly locate plant and equipment, screen certain items to lower noise, use specific water saving devices, reduce cars in the area, recycle waste, reduce greenhouse emissions and promote energy efficiency.

Supervision of construction workers by the builder and promoting respect for the neighbours and the environment of the area and sound management of the apartment when completed will assist in resolving future environmental issues of the project.

b. The Local Environment

To design and construct a new building project in Werrington, the Architect must respect the Environment of the area. The local environment which surrounds the site is currently changing. Strict supervision will be undertaken by the builder of all construction activities to reduce and minimize disruption for adjoining properties and the neighbourhood. Traffic Controllers to be used for all Vehicles entering and exiting the Site.

c. Construction Considerations

- Water Conservation - reduce water usage in the building.
- Economical light fixtures to be used.
- Internal landscaping to soften the structure of the building.
- Reduce greenhouse gas emissions by sensible selection of equipment.
- Reduce disruption to neighbourhood community during the construction phase.
- Maintain control of materials delivery.
- reduce noise, dust and vibration emissions from the construction site.
- Promote use of Public Transport for workers.

d. Conclusion

Adequate care through the site Demolition and Construction Works phase and good Asset Management will achieve an Environmentally Friendly building project.

The Demolition and Construction phase is to be strictly supervised and all activities maintained by the Responsible Builder to provide good construction practices that minimize disruption in the neighbourhood.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

APPENDIX A - COUNCIL'S REQUIRED FORM (WASTE MANAGEMENT PLAN) -
- PART ONE - DEMOLITION PHASE (Following Pages)
- PART TWO - CONSTRUCTION PHASE (Following pages)
- PART THREE – ONGOING WASTE MANAGEMENT OF BOARDING HOUSE

PART THREE - ONGOING WASTE MANAGEMENT OF BOARDING HOUSE

This project for the construction of a Boarding House which would cater for Students of the University and others as it is close to Werrington Railway Station and the University.
The Boarding House consists of 69 Single Rooms and one Managers Room = 70 single rooms.
A four storey building - Parking for 35 cars, 17 motorcycles and 15 pushbikes.

All waste is put into kitchen bins which are brought by the residents to the Two Waste Bins in the basement. YELLOW – Recycling, RED – Residual Waste. Signage will be displayed with instructions pertaining to each bin.

For Electronic or E/Waste contact the Penrith Community Recycling Centre 4732 7777. For BULKY Goods allow a 11.0 M2 space in the building – bookings can be made online (The Waste Spot) or by calling 4732 7777 – MINIMUM TWO DAYS PRIOR TO PUTTING THE GOOD OUT ONTO THE KERB SIDE -DISCUSS TIMING WITH COUNCIL.

The Building Manager lives in the building and would supervise and control the requirements of the Three Bins, and make sure that recycling is properly done and that the area is clean and tidy.
The Building Manager has a Set of Rules, some that pertain to Rubbish and the Residents must live by those rules in this Boarding House.

Bins are to be moved up to the kerbside by the Building Manager with the use of an Electric Bin Mover if the bins are to be wheeled up inclines. All bins of the same colour are to be placed together for pick up by the Waste contractors. The Waste removal timetable can be obtained by the Building Manager when the building is completed and placed on the appropriate Notice Boards. Once bins are emptied by the Council contractor all bins are moved back to the bin store area by the Building Manager where they are cleaned if needed in the bin wash area. All Boarders who sign for their rooms are advised that no Illegal Dumping is allowed as they will be fined by Council.

BIN REQUIREMENTS – AS DISCUSSED WITH COUNCIL.

- **YELLOW RECYCLING - 70 SINGLE ROOMS x 0.375 - 27 (240 Lt BINS)**
- **RED ORGANICS - 70 SINGLE ROOMS x 0.375 - 27 (240 Lt BINS)**

TOTAL NUMBER OF BINS FOR 70 SINGLE ROOM BOARDING HOUSE = 54 (240 Lt BINS)

STANDARD BIN SIZE = 600 mm WIDTH x 740mm DEPTH.

THE BIN ROOM is to have a sealed concrete floor with water supply for bin cleaning, drainage for bin cleaning and exhaust. Access to Bin Room is to be fairly flat with no steps or kerb – An electric bin mover is required if the grade to the kerb side is greater than 1:14 but as bins are sometimes difficult to move an electric bin mover is recommended for use by the Building Manager.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

WASTE MANAGEMENT PLAN
DEMOLITION, CONSTRUCTION AND USE OF PREMISES

If you need more space to give details, you are welcome to attach extra pages to this form.

PLEASE COMPLETE ALL PARTS OF THIS FORM THAT ARE RELEVANT TO YOUR DEVELOPMENT APPLICATION (DA).

IF YOU NEED MORE SPACE TO GIVE DETAILS, YOU ARE WELCOME TO ATTACH EXTRA PAGES TO THIS FORM.

Council will assess the information you provide on this form along with your attached plans. We will take into account the types and volumes of waste that could be produced as a result of your proposed development, and how you are planning to:

- minimise the amount of waste produced
- maximise re-use and recycling
- store, transport and dispose of waste safely and thoughtfully.

APPLICANT DETAILS

First name: Greg

Surname: Sullivan

Postal Address

Street No.: 13-15

Street name: Wentworth Ave

Suburb: Sydney

Post code: 2000

Contact phone number

Email address

DETAILS OF YOUR PROPOSED DEVELOPMENT

Street No.: 10-11

Street name: RAILWAY ST.

Suburb: WERRINGTON

Post code:

What buildings and other structures are currently on the site?

Buildings Demolished but there is footings, brick fences and demolished items on ground.

Briefly describe your proposed development

4 story 70 room Boarding House with associated 2 level parking.

PENRITH CITY COUNCIL

/

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

SECTION 1: DEMOLITION

*Please include details on the plans you submit with this form, for example location of on-site storage areas/ containers, vehicle access point/s.

Materials		Destination		
		Re-use and recycling		Disposal
Material	Estimated volume (m^2 or m^3)	ON-SITE* Specify proposed re-use or on-site recycling	OFF-SITE Specify contractor and recycling facility	Specify contractor and landfill site
Excavation (eg soil, rock)	—	—	—	—
Green waste	Approx 3m³ Solid	Used as mulch	NiL	NiL
Bricks	Approx 5.2m³ loose	Use as Hard Stand in Wet	NIL	NIL
Concrete	Approx 8.2m³ loose	Hard Stand at Entry	NIL	NIL
Timber (Please specify type/s)	—	—	—	—
Plasterboard	—	—	—	—
Metals (Please specify type/s) Reo / other —	Approx. Minimal App 1.2m³	—	Recycle	Veola Horsley Park
Other misc Debris to be Sorted	Approx. 15 m³	NIL	Needs Sorting	Recycle Kimbriki

PENRITH CITY COUNCIL

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

SECTION 2: CONSTRUCTION

*Please include details on the plans you submit with this form, for example location of on-site storage areas/ containers, vehicle access point/s.

Materials		Destination		
		Re-use and recycling		Disposal
Material	Estimated volume (m^2 or m^3) All Approx.	ON-SITE* Specify proposed re-use or on-site recycling	OFF-SITE Specify contractor and recycling facility	Specify contractor and landfill site
Excavation (eg soil, rock)	5,159 m^3 solid	Allow 500 m^3 Topsoil	To other building sites	TBA unless needed by Council
Green waste	—	—	—	—
Bricks Masonry off cuts	5.0 m^3 loose	Around Pits & Pipes.	NIL	NIL
Concrete	All Measured exact	—	—	—
Timber (Please specify type/s) Formwork	Minimal	Reuse	NIL	NIL
Plasterboard	4.8 m^3	As needed	Recycle	Veola 9620 2867
Metals (Please specify type/s)	Minimal	NIL	Recycle	Veola
Other - Pallets	many	—	Returned to supplier	—
- Packaging	much	—	Recycle	Kimbriki

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

SECTION 3: WASTE FROM ON-GOING USE OF PREMISES

If relevant, please list the type/s of waste that may be generated by on-going use of the premises after the development is finished.	Expected volume (average per week)
Normal Red & Yellow Bin – for this refer to Notes on Appendix A. Ongoing Waste.	

SECTION 4: ON-GOING MANAGEMENT OF PREMISES

If relevant, please give details of how you intend to manage waste on-site after the development is finished, for example through lease conditions for tenants or an on-site caretaker/manager. Describe any proposed on-site storage and treatment facilities. Please attach plans showing the location of waste storage and collection areas, and access routes for tenants and collection vehicles.

On site full time Building Manager.
Refer to Notes on Appendix A Ongoing Waste.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

APPENDIX B - FACT SHEETS

- Fact Sheet 2 - Dust Control
- Fact Sheet 4 - Excavation Pump out
- Fact Sheet 6 - Protected Concrete Delivery
- Fact Sheet 7 - Protected Service Trucks
- Fact Sheet 8 - Protected Stockpiles
- Fact Sheet 12 - Protection of Gutters and Street Stormwater Drains
- Fact Sheet 13 - Protection of Site Stormwater Pits
- Fact Sheet 14 - Sediment Controls
- Fact Sheet 15 - Soil and Water Management Plan
- Fact Sheet 16 - Stabilised Site Access

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Dust Control

'Do it right on site' is a project to help the construction industry protect the environment and achieve the many benefits that come from doing so.

Dust Control

What is it?

Dust control refers to minimising the amount of dust that enters the air and stormwater system from your site.

Why is it important?

Dust blowing from your site has a four way impact. Firstly, it is a nuisance to neighbours which can result in poor relations or complaints about your company.

Secondly, it can result in adverse health effects like asthma in workers and others. Thirdly, blown away materials are blown away dollars, and finally, it is dangerous to the environment.

The environmental impact of dust and sediment is significant. They smother animals and plants that live on the bottom of creek beds and make the creeks shallower. They carry nutrients which can lead to algal blooms and fish kills, as well as weeds which can take over from native plants.

Even though mud and dirt are natural they are still serious pollutants that must be prevented from entering our waterways.

What do I need to do?

Before building commences:

Assess the dust potential of your site and decide on dust controls. If there is high risk of dust generation then barriers to divert the wind up and over the site can be constructed. These include shade cloth walls of height one-fifth the site length. Document controls on your Soil and Water Management Plan and ensure staff are aware of its importance.

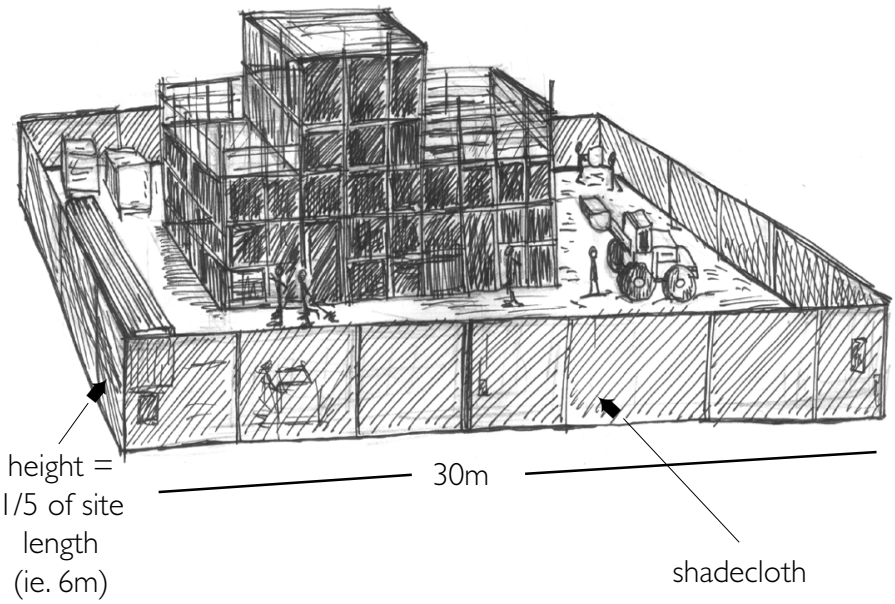
Installing the controls:

Good sediment management can alleviate most of the dust problem. Some of the steps that can be taken to minimise dust include:

- Maintain as much vegetation as possible
- Cover materials and stockpiles
- Ensure that all equipment has dust suppressors fitted
- Dampen the site slightly during excavation or when dust is being raised. Be careful not to wet it to the point of creating polluted runoff.
- Ensure that vehicles only leave via the stabilised site access
- Minimise the amount of the site that is disturbed at any one time

All of these actions will help to minimise the amount of sediment loose on the site and therefore the dust that can be generated.

If dust becomes too serious on windy days the best option is to cease work until wind conditions are suitable.



Fact Sheet 2

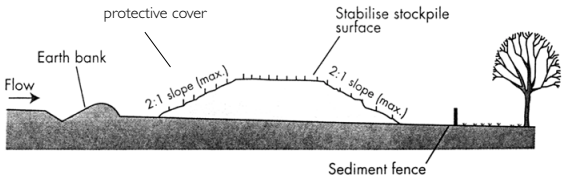
Maintenance of the sediment controls:

Dust collected around sediment controls will need to be removed regularly to maintain effectiveness. Built up material can be restockpiled, used on site or collected by an Earth Moving Company.

Inspect and sweep roads at the end of each day and when rain is likely.

On larger sites dust monitoring should be undertaken. The National Health and Medical Research Centre (NHMRC) guidelines require an annual mean of 90ug/m^3 for total suspended particulate.





Remember:

Everyone has a responsibility to protect the environment. The site supervisor is required to make sure that all workers, including sub-contractors are doing the right thing and all workers are required to notify their supervisors and Council if they see pollution occurring.

It is illegal for any substance other than rainwater to enter the stormwater system. If you do have an accident and pollution occurs you are required by law to notify the Council so that they can work with you to minimise any harm to the environment.

Penalties for polluting the stormwater system range from $750 on the spot fines to $1 million and seven years in gaol. Both companies and individuals can be fined.

Council Officers and the EPA enforce the environmental legislation and do routine inspections of building sites. They can issue notices to make companies clean up sites, change the way they are managing the sites and if necessary, cease work. They will attempt to work with you but penalties will be issued if a satisfactory environmental outcome is not achieved.

List of fact sheets available from Council:

1. Diversion of Upslope Water
2. **Dust Control**
3. Early installation of Roof Drainage
4. Excavation Pump Out
5. Protected Concrete, Brick and Tile Cutting
6. Protected Concrete Delivery
7. Protected Service Trenches
8. Protected Stockpiles
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12. Protection of Gutter and Street Stormwater Drains
13. Protection of Site Stormwater Pits
14. Sediment Controls
15. Soil and Water Management Plans
16. Stabilised Site Access

For further information on preventing pollution from building and construction sites contact your local council:

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THE DRAIN IS JUST FOR RAIN

Southern Sydney Regional Organisation of Councils

Excavation Pump Out

'Do it right on site' is a project to help the construction industry protect the environment and achieve the many benefits that come from doing so.

Excavation Pumpout

What is it?

Excavation pump out refers to the pumping of water collected in the bottom of excavated sites to the stormwater system. This water may be ground water or collected rain water.

Why is it important?

Rain Water

Rain water pooled on building sites picks up mud, dirt and any other contaminants present.

All of these pollutants can cause serious harm to our waterways. Even if the water is just muddy it can cause significant damage through smothering plants and bottom dwelling animals.

Ground Water

Ground water seeping up from aquifers may contain a range of contaminants such as heavy metals, petrochemicals and toxins depending on prior land uses in the area.

Approval is needed from the Department of Land and Water Conservation and Council to install ground water bores or spear points for pumpout of ground water.

What do I need to do?

Before building commences:

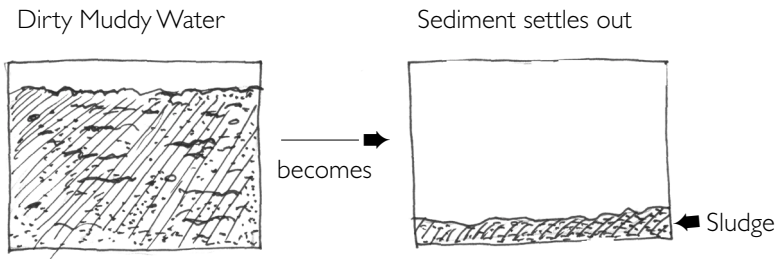
Review the site requirements and consider the best option for dealing with the collected water. Depending on the level of contamination it may be possible to:

1) pump it after treatment to the stormwater system
2) pump it to the sewer with approval from Sydney Water or
3) have it collected by a liquid waste company for disposal at a licensed treatment facility.

The second and third options are the most preferable as they reduce the risk to the stormwater system and ensure you are not breaking the law. Document the methods to be used on your Soil and Water Management Plan and ensure that staff are aware of its importance. If the groundwater is contaminated EPA advice should be sought and may require waste disposal tracking.

Installing the controls:

If the water contains only sediment it can be pumped to the stormwater system after filtering. It must have less than 50 mg/L Total Suspended Solids. This is water with no visible cloudiness. If you do not have time or room on-site to let the sediment settle naturally, flocculants such as gypsum can be used. Flocculants speed up the settling process. Unfortunately they raise the pH of the water and pH correction is needed prior to pumping to the stormwater system. Some flocculating agents can be toxic to fish above certain critical concentrations. Council advice should be sought prior to their use. Once settled, pump the clean water from the top to an area of the site where it can soak in or to the stormwaer system. The settled sediments, "the sludge", can be reused on site or disposed of in a bin.



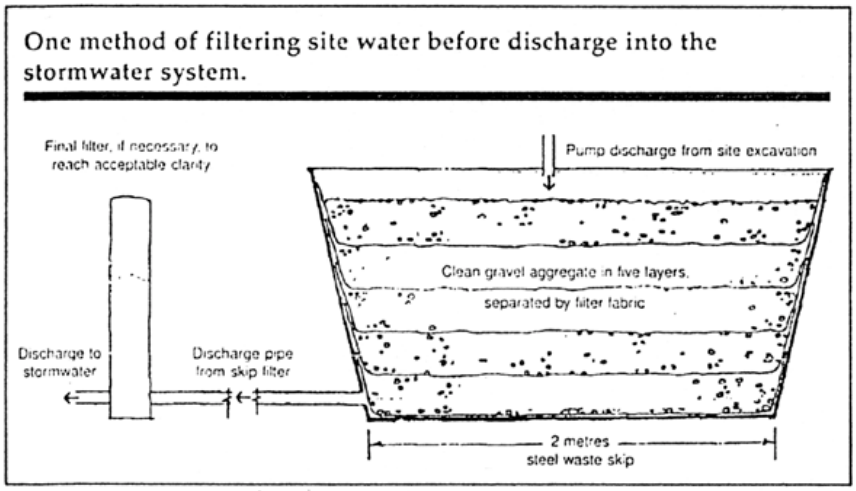
Sediment settles over time but can be sped up with floculant.
Reuse sediment or place in bin

Pump clear water to "soak in" site or to stormwater system

Fact Sheet 4

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

One method of filtering site water before discharge into the stormwater system.



Source: Environetwork News, EPA, 5/99

Maintenance of the sediment controls:

If you install a filtering system such as the one pictured it will need to be cleaned regularly to remove the sediment that it filters out.

Remember:

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List of fact sheets available from Council:

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2. Dust Control
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THE DRAIN IS JUST FOR RAIN

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Protected Concrete Delivery

'Do it right on site' is a project to help the construction industry protect the environment and achieve the many benefits that come from doing so.

Protected Concrete Delivery

What is it?

This refers to receiving concrete deliveries in a manner that does not pollute the stormwater system.

In the past the usual way of delivering concrete was for the truck to park either in the site access point or next to the site and pump the concrete to the required area. Any spills would land on the road. The chute of the concrete truck would often be washed down, resulting in all of this waste concrete slurry entering the drains and our rivers.

Why is it important?

Concrete that enters the stormwater system causes several problems.

It hardens in the pipes, reducing their diameter. This increases the risk of flooding to the surrounding neighbourhoods.

It also affects the pH of the water, making it toxic to many plants and animals. This kind of pollution results in major fish kills.

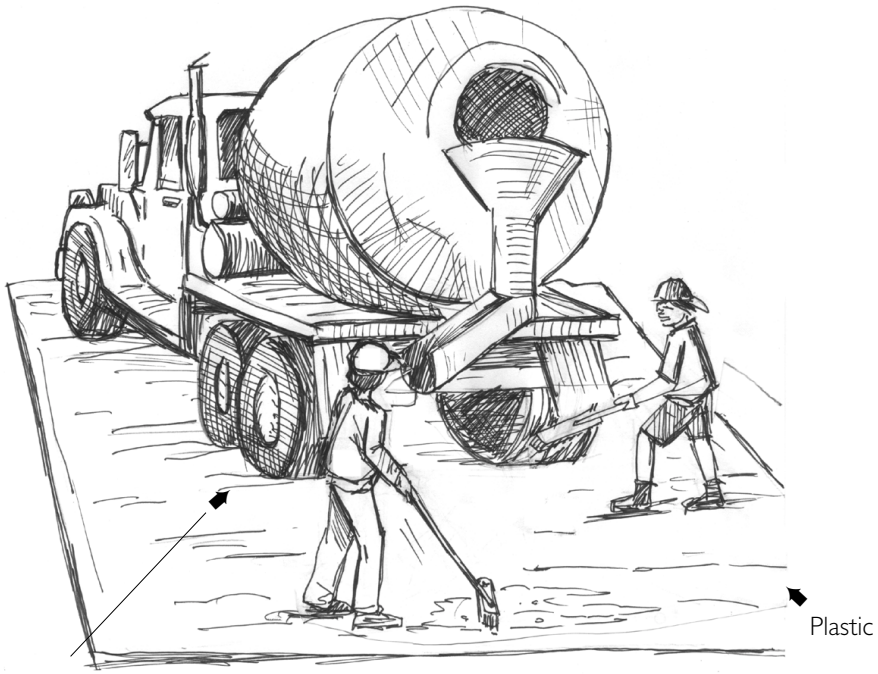
What do I need to do?

Before building commences:

Plan to have concrete deliveries made entirely on the site where spillage can be cleaned up without risk of it entering the stormwater system. If this is not possible you will need to place controls around and under the concrete truck to catch any spills. Document the delivery area on your Soil and Water Management Plan. Purchase these controls and ensure staff are aware of the need to use them. When selecting a concrete supplier ask them if they comply with the Australian Premixed Concrete Association guidelines for safe concrete delivery.

Installing the controls:

1. Before pumping begins, place plastic under the concrete pump and temporary bunds across all downslope gutters to trap any spillage. Sweep up all spillage before removing the bunds. Do not wash it away.
2. Ideally vehicles and equipment should be washed down within a designated bunded area within the site where the washwater can soak in to the ground or at a washdown depot. If more washwater occurs than can soak into the ground, it can be stored, settled and/or filtered by techniques that render waters clear for safe discharge to council drains ie: 50mg/l Total Suspended Solids which means clear water with no visible turbidity (cloudiness). pH correction may be required. Contact suppliers for help with meeting EPA requirements.



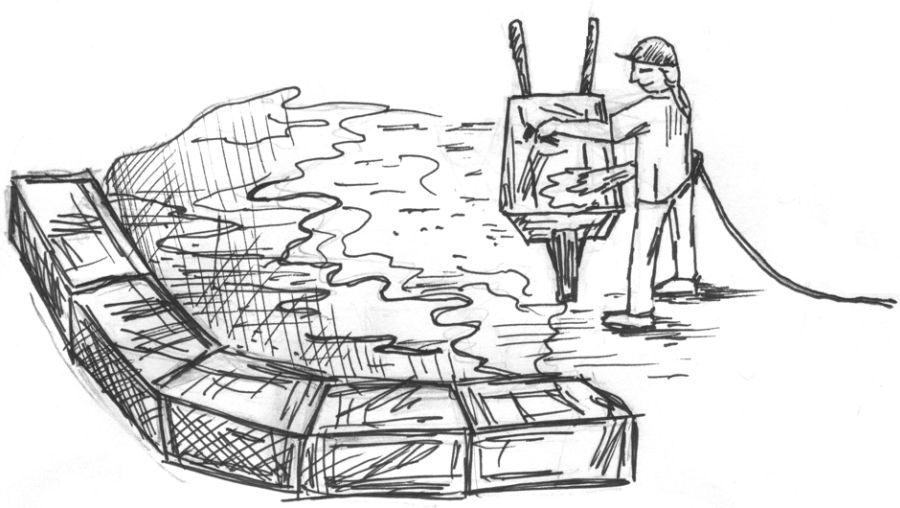
Scrape down wheels/tyres

Ensure tyres are clean before leaving construction site

Collect and remove all spillage
Sweep up residues

Fact Sheet 6

Wash down chutes and barrels in proper wash area on site or at a washdown depot. If not applicable, collect wash water in a wheelbarrow and transport on site to wash area



Letting any materials enter the stormwater system may result in fines

Remember:

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THE DRAIN IS JUST FOR RAIN

Southern Sydney Regional Organisation of Councils

Protected Service Trenches

'Do it right on site' is a project to help the construction industry protect the environment and achieve the many benefits that come from doing so.

Protected Service Trenches

What are they?

This refers to installing phone, power, water and drainage services in a manner that does not pollute the stormwater system.

Why are they important?

Underground service connections can concentrate runoff into rivulets and channels that cause rapid soil erosion and pollution of discharged waters.

This sediment has significant impacts on our waterways. It smothers animals and plants that live on the bottom of creek beds. It settles and make the creeks shallower. This results in the sun's rays heating the water. Many native plants and animals can not survive in this hotter water and die.

Even though mud and dirt are natural they are still serious pollutants that must be prevented from entering our waterways.

What do I need to do?

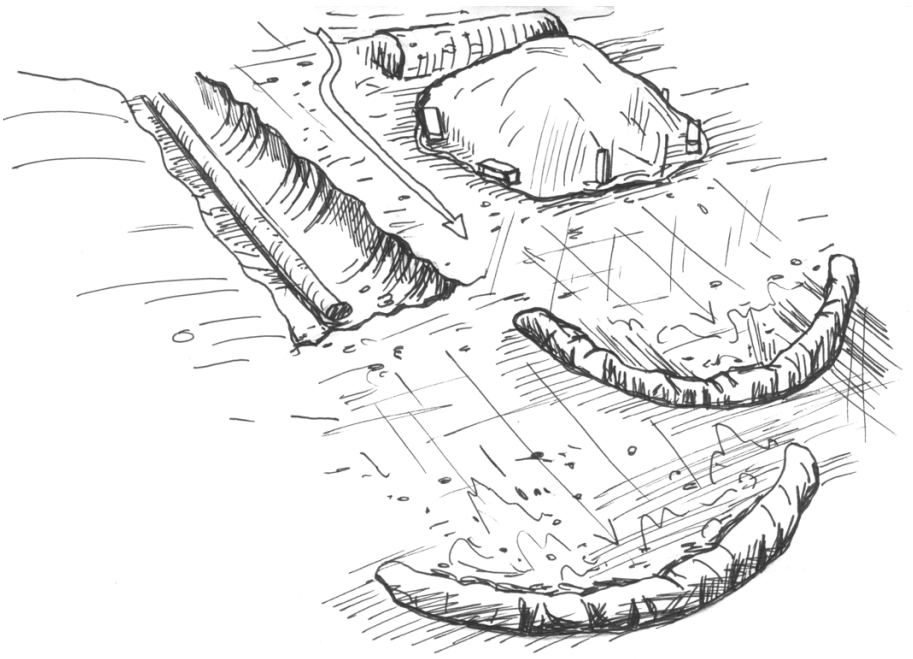
Before building commences:

Decide where the service trenches will need to go. Document them on your Soil and Water Management Plan. Ideally they should be away from areas where water flow is likely to concentrate. Plan to coordinate the various service connections so that a single trench can be used and schedule work to periods when rainfall is low.

Installing the controls:

1. Remove and store vegetated topsoil so that it can be replaced after works to provide immediate erosion protection.
2. Place the soil on the uphill side of trenches to divert water flow away from the trench line. Temporary bunds can also be used.
3. The trench should be open for a maximum of 6 days. Once completed, backfill subsoil and compact.
4. Replace topsoil and any grass / vegetation to match surrounding ground levels. If trench runs are steep place sediment barriers at 5 metre intervals to prevent erosion.

If cutting of pavement is required, ensure that proper measures are taken to prevent 'cuttings' entering the stormwater - see Fact Sheet 5 on *'Protected Concrete, Brick and Tile Cutting'* in this series.

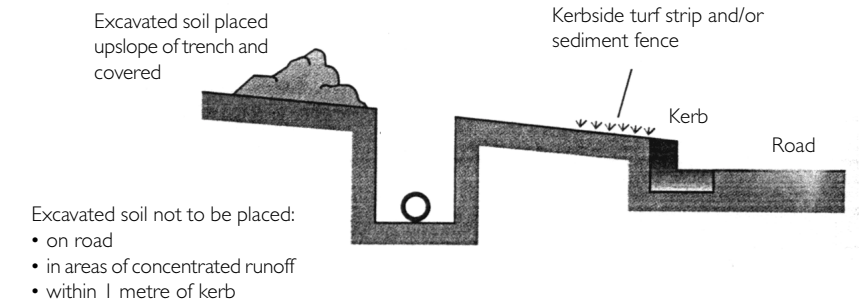


Minimise the width of cut and the time trenches are open - then quickly stabilise the backfill.

Fact Sheet 7

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

When Excavating Trench...



Maintenance of the controls:

If using temporary bunds, sediment will need to be collected from them to maintain their effectiveness. This material can be re-stockpiled, used on site or collected by an Earth Moving Company. The stockpile of excavated sediment that will be reused to cover the trench should also be checked regularly to ensure it is compacted and not being washed away - see Fact Sheet 8 on '*Protected Stockpiles*' in this series for more information.

Remember:

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THE DRAIN IS JUST FOR RAIN

Southern Sydney Regional Organisation of Councils

Protected Stockpiles

'Do it right on site' is a project to help the construction industry protect the environment and achieve the many benefits that come from doing so.

Protected Stockpiles

What are they?

They are materials such as sand, gravel, topsoil, mulch and woodchip stored in a way that will not enter the stormwater system.

Why are they important?

Stockpiles are at risk of being washed or blown away and polluting stormwater. Loose materials in heaps with steep sides and impervious foundations are most at risk. Not only does this affect the environment but it is expensive to the builder, increasing the amount of materials needing to be purchased for the development.

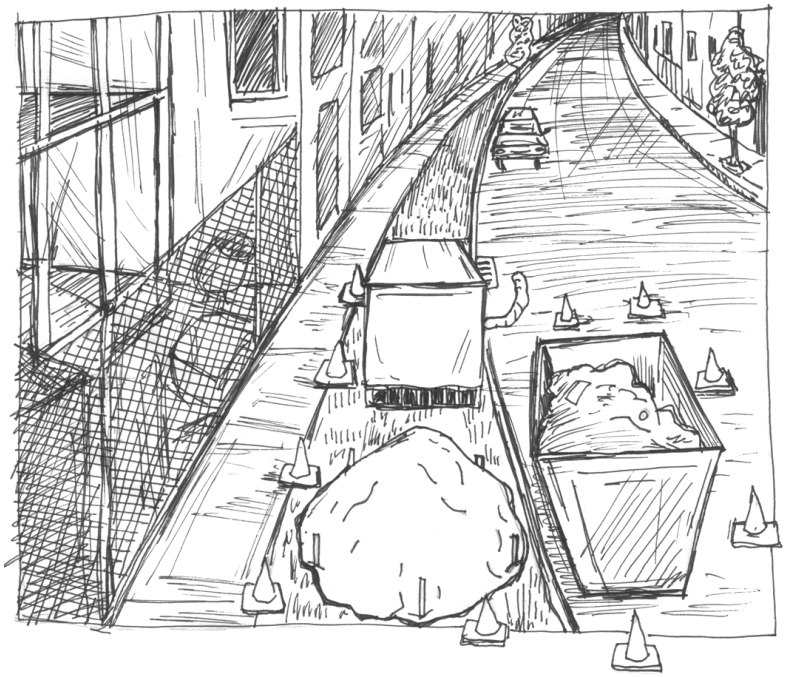
The environmental impact of these materials is significant. Mulch and woodchip decompose absorbing all the oxygen in the water resulting in suffocation of animals. Sediment settles making creeks shallower and smothering animals and plants that live on the creek beds. This shallower water depth also results in the suns rays heating the water. Many native plants and animals can not survive in this hotter water and die.

Fact Sheet 8

What do I need to do?

Before building commences:

Identify a protected storage area for stockpiles. This should be inside the site under cover, away from stormwater flow paths, with erosion control measures such as sediment fence, gravel sausage or straw bales placed around them. If there is no room on site Council approval will be needed to store materials on the kerb or footpath. Materials should be stored in sand bags or bale/pallet containers with sediment controls around them. Document your storage area on the soil and water management plan and ensure staff are aware of its importance.



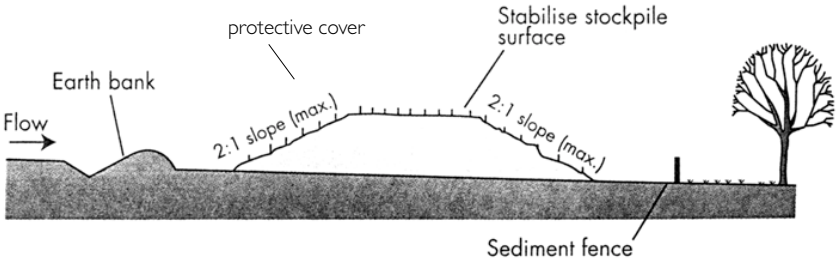
Installing the controls:

1. Locate stockpile away from stormwater flow paths, roads and hazard areas (ideally at least 5m away).
2. Place on a level area as a low, flat, elongated mound.
3. Where there is sufficient area topsoil stockpiles shall be less than 2m in height.
4. Construct an earth bank on the upslope side to divert run off around the stockpile and a sediment fence 1 to 2 m downslope of the stockpile (or sand bag, gravel sausage).
5. Stockpiles should be covered during windy conditions, rain or unattended site periods.
6. Once the roof has been installed on the frame, move stockpiles inside.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Maintenance of the controls:

Stockpiles should be checked and covered at the end of each day. Materials trapped by the down slope controls should be removed regularly to maintain their effectiveness. Built up material can be re-stockpiled, used on site or collected by an Earth Moving Company. Incorrect storage of stockpiles is a major source of stormwater pollution. All site workers, subcontractors, and delivery drivers should be advised of their responsibilities. Delivery drivers should be given a designated location to deliver materials on site.



Remember:

Everyone has a responsibility to protect the environment. The site supervisor is required to make sure that all workers, including sub-contractors are doing the right thing and all workers are required to notify their supervisors and Councils if they see pollution occurring.

It is illegal for any substance other than rainwater to enter the stormwater system. If you do have an accident and pollution occurs you are required by law to notify the Council so that they can work with you to minimise any harm to the environment.

Penalties for polluting the stormwater system range from $750 on the spot fines to $1 million and seven years in gaol. Both companies and individuals can be fined.

Council Officers and the EPA enforce the environmental legislation and do routine inspections of building sites. They can issue notices to make companies clean up sites, change the way they are managing the sites and if necessary, cease work. They will attempt to work with you but penalties will be issued if a satisfactory environmental outcome is not achieved.

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6. Protected Concrete Delivery
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8. **Protected Stockpiles**
9. Protected Wash Areas
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12. Protection of Gutter and Street Stormwater Drains
13. Protection of Site Stormwater Pits
14. Sediment Controls
15. Soil and Water Management Plans
16. Stabilised Site Access

For further information on preventing pollution from building and construction sites contact your local council:

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THE DRAIN IS JUST FOR RAIN

Southern Sydney Regional Organisation of Councils

Protection of Gutter and Street Stormwater Drains

'Do it right on site' is a project to help the construction industry protect the environment and achieve the many benefits that come from doing so.

Protection of Gutter and Street Stormwater Drains

What is it?

This refers to placing sediment collection devices around or in the drains down slope of your site to prevent pollutants entering. ***This should not be your only measure.***

Street drain protection is a backup measure to support your on-site controls.

Why is it important?

The environmental impact of sediment such as mud and dirt is significant. They smother animals and plants that live on the bottom of creek beds and make the creeks shallower. This results in the sun's rays heating the water. Many native plants and animals can not survive in this hotter water. Even though mud and dirt are natural they are still serious pollutants that must be prevented from entering our waterways.

What do I need to do?

Before building commences:

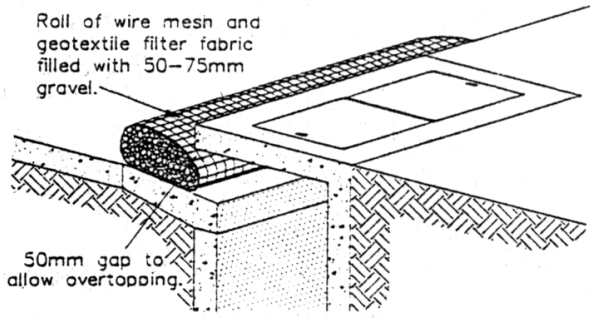
Find the street drains below your work site. Choose the most appropriate method for protection and install prior to commencement of building works. Document these on your Soil and Water Management Plan and ensure staff are aware of its importance.

Installing the controls:

Choose the best down slope control method for your site. Those that collect sediment above the pit are easier to clean but have low storage capacity compared to controls that 'sit' in the pits. Place cones around controls in the gutters or on roads to prevent drivers damaging them.

Portable gravel kerb inlet sediment trap:

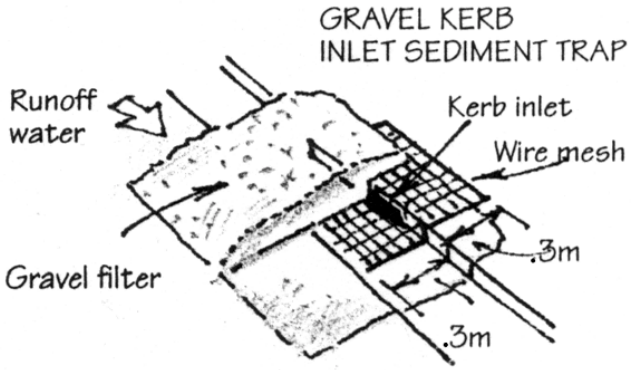
This trap involves a roll of wire mesh and geotextile filter fabric filled with gravel in front of the kerb inlet. It has the benefit of being portable and easily removed for cleaning. Ensure there is a gap at the top to allow overtopping and prevent flooding.



Portable Gravel Kerb Inlet Sediment Trap

Gravel surface barrier strategy

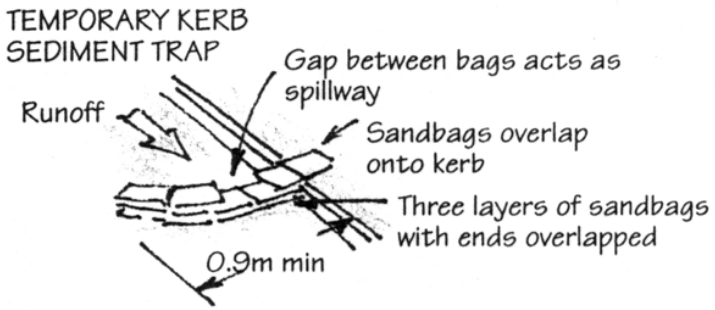
This method involves placing wire mesh over the drain and placing large gravel upslope of it. The sediment will be filtered out into the gravel with only the clean water entering the stormwater system.



Fact Sheet 12

Sandbag kerb sediment trap

Place sandbags in front of flow of water. This will slow down the water enabling sediment to settle out. Two or three of these traps in a row may be required to ensure sediment settles out.



Pit Baskets

There are a range of products that can be placed inside side entry pits that act as baskets or sacks to trap any pollutants that enter. Council permission must be sought before placing any items inside the side entry / gully pit.

Maintenance of the sediment controls:

All sediment collection devices will need to be cleaned regularly to maintain effectiveness. The built up material can be re-stockpiled, used on site or collected by an Earth Moving Company.

Remember:

Everyone has a responsibility to protect the environment. The site supervisor is required to make sure that all workers, including sub-contractors are doing the right thing and all workers are required to notify their supervisors and Council if they see pollution occurring.

It is illegal for any substance other than rainwater to enter the stormwater system. If you do have an accident and pollution occurs you are required by law to notify the Council so that they can work with you to minimise any harm to the environment.

Penalties for polluting the stormwater system range from $750 on the spot fines to $1 million and seven years in gaol. Both companies and individuals can be fined.

Council Officers and the EPA enforce the environmental legislation and do routine inspections of building sites. They can issue notices to make companies clean up sites, change the way they are managing the sites and if necessary, cease work. They will attempt to work with you but penalties will be issued if a satisfactory environmental outcome is not achieved.

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THE DRAIN IS JUST FOR RAIN

Southern Sydney Regional Organisation of Councils

Protection of Site Stormwater Pits

'Do it right on site' is a project to help the construction industry protect the environment and achieve the many benefits that come from doing so.

Protection of Site Stormwater Pits

What is it?

This refers to placement of sediment collection devices around any existing stormwater drains on the site.

Why is it important?

Stormwater drains on the construction site are at high risk of having pollutants such as dirt, stockpiled soil, mulch and barkchips washed straight into them. The environmental impact of these materials is significant. Mulch and woodchip decompose absorbing all the oxygen in the water resulting in suffocation of animals. Sediment settles making creeks shallower, smothering animals and plants that live on the creek beds. Many native plants and animals can not survive this and die.





Fact Sheet 13

What do I need to do?

Before building commences:

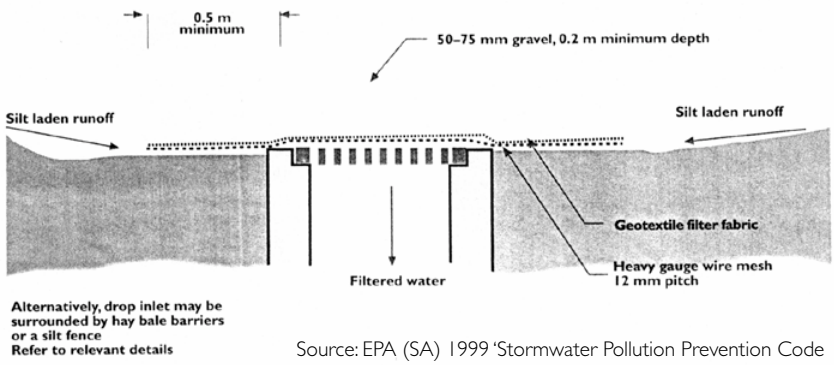
Identify any stormwater drains on the site. Plan the layout of the work site so that any wash down areas, tile or brick cutting areas are not near these drains. Clearly mark the stormwater drains on the site and choose a method of protection for them. Install the protective controls prior to building work commencing. Document all of this on your Soil and Water Management Plan and ensure staff are aware of its importance.

Installing the controls:

There are a range of sediment traps to choose from.

Drop inlet sediment Trap:

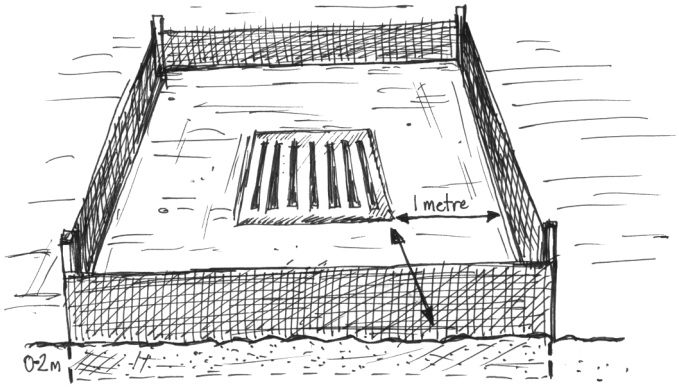
Three layers on top of the drain to trap the sediment. 1) heavy gauge wire netting or mesh 2) geotextile filter fabric with 3) a layer of prewashed 50-75mm gravel on top.



Source: EPA (SA) 1999 'Stormwater Pollution Prevention Code of Practice for the Building and Construction Industry.

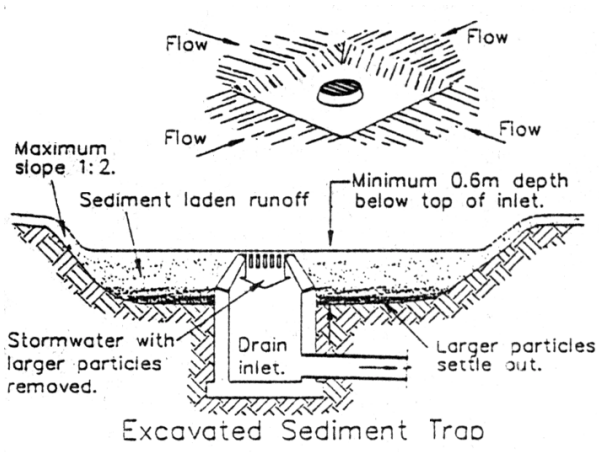
Sediment Fence drop inlet sediment trap:

Sediment fence staked around the drain to trap sediment. Note: It is important to partially bury the fabric so that water and sediment can not just flow underneath. The more space between the fence and the drain, the more chance of sediment settling and the greater the capacity of the trap.



Geotextile Filter Fabric Drop Inlet Sediment Trap

Excavated sediment trap: This is a detention basin technique for on-site drains. The basin depth needs to be at least 0.6m to ensure that water is held in place and sediment can settle out.



Excavated Sediment Trap

Source: Department of Conservation and Land Management (1995) 'Preparing an Erosion and Sediment Control Plan'.

Maintenance of the controls:

All sediment collection devices need regular maintenance to stay effective. Remove the built up sediment and check for holes or other breaks in the controls. Repair and replace them. Built up material can be re-stockpiled, used on site or collected by an Earth Moving Company.

Remember:

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THE DRAIN IS JUST FOR RAIN

Southern Sydney Regional Organisation of Councils

Sediment Controls

'Do it right on site' is a project to help the construction industry protect the environment and achieve the many benefits that come from doing so.

Sediment Control

What is it?

These are a range of products installed across drainage flows to filter sediment out of water and enable its deposition by slowing down water flow. They include sediment fences, straw bales, grass/ vegetation strips and sediment traps/basins. Other controls may be available and advice should be sought from suppliers of Sediment Control Equipment.

Why is it important?

Sediment on building sites causes problems not only for the environment but also for builders. A dirty site causes difficulties in wet weather, increases costs from having to replace stockpiles that are washed away, increases clean up costs, penalties and potential damage to your company's reputation if fined for polluting.

The environmental impact of sediment such as mud and dirt is significant. They smother animals and plants that live on the bottom of creek beds. They settle and make the creeks shallower. Many native plants and animals can not survive this and die. Even though mud and dirt are natural they are still serious pollutants that must be prevented from entering our waterways.

Fact Sheet 14

What do I need to do?

Before building commences:

Prepare a soil and water management plan, also known as a sediment control plan. This will be required by Council prior to issuing a construction certificate (either at DA stage or as a condition of consent) and should outline the methods you will use to prevent pollution of the stormwater system throughout the life of the development. There may be different controls needed as the site develops due to changes in drainage patterns and vegetation. This should be thought through and shown on your plans. Council can provide you with sample plans, however it is important that you develop a plan specifically for your site.

Remember the more erosion you can prevent the less sediment will need to be captured! The easiest way to prevent erosion is to leave shrubs and grass in place. This has the dual effect of holding the soil and dirt together as well as filtering and slowing down water flows enabling sediment to settle out.

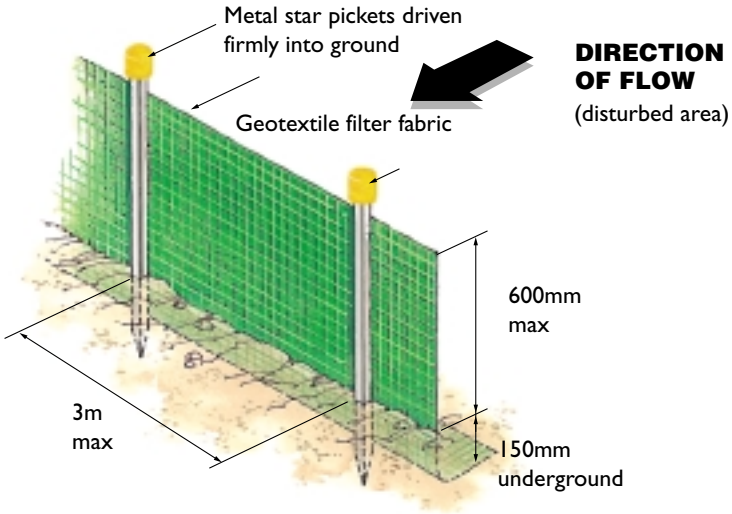
If vegetation needs to be removed try not to do it until immediately before works commence or stage the works to limit the amount of the site that is disturbed at any given time. As you move into a new area, revegetate the finished area. Another way to minimise erosion is to ensure that you only have small amounts of sand, soil and other stockpiles on site at any time. Ensure stockpiles are stored in ways to reduce erosion - *see* Fact Sheet 8 on *Protected Stockpiles*.

Installing the controls:

The sediment controls need to be in place prior to the commencement of building works. Remember that the sediment controls will need to be altered as construction occurs and the sites drainage patterns change.

Sediment Fence

A sediment or silt fence is the most widely used strategy. It is constructed from heavy duty geofabric. Although a sediment fence looks like shade cloth it is very different and is not interchangeable. A sediment fence is specifically designed to allow the free passage of water and trap sediment



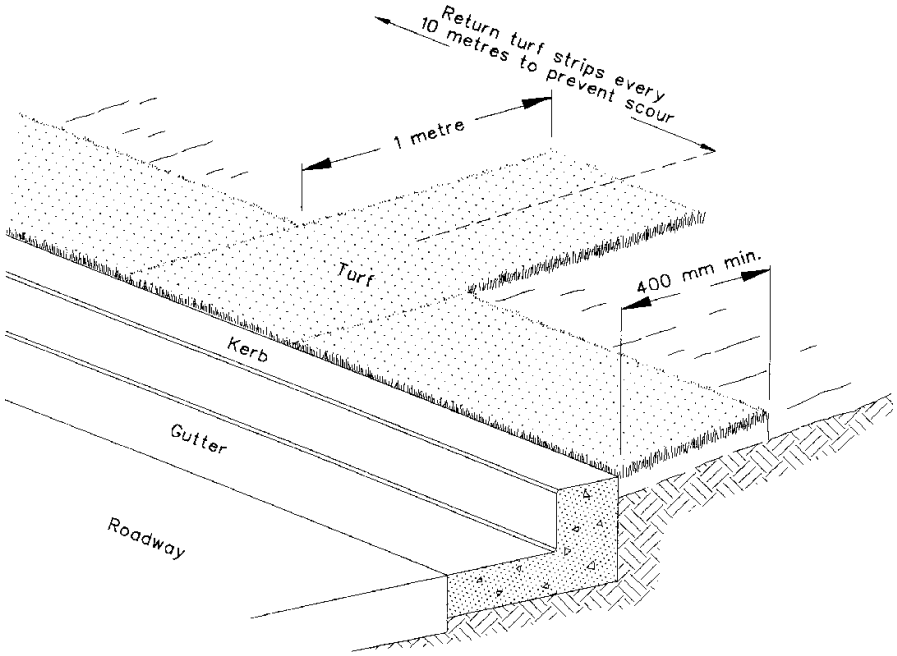
Sediment Fence (continued)

Construction Notes:

1. construct the sediment fence as close as possible to parallel to the contours of the site
2. drive 1.5m long star picket into ground, 3m apart
3. dig a 150mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched
4. backfill trench over the base of fabric (where the sediment barrier has to be located on hard pavement that cannot be trenched, a gravity system held firm by its weight eg: gravel sausage can be used.)
5. fix self supporting geotextile to upslope side of posts with wire ties or as recommended by geotextile manufacturer
6. join sections of fabric at a support post with a 150mm overlap

Grass Strip Filters

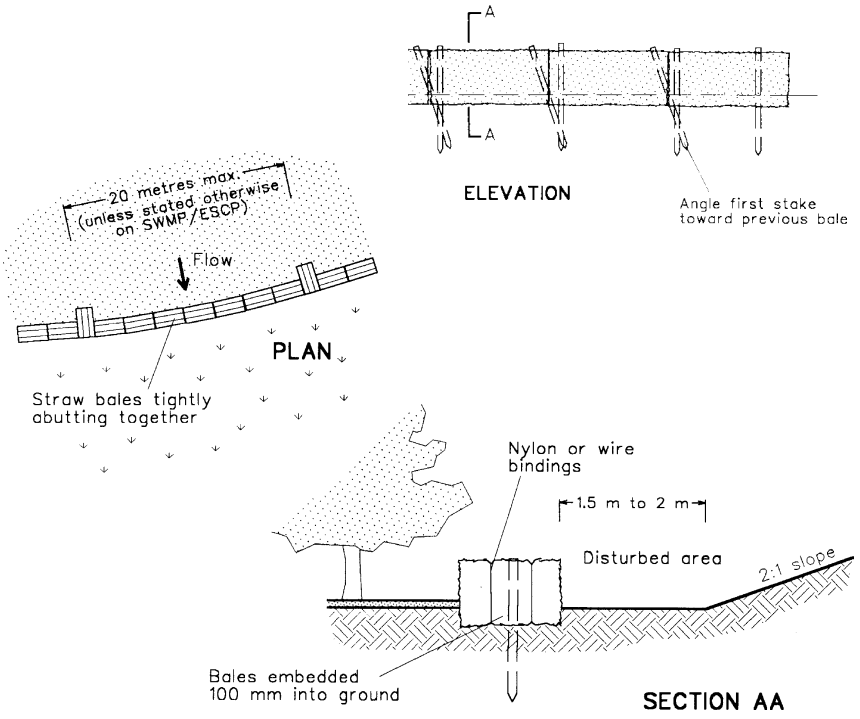
These are strips of undisturbed vegetation or grass planted down slope from earthworks. They provide a simple method of trapping coarse sediment. The flatter and wider the strips are, the more effective they become. They are only suitable on low grades. A 400mm wide grass strip between the kerb and the footpath can be a good last resort sediment control, filtering the water before it enters the stormwater system.



Straw Bale Filters

These are straw bales tightly abutted together and partially buried into the ground. They are only suitable for low flows. Filter fabric can be placed in front of them adding to the sediment stoppage. It is recommended that at least 4 bales are used as during a storm any less result in the water simply hitting the bales and flowing around them. This defeats the purpose of using them, which is to slow the water and have it filter through the bales with the sediment settling out.

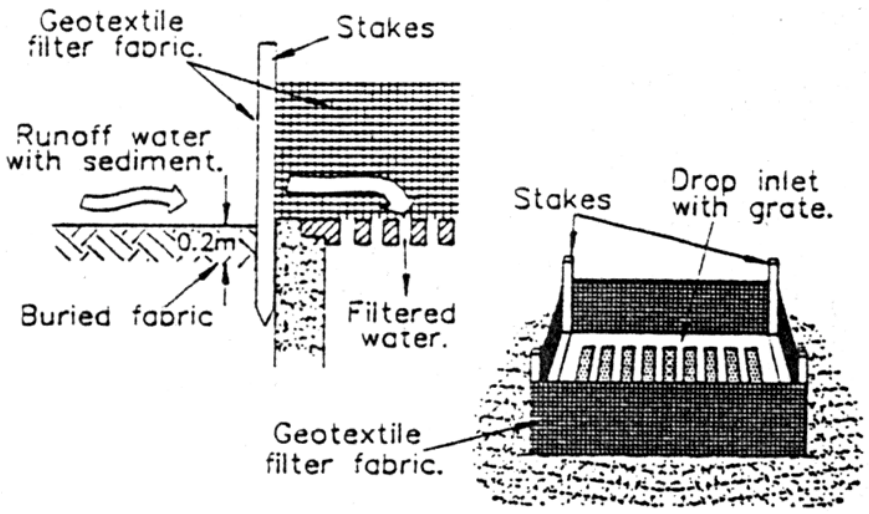
Straw bales are usually used incorrectly. Seek Council guidance if unsure.



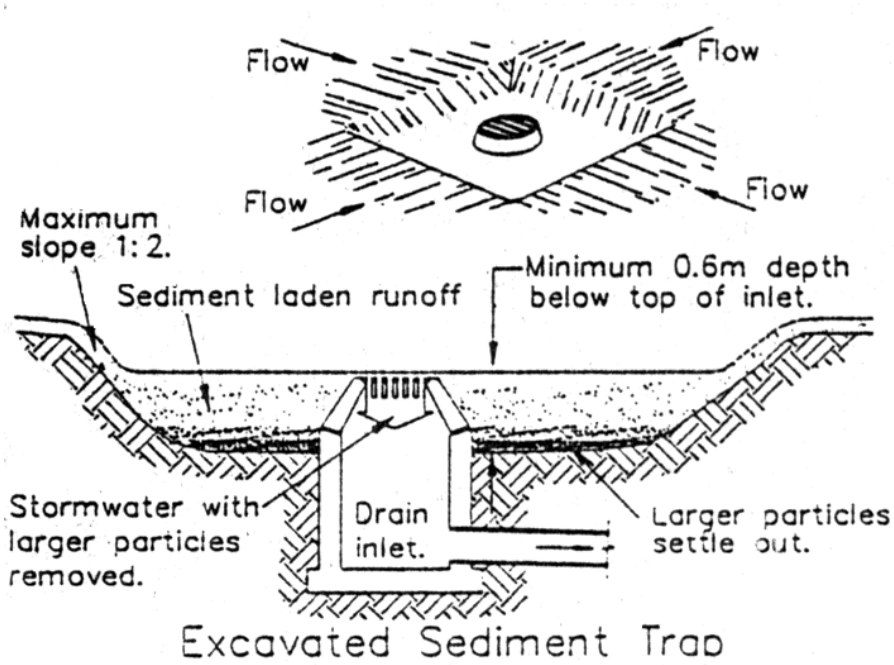
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Version: 1, Version Date: 18/11/2021

Sediment Traps / Ponds

These are basins designed to capture a concentrated sediment laden flow and store it under still conditions enabling the silt to deposit at the bottom of the trap. The effectiveness of the traps to remove fine particles may be improved by the placement of filter fabric along the uphill face of the embankment.



Geotextile Filter Fabric Drop Inlet Sediment Trap.



Excavated Sediment Trap

Maintenance of the sediment controls:

Sediment controls will naturally fill up with sediment and need to be maintained to stay effective. This involves removing the built up sediment as well as ensuring that they are still in good working condition.

Often sediment controls will be moved during works and they should be checked daily to ensure they have been put back in place properly.

Straw bales deteriorate and can end up polluting waterways. Their average life is 3 months and should be inspected regularly. Enclosing bales in sediment fence reduces this risk. At the end of their life they can be used as mulch on gardens. Sediment fences should also be checked regularly for holes.

Some Councils do not allow straw bales to be used, so check with them when planning your controls.

Soil and water controls should be kept in place until works are completed. If landscaping is not completed prior to handover ensure that the new owners are aware of their responsibility to prevent pollution from entering the stormwater system.

DO IT RIGHT ON SITE
ENVIRONMENTAL INFORMATION FOR BUILDERS

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Suppliers of Sediment Control Equipment

There are a large number of companies that supply sediment control equipment listed in Outdoor Design Source and the Yellow Pages. While we do not necessarily endorse any particular company or product we thought it useful to list some company details as a starting point for you:

Total Erosion and Pollution ph: 02 9524 0155

GSE Lining Technology ph: 02 9821 2977

Hardware House

Maccaferri Pty Ltd ph: 02 9648 3800

Mulch Mat Products ph: 02 9905 5344

Naturelink Environmental ph: 02 4578 4588

Polyfabrics Australia Pty Ltd ph: 02 9829 5599

Spraygrass Landscapes ph: 02 9627 4352

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Soil and Water Management Plans

'Do it right on site' is a project to help the construction industry protect the environment and achieve the many benefits that come from doing so.

Soil and Water Management Plans

What are they?

A Soil and Water Management Plan (also called an erosion and sediment control plan) is the formal plan designed to control erosion and sedimentation on a building site. It details the specific methods of erosion and sediment control that will be used to meet the specific site conditions at the various stages of construction. A Soil and Water Management Plan will be required by Council prior to issuing a construction certificate (either at DA stage or as a condition of consent).

Why are they important?

The Building and Construction Industry has a large impact on the environment, in particular our waterways. Sand, soil, cement slurry, paint and other building materials that enter our waterways kill fish and aquatic plants, silt up streams, and block stormwater pipes, leading to increased flooding. Due to the high number of construction sites even small amounts of pollution from each site is enough to cause significant damage to our waterways. Soil and Water Management Plans help in reducing pollution from building sites.

Fact Sheet 15

What do I need to do?

Develop a Soil and Water Management Plan along with other site documentation. The plan needs to include a minimum of:

- Basic site information
- Property boundary
- North point
- Contours initial and final
- Date
- Author
- Construction details
- 'Site' or 'disturbed area'
- Vehicle access point
- Location of stockpiles and secure chemical storage area
- Location and details of all temporary and permanent soil and water management controls
- Staging of works - the Soil and Water Management Controls will need to be altered as the site is developed and drainage patterns altered. The phases and controls to be used for each phase should be specified (major projects only)
- Location of all drains, downpipes, pits and watercourses
- Location of vegetation to be removed
- Revegetation program
- Stormwater management
- Integration with onsite detention / infiltration
- Stormwater discharge point if proposed

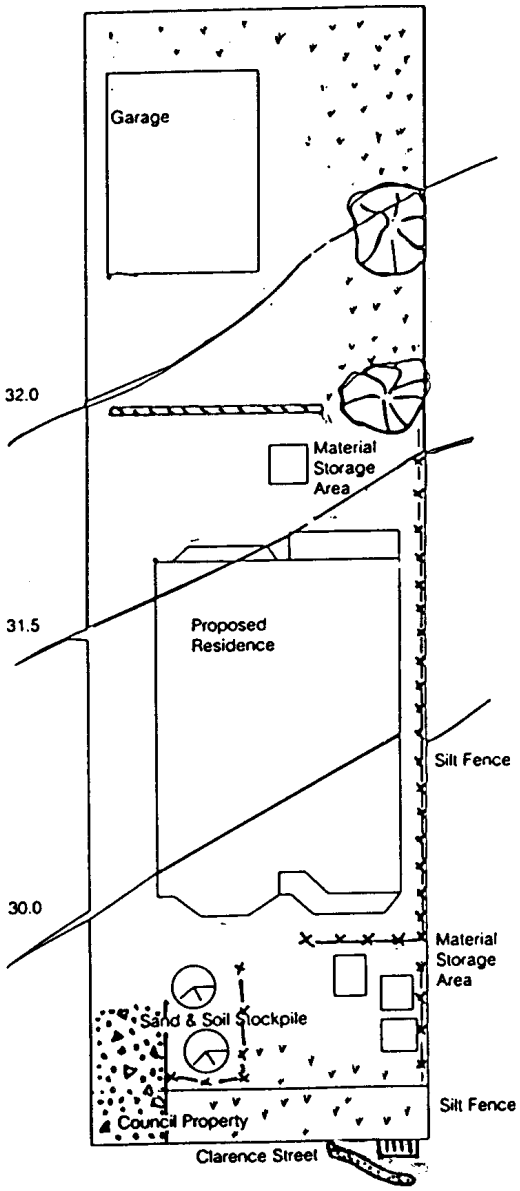
Other details may be required depending on the scale of the development and the specific requirements of the site- Council can advise on this and provide you with example Plans. Remember the example Plan will need to be modified to meet the needs of your specific site.

Councils may accept written plans stating what you will do to control sediment and erosion for smaller sites and developments that involve a minimum amount of earthworks, clearing or delivery of building materials. Contact the local Council for more information.



Example: Soil & Water Management Plan for Larger Sites

sample only



Note

1. All erosion and sediment control measures to be inspected and maintained daily by site manager
2. minimise distrubed areas
3. all stockpiles to be clear from drains, gutters and footpaths
4. drainage is to be connected to stormwater system as soon as possible
5. roads and footpath to be swept daily
6. If you do not comply you may be liable to a $750 or $1500 fine

Legend

Undisturbed vegetation

Silt Fence

Stockpiles

Gravel access

Geotextile fabric filled with gravel

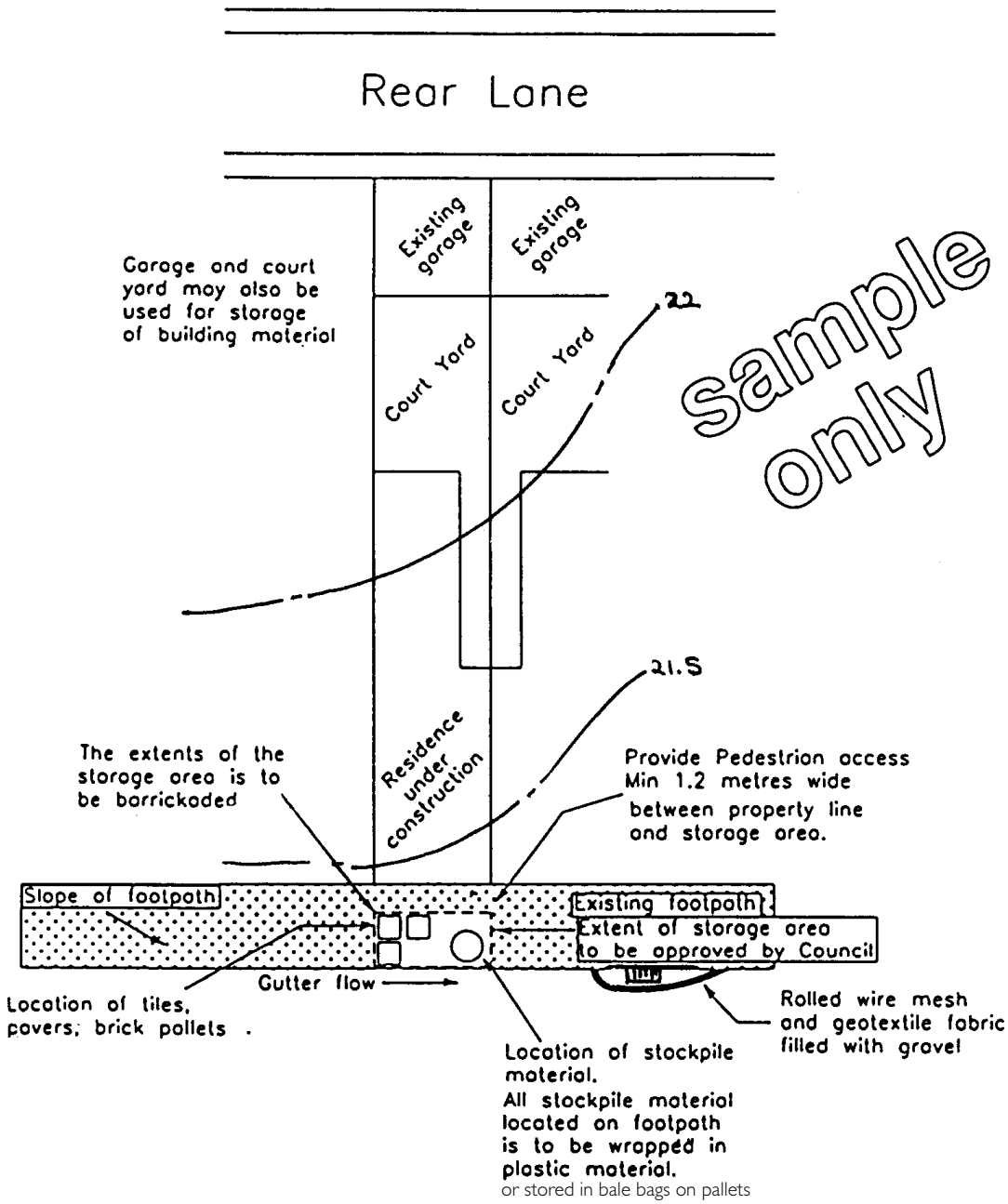
water diversion

Stormwater pit

Drawn by: Mr House Date: 02/08/00	Location: 3 Smith Street, Bankstown	Scale: Not to Scale	Applicant: Mr Andrews

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Example: Soil & Water Management Plan for Small Restrictive Site



Note

1. All erosion and sediment control measures to be inspected and maintained daily by site manager
2. Existing garage and court yeard can be used as storage area for building materials
3. Council approval must be obtained prior to the placement of any materials on the footpath
4. all stockpiles to be clear from drains, gutters and footpaths
5. drainage is to be connected to stormwater system as soon as possible
6. roads and footpath to be swept daily
7. If you do not comply you may be liable to a $750 or $1500 fine

Legend

Stockpiles

Geotextile with gravel

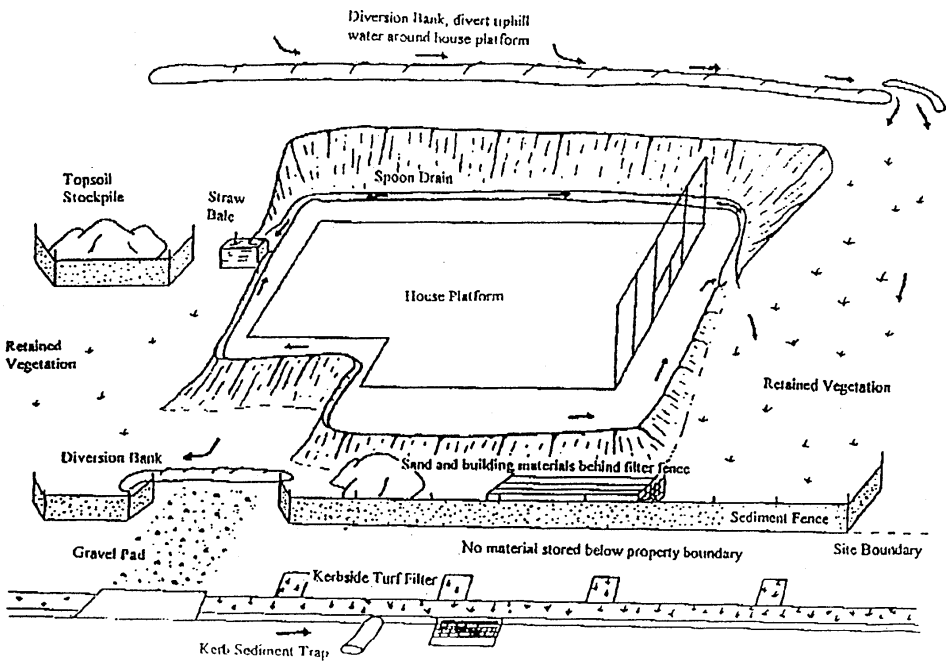
Footpath

Stormwater pit

Drawn by: Mr House Date: 02/08/00	Location: 3 Smith Street, Bankstown	Scale: Not to Scale	Applicant: Mr Andrews

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Example: Soil & Water Management Plan for Larger Site



Remember:

Everyone has a responsibility to protect the environment. The site supervisor is required to make sure that all workers, including sub-contractors are doing the right thing and all workers are required to notify their supervisors and Council if they see pollution occurring.

It is illegal for any substance other than rainwater to enter the stormwater system. If you do have an accident and pollution occurs you are required by law to notify the Council so that they can work with you to minimise any harm to the environment.

Penalties for polluting the stormwater system range from $750 on the spot fines to $1 million and seven years in gaol. Both companies and individuals can be fined.

Council Officers and the EPA enforce the environmental legislation and do routine inspections of building sites. They can issue notices to make companies clean up sites, change the way they are managing the sites and if necessary, cease work. They will attempt to work with you but penalties will be issued if a satisfactory environmental outcome is not achieved.

List of fact sheets available from Council:

1. Diversion of Upslope Water
2. Dust Control
3. Early installation of Roof Drainage
4. Excavation Pump Out
5. Protected Concrete, Brick and Tile Cutting
6. Protected Concrete Delivery
7. Protected Service Trenches
8. Protected Stockpiles
9. Protected Wash Areas
10. Protected Waste Management and Chemical Storage
11. Protecting Vegetation
12. Protection of Gutter and Street Stormwater Drains
13. Protection of Site Stormwater Pits
14. Sediment Controls
15. **Soil and Water Management Plans**
16. Stabilised Site Access

For further information on preventing pollution from building and construction sites contact your local council:

'Do it right on site' is funded by the Natural Heritage Trust and the Southern Sydney Regional Organisation of Councils – Bankstown, Botany Bay, Canterbury, Hurstville, Kogarah, Marrickville, Randwick, Rockdale, South Sydney, Sutherland Shire, Waverley and Woollahra.

THE DRAIN IS JUST FOR RAIN

Southern Sydney Regional Organisation of Councils

Stablised Site Access

'Do it right on site' is a project to help the construction industry protect the environment and achieve the many benefits that come from doing so.

Stablised Site Access

What is it?

A single entry/exit point for the site that is stabilised to reduce the tracking of sediment off the site on to Council's road and the stormwater system.

Why is it important?

A stabilised track allows vehicles to enter and exit the site safely during all weather conditions without either destroying valuable grass or carrying large amounts of mud and dirt on to the paved road surfaces. It provides a clean, dry surface for vehicles to enter and unload. The stabilised site access has a rough coarse surface which traps mud from vehicle tyres as they roll across it.

Mud and dirt have significant impacts on our waterways. They smother animals and plants that live on the bottom of creek beds. They settle and make the creek shallower. Many native plants and animals can not survive this and die. Even though mud and dirt are 'natural' they are still serious pollutants that must be prevented from entering our waterways.

What do I need to do?

Before building commences:

Identify the best location to place the entry/exit point- ideally it should be in an elevated position with little or no water flowing to it from upslope and away from any down slope stormwater pits. All deliveries should be able to be made through this point. Document it on your Soil and Water Management Plan and ensure staff are aware of its importance.

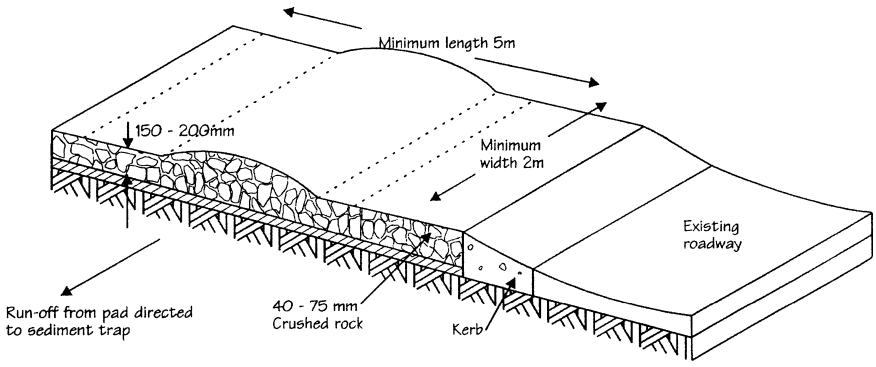
Installing the stablised access point:

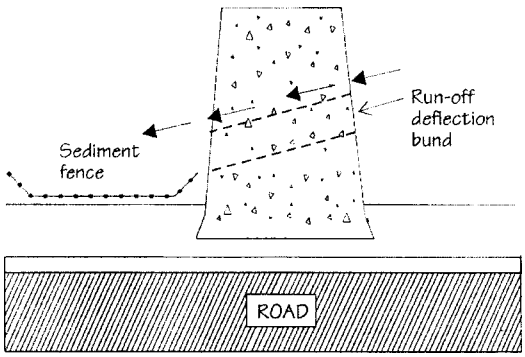
The recommended construction method for stabilising the access point is laying down 200mm of aggregate or recycled concrete greater than 40mm in size. (note: crushed sandstone is not suitable).

Where the access area slopes toward the road, a diversion hump should be installed across the stabilised area to direct stormwater run-off to the side where it can be filtered by a sediment fence. If the construction process enables it the permanent driveway can be laid and used as the access point.

Construction notes:

1. Strip at least 150mm of topsoil, level area and stockpile in space available
2. Compact subgrade
3. Cover area with needle punched geotextile
4. Construct a 200mm thick pad over geotextile using aggregate at least 40mm in size. Length ideally from kerb to building footprint.
5. Construct diversion hump 300mm thick immediately within boundary to divert water to a sediment fence or other sediment trap





Fact Sheet 16

On larger sites cattle grid or shaker grids can also be installed at the access point. These allow the wheels to turn a couple of times and shake off excess dirt. If mud still remains wheels can be washed as long as the wash water does not drain to the street. It should drain to a detention area on site to allow the sediment to settle out and the water to evaporate or can be pumped into undisturbed grassed areas where it can soak into the ground.

Maintenance of the stabilised access point:

As vehicles use the stabilised access point they will slowly compact the gravel or rock. If the access point becomes smooth it will no longer help control sediment as it is the rough surface that slows water flows and shakes off mud and dirt from tyres. It is therefore important to monitor the surface of the access point and to add new gravel or rock as needed. Roads should be inspected for any sediment that has escaped the site at the end of each day and swept if necessary. This should also be done when ever rain looks likely.



Remember:

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It is illegal for any substance other than rainwater to enter the stormwater system. If you do have an accident and pollution occurs you are required by law to notify the Council so that they can work with you to minimise any harm to the environment.

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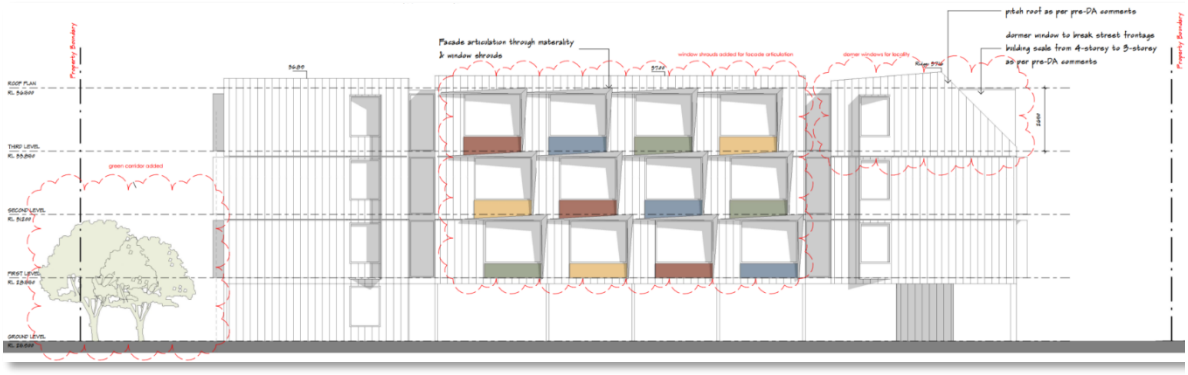
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Southern Sydney Regional Organisation of Councils

Clause 4.6 Written Request to vary Maximum Building Height

10-11 Railway Street, Werrington

Construction of a Boarding House



Draft: 20 September 2021

Prepared for: Level Architect

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

1.0 Introduction

This Clause 4.6 Written Request to Vary a Development Standard has been prepared by TBA Urban on behalf of Level Architects and the landowner for the construction of a boarding house at 10-11 Railway Street, Werrington ('the subject site').

This request seeks to vary the building height development standard as prescribed under Clause 4.3 Height of Buildings of the *Penrith Local Environmental Plan (PLEP) 2010*. The variation request is made pursuant to Clause 4.6 of the *PLEP 2010*.

The proposed construction of a boarding house will provide 69 affordable rooms (including a manager's room), each equipped with a private bathroom, kitchen, and laundry. The boarding house will provide additional housing options within the Werrington area. Werrington is expected to experience significant growth and the provision of affordable housing options will be beneficial.

2.0 Summary

The proposed development is as described within the Statement of Environmental Effects (SEE), and further detailed within the Neighbourhood Analysis (both documents prepared by TBA Urban). This variation request is to be read in conjunction with both the SEE and Neighbourhood Analysis.

The request to vary the Building Height development standard relates to the top floor of the boarding house, which has a maximum height of 37.850RL, as a result of the lift overrun (see Image 1.). The remainder of the actual building has a maximum building height of 37.00RL (see Image 2.). The proposed building contravenes the maximum building height development standard by 3.1m (36.5%) at the top of the building wall, and 3.75m (or 44%) at the lift overrun.

The previously approved a three-storey residential flat building (DA12/0282) had a maximum with a cascading pitched roof that had a maximum ridge line of 38.26m AHD which which is a building height of about 12.36m. This approved height represents a variation of 3.84m (or 48%) to the maximum building height standard of 8.5m.

Shadow Diagrams have been prepared and are included within the accompanying set of architectural drawings (see Images 3., 4. and 5.). As the proposed boarding house is a new building on a vacant site, it is not unreasonable to expect some impacts to solar access of adjoining properties. In accordance with Built Form, Street Image and Appearance control in 5.11 Boarding Houses of the Penrith Development Control Plan 2014, the proposed boarding house affords adjoining properties with adequate solar access.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

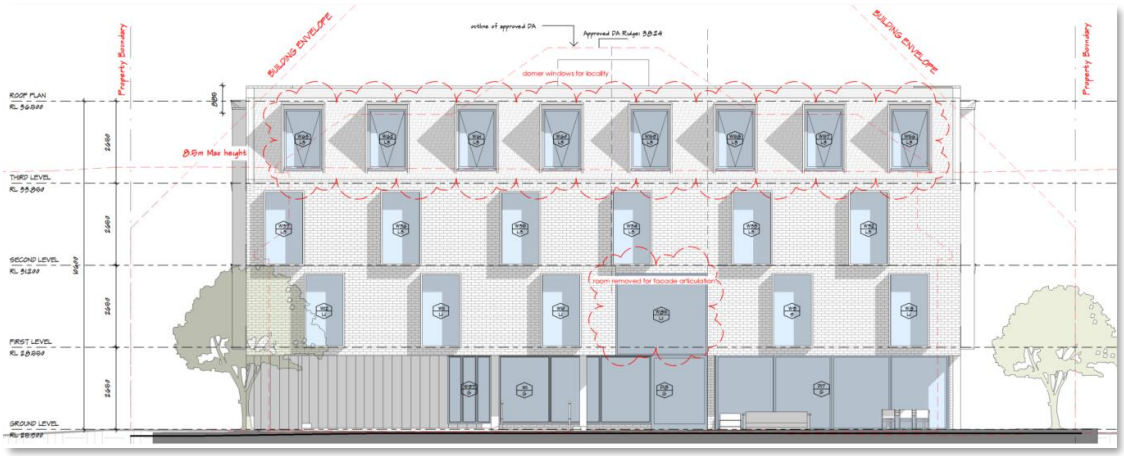
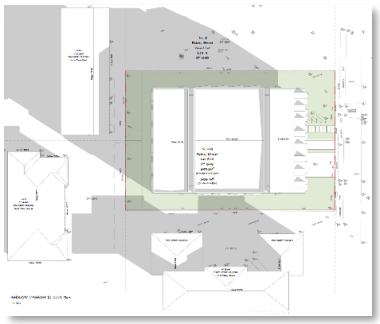


Image 1. Maximum Building Height. (Source: architectural plans prepared by Level Architects).



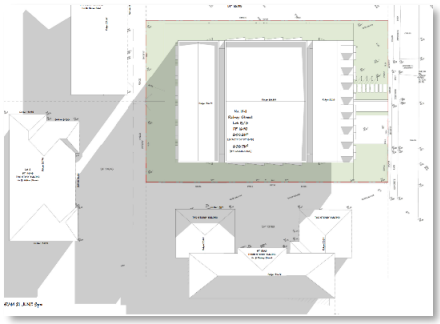
Image 2. Ridge heights. (Source: architectural plans prepared by Level Architects).



Shadow Diagram 21 June 9am



Shadow Diagram 21 June 12pm



Shadow Diagram 21 June 3pm

Images 3, 4 and 5. Shadow Diagrams (Source: prepared by Level Architects).

3.0 The Site and its Context

The subject site is rectangular in shape, with a frontage of approximately 30.480m to Railway Street. The site experiences a marginal slope, with a cross-fall from the north-eastern corner toward the rear south-western corner of approximately 0.2m. The subject site is legally referred to as Lot 5 and Lot 6 DP 1605.

The subject site is located approximately 8km east of Penrith's CBD, and approximately 49km west of Sydney's CBD. The subject site is serviced by public transport, with Werrington train station located approximately 200m away, which is around a 1-minute walk. The closest bus stop is located on the corner of Victoria Street and Kazanis Crescent, which is approximately 400m from the subject site, and is around a 5-minute walk. Further, the subject site is within proximity to a variety of community facilities, open space and recreational facilities, and community health services (Image 6).

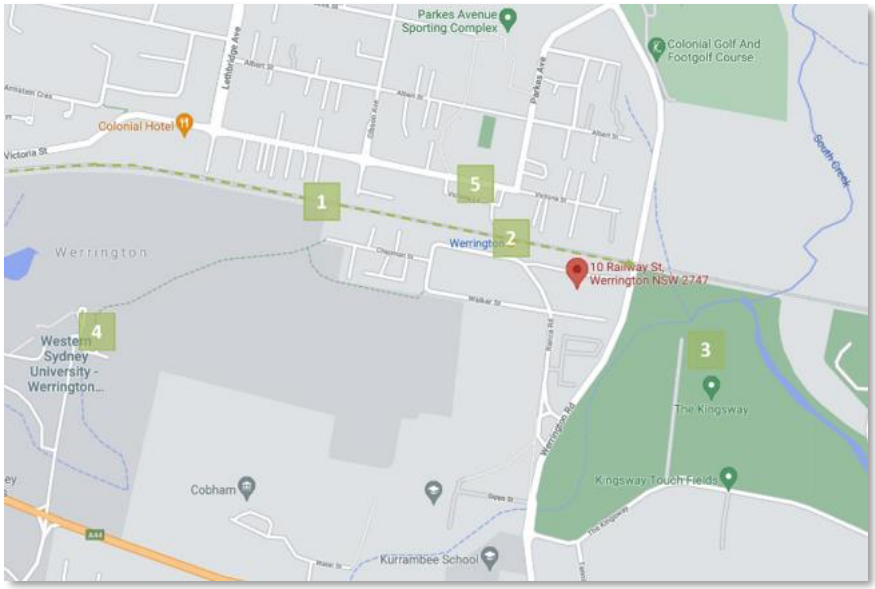


Image 6. Community Facilities (Source: Google)

1. The rail corridor (T1 North Shore & Western Line) is located across the road (north) from the subject site.
2. Werrington Train Station is, approximately, a 170m walk from the subject site along Station Street.
3. The regionally significant Kingsway Park is located to the east of the subject site. The Kingsway is approximately a 120m walk from the subject site.
4. The Western Sydney University – Werrington site is located approximately 1km south-west from the subject site.
5. Werrington neighbourhood shops are approximately a 330m walk from the subject site.

The site immediately adjoining to the east, being 8 Railway Street, is a two storey Residential Flat Building (RFB), which comprises 8 apartments. This RFB is part of the old housing stock of Werrington. Further east is 6-7 Railway Street, which comprises 5 separate terrace-style buildings.

To the south of the subject site is 13 Walker Street which is a two storey RFB, and 16 Rance Road that is also a two storey RFB.

Further to the west of the subject site at 21 Railway Street a development application (DA21/0523) has been lodged with Council which seeks consent for the construction of a three-storey boarding house, consisting of 12 rooms over ground level carparking. This is under assessment with Penrith City Council; however, it indicates the growing need for a variety of housing options in Werrington.



Image 7. Contextual site locality. (Source: Google Maps)

A detailed Neighbourhood Analysis has been prepared which further details and expands upon the proposed development and its appropriateness to the subject site and locality.

4.0 Background

A pre-DA meeting was held with members of Council's development team (Planner, Waste Officer, Building Certification Coordinator, Development Engineer, Traffic Engineer and Environmental Health and Administration Officer) on 1 April 2021. The following were the primary issues raised by Council:

- *In accordance with the Penrith DCP 2014 and State Environmental Planning Policy (Affordable Rental Housing) 2009, the boarding house must fit with the local character of the area.*

  Comment:

  A detailed Neighbourhood Character Analysis has been prepared by TBA Urban and submitted with this Development Application. The Neighbourhood Analysis succinctly details how the proposed boarding house will reasonably 'fit in' with the local character of the area and with particular reference to desired future character. In this instance, this document should be read in conjunction with the Neighbourhood Analysis and SEE.

- *The existing developments within proximity to the subject site are either single dwellings, or two storey developments with some buildings that appear as two storey developments with attic style roof designs.*

  Comment:

  The subject site is not surrounded by single dwellings. Rather, the urban fabric surrounding the subject site comprises RFBs that range between two and three storeys and two storey terrace-style dwellings (see Image 7.). The vacant site to the west has been approved for the construction of a two (2) storey RFB, with basement carparking.

  As detailed above, a Neighbourhood Character Analysis has been prepared to accompany the Development Application. The Neighbourhood Analysis details that the proposed development will be consistent with the future character of Werrington, as Werrington is expected to experience a significant increase in more affordable housing options (such as Boarding Houses, RFBs, and other medium to high density housing options).

  The design of the proposed boarding house has been adapted to address the concerns raised by Council. Some design amendments include, but are not limited to: dormer windows, recessed building façade along the elevations, and window protrusions along the eastern and western elevations.



Image 7. Aerial image showing existing residential typologies within the local area of Werrington (Source: adapted Google Map image).

A previous Development Application (DA12/0282) for the subject site was submitted to Penrith City Council for the construction of an RFB, which comprised 13 units and basement carparking. This application was approved, subject to conditions. The proposed RFB was a three-storey structure with a pitched roof design. The maximum ridge height was approved at 38.24m RL.

5.0 Consideration of the Contravention of the Development Standard

Clause 4.6 provides a mechanism to enable the flexibility of development standards in certain circumstances. Clause 4.6 also requires concurrence of the Secretary to be obtained prior to the granting of consent for development that contravenes a development standard.

The matter of concurrence of the Secretary of the Department of Planning and Environment is dealt with by Planning Circular PS 18-003 'variations to development standards', dated 21 February 2018. This circular is a notice under 64(1) of the *Environmental Planning and Assessment Regulation 2000*. A consent granted by a consent authority that has assumed concurrence is as valid and effective as if concurrence had been given.

The circular, therefore, provides for assumed concurrence. Concurrence cannot be assumed for a request for a variation to a numerical standard by more than 10 per cent if the function is to be exercised by a delegate of the consent authority.

Consideration has been given to the following matters within this assessment:

- *Varying development standards: a guide,* prepared by the Department of Planning and Infrastructure, dated August 2011.
- Relevant judgements issues by the New South Wales Land and Environment Court (NSWLEC).

Consideration 1. What is the name of the environmental planning instrument that applies to the land?

Comment:

Penrith Local Environmental Plan 2010 (PLEP 2010).

Consideration 2. What is the zoning of the land?

Comment:

R3 Medium Density Residential.

Consideration 3. What are the objectives of the zone?

Comment:

- To provide for the housing needs of the community within a medium density residential environment.
- To provide a variety of housing types within a medium density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To provide for a concentration of housing with access to services and facilities.
- To enhance the essential character and identity of established residential areas.
- To ensure that a high level of residential amenity is achieved and maintained.

- To ensure that development reflects the desired future character and dwelling densities of the area.

Consideration 4. What is the development standard being varied?

Comment:

Maximum Height of Buildings.

Consideration 5. Under what clause is the development standard listed in the environmental planning instrument?

Comment:

Clause 4.3 of the PLEP 2010.

Consideration 6. What are the objectives of the development standard?

Comment:

a) to ensure that buildings are compatible with the height, bulk and scale of the existing and desired future character of the locality,

b) to minimize visual impact, disruption of views, loss of privacy and loss of solar access to existing development and to public areas, including parks, streets and lanes,

c) to minimize the adverse impact of development on heritage items, heritage conservation areas and areas of scenic or visual importance,

d) to nominate heights that will provide a high-quality urban form for all buildings and a transition in built form and land use intensity.

Consideration 7. What is the numeric value of the development standard in the environmental planning instrument?

Comment:

The prescribed maximum height of building standard applying to the subject site is 8.5m.

Consideration 8. What is the proposed numeric value of the development standard in your development application?

Comment:

The proposed boarding house will have a maximum height of approximately 11.6m, when measured from the top of the building wall, which is an exceedance of 3.1m, and 12.25m when measured at the lift overrun (being an exceedance of 3.75m.

Consideration 9. What is the percentage variation (between your proposal and the environmental planning instrument)?

Comment:

This presents a variation of 36.5% measured from top of wall, and 44% when measured from the lift overrun.

Consideration 10. Clause 4.6(3)(a) Compliance with the development standard is unreasonable or unnecessary in the circumstance of the case.

Comment:

Compliance with the maximum building height as prescribed under Clause 4.3 Height of Buildings of *PLEP 2010* is considered unreasonable or unnecessary in this circumstance for the following reasons:

(a) Achievement of R3 Zone and Development Standard objectives

- Despite the height exceedance, the proposed development achieves consistency with the objectives of the building height development standard and the land use zone objectives (refer to detailed discussion in Section 7.1 and 7.2, respectively).

(b) Residential Amenity

- The proposed height exceedance does not result in any unreasonable amenity impacts, such as visual and/or acoustic privacy, view loss impacts, and unreasonable shadows. Refer to accompanying shadow diagrams illustrating all adjoining property achieve the minimum solar access.
- The communal private open space area is located on ground floor and no roof top communal open space areas are proposed. In this regard, the height exceedance will not result in additional acoustic impact. The accompanying Plan of Management will further ensure appropriate acoustic amenity is maintained.
- The inclusion of a 'green corridor', will provide opportunities for landscape screening to further increase privacy between rear adjoining properties. The addition of appropriate window treatments can also reduce any potential for direct overlooking.
- The adjoining properties do not currently experience any significant or remarkable views of landmarks within the immediate vicinity. The spatial separation between the existing and proposed building will allow for a reasonable sharing of views around the proposed development.
- Solar access to adjoining properties will be impacted. However, this is not a direct result from contravening the height of buildings development standard. Rather, impacts to solar access of adjoining properties is expected as the site is currently vacant, therefore any development would create solar access impacts. The shadow diagrams provided indicate the shadows cast to adjoining properties, however, the proposal achieves compliance with the requirements for solar access as outlined within the Penrith DCP 2014, 5.11 (2) Built Form, Street Impact and Appearance.
    - East adjoining development (8 Railway St) will receive solar access from 9am -1pm.
    - South adjoining development (16 Rance St) will receive solar access from 12pm – 3pm.
    - South adjoining development (13 Walker St) will receive solar access from 9am – 2pm.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

(c) Compatibility with Urban Context

- Given the land use zone and the expected increase in medium to high density residential development within the Werrington area, the proposed building height is contextually appropriate. The existing immediate urban context does not represent the full development of the R3 Zone land use and the remnant single dwelling houses are likely to experience redevelopment for higher order uses such as town houses and apartment blocks.
- The proposal generally fits within with the prescribed building envelope of the DCP (refer to Figure D5.4 of Section 5.11). This suggests that the DCP already contemplates greater heights within the R3 zoned land.

(d) Acceptable difference in Height Plane

- On the basis of the outcome of *Project Venture Developments v Pittwater Council* [2005] NSWLEC 191, compatibility does not mean 'sameness', and a gradual increase in height can readily be accepted in demonstrating compatibility with the local character and immediate urban fabric. The proposal, despite being four stories with a flat roof design is only 1.39m taller than the ridge line, and about 3.5m taller that the gutter line of the existing development at 8 Railway St. This height difference equates to about one level which is generally an acceptable height difference between adjoining developments.
- The proposed height of the building will fit within the existing visual plane that is anchored by the existing 20m gum trees that are located along the rail corridor within the streetscape. Despite the height variation the building will not be the tallest element in the immediate streetscape.

(e) Enhanced streetscape

- Despite the height variation, the proposed development will be a positive contribution to the existing streetscape, as it is quite baren, but also reflects the desired future character for Werrington being a strategic centre.
- The proposal will assist in creating a more congruent streetscape and consistent urban fabric through the provision of established side and front setbacks that in turn creates a consistent urban rhythm of between built form and setback space.
- The proposed development includes the provision of deep soil front setback area, as well as the inclusion of a 'green corridor' within the rear setback area. The 'greening' of the subject site enhances the streetscape and provides visual relief of the built form when viewed from adjoining private properties, and public places.
- The subject site fronts a transport corridor. As such, there is no consistent urban form to the immediate north of the subject site. The proposed development will anchor the façade in the urban plane and will not impede on the existing streetscape by creating a built form that suffocates the urban fabric of Railway Street.

To conclude, strict compliance with this development standard is unreasonable and/or unnecessary based on the reasons detailed above. Further, should strict compliance be required,

members of the community who want to access affordable rental housing associated with a co-living arrangement within a boarding house will be adversely impacted as a direct result of the loss of at least 18 rooms should the top floor be removed. This is disproportionate to the potential adverse consequences attributable to the proposed non-compliant development. Relying upon comments made in a comparable context in *Botany Bay City Council v Saab Corp* [2011] NSWCA 308 at [15], this disproportion is sufficient to establish reasonableness to contravene the development standard.

Consideration 11. Clause 4.6(3)(b) There are sufficient environmental planning grounds to justify contravening the development standard.

Comment:

It is determined that the variation is well-founded and is worthy of Penrith City Council's approval.

The proposed development seeks to provide sufficient building height to meet anticipated development needs for the foreseeable future and provide for an expected intensification of developments within the R3, and surrounding zone R4 High Density Residential, zone. The provision of 69 rooms within the boarding house (including the manager's room) will be commensurate with the capacity of existing and planned infrastructure of the Werrington, and wider Penrith, area. As indicated in the SEE and Neighbourhood Analysis, the overall design of the proposed boarding house reflects a high-level of modern architecture that is a welcomed departure from the old-style housing stock in the area.

The particulars are as follows:

(a) Desired Future Character

- The growth earmarked for Werrington will influence the ultimate character of the neighbourhood.
- Consideration must be given to the changing nature of Werrington, and the wider Penrith LGA. Census data indicates that there is a growing need for single-occupant dwellings within the Werrington area. The proposed boarding house reflects the housing needs of the current and expected future community.
- The proposed development is considered to represent the desired future local character of the area, as driven by the strategic objectives for Werrington and demonstrated by past community consultations undertaken for the Werrington Enterprise Living and Learning Precinct Strategy (2004), the Penrith Urban Design Study (2009), and more recently the Penrith Local Strategic Planning Statement (2019).
- The proposal utilizes contemporary architectural style that are representative of the current preferences of the construction and consumer market. This includes aspects such as dormer windows to the top-floor, and the contemporary box-style windows to the remaining windows along the northern elevation provides a high-level of articulation to the building.
- The State Environmental Planning Policy (Affordable Rental Housing) SEPP incentivise the provision of affordable housing by the private sector of by providing additional GFA for

boarding houses above the otherwise applicable development standards that determine the building envelope for a particular site. This too must be factored into any consideration of what constitutes the 'desired future character' of an area.

- The consideration of desired future character to vary maximum building height and FSR exceedance have been accepted has appropriate justification in recent case law (*Big Property Pty Ltd v Randwick City Council [2021], HPG Mosman Projects Pty Ltd v Mosman Municipal Council [2021]* and *SJD DB2 Pty Ltd v Woollahra Municipal Council [2020]*).

(b) Improved social benefits (housing affordability):

- Housing affordability is another major issue across NSW, but particularly in the Sydney metropolitan area. Home ownership rates in NSW are falling and there is a widening gap between dwelling prices and incomes. In the rental sector, households are needing to spend a greater proportion of their income on housing.
- The boarding house will provide 69 rooms (including one manager's room) within an area that is showing great need for affordable housing, thus delivering increased social benefits to Werrington.
- A Boarding House is a desirable housing typology, as the largest household type in Werrington are lone-persons which make up 27.7% of the community (Australian Bureau of Statistics [ABS] 2016 Census Data). This is a stark contrast to the general household make-up of greater Sydney which has an average lone-persons household of 20.4% (Australian Bureau of Statistics [ABS] 2016 Census Data).
- The greatest employment sectors in Werrington are nursing and other healthcare professionals and retail employees. These employment sector require long working hours and, therefore, low maintenance housing is ideal for these workers. The data clearly indicates that Werrington is in need of more affordable housing options, which can be delivered through the proposed development of a Boarding House. And, as clearly indicated in this document, the SEE and Neighbourhood Analysis, the subject site is an ideal location for such a development.
- Should Council not consent to the variation by requiring strict compliance with this development standard, then the proposed 18 affordable housing rooms will no longer be an option for the community. This outcome would contravene and undermine the following important statutory aims and objectives:
    - 'to promote the delivery and maintenance of affordable housing' – section 1.3(d) of the *Environmental Planning and Assessment Act 1979* ('the Act').
    - 'to facilitate an expanded role for not-for-profit providers of affordable rental housing' – section 3(e) of the *State Environmental Planning Policy (Affordable Rental Housing) 2009* ('SEPP ARH 2009').
    - 'to accommodate and support Penrith's future population growth by providing a diversity of housing types, in areas well located with regard to services, facilities and transport, that meet the current and emerging needs of Penrith's communities and

safeguard residential amenity' – section 1.2(2c) of the *Penrith Local Environmental Plan 2010* (PLEP 2010).

- 'to provide for the housing needs of the community within a medium density residential environment'; 'to provide a variety of housing types within a medium density residential environment'; and, 'to provide for a concentration of housing with access to services and facilities' – Land Use Table Zone R3 Medium Density Residential of PLEP 2010.

- The contravention of the maximum building height does not give rise to any unreasonable environmental impacts that would be cause for concern and will be able to deliver a greater portion of housing accommodation that greatly needed in the local area. The proposal, with the height variation, therefore delivers greater social benefits without an increase in unreasonable environmental impacts.

(c) Delivery on strategic objectives and longer-term vision:

- Council's Local Strategic Planning Statement (LSPS) included community consultation activities. The key comments made, and ideas raised, by the community in response to the draft LSPS indicated the following: 'facilitate sustainable housing and provide new homes to meet the diverse needs of the growing population'. The provision of a Boarding House on the site aligns with the community sentiments for Werrington.
- The LSPS includes greater connection to the rest of greater Sydney, including proposed infrastructure such as the North-South Rail Line (Image 8.) and the rapid transit connection between Penrith and Wester Sydney Airport. This further encourages Council to consider the growing needs to provide appropriate housing typologies that connects with the proposed transport infrastructure (Transport Orientated Development).
- The future strategic direction of Werrington shows that the construction of a Boarding House on the subject site is ideal as it delivers additional housing diversity and will deliver on housing objectives of Werrington.

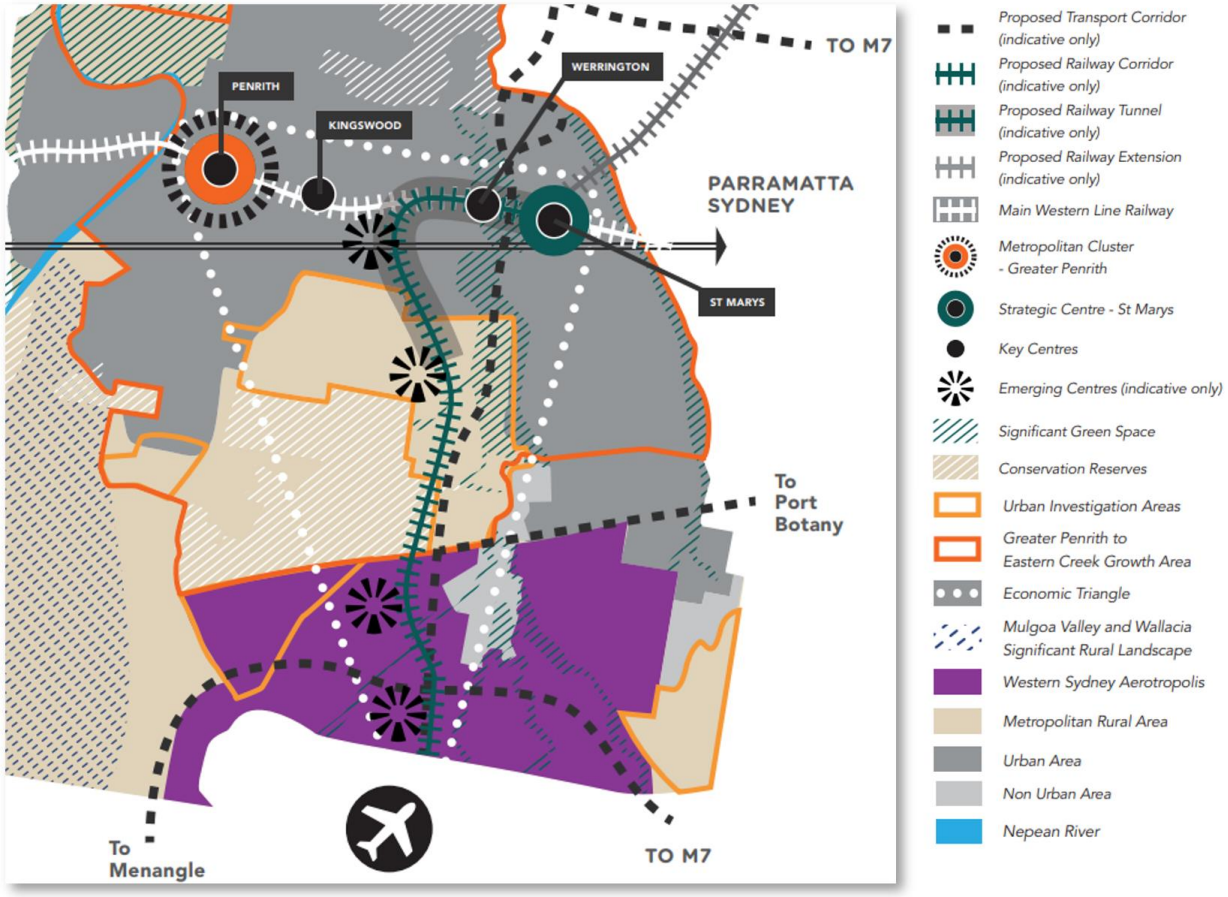


Image 8. Extract of Map 2 from the Penrith LSPS.

(d) Public Interest:

- One of the primary considerations under section 4.15 *Evaluation of the Environmental Planning and Assessment Act 1979* is whether a proposed development is in the public interest. It can be argued that as the proposed building will not give rise to any unreasonable environmental and amenity impacts and provides affordable rental rooms that addresses the growing need for housing options in Werrington, the proposed development is in the public interest.

(e) Recovery – COVID 19

- The proposed development in its current design will assist with achieving the planning policies that support creation of jobs, including for construction jobs for housing that is fit-for-purpose.
- In recent months, many people have found themselves unexpectedly out of work due to the COVID19 health and economic crisis. This has led to increased housing insecurity for many people. The delivery of 69 boarding rooms will provide much needed housing diversity for people impacted by COVID 19 and its health order mitigation measures.

6.0 Consideration of the Clause 4.6 provisions

Clause 4.6(4)(a)(ii) Will the proposed development be in the public interest because it is consistent with the objectives of the particular standard and objectives for development within the zone in which the development is proposed to be carried out?

Comment:

Yes, the proposed development is in the public interest - as detailed above, and further outlined below, under section 7.0.

Clause 4.6(5)(a) Would non-compliance raise any matter of significant for State or regional planning?

Comment:

No.

Clause 4.6(5)(b) is there a public benefit of maintaining the development standard?

Comment:

No. Strict compliance with the development standard is not in the interest of the public as the proposed non-compliance supports the delivery of 69 much need affordable dwellings in an area that has access to excellent public transport, access to shops, employment, and social infrastructure. As detailed in the upcoming section 7.0, the proposed development achieves the objectives of the development standard and the land use zone. As such, there is no public benefit in maintaining the development standard in this case, nor is there an improved benefit or outcome from a built form perspective.

Clause 4.6(5)(c) Are there any other matters required to be taken into consideration by the Secretary before granting concurrence?

Comment:

No, there are no additional matters that need to be considered.

7.0 Consistency with the Development Standard Objectives and the Zone Objectives

The below sections will detail how the proposed development achieves the objectives of both the development standard and the land use zone, as stipulated under the *PLEP 2010*.

7.1 Clause 4.3 Height of Buildings development standard objectives

(a) to ensure that buildings are compatible with the height, bulk and scale of the existing and desired future character of the locality,

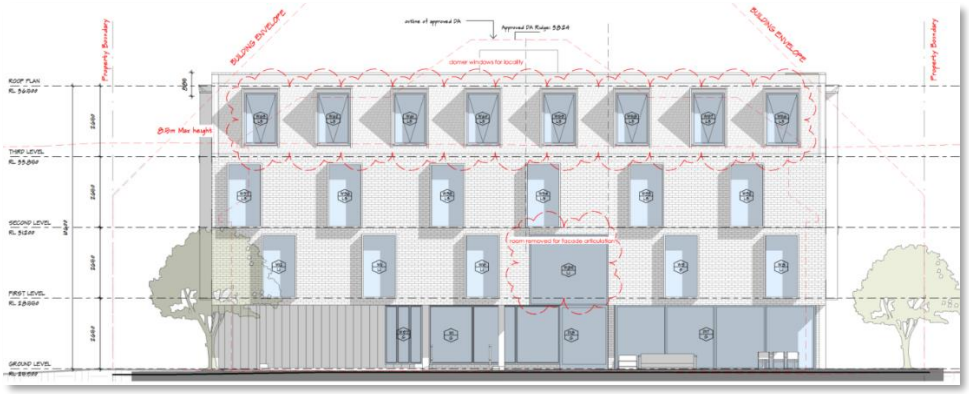
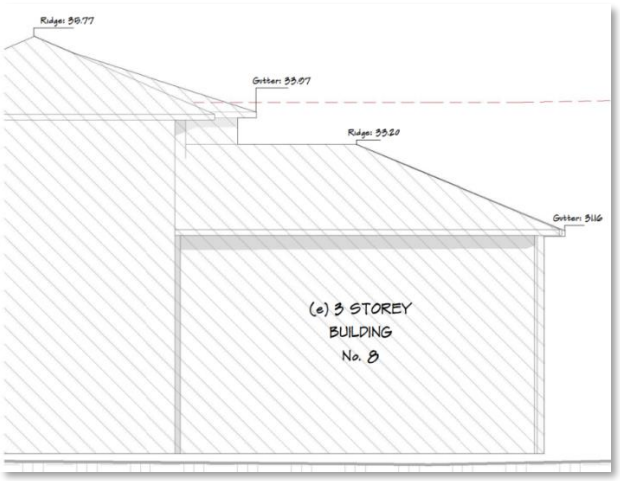
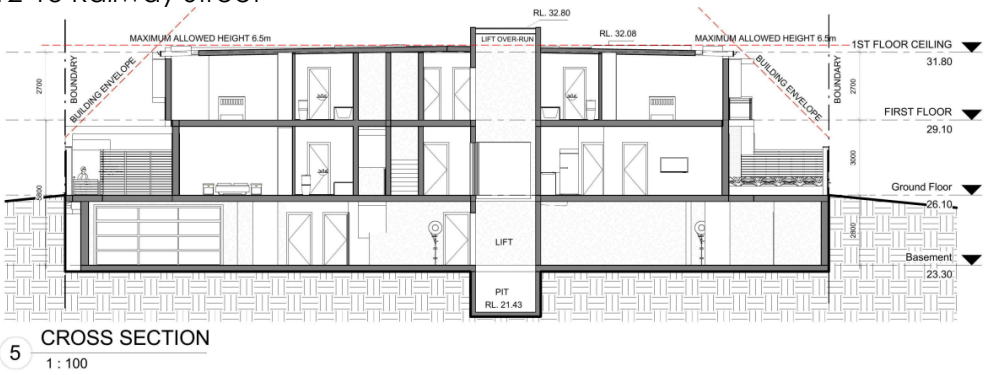
Comment:

The concept of compatibility has been the subject of case law (*Project Venture Developments v Pittwater Council* [2005] NSWLEC 191, which resulted in the Planning Principle 'Surrounding Development'). Essentially, the term 'compatibility' does not mean that every development must have the same height, bulk and scale (and other built form controls) as that of adjoining and neighbouring property, but instead providing something that is 'capable of existing together in harmony. Compatibility is thus different from *sameness*' [22]. Additionally, this case determines that buildings 'can exist together in harmony without having the same density, scale or appearance' and 'buildings do not have to be the same height to be compatible' [22]. Where there are significant differences in height, it is easier to achieve compatibility when the change is gradual rather than abrupt' [27].

The lack of a definition of 'desired future character' within the PLEP 2010 and Penrith DCP 2014 means there is a lack of consistency in development in the Werrington area. In lieu of a defined 'desired future character', we referred to the Penrith LSPS 2019 which notes that Werrington is an area of strategic importance. As such, Werrington, but specifically the subject site, is an ideal location to provide high-level housing diversity and increased housing density.

The subject site is surrounded by two and three storey residential developments (generally RFBs and townhouse-style developments). The following table details the adjoining properties (existing and approved) and their ridge heights. The table outlines that the buildings in the immediate vicinity of the subject site show a gradual change in the maximum building height.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Address	Ridge Height
Subject site (10-11 Railway Street) 	RL37.85 (proposed)
8 Railway Street 	RL35.77 (existing)
12-13 Railway Street 	RL32.80 (approved, not yet constructed)

The gradual height increases in the immediate vicinity show consistency with the 'Surrounding Development' planning principle. Therefore, the proposed maximum building height of the proposed development can, and will be, consistent with the character of the locality.

(b) to minimize visual impact, disruption of views, loss of privacy and loss of solar access to existing development and to public areas, including parks, streets and lanes,

Comment:

The portion of the proposed building that extends beyond the prescribed maximum building height will not give rise to any unreasonable amenity impacts (including visual and acoustic privacy and view loss) upon adjoining and neighbouring properties. Please refer to **Consideration 10**. for demonstration of the proposed development resulting in acceptable amenity impacts, with a focus on visual and acoustic privacy, view sharing and solar access.

Having a new residential development on the subject site will result in an activated ground plane. By having tenants exit the building and using Railway Street for pedestrian access to Werrington train station, the proposal underpins the use of the existing streetscape as well as the surrounding public areas with adequate pedestrian and vehicular links to parks.

The increased density from the boarding house is appropriate with the area and is commensurate with the existing amenities (including social infrastructure and public places). The amenities within the Werrington town centre and surrounding public open space areas will provide the future tenants of the boarding house with all necessary services and amenities required to live a healthy and balanced life.

(c) to minimize the adverse impact of development on heritage items, heritage conservation areas and areas of scenic or visual importance,

Comment:

The subject site:

- does not include any items of heritage; and,
- is not within a heritage conservation area; and,
- is not within an area of scenic or visual importance (see Image 10.).

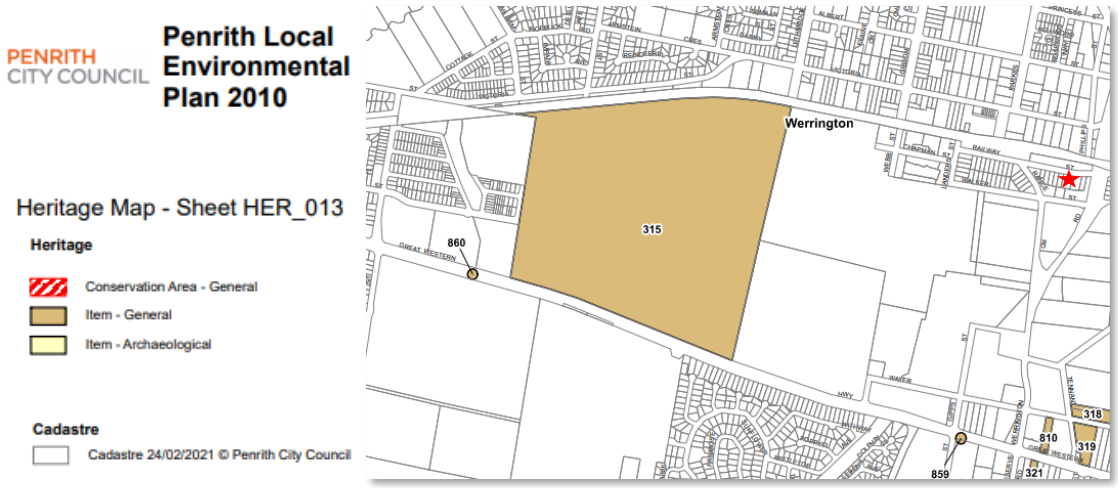


Image 10. Heritage Map (Source: Penrith Local Environmental Plan 2010 Heritage Map – Sheet HER_013)

(d) to nominate heights that will provide a high quality urban form for all buildings and a transition in built form and land use intensity.

Comment:

The proposed building height will establish a high-quality urban form through the following architectural design elements:

- Dormer windows to the top floor along the northern (front) elevation.
- Contemporary box-style recessed windows along all elevations.
- Window shroud colour treatment to the windows along the eastern and western elevations.
- Recessed building modulation at four points along both the eastern and western elevations.

These architectural treatments will provide visual interest in the building when viewed from the street frontage and adjoining public and private places.

The adjoining buildings are generally old-style housing stock. Therefore, the proposed development positively provides a high-quality urban form transition that suitably reflects the land use intensity and the expected growth of population and development within the Zone R3 Medium Density Residential area.

As noted earlier in this document, the proposal, despite being four stories with a flat roof design is only 1.39m taller than the ridge line, and about 3.5m taller that the gutter line of the existing development at 8 Railway St.

7.2 R3 Medium Density Residential zone objectives

- **To provide for the housing needs of the community within a medium density residential environment.**

  Comment:

  The suburb of Werrington is expected to experience a significant transition from single-dwelling housing to multi-dwelling housing so as to address the growing need for more affordable rental housing options. The proposed development will provide 69 rooms (one room being designated for the manager) and each are equipped with a private kitchen, laundry, and bathroom. As such, the proposal achieves this objective by providing affordable rental housing for the needs of the community within the Zone R3 Medium Density Residential.

- **To provide a variety of housing types within a medium density residential environment.**

  Comment:

  The subject site is currently surrounded by a variety of housing types, such as single dwelling houses, Residential Flat Building's (RFBs) and townhouse style dwellings. The provision of a 69-room boarding house will achieve this objective by continuing to provide Werrington with a variety of affordable rental housing options. The Boarding House Register (on the NSW

Government Fair Trading site) indicates that there are ten (10) registered Boarding Houses within the Penrith Local Government Area (seven [7] in Kingswood and three [3] in St Marys).

- **To enable other land uses that provide facilities or services to meet the day to day needs of residents.**

  Comment:

  The proposed development will provide 69 rooms for affordable rental opportunities. This will allow additional occupants to frequent local businesses within the Werrington precinct, and wider Penrith LGA. In this regard, the development will enable other land uses that provide facilities or services to meet the day to day needs of residents.

- **To provide for a concentration of housing with access to services and facilities.**
  Comment:

  The subject site is a short walk (approximately 1 minute) from Werrington train station, and approximately a 5-minute walk to bus stops that service and connect Werrington to suburbs within the wider Penrith LGA. Werrington has a small shopping precinct (Werrington Shopping Centre) which includes the following services: take away food and café services, bakery, massage services, supermarket, self-service laundromat, pharmacy and medical centre, bottle store (with ATM facilities). A short walk from the Werrington Shopping Centre is the Werrington Medical Centre (104 Victoria Street), a Post Office (108 Victoria Street), a Real Estate Agency, a Convenience Store and a food take away premises.

  As such the proposed 69 room boarding house will provide a concentration of affordable rental housing with adequate and reasonable access to vital services and facilities.

- **To enhance the essential character and identity of established residential areas.**
  Comment:

  While the subject site is located within the Zone R3 Medium Density Residential, there is not an 'essential character or identity' that has been established within the local R3 zoned area due to a lack of front setback landscape treatment, urban fabric inconsistencies, and general lack of appeal. The table below describes the surrounding existing and approved buildings (as indicated on the map in *Image 11)*.

Address	Description
14 Railway Street (Lot 22, DP 1066923)	Two (2) storey residential dwelling. The external walls are a light brick, and the roof has a slight pitch. This dwelling is a relatively modern and contemporary design. Single dwellings, however, are not commensurate of the R3 zoning and is inconsistent in this zone. Council's publicly available records do not show recent planning approvals for this site.
12-13 Railway Street (Lot 4 DP 1605 and Lot 3, DP 1605)	The site is currently vacant. An approved Development Application (DA14/0936) is applicable to this site for the demolition of existing structures and construction of a two (2) storey RFB comprising 18 units

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

	and associated basement carparking, drainage and landscaping works. Construction has not yet commenced. The approved building is a high-end contemporary design with the following architectural features: • Flat roof • Contemporary box-style balconies on the first floor and timber-fenced courtyards on the ground floor. • Louvres, awnings and roof overhangs • A variety of materials and colours to the external finishes – render and paint, brickwork, timber cladding, glass and timber fencing.
8 Railway Street (Lot 8 DP 1187252)	Two (2) and three (3) storey RFB. The external walls are a light brick colour, with beige railings to all balconies. The roof is a pitched style with terracotta tiles. The off-street parking is located on ground level and cannot be viewed from the street frontage. This RFB is characterized by the old housing stock in the Werrington area and is not generally indicative of the elevated and contemporary architecture that encompasses the future character of the Werrington area.
6-7 Railway Street (Lot 1, DP 1155992)	There are five (5) two (2) storey Terrace-style residential dwellings on the site. The style of these buildings shows architectural features to elevate the buildings and provide an attractive street frontage. The dwellings fronting Railway Street have one (1) off-street parking spaces. Such architectural features include: • Skillion and lean-to roof style • Privacy screens and awnings to the windows • Balconies • A range of external colours and materials. Council's public records do not show any recent planning approvals for this site.
5 Railway Street (Lot 11, DP 1605)	A single level brick residential dwelling. This dwelling is part of the old housing stock of Werrington, and thus does not reflect the contemporary design that is consistent with the desired future character of the area.
2-4 Rance Road (Lot 1, DP1066751)	Two (2) single storey residential dwellings within a landscaped setting. The design of both dwellings varies – 2 Rance Road has brick external walls with a detached single vehicle carport, pitched roof with terracotta tiles; 4 Rance Road has rendered external walls, attached single vehicle garage, and a pitched roof with dark tiles.
12 Rance Road (Lot 21, DP 1066923)	A single storey residential dwelling within a landscaped setting, with a single attached carport and pitched roof with dark tiles. The external

	walls are a light-coloured brick with two (2) pillars at the front of the dwelling.
16 Rance Road (Lot 100, DP 808312)	Eight (8) two (2) storey terrace-style attached dwellings, each with single attached garages. The external walls are a light orange coloured brick, with a pitched roof of brown tiles. These terraces are indicated of the old-housing stock within the Werrington area.
13 Walker Street (Lot SP 14943)	Two (2) storey RFB, comprising eight (8) apartments. The external walls are a light-coloured brown brickwork with two (2) small balconies located off the first-floor level. This RFB is reflective of the old-style housing stock in the area. There is external parking at the rear of the property. The roof is a pitched style with brown tiles.
5-11 Walker Street (Lot SP 10782)	Three (3) separate RFBs, each being two (2) storeys, with a total of 22 apartments. There are four (4) separate structures for off-street carparking to the rear of the site. Each building has the same external colours, materials and overall design – red brick with a pitched roof of dark-green roof tiles. The style of these buildings are commensurate with the old housing stock of Werrington.

The table above clearly indicates that there is a lack of continuity or consistency with the character of buildings in the Werrington area. In lieu of a definitive residential character of the subject site and its surrounds, the proposed development will favorably enhance the area through good architectural design, and it will improve the housing stock of the area. The proposal will add to the desired future character and assist in providing a high-level contemporary identity for this block.

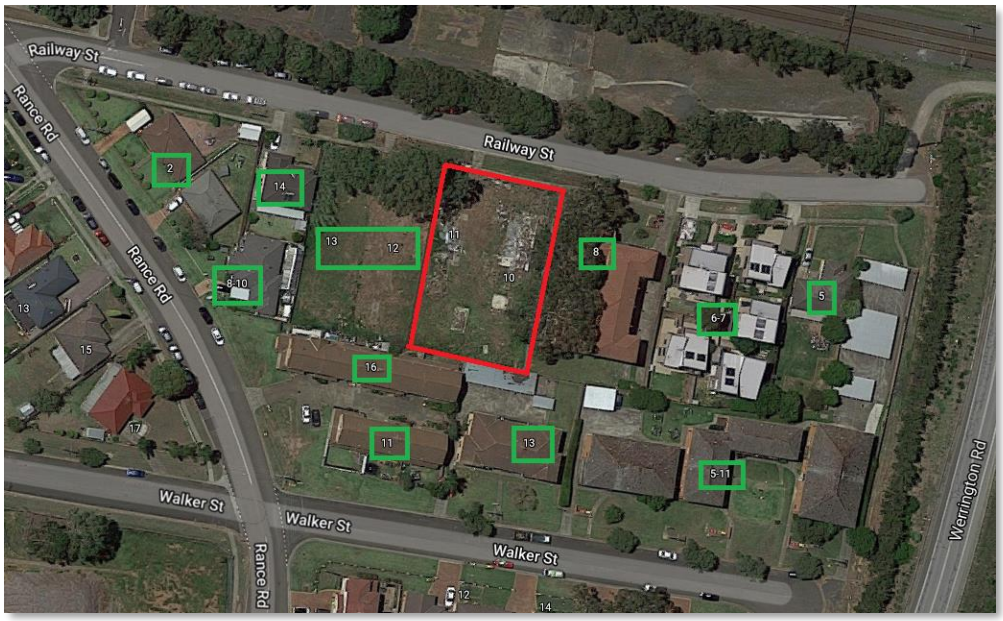


Image 11. Site locations of adjoining/nearby properties as described in the table above, the subject site is indicated by the red square (Source: Google Maps, altered by TBA Urban).

- **To ensure that a high level of residential amenity is achieved and maintained.**

  Comment:

  The existing Zone R3 Medium Density Residential ensures that the proposed development will maintain a high-level of residential amenity (please refer to the above points). Further, the proposal includes communal private open space areas that will ensure the future occupants can enjoy adequate residential amenity on the site.

- **To ensure that development reflects the desired future character and dwelling densities of the area.**

  Comment:

  Relevant case law (*Big Property Pty Ltd v Randwick City Council [2021], HPG Mosman Projects Pty Ltd v Mosman Municipal Council [2021] and SJD DB2 Pty Ltd v Woollahra Municipal Council [2020]*) has indicated that the concept of 'desired future character' is not specifically defined by the numerical requirements detailed within development standards – rather these only contribute to *shaping* the character of the locality, not the desired future character of the area. This case law determines that if a proposed development contravenes the development standard, it does not fail and there are other factors that contribute to shaping the character of an area. The *PLEP 2010* does not define 'desired future character', nor does the Penrith Development Control Plan 2014. As detailed above, and in lieu of a definitive residential character of the subject site and its surrounds, the proposed development shows that it will favorably enhance the Werrington area through good architectural design and will improve the housing stock of Werrington.

  The accompanying Neighbourhood Character Analysis (prepared by TBA Urban) outlines the demographics of Werrington and details how the proposed boarding house is ideal for the Werrington area in that it addresses the demographics of Werrington and the growing need for greater affordable housing options in the area. The Neighbourhood Character and concludes that the proposed boarding house reflects the changing nature of the Werrington area.

  The subject site was previously the subject of a Development Application (DA12/0282) for an RFB that exceed the maximum building height development standard. DA12/0282 has expired, however, during the assessment process for the DA Council would have given due consideration to the desired future character of the Werrington area. Given the DA was approved, the contravention of the development standard did not warrant failure of the proposed development and Council deemed the proposal acceptable, within the public interest, and achieving the desired future character of Werrington.

  The proposed development is consistent with the dwelling densities of both Werrington and the R3 Medium Density Residential Zone.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

8.0 Conclusion

Strict compliance with the building height development standard is unreasonable and/or unnecessary in the circumstances of the case for the following reasons:

- As detailed, the proposed development achieves the objectives of Clause 4.3 of the PLEP 2010.
- The proposed development generally achieves compliance with all other relevant clauses of the PLEP 2010 and controls within the Penrith Development Control Plan.
- The variation to the building height development standard allows for the provision of 18 rooms that will provide affordable housing options in an area that is expected to experience significant population and development growth. The proposed development will provide key social benefits.
- The variation to the building height development standard does not give rise to any unreasonable development or environmental impacts.

Further, maintaining strict compliance to the building height development standard would not be in the public interest.

Based on the reasons outlined within the document, it is concluded that the request to vary the building height development standard is well founded, and that the circumstances of the case warrant support for the contravention of the development standard in this instance.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

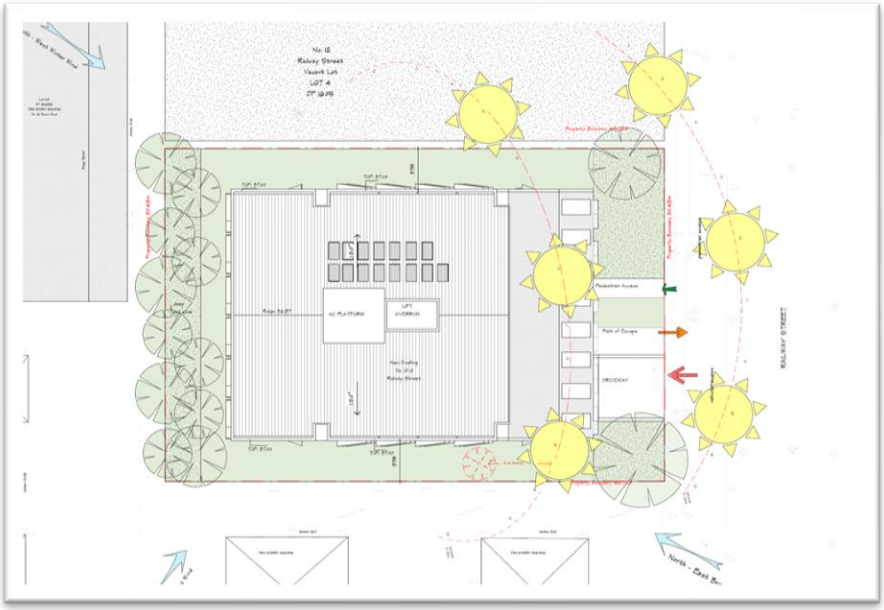
TBA URBAN

STRATEGY — MANAGEMENT — ADVISORY

Statement of Environmental Effects

10-11 Railway Street, Werrington

Construction of a Boarding House



Prepared for: Level Architects

Final report: September 2021

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

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Contents

1. Summary 4
2. Consent Authority 4
3. Site Description 5
3.1 Streetscape 6
3.2 Planning approval history – subject site 7
3.3 Development in local area 8
4. Site Context 9
4.1 Geographical 9
4.2 Land use 10
4.3 Demographic 11
4.4 Transport 12
4.5 Demonstrated need for boarding houses in local area 12
5. Proposal Summary 13
6. Pre-Development Application meeting 15
7. Environmental Planning Instruments 16
7.1 State Environmental Planning Policy (Affordable Rental Housing) 2009 16
7.2 State Environmental Planning Policy No 55 (Remediation of Land) 17
7.3 Penrith Local Environmental Plan 2010 18
8. Proposed Environmental Planning Instruments instruments 21
8.1 State Environmental Planning Policy (Housing) 2021 21
9. Penrith Development Control Plan 2014 22
9.1 D5.11 Boarding house objectives 22
9.2 Section 5.11(2) Building Envelope 23
9.3 Section 5.11(2) Basement 25
9.4 Section 5.11(3) Streetscape 25
9.5 Section C5 - Waste Management 26
10. Environmental Planning and Assessment Act – S4.15 Assessment 28
11. Conclusion 29

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

1. Summary

This Statement of Environmental Effects (SEE) has been prepared to accompany a development application (DA) at 10-11 Railway Street, Werrington (the 'subject site'). The proposal for which consent is sought is for the construction of a boarding house with basement carparking and associated landscape works.

The subject site is located within Werrington, a suburb of Penrith Local Government Area ('LGA'), and fronts Railway Street and the T1 North Shore & Western Railway line. The subject site is a vacant rectangular allotment that meets all key requirements for the construction of a Boarding House.

The proposal, and its potential impacts, has been considered against all relevant environmental planning instruments, the Penrith City Council's Development Control Plan (DCP) and Section 4.15 of the *Environmental Planning and Assessment Act 1979*.

The proposed building is of a contemporary architectural design that will result in not only a new and attractive addition to the streetscape but will assist with catalysing an urban transition to more modern and desirable development in the local area. As will be discussed in this SEE and supporting documentation, Werrington is expected to experience significant growth in the next few years. Coupled with high rates of lone-person households, the proposed development is considered appropriate for the subject site. As the proposal provides multiple common areas (both internal and external), it affords any future tenants with the ability to enjoy the site and increase their social capital by interacting with other like-minded tenants.

The proposal is demonstrated in this SEE to be worthy of approval by Penrith City Council ('the Council'). This SEE is to be read in conjunction with the architectural plans (prepared by Level Architects, issuing date 17 September 2021), the Landscape Plan (prepared by Grindstone Landscapes, dated 17 September 2021) and supporting reports and documentation, particularly the Neighbourhood Analysis (prepared by TBA Urban).

2. Consent Authority

In accordance with the *Penrith Local Environmental Plan (PLEP) 2010* the consent authority is Penrith City Council.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

3. Site Description

The subject site is located at 10-11 Railway Street, Werrington with legal description of Lot 5 and 6 of DP1605.

The site is a cleared rectangular allotment comprising an area of 1393.5m^2, a frontage of 30.48m to Railway Street, and a depth of 45.72m (Figure 1 and 2).

The land is generally flat with a north to south orientation and is absent of any mature vegetation. Refer to Figures 3 -6 for site photos.

Site images



Figure 1. Subject site, as indicated by green highlight area (Source: Six Maps).



Figure 2. Subject site, as indicated by green highlighted area (Source: Six Maps).

Site photos



Figure 3. South facing view of the subject site (Source: Google Maps).



Figure 4. South-east view of towards subject site with property at 12-13 Railway St visible in the foreground (Source: property owner).



Figure 5 – East view down Railway St with subject site visible on left hand side of image (as indicated by the construction site fencing) (Source: property owner).



Figure 6. Street frontage of the T1 Western Railway line, opposite to the subject site. (Source: property owner).

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

3.1 Streetscape

The subject site is located in a medium density residential zoned area that comprises a mixture of housing typologies, architectural styles and ages.

The northern side of Railway St does not include any development but instead comprises of the rail corridor and a vacant strip of RailCorp (now TAHE) owned land. Further east, closer to Werrington train station, this strip of land is used as a commuter car park. The vacant land that is located opposite the subject site is occupied by a row of large mature gum trees reaching heights of about 20m (Figure 7 and 8).



Figure 7. Street view, facing east, of the subject site to the right and mature gum trees adjoining the railway line on the left (Source: Google Maps Street View).



Figure 8. Street view, facing west, of the subject site to the left and mature gum trees adjoining the railway line on the right (Source: Google Maps Street View).

The southern side of Railway St streetscape includes residential developments. Towards the eastern end of Railway St is a red brick 1980s style three storey walk up apartment building with a pitched roof design (8 Railway St) and more contemporary two and three storey brick townhouses with prominent skillion roof design (6-7 Railway St) (see Figures 9 and 10). Towards the western side of the streetscape is the vacant allotment of the subject site, which is adjoined by vacant land at 12-13 Railway St, and further west is a two-storey dwelling (14 Railway St) (see Figures 11 and 12).

Due to the vacant land on the subject site and west adjoining property, there is no established street setback or consistent urban rhythm between built form and setback spacing. There is no perceptible front setback landscape character theme. In this regard, a discernible or desirable streetscape character has not been established within this portion of Railway St. Refer to the Neighbourhood Analysis which accompanies this DA for further description of the local area.



Figure 9. Development at 8 Railway Street (Source: Google Maps Street View).



Figure 10. Development at 6-7 Railway Street (Source: Google Maps Street View).

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



Figure 11. Development at 12-13 Railway St (Source Google Maps Street View)



Figure 12. Development at 14 Railway Street, Werrington (Source: Google Maps Street View).

3.2 Planning approval history – subject site

A development application (DA12/0282) was granted a deferred commencement development approval in 2012 for the demolition of existing structures and construction of 13 residential units with basement parking. (Refer to Figures 13 and 14 for extracts of the development).

The development essentially approved a three-storey residential flat building with a cascading pitched roof that had a maximum ridge line of 38.26m AHD, which is a building height of about 12.36m. This approved height represents a variation of 3.84m (or 48%) to the maximum building height standard of 8.5m.

The proposal also included an enclosed bin area located in the front setback .



Figure 13. Front Perspective Drawing of approved development DA12/0282 (source: Architectural Drawing dated Jan 2014 and prepared by EPS).



Figure 14. North Elevation of approved development DA12/0282 (source: Architectural Drawing prepared by EPS).

3.3 Development in local area

Other notable development applications in the local area include:

- **12-13 Railway Street (Lot 4 DP1605 and Lot 3 DP1605)**

  The immediately adjoining property to the west is currently a vacant lot. Council's records show that approval was granted (DA14/0936) for the demolition of existing structures and construction of a two (2) storey Residential Flat Building (RFB), comprising 18 units and associated basement carparking, drainage and landscaping works. The design of the approved building is of a high-end contemporary architectural style (see Figure 15 below showing an extract of the northern elevation).



Figure 15. 3D Architectural Image of approved RFB at 12-13 Railway Street, Werrington. (Source: Penrith City Council DA tracker).

- **21 Railway Street, Werrington - DA21/0523**

  This application is currently with Penrith City Council and seeks consent for the construction of a three (3) storey Boarding House, comprising 12 rooms, with ground level carparking. Figure 16 below indicates a building height that extends far beyond the maximum building height of adjoining properties, as well as showing a contemporary design that is distinctive to the existing development with the existing streetscape.



Figure 16. Architectural 3D Design of DA21/0523 as viewed from the street frontage (Source: Lyle Marshall & Partners Pty Ltd, obtained from Penrith City Council).

4. Site Context

4.1 Geographical

The subject site is located in the suburb of Werrington which is about 8km east of Penrith's CBD, and approximately 49km west of Sydney's CBD (see Figure 17 below). The site is well connected to the region being in proximity to Werrington train station (180m stroll west) and the Great Western Highway being located 1.8km south and accessed via Rance Rd and Werrington Rd.

The subject site is benefitted by ample recreational opportunities that are within walking distance, with the Kingsway Park and sporting fields located directly east, Rance Oval to the north, and Werrington Lakes further north-west.

The nearest neighbourhood shops include the Werrington local shops which is located on Victoria St, just north of Werrington Train station, and a 5 minute walk from the subject site. The nearest large format shopping centre is located 1.8km east of the site in St Mary's, just on the other side of the Kingsway Park.

The Penrith Western Sydney University Werrington campus is located 1.5km west of the site. The Western Sydney University is further adjoined by the Nepean – Kingswood TAHE campus. The Werrington Campus of Western Sydney University was rezoned to B7 Business Park use in 2017 to support the creation of the Penrith Health and Education Precinct.

Further west at the intersection of the Great Western Highway and Parker Street is the Nepean Hospital.

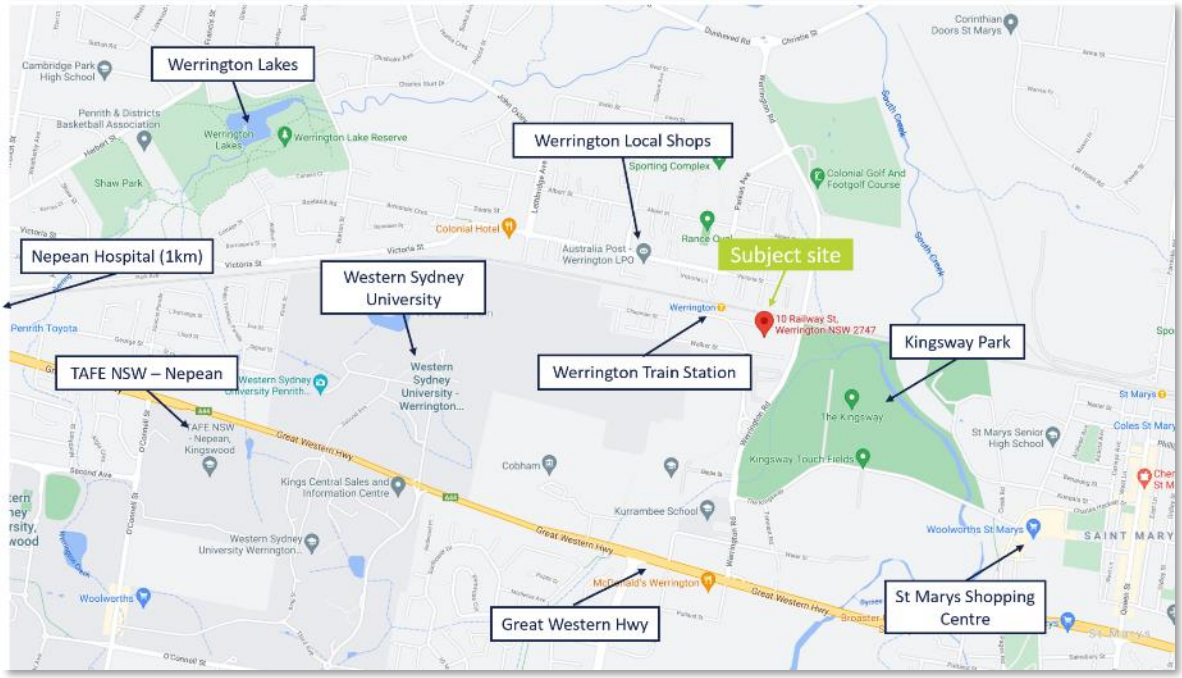


Figure 17. Suburb locality map (suburb identified by red star) (source: Google Maps as adapted TBA Urban)

4.2 Land use

The subject site is located within a pocket of R3 Medium Density Residential zoned land, which is essentially wedged between R4 High Density Residential zoned land directly north of the rail corridor, and south of Walker Street (Figure 18).

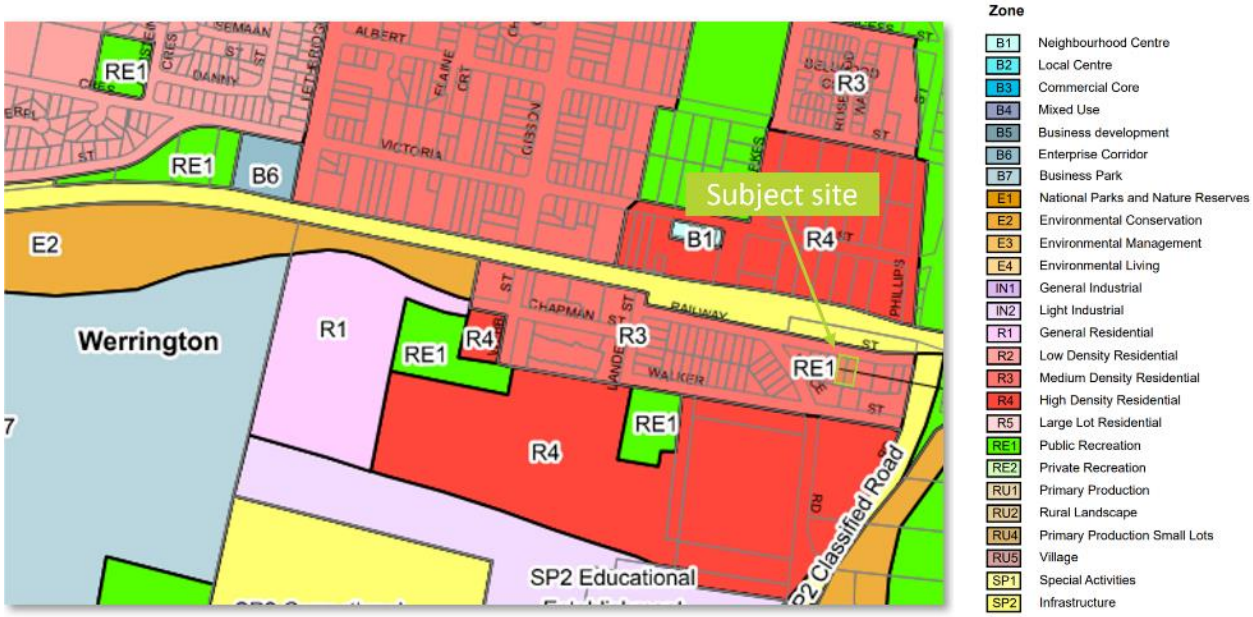


Figure 18 - Werrington land zoning (subject site identified by yellow star) (Source: Penrith Local Environmental Plan 2010, Land Zoning Map – Sheet LZM_013).

Werrington has been earmarked as an area capable of accommodating additional future density. It is noted that, the existing residential development in the immediate is an underrepresentation of the permitted development potential of the R3 Medium Density Residential zone (which allows townhouse and residential flat building developments). Accordingly, the density of the immediate area is expected to increase naturally, even without further zoning amendments, as the existing lower density will continue to ripen for redevelopment to medium density residential typologies.

The Penrith Local Strategic Planning Statement (LSPS) 2019 has identified Werrington as an area of significant strategic importance, being a 'key centre' (see Figure 19 below). Werrington Train Station is also contemplated to be a stop along the proposed North South Rail Line (which will connect St Marys with Macarthur and Badgerys Creek airport) (Figure 19). These strategic aims illustrate that the character of the local area will experience significant change over the next decade.

Refer to the Neighbourhood Analysis accompanying the DA for further detail on the strategic planning applying to the local area.

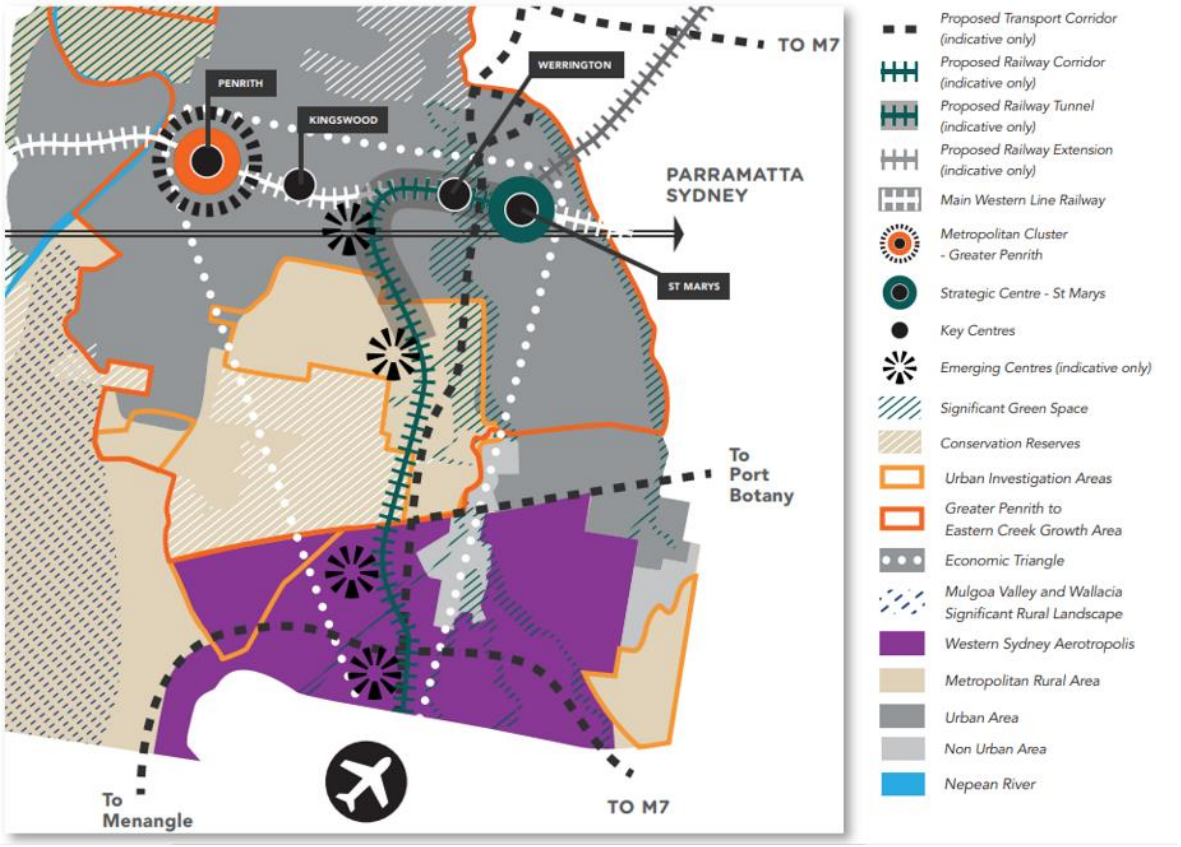


Figure 19. Map 2: Structure Plan (Source: Penrith City Council Local Strategic Planning Statement 2019).

4.3 Demographic

The relevant high level demographic constitution of Werrington and its relevance to the proposed development, as informed by the 2016 consensus and summarised on the Australian Bureau of Statistics (ABS) website, is discussed as follows:

- **Population**

  The 2016 census estimated the residential population of Werrington to be 4,136 and the ABS 2020 estimated residential population increased this to 4,918. From 2019 to 2020 the population of Werrington grew about 5.3%, which is a much faster growth rate than the average of greater Sydney (1.1%).

  The fastest growing age group within the Werrington area (between 2011 to 2016) was the young work force category (age 25 to 34), which also represents the second largest age group (15.5%) behind parents and homebuilders (20.5%) within the community.

  A boarding house typology will provide appropriate housing prospects for the fastest growing age group being young work force members as they commence their career and look for affordable accommodation with high opportunities of social interaction.

- **Employment Industries**

  The top employment industries for the residents of Werrington include Health Care and Social Assistance (12.8%), retail trade (11.6%) and construction (8.4%). Although these statistics are dated back from 2016, each of the noted employment industries

continues to be key employment areas for Penrith, and therefore considered to remain a relevant consideration.

A low cost and mimical upkeep style of accommodation, such as a modern boarding house, will support workers in these employment industries as these roles tend to be time intensive (Health Care, Retail, and Constructing), and tend to employ a larger portion of the young person's workforce.

- **Household types**

  The largest household type in Werrington are lone person households, which make up 27.7% (more than 1 in 4) of the community, and the second largest household are couples with children which makes up 25.5% of the community. This community make up is quite a stark difference to the general household makeup of the greater Sydney average, which indicates that lone persons make up 20.4% of households and couple with children make up 35.3%.

  In this regard, a modern boarding house accommodation would provide a warranted and desirable housing stock for the lone person household population of Werrington.

4.4 Transport

The subject site is well serviced by mass public transport with Werrington Train Station located a distance of approximately 180m, which is around a 3-minute walk. The nearest bus stop is located on the corner of Victoria Street and Kazanis Crescent, which is approximately 400m from the subject site, and is around a 5-minute walk.

4.5 Demonstrated need for boarding houses in local area

As discussed above, and throughout this SEE and associated documentation, the proposed boarding house is an appropriate land use within the local area being within proximity to a variety of community facilities and services, public recreational facilities, and a major train station.

The demographics detailed above, and within the Neighbourhood Analysis, clearly indicate that the population requires a greater diversity and quantum of more affordable housing typologies. A modern boarding house will provide support to those of the population who attend Western Sydney University; who work in Nepean Hospital; those who rely on close access to high frequency public transport; as well as those seeking more affordable housing after employment status change.

A modern boarding house further supports community members who are affected by living stresses, which includes approximately 19% of Werrington households, which is drastically greater than the average of greater Sydney, which is 11.8% (Penrith Local Housing Strategy 2009).

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

5. Proposal Summary

The DA seeks consent for the construction of a Boarding House, with basement carparking and associated landscape works. The boarding house building will be supported by solar panels on the roof.

The proposal will be four storeys with two levels of basement car parking and will comprise a total of 69 boarding rooms. Each room includes a kitchen, bathroom, and laundry.

Boarding house summary

Floor	Boarding Rooms	Other
Basement Level 2 **20.35m RL**	None	• 20 car spaces • 8 motorcycle spaces • 12 bicycle spaces
Basement Level 1 **22.9m RL**	None	• 16 car spaces (including 7 accessible and 1 manager's parking space) • 6 motorcycle spaces • 2 bicycle spaces • General and recycling waste room • Bulk waste room
Ground floor **25.90m RL**	• 12 boarding rooms (2 accessible) • 1 Managers room (with 15.0m^2 of external private open space)	• Common living room with kitchen amenities directly adjoined by external private open space • 1 accessible unisex toilet
First floor **28.55m RL**	• 19 boarding rooms (2 accessible)	
Second Floor **31.20m RL**	• 20 boarding rooms (2 accessible)	
Third Floor **33.85m RL**	• 18 boarding rooms (1 accessible)	
Total	• **69 rooms** **(Including 1 managers room and 7 accessible rooms)**	• **36 car spaces (7 accessible)** • **14 motorcycle spaces** • **14 bicycle spaces**

External elements

The streetscape façade includes a descending pitched roof with dormer windows overlooking the street, and window from extensions with window shrouds on the side elevations.

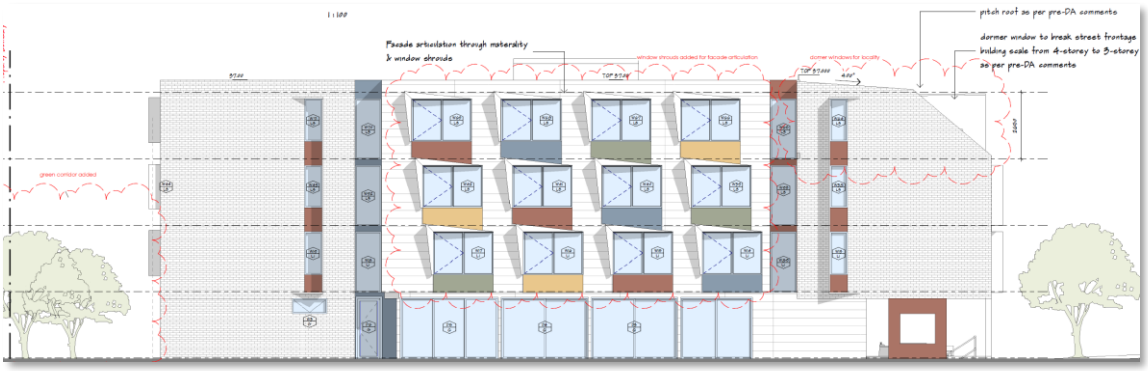


Figure 20. Extract of the East Elevation Drawing of proposed development (Source: Architectural Plans prepared by Level Architects).

Landscaping

The proposed development will include 566.1m² (40%) of landscaped area. A rear setback deep soil area of 99.21m² (7.1%) is proposed and the front setback will include approximately 120m² (8.6%) of deep soil area. The deep soil area located to the rear of the site will support the creation of a green corridor along the spine of the subdivision block.

Appropriate front setback landscape is incorporated which will assist with establishing a coherent landscape character within Railway St. Refer to the Landscape Plan provided for more detail.

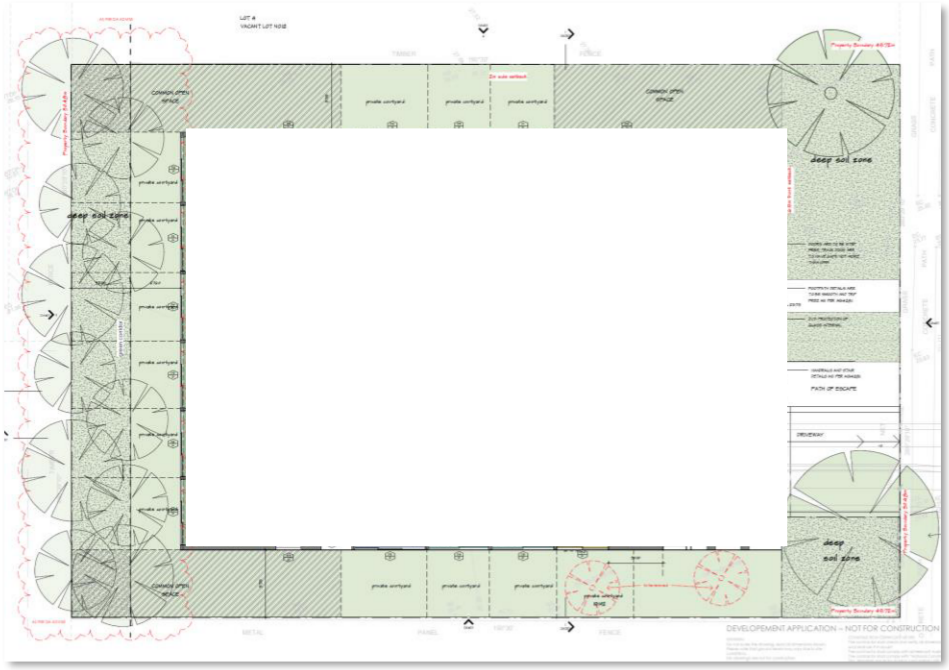


Figure 21 - Extract of site plan showing landscaped area (Source: Architectural Plans prepared by Level Architects).

Waste Management

A Waste Management Plan has been prepared and accompanies this Development Application. Please refer to the architectural plans, Waste Management Plan and Plan of Management (PoM) for details outlining the proposed waste management storage and practices.

Building design

The building design provides for a considered layout which promotes privacy between the proposed dwelling and adjoining sites. As well as providing a high level of articulation to the elevations to promote an interesting and aesthetically pleasing façade.

While the proposed boarding house will present as a four-storey building, the proposed ridge height is not considered unreasonable. The maximum ridge height of the adjoining property is RL35.77. It must be noted that the previously approved Development Application (DA12/0282) on the subject site had a maximum ridge height of RL38.24 (~12.75m maximum height).

The proposed development is illustrated in the architectural drawings, prepared by Level Architects, accompanying the DA.

6. Pre-Development Application meeting

A Pre-DA Meeting was held with the Council on 6 April 2021 (PL21/022).

The architectural plans have been redesigned to address the concerns raised by Council in the Pre-DA notes. This is indicated in the table below.

Pre-DA Council Comments	Redesign plans
Unacceptable bulk & scale, inadequate building façade and articulation, as well as consideration to adequate solar planning.	• Added a descending pitch to the roof fronting the street. • Added dormer windows within the pitched portion of the roof. • Added contemporary windows shroud articulation to the remaining windows along the side elevations providing for a high-level of articulation to the building. • Solar access to adjoining development is demonstrated to be satisfactory in terms of the relevant development controls. Refer to accompanying shadow diagrams.
Demonstrate the proposal achieves the local character of the area.	• Added architectural features better reflect the existing development in the local area whilst also reflecting the desired future character as has been analysed in the accompanying Neighbourhood Analysis.
A deep soil zone area and green corridor is not provided.	• Increase deep soil areas, and now provided a rear setback deep soil area to contribute to a 'green corridor'.
Maximum building height exceedance.	• Building height variation is considered to be reasonable, achieves the objectives of the standard and zone, and will deliver for an improved social outcome. Refer to accompanying Clause 4.6 Written Variation for full discussion of height variation.
Inadequate waste management procedures.	• The proposed waste management procedures are appropriate for a boarding house use and will be managed by the on-site boarding house manager.
Consideration of Clause 29 of the ARHSEPP	• Attachment 1 addresses all Clauses within ARHSEPP. It is thus concluded that the proposal achieves compliance with the clauses in the ARHSEPP. • Shared kitchen and laundry facilities are provided in accordance with the applicable affordable housing planning instrument.
Consideration of Part C and Part D (particularly D5.11 Boarding Houses) of the Penrith Development Control Plan 2014.	• As will be evident, the SEE addresses all relevant parts of the Penrith DCP 2014. Attachment 2 provides a detailed compliance table to D5.11 of the Penrith DCP 2014.
Appropriate location of accessible car parking spaces.	• Accessible car spaces are located opposite to lift corridor (see architectural plan DA102).
Laundry and clothesline location	• Multiple clotheslines are located on the ground floor level in the common areas on the western and eastern sides of the site.

As indicated in the accompanying Neighbourhood Character Analysis, Werrington is expected to experience a transformation from the old-style single dwelling housing stock to higher density residential living, utilising high-end and modern architectural designs that would be commensurate with the Zone R3 Medium Density Residential, and the growing need for additional housing in Werrington.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

7. Environmental Planning Instruments

The proposed development has been considered against the following applicable Planning Instruments.

7.1 State Environmental Planning Policy (Affordable Rental Housing) 2009

State Environmental Planning Policy (Affordable Rental Housing) 2009 (ARH SEPP) outlines statutory requirements and processes associated with designing, assessing, and approving various styles of affordable housing.

Division 3 of SEPP ARH 2009 prescribes statutory requirements relating to the construction of boarding houses.

The proposed development is consistent with the definition of a 'boarding house' as it appears within the Division and the Standard Instrument. Further, as the subject site is zoned R3 Medium Density Residential, the proposal is permissible under the ARH SEPP and may be carried out with consent.

Pursuant to Clause 29(2) of the ARH SEPP, the proposed development cannot be refused on the followings grounds as it complies with respective standards:

- **(1) Density and scale of building**

  The land on which the development is proposed is not subject to a floor space ratio, and therefore cannot be refused on the grounds of density or scale as expressed by a floor space ratio.

  If a floor space ratio had been applied to the subject land, the proposed development would be afforded a floor space ratio incentive of at least 0.5:1 for boarding houses (clause 29(1(c)) by virtue of the fact that residential flat buildings are permitted in the R3 Medium Density Residential zone and that the site does not contain a heritage item.

- **(2)(b) Landscaped area**

  The proposed landscape area exceeds what is prescribed by the applicable controls, and the associated treatment will significantly enhance the landscaped character of the lacklustre Railway St streetscape.

- **(2)(c) Solar access**

  The proposed north facing communal area (ground floor) will receive more than 3 hours of solar access.

- **(2)(d) Private open space**

  A private open space area of 25m^2 is provided adjacent to the communal living room on the ground floor.

- **(2)(e) Parking**

  36 car parking spaces are accommodated within the basement levels of the proposed development which equates to more than 0.5 spaces per boarding room.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- **(2)(f) Accommodation size**

  Each boarding room has a gross floor area that is greater than 16m^2 and less than 25m^2 excluding areas for private kitchen, bathroom and laundry facilities.

Refer to Attachment 1 for a detailed assessment against the relevant clauses within Division 3 of the SEPP ARH 2009, which demonstrates the proposed development's compliance with the respective development standards.

7.2 State Environmental Planning Policy No 55 (Remediation of Land)

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) prescribes a statutory process associated with the development of land that is contaminated and needs remediation. Clause 7 of SEPP 55 provides:

> '*(1) A consent authority must not consent to the carrying out of any development on land unless:*
>
> *(a) It has considered whether the land is contaminated, and*
> *(b) It the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
> *(c) If the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

The subject site is zoned R3 Medium Density Residential and has been zoned for residential living for an extended period of time (aerial imagery from 1943 illustrates that the subject site was vacant and the directly adjoining sites were used for residential purposes). More recent available aerial imagery (Maps Six images and google maps) and a review of NSW EPA Contaminated Land Record of Notices confirms that there is no evidence to suggest that any contamination activities occurred on the subject site. In this regard, the subject site is suitable for the proposed development and no further investigations are warranted.

7.3 Penrith Local Environmental Plan 2010

Clause 2.3 Land Use Zone – R3 Medium Density Residential Zone

- *To provide for the housing needs of the community within a medium density residential environment.*
- *To provide a variety of housing types within a medium density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To provide for a concentration of housing with access to services and facilities.*
- *To enhance the essential character and identity of established residential areas.*
- *To ensure that a high level of residential amenity is achieved and maintained.*
- *To ensure that development reflects the desired future character and dwelling densities of the area.*

Werrington is expected to experience an urban transition from single-dwelling dominant housing to multi-dwelling housing options as permitted by the R3 zone and in response to the growing need for increased affordable rental housing options. As such, the provision of 69 boarding rooms (including 1 manager's room) will provide the community with alternative housing types within the medium density residential environment in which the subject site is located.

The subject site is located within good proximity to mass transport corridors (Werrington train station and multiple bus routes), as well as many facilities and services in the Werrington Village that will meet the day to day needs of all future tenants. It should be noted that these facilities and services are within an easy walking distance from the subject site.

Further, the proposal includes multiple communal private open spaces on the ground floor level that will ensure all future occupants can enjoy residential amenity on the subject site.

As described in detail in this SEE, the Clause 4.6 and the Neighbourhood Character Analysis, a desirable local character has not been observed within the immediate area Railway Street. In lieu of a definitive desirable residential character, the proposed development will favourably enhance the area through good architectural design, as well as improve the housing stock of the area.

Clause 4.3 Height of Buildings

The maximum building height for the subject site is **8.5m** (see Figure 22.).

The proposed boarding house results in a maximum height of approximately **11.6m,** from top of wall (RL37.00) and **12.25m** (RL37.850) at the lift overrun**.**

A Clause 4.6 has been prepared as a separate document which seeks consent for the 3.1m (36.5%) height exceedance to the top of the building wall, and a 3.75m (44%) exceedance to the lift overrun. The Clause 4.6 details that achieving compliance with the maximum building height is unreasonable and unnecessary, and that there are adequate planning grounds for which the standard can be varied, as summarised by the following:

- Improved social outcome with delivery of additional sorely needed lower cost housing.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- Compatibility of the Future Desired Character positioning the immediate area for urban transformation, as is stipulated by the Penrith Local Strategic Planning Statement (2019), the Penrith Local Housing strategy (2019), the Western Sydney District Plan, and as considered in previous strategic plans (Werrington Enterprise Living Learning Precinct 2004, Penrith Urban Design Study 209).
- Achievement with the objectives of the R3 Medium Residential Density zone and the Height of Building development standard, despite the height variation.
- Maintenance of appropriate residential amenity.
- Compatible with existing height plane with adjoining and nearby 3 storey structures and future developments as envisaged by the strategic planning for the Werrington area.
- Enhancing the Railway St streetscape and adding the creation of a desirable character.

The Clause 4.6 document should be read in conjunction with this SEE and accompanying architectural plans (prepared by Level Architects).

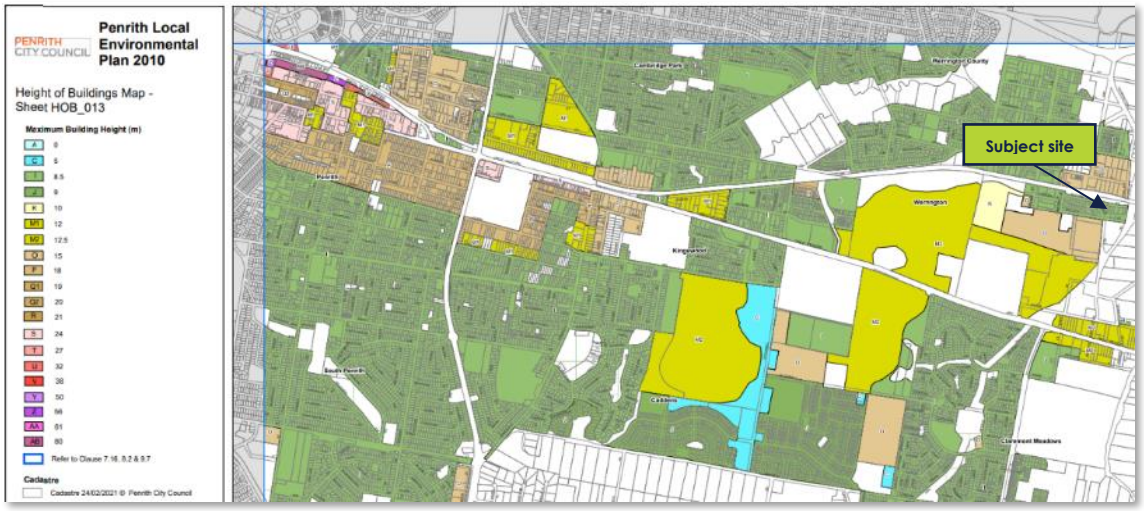


Figure 22 Height of Buildings Map (subject site indicated by a red star) (Source: Penrith Local Environmental Plan 2010 HOB_013)

Clause 4.4 Floor Space Ratio

A Floor Space Ratio has not been applied to the subject site or immediate area (see Figure 22).



Figure 23. Floor Space Ratio map (subject site indicated by red star)

(Source: Penrith Local Environmental Plan 2010 FSR_013).

Clause 4.10 Heritage

The subject site is not a known heritage item, nor is it located within a heritage conservation area (see Figure 10.).

The nearest item of heritage is the Werrington Park House, garden and poplar avenue (Item 315) which is located in the grounds of Western Sydney University and over 1km from the subject site. In this regard, the proposal will not have any impact on the nearest item of heritage.



Figure 24. Heritage Map (subject site indicated by red star)
(Source: Penrith Local Environmental Plan 2010 HER_013).

8. Proposed Environmental Planning Instruments instruments

8.1 State Environmental Planning Policy (Housing) 2021

The Department of Planning, Industry and Environment (DPIE) released an Explanation of Intended Effect (EIE) for a proposed Housing State Environmental Planning Policy (SEPP). This was exhibited between 29 July and 9 September 2020. DPIE received over 270 submissions in response to the EIE, and these informed the fine-tuning of the proposed Housing SEPP. The draft Housing SEPP was re-exhibited for a second time, with submissions closing on 29 August 2021.

The primary purpose of the Housing SEPP is to consolidate the swath of housing related SEPPs including: the State Environmental Planning Policy (Affordable Rental Housing) 2009, State Environmental Planning Policy (Housing for Seniors and People with a Disability) 2004; State Environmental Planning Policy No 70 – Affordable Housing (Revised Schemes); State Environmental Planning Policy No 21—Caravan Parks; and State Environmental Planning Policy No 36—Manufactured Home Estates into a single SEPP.

The Housing SEPP further introduces provisions for co-living housing, which is a form of housing that provides small private rooms (which may or may not include private kitchen and bathroom facilities) offset by access to managed communal spaces, and changes to the ARH SEPP boarding house and seniors housing provisions.

The proposed development standards for boarding houses in the draft housing SEPP are consistent with the existing ARH SEPP. The principal changes to boarding houses, as proposed by the draft Housing SEPP, are to require boarding houses to be used for affordable housing in perpetuity and require boarding houses to be managed by a registered community housing provider.

Comment

The design of the proposed boarding house is consistent with the prescribed development standards for boarding houses contained in the proposed Housing SEPP.

The proposed changes to the management of a boarding house are still subject to consideration of the submissions received during the second exhibition period. As such, it is not certain that this will be adopted in the proposed form.

In this regard, the proposal subject to this development application, as lodged prior to the gazettal of the Housing SEPP, should be considered against the definition of boarding houses at the time of lodgement, and thereby capable of being approved as is described in this DA.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

9. Penrith Development Control Plan 2014

The Penrith Development Control Plan 2014 (PDCP 2014) applies to the subject site. It provides planning, design and environmental objectives and controls against which Council is to assess DAs.

A full compliance assessment was undertaken, and it is noted that the proposed development generally complies with the relevant controls in the PDCP 2014 – please refer to *Attachment 2* for a full compliance assessment. Any variations to the controls stipulated within the PDCP 2014 are discussed below.

Attachment 2 details the proposed development's compliance with the controls within D5.11 Boarding Houses of the Penrith DCP 2014. Consideration was also given to the controls relating to Multi-Dwelling Housing, as encouraged by section D5.11, control 2(h) of the PDCP 2014.

Any proposed variation to a PDCP2014 control has been considered against the relevant objectives and are demonstrated to be suitable in accordance with Section 4.15(3A) of the *Environmental planning and Assessment Act 1979* which deals with development control plans.

The proposed variations are discussed in detail in the following section.

9.1 D5.11 Boarding house objectives

The objectives of D5.11 Boarding Houses within the PDCP 214 are as follows:

a) *To ensure that boarding houses fit the local character or desired future local character of the area.*
b) *To minimise negative impacts on neighbourhood amenity.*
c) *To ensure boarding house premises are designed to be safe and accessible.*
d) *To respond to increasing neighbourhood densities resulting from boarding house development.*
e) *To ensure that boarding houses operate in a manner which maintains a high level of amenity, health and safety for residents.*

The proposal achieves the objectives of the Boarding House section of the PDCP 2014, as demonstrated by the following:

- The proposed development is considered to represent the desired future local character of the area, as driven by the strategic objectives for Werrington and demonstrated by past community consultations undertaken for the Werrington Enterprise Living and Learning Precinct Strategy (2004), the Penrith Urban Design Study (2009), and more recently the Penrith Local Strategic Planning Statement (2019). The proposal is further not considered to be inconsistent with the existing local character as a consistent desirable character does not appear to have been established within the relevant portion of Railway St, with the presence of vacant lots mixed with aged red brick apartment blocks, and single dwellings that will likely experience redevelopment to the higher order permitted residential development in the near future. Please refer to the accompanying Neighbourhood Design Analysis for detailed investigation of future desired character.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

- The location of the proposed boarding house is highly suitable as it is afforded the requisite amenities to support the proposed density with Werrington Train Station, Werrington local shops, and local parks, and educational precincts all within walking distance.
- The boarding house will be managed by an on-site manager who will ensure the safety and noise requirements stipulated in the Plan of Management are actualised.

9.2 Section 5.11(2) Building Envelope

Prescribed controls

Figure D5.4 of the PDCP2014 prescribes a building envelope development control of which the envelope boundary is set at a height of 6.5m lot boundary and angled inwards at 45 degrees (refer to Figure 23), which essentially encourages pitched roof residential designs.

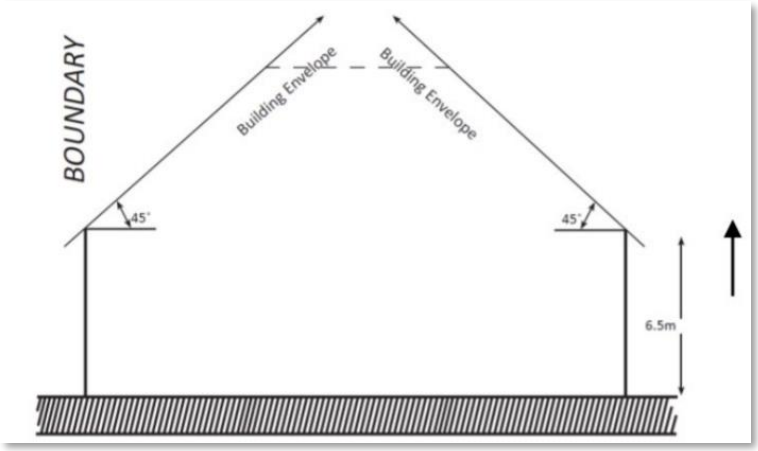


Figure 25. Extract of the Building Envelope Figure for boarding houses in the R3 zoned (Source: Penrith Development Control Plan 2014)

Proposed development

The proposed design adopts a more contemporary flat roof design, which marginally exceeds the prescribed building envelope at the corners of the proposed built form by 885mm at the most extreme extent (Refer to Figure 24).

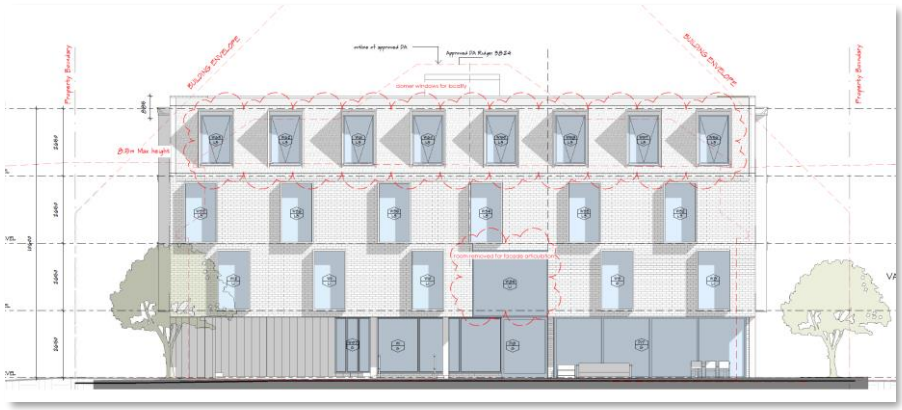


Figure 26. Extract of North Elevation Plan (Source: Architectural Drawings prepared by Level Architect)

The variation is minor and the proposal is considered to be acceptable, as demonstrated by the following:

- The variation relates to a minor encroachment of 885mm measured from the top of the corner, which is, at most, a 7.7% exceedance.
- Despite the encroachment, the adjoining property continues to be afforded appropriate solar access (min 3 hours between 9am and 3pm in the middle of winter) (please refer to accompanying shadow diagrams).
- The encroachment is essentially borne out of the application of a more contemporary and desirable (as evidence by the popularity of which flat roofs have been adopted by the construction industry) roof form.
- The local area can appropriately accommodate newer roof forms as a distinct and desirable character is not identifiable within the immediate streetscape of the subject site. This is confirmed by the fact that this immediate area of Werrington is not identified within a 'key precinct' of PDCP2014 (Part E), it is not subject to a heritage conservation zone, and there is no Council prescribed character statement.
- Past community consultation undertaken for Werrington Enterprise Living and Learning Precinct Strategy (2004), the Penrith Urban Design Study (2009), and more recently the Penrith LSPS (2019) received community comments regarding the undesirable built form that exists within parts of Werrington precinct and support newer more modern and contemporary redevelopments.
- The PDCP2014 is considered to include dated urban design controls that seeks to achieve a certain built form and roof design (pitched roof), as directed by the building envelope controls, and therefore penalises newer and potentially more innovative roof forms. Design preferences have changed since the PDCP2014 was adopted, and accordingly the prescribed building envelope is not considered to reflect desired designs as is put forward by the proposed development.
- The design of the Boarding House is demonstrated to be in line with the future desired character of Werrington, as it reflects contemporary design preferences and a density and use supportive of the growth expected to be experienced by Werrington with the newly created R4 High Density Residential zone to the south and the B7 Business Park zone at the Western Sydney University Werrington campus.
- The character of Werrington, with the anticipated growth and strategic importance with newer forms and styles of residential development, will complement the proposed development, ultimately creating a highly compatible built form.
- Notwithstanding the numerical non-compliance to the building envelope control due to the roof form, the proposed development demonstrates compliance with the objectives of D5.11 Boarding Houses.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

9.3 Section 5.11(2) Basement

Prescribed control

The PDCP2014 prescribes that no basement encroachments to setbacks either above or below ground.

Proposed development

The proposal includes two levels of basement parking. The basement extends beyond the ground level building footprint up to the side property boundaries and partially into the rear setback area. A basement with nil side setbacks and a rear setback of 3.55m is proposed.

The practical impact of the variation is considered to be minor and will be mitigated via appropriate design and technical solutions, as demonstrated by the following:

- The basement encroachment will not lead to any additional overshadowing or privacy issues as it is contained below ground out of sight.
- Council's landscape requirements, including the provision of a green corridor along the spine of the residential subdivision block, are achieved with the proposed design. 40% of the site is landscaped and a 3.55m wide deep soil area is provided in the rear setback.
- Appropriate on-site water management, as provided for in the accompanying Stormwater Management Plans, ensure that no stormwater run-off is displaced to adjoining properties.
- The design of the basement affords a more efficient layout and enables appropriate number of car, motorcycle, and bicycle spaces to be provided without adding bulk or scale to the development.
- Planter boxes can be provided in the side setback for any required landscape treatments.
- From an urban design perspective, it is not uncommon to have larger basement footprints on land that is in close proximity to train station and area of high amenity as there is a natural increase of density close to such elements.

9.4 Section 5.11(3) Streetscape

Prescribed control

The PDCP2014 requires consideration of 'Compatibility with Streetscape in the Front Setback' through ensuring a minimum 18m^2 of deep soil is provided in the front setback and that an appropriate watering system is provided.

Proposed development

The proposal includes about 160m^2 of deep soil in the front setback area and the development itself provides a 6.5m front setback which is greater than the 6m development at 8 Railway St. This larger street setback will set the tone for future development in this vicinity Railway Street and ensures a suitable landscape component is provided.

More generally, the proposal is considered to enhance the existing streetscape which currently lacks coherence and consistency in built form and character. The addition of the proposed development and future development on the adjoining site (12-13

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Railway St) will establish a more coherent streetscape comprising of more modern and contemporary designed buildings and improved front setback landscaping opportunities. Refer to Figure 24 for a visual representation of the general building envelopes on the subject site and at 12-13 Railway St (not to scale) which demonstrates this point and illustrates that a compatible height plane can be established with larger envelopes.

These building envelopes further act an appropriate urban design response to the opposing railway corridor, with taller developments often bounding areas of open space. This further assists with creating a visual and acoustic built form buffer between the rail corridor and the residential developments to the rear. The proposed Boarding House will anchor the contemporary façade in the urban plane and will not impede on the existing streetscape by creating a built form that suffocates the urban fabric on Railway Street. Rather, the proposal will be a welcomed visual relief from the old and near expired housing stock in the Werrington area.

9.5 Section C5 - Waste Management

Prescribed controls

The Pre-DA notes provided by Council indicates that the proposed development's on-site waste collection infrastructure would need to be provided in accordance with Residential Flat Buildings (RFBs) as defined in the C5 Waste Management of the PDCP 2014.

Proposed development

The proposed development includes two (2) bin storage areas located on Basement Level 1. When a tenant needs to dispose of waste from their room, they will do so by using the lifts that are centrally located in the building and safely accessing the relevant bin storage room on Basement Level 1.

The proposal opted out of providing a waste chute system as it is an impractical and often an unnecessary maintenance burden. The alternative solution proposed is included in the Plan of Management (PoM) which details that the on-site Manager will take out, and bring in, all the bins to the street frontage for collection on the relevant day. The PoM further details the timeframe to which the bins will be located on the street frontage. This will ensure that the bins will *only* be on the street frontage for collection and will not be left there for extended periods of time. (It is worth noting that the proposed bin collection strategy is a significant improvement to the adjoining property, being 8 Railway Street, which shows bins precariously placed adjacent to the driveway and in complete view of the streetscape [see Figure 24.]).

Assessing the proposed boarding house against waste management controls relating to an RFB is unreasonable in that the use and habitation of an RFB is considerably different to the use and habitation of a boarding house. A boarding house is based on flexible, short-lease tenancy, with variable tenancy occupation rates resulting in variable waste generation. Further, due to difference in habitation, boarding house are unlikely to generate excessive amounts of waste on a consistent basis (i.e. decreased furniture turn over). Whereas an RFB is generally a longer-lease option with constant tenants, operating at full-capacity. It can be reasonably be expected that the waste generated from a long-term tenancy is greater than that of a boarding house.

As discussed above, a detailed and comprehensive PoM has been prepared and submitted with this DA. The PoM details a range of procedures for the effective operation of the boarding house, including the appropriate waste disposal.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

The proposed waste management and collection processes adequately and appropriately address Council's requirements in the PDCP 2014, as well as Council's concerns raised in the Pre-DA notes.



Figure 24. Bin collection point 8 Railway Street. (Source: Google Street View).

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

10. Environmental Planning and Assessment Act – S4.15 Assessment

The matters for considerations under Section 4.15 of the *EP&A Act 1979* have been considered in light of the proposed development and are discussed as follows:

(a) Environmental planning instruments and development control plan

The key environmental planning instruments and the PDCP2014 have been addressed. It has been shown that the proposed boarding house satisfies all applicable development provisions and/or objectives.

(b) Likely impacts

The proposal involves the construction of a boarding house, which is a permissible development within the zone. The proposal is deemed to have an acceptable impact with consideration of the land use zoning, permissible height, built form controls, and the urban context, with consideration to existing urban fabric and future desired urban character, in which the development is proposed.

(c) Suitability of the site

The site is suitable for a boarding house, as confirmed by the permissibility of the development in the R3 Medium Density Residential zone, connection to utilities, and proximity to mass transport corridor, neighbourhood amenities and services, and tertiary education facilities. The proposal also achieves general compliance with all key development controls that relate to the bulk, scale and density, and layout of boarding houses. Further, the Neighbourhood Analysis that accompanies this SEE further details the suitability of the site for the proposed development.

(e) Public Interest

A large proportion of the population of Werrington (19%) experiences housing stress and 27.7% of the population make up lone person households. While the proposal is demonstrated to have minimal environmental impacts, subsequently achieving the objectives of the land use zones, achieves orderly and economic development of the land, it is the provision of a 69-room boarding house that makes the proposed development a benefit to the population of Werrington. In this instance, the proposed development is in the public interest.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

11. Conclusion

The proposed boarding house is a contemporary designed development that will positively add to the value of the existing streetscape, and to the redefined desired future character of Werrington.

The analysis detailed within the Neighbourhood Analysis, demonstrates that a boarding house development is highly appropriate within Werrington, and particularly for the subject site. As further discussed in Section 3 (Site Description) and Section 4 (Context) of this SEE, the subject site's proximity to a mass transport corridor, tertiary education facilities and neighbourhood services and amenities, in conjunction with the land use zoning, means that the subject site is ideal for medium density accommodation.

During the consultation activities for major strategic plans, including the Werrington Enterprise Living + Learning Strategy (WELL Strategy), the Penrith Urban Design Study 2008-2009, and the Penrith LSPS 2019, general community sentiment highlighted the need for the facilitation of sustainable and affordable housing that meets the diverse needs of the growing community. As clearly detailed in this SEE and the Neighbourhood Analysis, the proposed boarding house will provide suitable and affordable accommodation that will be beneficial for lone-persons households.

The immediate neighbourhood lacks consistency in the urban fabric and landscape treatment has generally resulted in a neighbourhood that lacks a uniform character and area of relevance to the community. The proposed design, which adopts a more contemporary style with the provision of additional landscape treatments, will have a direct and improved benefit to the undeveloped and incoherent streetscape, and wider Werrington area. The provision of a contemporary building will assist in anchoring the evolution of a greater neighbourhood character ultimately resulting in a more active, safer, and pleasant neighbourhood. The proposal in its entirety delivers against the desired character of the Werrington suburb and the objectives of the Penrith LGA.

The proposal, and its potential impacts, has been considered against all relevant environmental planning instruments, the Penrith Development Control Plan and Section 4.15 of the *Environmental Planning and Assessment Act 1979*.

The proposed development is worthy of approval by Penrith City Council.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Attachment 1. SEPP (ARH) 2009, Division 3 Boarding House

Clause 26: Land to which this Division applies

Requirement	Comment
This division applies to land within any of the following land use zones or within a land use zone that is equivalent to any of these zones:	
(a) Zone R1 General Residential, (b) Zone R2 Low Density Residential, (c) Zone R3 Medium Density Residential, (d) Zone R4 High Density Residential, (e) Zone B1 Neighbourhood Centre, (f) Zone B2 Local Centre, (g) Zone B4 Mixed Use.	**Complies**. The subject site is located within the R3 Medium Density Residential zone and, as such, the proposed use is permissible with consent under *Penrith Local Environmental Plan 2010*.

Clause 27: Development to which Division applies:

Requirement	Comment
(1) This Division applies to development, on land to which this Division applies, for the purposes of boarding houses.	**Complies**. The proposal seeks consent for the construction of a boarding house, basement carparking and associated landscaping works.
(2) Despite subclause (1), clauses 29, 30 and 30A do not apply to development on land within Zone R2 Low Density Residential or within a land use zone that is equivalent to that zone in the Greater Sydney region unless the land is within an accessible area.	**Not applicable.** The subject site is located within the R3 Medium Density Residential zone.
(3) Despite subclause (1), clauses 29, 30 and 30A do not apply to development on land within Zone R2 Low Density Residential or within a land use zone that is equivalent to that zone that is not in the Greater Sydney region unless all or part of the development is within 400 metres walking distance of land within Zone B2 Local Centre or Zone B4 Mixed Use or within a land use zone that is equivalent to any of those zones.	**Not applicable.** The subject site is located within the Sydney region and is located within the R3 Medium Density Residential zone.

Clause 28: Development may be carried out with consent

Requirement	Comment
Development to which this Division applies may be carried out with consent.	**Complies**. The proposed development constitutes the construction of a boarding house as it is defined under the Standard Instrument. As such, the proposed development of a boarding house may be considered under this Division of the SEPP as development that may be carried out with consent.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Clause 29: Standards that cannot be used to refused consent

Standard	Requirement	Proposed	Comment
(1) A consent authority must not refuse consent to development to which this Division applies on the grounds of **density or scale** if the density and scale of the buildings when expressed as a floor space ratio are not more than	(a) The existing maximum floor space ratio for any form of residential accommodation permitted on the land, or, (b) If the development is on land within a zone in which no residential accommodation is permitted – the existing maximum floor space ratio for any form of development permitted on the land, or (c) If the development is on land within a zone in which residential flat buildings are permitted and the land does not contain a heritage item that is identified in an environmental planning instrument or an interim heritage order or on the State Heritage Register – the existing maximum floor space ratio for any form of residential accommodation permitted on the land, plus - (i) 0.5:1, if the existing maximum floor space ratio is 2.5:1 or less, or (ii) 20% of the existing maximum floor space ratio, if the existing floor space ratio is greater than 2.5:1.	Floor space ratio is not applicable to this subject site. Floor space ratio is not applicable to this subject site. Floor space ratio is not applicable to this subject site.	If a floor space ratio had been applied to the subject land, the proposed development would be afforded a floor space ratio incentive of at least 0.5:1 for boarding houses (clause 29(1(c)) by virtue of the fact that residential flat buildings are permitted in the R3 Medium Density Residential zone and that the site does not contain a heritage item.
(2) A consent authority must not refuse consent to development which this Division applies on any of the following grounds:			
(a) Building Height	if the building height of all proposed buildings is not more than the maximum building height permitted under another environmental planning instrument for any building on the land,	The proposed maximum building height is 11.6m (TOP) and 12.25 (Lift overrun). This is 3.1m and 3.75m above the prescribed 8.5m maximum building height prescribed under Clause 4.3 of PLEP 2010.	Application of Clause 4.6.
(b) Landscaped Area	if the landscape treatment of the front setback area is compatible with the streetscape in which the building is located,	The front setback area is proposed to have multiple deep soil zones, including the retention of multiple trees.	Complies.
(c) Solar Access	where the development provides for one or more communal living rooms, if at least one of those rooms receives a minimum of 3	The proposed development includes one (1) communal living room on the ground level at the front of the	Complies.

	hours direct sunlight between 9am and 3pm in mid-winter,	building. Due to the northern orientation of the building, this common room (including the communal private open space) will receive a minimum of 3 hours of direct sunlight between 9am and 3pm in mid-winter.	
(d) Private Open Space	if at least the following private open space areas are provided (other than the front setback area)— (i) one area of at least 20 square metres with a minimum dimension of 3 metres is provided for the use of the lodgers, (ii) if accommodation is provided on site for a boarding house manager—one area of at least 8 square metres with a minimum dimension of 2.5 metres is provided adjacent to that accommodation,	The proposal provides a private open space area of 39m2 area behind the front setback area, exceeding the minimum dimensions required. The proposal provides accommodation for a boarding house manager, including a private open space area of 15.0m2, exceeding the minimum dimensions required.	Complies. Complies.
(e) Parking	If – (i) in the case of development carried out by or on behalf of a social housing provider in an accessible area—at least 0.2 parking spaces are provided for each boarding room, and (ii) in the case of development carried out by or on behalf of a social housing provider not in an accessible area—at least 0.4 parking spaces are provided for each boarding room, and (iia) in the case of development not carried out by or on behalf of a social housing provider—at least 0.5 parking spaces are provided for each boarding room, and (iii) in the case of any development – not more than 1 parking space is provided for each person employed in connection with the	Not applicable. Not applicable. The proposal includes 70 boarding rooms (including one manager's room) and provides 36 parking spaces. The proposal includes one (1) manager's room and provides one (1) parking space for the manager.	Complies. Complies.

	development and who is resident on site,		
(f) Accommodation size	If each boarding room has a gross floor area (excluding any area used for the purposes of private kitchen or bathroom facilities) of at least – (i) 12 square metres in the case of a boarding room intended to be used by a single lodger, or (ii) 16 square metres in any other case.	Each boarding room has a gross floor area ranging between 16.0m^2 and 25.0m^2.	Complies.
(3) A boarding house may have private kitchen or bathroom facilities in each boarding room but is not required to have those facilities in any boarding room. Comment: Bathroom, kitchen, and laundry facilities are provided for in each room. Therefore, the proposal is compliant with this Clause.			
(4) A consent authority may consent to development to which this Division applies whether or not the development complies with the standards set out in subclause (1) or (2). Comment: The proposed development achieves compliance with standards as set out in subclause (2). Subclause (1) addresses floor space ratio standards which is not applicable to the subject site.			

Clause 30: Standards for boarding houses

Standard requirement	Proposed	Compliant/ Comment
(1) A consent authority must not consent to development to which this Division applies unless it is satisfied of each of the following:		
(a) If a boarding house has 5 or more boarding rooms, at least one communal living room will be provided,	One (1) common room is proposed on the ground floor plan. This room includes a common living area and kitchen amenities.	Complies.
(b) No boarding room will have a gross floor area (excluding any area used for the purposes of private kitchen or bathroom facilities) of more than 25 square metres,	The managers room, Type 1, and Type 2 rooms do not exceed 16 square metres. The Type 3 rooms and accessible rooms do not exceed 25 square metres.	Complies.
(c) No boarding room will be occupied by more than 2 adult lodgers,	Each room will allow for a maximum of two occupants.	Complies.
(d) Adequate bathroom and kitchen facilities will be available within the boarding house for the use of each lodger,	Each room is equipped with private laundry and kitchen facilities. Further, the common room has common kitchen amenities.	Complies.
(e) If the boarding house has capacity to accommodate 20 or more lodgers, a boarding room or on-site dwelling will be provided for a boarding house manager,	The proposed boarding house has capacity to accommodate more than 20 lodgers. As such, a manager's room (equipped with a private bathroom, laundry and kitchen) is proposed to be located on the ground floor, adjacent to the front door.	Complies.
(f) Repealed.	N/A	N/A

(g) If the boarding house is on land zoned primarily for commercial purposes, no part of the ground floor of the boarding house that fronts a street will be used for residential purposes unless another environmental planning instrument permits such a use,	Not applicable. The subject site is zoned R3 Medium Density Residential.	Not applicable.
(h) At least one parking space will be provided for a bicycle, and one will be provided for a motorcycle, for every 5 boarding rooms.	The proposal includes 69 rooms, and provides the following: • 14 motorcycle spaces • 14 bicycle spaces.	Complies.
(2) Subclause (1) does not apply to development for the purposes of minor alterations and additions to an existing boarding house.	The proposed development is for the construction of a new boarding house. Therefore, subclause (1) applies.	Complies.

Clause 30AA: Boarding houses in Zone R2 Low Density Residential

The subject site is located within Zone R3 Medium Density Residential. Therefore, this Clause does not apply to this application.

Clause 30A: Character of local area

A consent authority must not consent to development to which this Division applies unless it has taken into consideration whether the design of the development is compatible with the character of the local area.

The proposed development is accompanied by a Neighbourhood Analysis which provides a high-level analysis of the Werrington neighbourhood. The Neighbourhood Analysis concludes that the subject site is a suitable location for the proposed boarding house for the following reasons:

- The population of Werrington is changing. There are higher growth rates than compared to the average of greater Sydney with a comparatively large lone household population.
- 19% of the Werrington population experiences housing stress.
- The immediate neighbourhood lacks a consistency in the urban fabric and landscape elements. As such, the immediate neighbourhood does not have a uniform character and connection to the community.
- South Werrington is set to experience a significant development with large vacant areas of the Western Sydney University (Werrington Campus), and the old Sydney Water site (corner of Walker Street and Rance Road) ready for construction. The development of these parcels will have an immediate impact on the neighbourhood character of Werrington.
- Werrington has been earmarked, on several occasions, as a key centre capable of accommodating additional housing and greater housing density.
- General community sentiment derived from past consultations confirms the community is supportive of increasing residential density within, or nearby, strategic centres, and particularly within proximity of mass transport systems. Additionally, past community sentiment has further expressed a desire for greater housing diversity in appropriately located areas to support the changing needs of the community.

In consideration of the above concluding points and the Neighbourhood Analysis, the proposed boarding house will assist in contributing to creating a more consistent neighbourhood character that has greater relevance to the future focus of Werrington.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

Attachment 2 Penrith DCP 2014 Built Form Compliance Table

D5 Other Land Uses

5.11 Boarding Houses

D5.11(c) Table D5.3 Minimum setback and building envelope requirements for Boarding Houses in R2, R3 and R4 zones.

Setbacks	Requirements		Proposed
	Minimums in R3 Zone	**Minimums for Multi-dwelling housing**	
Front	a) Average setbacks of the adjoining neighbours; or, b) A 5.5m minimum setback, whichever is the greater	a) Average setbacks of the adjoining neighbours; or, b) A 5.5m minimum setback, whichever is the greater	**Complies**. 6.5m setback is proposed. This is consistent with the front building line of 8 Railway Street and exceeds the numerical requirement of these controls.
Side	2m along not more than 50% of the building length. The remaining 50% is to achieve a minimum setback of 3m, these areas are to be a minimum of 1.5m wide.	Zero side setbacks from the side boundary are not permissible.	**Complies.** A side setback of 3.715m on both sides.
Rear	4m for a single storey building (or any single storey component of a building). 6m for a two storey building (or any two storey component of a building).	4m for a single storey building (or any single storey component of a building). 6m for a two storey building (or any two storey component of a building).	**Complies.** A rear setback of 6.0m is provided.
Building Envelope	Refer to Figure D5.5 – indicates 6.5m, angled inwards at 45 degrees.	Comply with controls for *Multi-dwelling Housing* in this DCP (which is 6.5m, angled inwards at 45 degrees).	**Minor variation** Marginally extends beyond the prescribed building envelope on both western and eastern elevations. Approvable through merit assessment, as discussed in Section 9.2 of this SEE.
Compatibility of landscaping with streetscape in the front setback	R3 Zone: 40%	40%	566.1m^2 (or 40%)

Attachment 2. Penrith DCP 2014 Boarding House Compliance Table

D5 Other Land Uses

5.11 Boarding Houses

Development Control	Compliance
1) Local Character	
(a) Boarding house development applications shall be accompanied by a detailed site analyses to assist with the determination of local character.	**Complies**. A site analysis plan is provided within the architectural drawings and a detail analysis of local character is provided in the Neighbourhood Analysis. Local character, both existing and the desired future character, is not defined in the PLEP 2010 or the Penrith DCP 2014. Further, Council has not adopted a Local Character Statement that provides guidance on the character of areas within the Penrith LGA.
(b) A neighbourhood analysis must be completed to identify the desired future character of the neighbourhood. It is recommended that community consultation be undertaken as part of the analysis to determine aspirations for the future.	**Complies**. A Neighbourhood Analysis has been undertaken and the results of have been provided as a separate document which accompanies this Development Application.
2) Built Form, Street Impact and Appearance	
(a) The entrance to the boarding house must be in a prominent position addressing the street.	**Complies.** The entrance to the boarding house is prominent with pedestrian and vehicular access gained from Railway Street. Access is sited centrally to the proposed building.
(b) New boarding houses must not reduce the achievement of access to a minimum of 3 hours sunlight in main living area and in at least 50% of private open space between 9am and 3pm on 21 June for adjoining properties.	**Complies**. Shadow diagrams provided with the architectural plans indicate the proposal achieves compliance with this control. Additional shadows are expected as the subject site is currently vacant – any development on the site would increase shadows to adjoining properties.
(c) Boarding houses must be designed to have a sympathetic relationship with adjoining development.	**Complies**. The proposed boarding house has been designed to reflect a modern architecturally advanced structure with varying architectural treatments that create a visually appealing building.
(d) Proposals must demonstrate that neighbourhood amenity will not be adversely impacted by factors such as noise and privacy.	**Complies** The common room, including the external common area, is located along the northern elevation of the building, which fronts Railway Street and is located a reasonable distance from adjoining properties. The Plan of Management will ensure on site noise will be kept to a minimum.
(e) There must be no basement encroachments to setbacks either above or below ground.	**Minor Variation.** The proposed basement extends into the side and rear setback areas. However, this does not result in any unreasonable amenity impacts and can be

	appropriately managed and secured during the construction stage. Please discussion under Section 9.3 of this SEE
(f) Minimum setbacks for boarding houses in R2 and R3 Zones are provided in table D5.3.3	**Complies**. This has been addressed in the body of the SEE.
(g) In an R2 and R3 Zone, boarding houses should comply with controls for *Single Dwellings* where these controls do not conflict with the requirements of the SEPP.	**N/A**
(h) A boarding house proposal of a similar scale to a multi dwelling housing development should comply with the controls and objectives of *Multi-Dwelling Housing* within this DCP, where they are not in conflict with the requirements of the SEPP and the objectives of the zone.	**Complies.** The Pre-DA meeting notes advised that consideration must be given to the controls and objectives of the *Multi-Dwelling Housing*. However, the control stipulates that a boarding house of a similar scale to a multi-dwelling housing development *should* comply. In this instance, the proposal generally complies with the controls and objectives of *Multi-Dwelling Housing* within the PDCP
(i) A boarding house proposal of a similar scale to a residential flat building or high density mixed use development should comply with the controls and objectives for *Residential Flat Buildings* within this DCP, where they are not in conflict with the requirements of the SEPP, and the objectives of this zone.	**N/A** Based on the information and advice provided in the Pre-DA notes, consideration of this control is not required.
3) Compatibility with Streetscape in the Front Setback	
a) A minimum of 18m^2 deep soil area must be provided to support larger plants and trees used to soften the form of the building and provide shade. Deep soil areas are to be a minimum width and length of 3m. Deep soil zone may form part of the landscaped area calculation.	**Complies**. The proposed development includes a deep soil zone of 18m^2 within the front setback area (forward of the communal private open space). Additional areas of deep soil zones and a green corridor are on the site.
b) A watering system that does not rely on lodgers to maintain plantings.	**Complies**. Refer to the landscape plan provided.
4) Tenant Amenity, Safety and Privacy Boarding houses are to maintain a high level of resident amenity, safety, and privacy by ensure:	
a) Communal spaces, including laundry, bathroom, waste facilities, private open space, kitchen and living areas are accessible to all lodgers;	**Complies**. All communal spaces are accessible by all lodgers.
b) If over 10 boarding rooms are supplied, 10% of the total number of dwellings (rounded up) must be accessible;	**Complies.** The proposal includes the provision of 70 rooms (including 1 manager's room). Therefore, seven (7) rooms must be accessible. The proposal includes 9 accessible rooms.
c) Cross ventilation should be achieved in common areas including corridors, common kitchen areas, living areas, laundry, waste and kitchen facilities;	**Complies**. Cross ventilation is achieved in all common areas.

Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021

d) All opening windows are to be provided with fly screens; and	**Can be made to comply.** The proposed development can be made to comply with this requirement.
e) Secure mailboxes shall be provided on the property allowing resident only access.	**Complies**. The proposed development includes a letterbox area within the front setback adjacent to the front entrance. The individual mailboxes can be made to be secured.
f) Communal kitchen facilities must be provided with a minimum area of: a. 7m^2 for up to 6 lodgers, b. Or 11m^2 for more than 6, up to 12 lodgers, plus 1m^2 for each additional lodger over 12; or all bedrooms shall contain kitchenette facilities with a fridge, adequate cupboards and shelves and a microwave. For fire safety reasons no other cooking appliances are permitted.	**Minor variation.** The ARH SEPP requires a common room to be provided in a boarding house with 5 boarding rooms or more. The ARH SEPP does not provide a minimum numerical figure for the gross floor area (GFA) of the communal living room. The requirement for the communal kitchen space is somewhat outdated and a considered to be a legacy requirement of older generation boarding houses. The proposed design is for a modern boarding house which provides each boarding room with its own kitchenette amenities, and one common kitchen and communal living area for social interaction purposes. Appropriate fire safety measures have been included in the design of the building to accommodate cooking appliances in the boarding rooms.
g) Common rooms must be provided at a minimum rate of 2m^2 per lodger, or a minimum of 13m^2 where there are fewer than 6 lodgers. Common rooms do not include circulation space, laundry, bathroom, waste, and kitchen facilities.	**Minor variation.** The proposal includes a common area for kitchen amenities and a living room, with an external private open space along the northern elevation of the building (access from the common living room). The proposed common living room, kitchen, and covered outdoor space have an approximate 77m2 area. In addition, each ground floor boarding room is provided with a private open space area of ~10sqm and each boarding room is equipped with a private kitchen, bathroom and laundry. This provides a better outcome for future tenants as those who can use private courtyards will do so and this will provide more space in the proposed common areas for other tenants. The proposed mix of common space to private open space areas better reflect the requirements of a new generation boarding house and what the lone household market is wanting.
5) Visual and Acoustic Amenity Impacts Boarding houses are to provide:	
a) Bedrooms separate from significant noise sources;	**Complies**. The bedrooms on the ground floor are located a reasonable distance from the communal living room and the external private open space.
b) Sound insulation between bedrooms to provide reasonable amenity;	**Complies.**

c) Communal areas and bedroom windows away from the main living area or bedroom windows of any adjacent buildings; and d) Screen fencing, plantings and acoustic barriers in appropriate locations.	Sound insulation will be provided in accordance with the National Construction Code (NCC) acoustic installation standards. **Complies.** The proposed communal areas and bedroom windows are situated away from the main communal areas. **Complies**. Plantings are proposed in the rear setback and along side boundaries.
6) Location Boarding houses shall not be located in cul-de-sacs.	Railway Street is not a formal or defined cul-de-sac. The road signs on display on the corner of Railway Street and Rance Road do not indicate that Railway Street is a 'no-through road', as usually installed for defined cul-de-sac streets. A Traffic Management Plan has also been provided which concludes that Railway Street is equipped to appropriately manage additional vehicles. This control was not raised as an issue within the Pre-DA Meeting notes.
7) Plan of Management An operating 'Plan of Management' is to be submitted with each development application for a boarding house (including new and existing boarding houses). The Plan of Management is to include, but is not limited to: a) Boarding house staffing arrangements, including the location of 24/7 contact details for any on-site manager or resident caretaker, who has overall responsibility for the operation, administration, cleanliness, maintenance, and fire safety of the premises; b) House rules and how they will be publicised to residents, including details of: i. Guest behaviour; ii. Activities and noise; iii. Visitor policy; iv. The use of alcohol and/or drugs; v. Cleaning of communal spaces following use; and vi. Location of smoking area. c) Plans outlining the occupancy rate for each sleeping room, room furnishings, provisions of communal areas and facilities, and access and facilities for people with disabilities; d) Measures to minimise unreasonable impact to the habitable spaces of adjoining properties, including the management of communal open spaces, which, for boarding houses within residential areas or where	**Complies.** A Plan of Management has been prepared and is an accompanying document that forms part of the Development Application. The Plan of Management details how the boarding house will be managed in accordance with the requirements as listed under Control 7. Plan of Management of the PDCP2014.

adjoining sites contain residential activities, should be restricted to 10pm; e) Waste minimisation, recycling and collection arrangements are to be identified; f) Maintenance strategy including, but not limited to: i. Monthly gardening and pruning of vegetation; ii. Pest management plan; iii. Cleaning and sanitation program including end of lease arrangements; iv. Quarterly external clean and graffiti removal; v. Waste management plan; and, vi. Indicative arrangements for council officer's 12 month inspection, required under the Boarding House Act 2012. g) Internal signage arrangements, including: i. The name and contact number of the property caretaker or manager; ii. Emergency contact numbers for essential services; iii. House rules; iv. A copy of the annual fire safety statement and current fire safety schedule; v. Floor plans that will be permanently fixed to the inside of the door of each sleeping room which indicate the available emergency egress routes from the respective sleeping room; and, vi. Information on local social services. h) Minimum lease period with conditions including: i. Resident agreement to comply with boarding house rules; ii. Minimum lease period of 3 months; and, iii. 6 and 12 month rental terms available. i) A social impact assessment. j) A complaint register that is available for inspection by Council. k) Indicative arrangements for Council monitoring and review of require management actions l) Any further relevant considerations. Council may request further information to be provided.	

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LANDSCAPE DA PLAN

BOARDING HOUSE

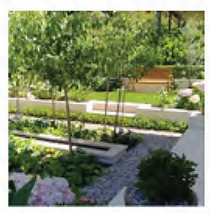
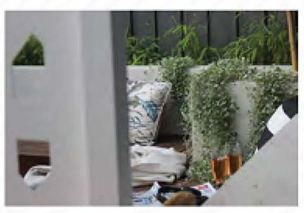
10 - 11 Railway street
Werrington NSW 2747

SHEET TITLE	SHEET NUMBER
COVER PAGE	
LANDSCAPE PLAN	DA-01
Deep Soil plan / Details	DA-02
WEST ELEVATION A-A	DA-03
SOUTH ELEVATION B-B	DA-04
SOUTH ELEVATION C-C	DA-05
NORTH ELEVATION D-D	DA-06

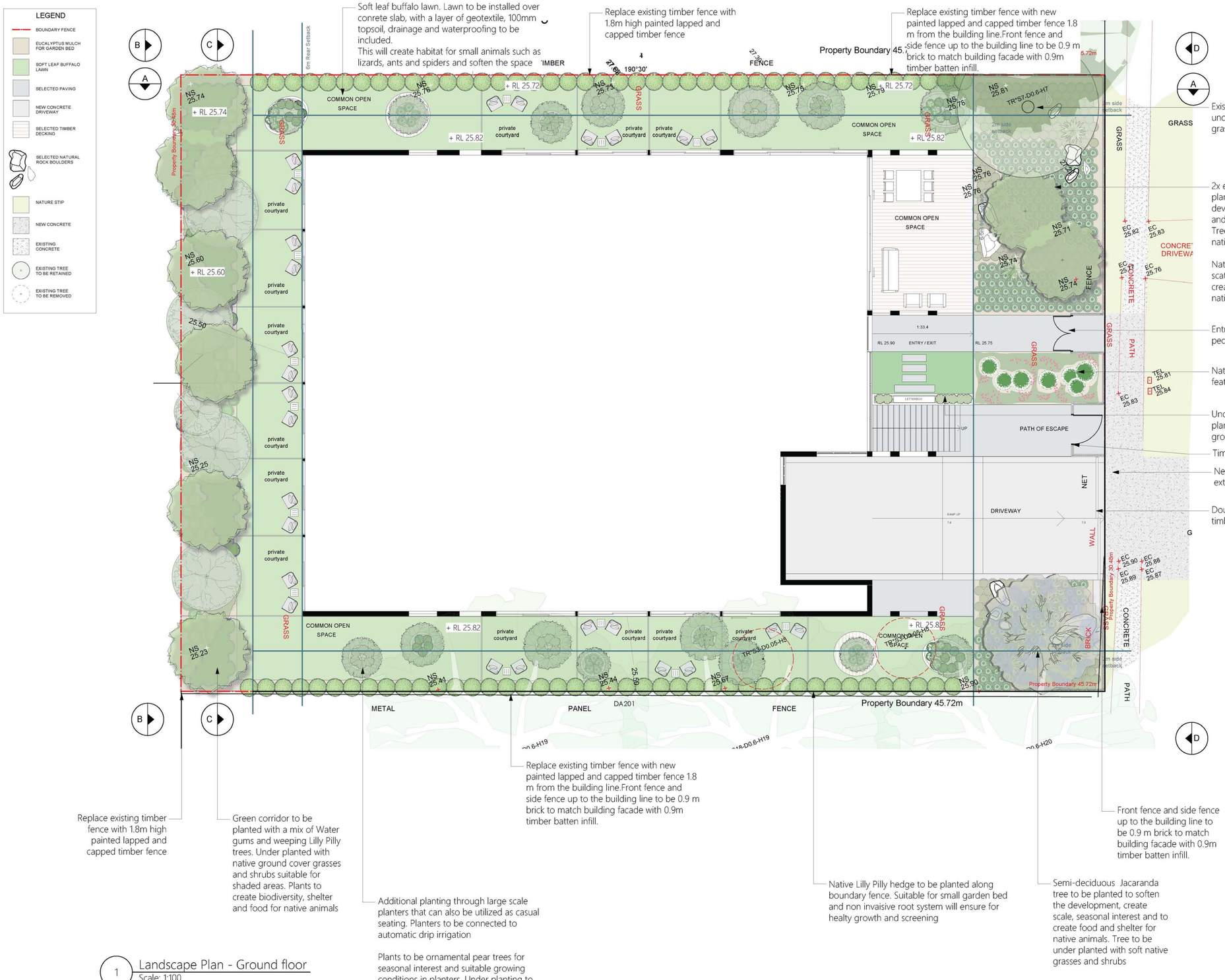
REVISON	DATE
DRAFT	07.09.21
FIRST ISSUE	08.09.21
Rev.A	14.09.21
Rev.B	17.09.21
Rev.C	20.09.21






Document Set ID: 9812242
Version: 1, Version Date: 18/11/2021



1 Landscape Plan - Ground floor
Scale: 1:100

DA NOTES
LANDSCAPE AREA CALCULATIONS

Site area: 1,393.50 sqm

Development Control Plan (DCP) 2014 Penrith precinct requirement:

Landscaped area is defined as an area of a reasonable proportion of each site for landscaped garden areas, conserve significant existing vegetation, and provide reasonable separation between neighbouring dwellings

(a) R3 Medium Density Residential - 5.11 Boarding Houses
min. 40% of the landscape area to be soft — min. 557.60 sqm

Proposed Landscape area — 566.10 sqm (40%)

3) Compatibility with Streetscape in the Front Setback — complies

In order to be compatible with the streetscape, boarding houses must supply the following elements within the front setback, in addition to complying with other relevant Landscape. Design controls in this DCP and Built form, streetscape impact and appearance controls in this section:

a) A minimum of 18m2 deep soil area must be provided to support larger plants and trees used to soften the form of the building and provide shade. Deep soil areas are to be a minimum width and length of 3m. Deep soil zone may form part of the landscaped area calculation.

b) A watering system that does not rely on lodgers to maintain plantings.

Principal private open space — complies

controls for Multi Dwelling Housing - Boarding Houses

(1) A reasonable area of private open space should be provided for:

Min 20m2 for lodgers + 8m2 for building manager

APPROXIMATE CALCULATIONS

PLANT SCHEDULE

IMAGE	ID	QTY	BOTANICAL NAME	COMMON NAME	POT SIZE	MATURE SPREAD	MATURE HEIGHT	REMARKS
	Trees							
	Jm	1	Jacaranda mimosifolia	Jacaranda mimosifolia	100 Ltr	6.0 - 10.0 m	10.0 -15.0 m	semi - deciduous
	Pn	15	Pyrus nivalis	Snow Pear	45 Ltr	2.0 - 4.0 m	3.0 - 6.0 m	deciduous
	Tll-1	8	Tristaniopsis larunia 'Luscious'	Water Gum	75 Ltr	3.0 -5.0 m	7.0 -12.0 m	native / evergreen
	Wf	5	Waterhousia floribunda	Weeping Lilly Pilly	75 Ltr	3.5 - 6.0 m	5.0 - 10.0 m	native / evergreen
	Shrubs							
	Acs	84	Acmena 'Sublime'	Lillypilly	300 mm	0.9 - 1.5 m	2.0 - 5.0 m	native
	Gf	15	Gardenia augusta 'Florida'	Gardenia	300 mm	0.6 - 1.0 m	0.6 - 1.0 m	
	Rop	7	Rhaphiolepis indica 'Oriental Pearl'.	Indian Hawthorn	300 mm	1.0 - 1.2 m	1.0 -1.2 m	
	Perennials							
	Deg	10	Doryanthes excelsa	Gymea Lily	300 mm	1.5 - 2.0 m	1.5 - 3.0 m	native
	Lp	94	Libertia paniculata	Libertia	175 mm	0.2 - 0.5 m	0.5 - 0.8 m	
	Prc	12	Philodendron Xanadu	Philodendron	175 mm	0.8 - 1.2 m	0.6 - 0.8 m	
	Strappy							
	Dclj	301	Dianella caerulea 'Little Jess'	Flax Lily	140 mm	0.35 - 0.4 m	0.35 - 0.4 m	native
	Poa	287	Poa labillardieri 'Eskdale'	Tussock Grass	140 mm	0.5 - 0.6 m	0.6 - 0.9 m	native
	Llt	51	Lomandra longifolia 'Tanika'	Spiny-headed mat rush	140 mm	0.6 - 0.65 m	0.5 - 0.6 m	native
	Groundcovers							
	Di	34	Dichondra repens	Kidney Weed	100 mm	0.9 - 1.2 m	0.1 - 0.3 m	native/in-front of letterbox
	Ga	25	Grevillea hybrid 'Aussie Crawl'	Groundcover Grevillea	140 mm	1.0 -2.0 m	1.0 -2.0 m	native
	Hv	89	Hardenbergia violacea	False Sarsaparilla	200 mm	1.2 - 2.0 m	0.75 - 0.9 m	native
	Lr	31	Ligularia reniformis	Leopard Plant	140 mm	0.0 - 0.3m	0.0 - 0.3m	
	Total:	**1069**						

* Plants have been selected for their low maintenance, drought tolerant and overall neat appearance. A mix of flowering and non flowering native and exotic plants help to create a functional biodiversity for local wildlife that suite the microclimate within the new developmentand the Werrington

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PROJECT.
Georges Wehbe
10-11 Railway Street,
Werrington NSW 2747

DRAWING TITLE.
DA Landscape Plan
Ground floor

SHEET No. DA-01
Rev. No. C
SCALE. 1:100 @A1
DATE. 06.09.2021
DRAWING BY. CC

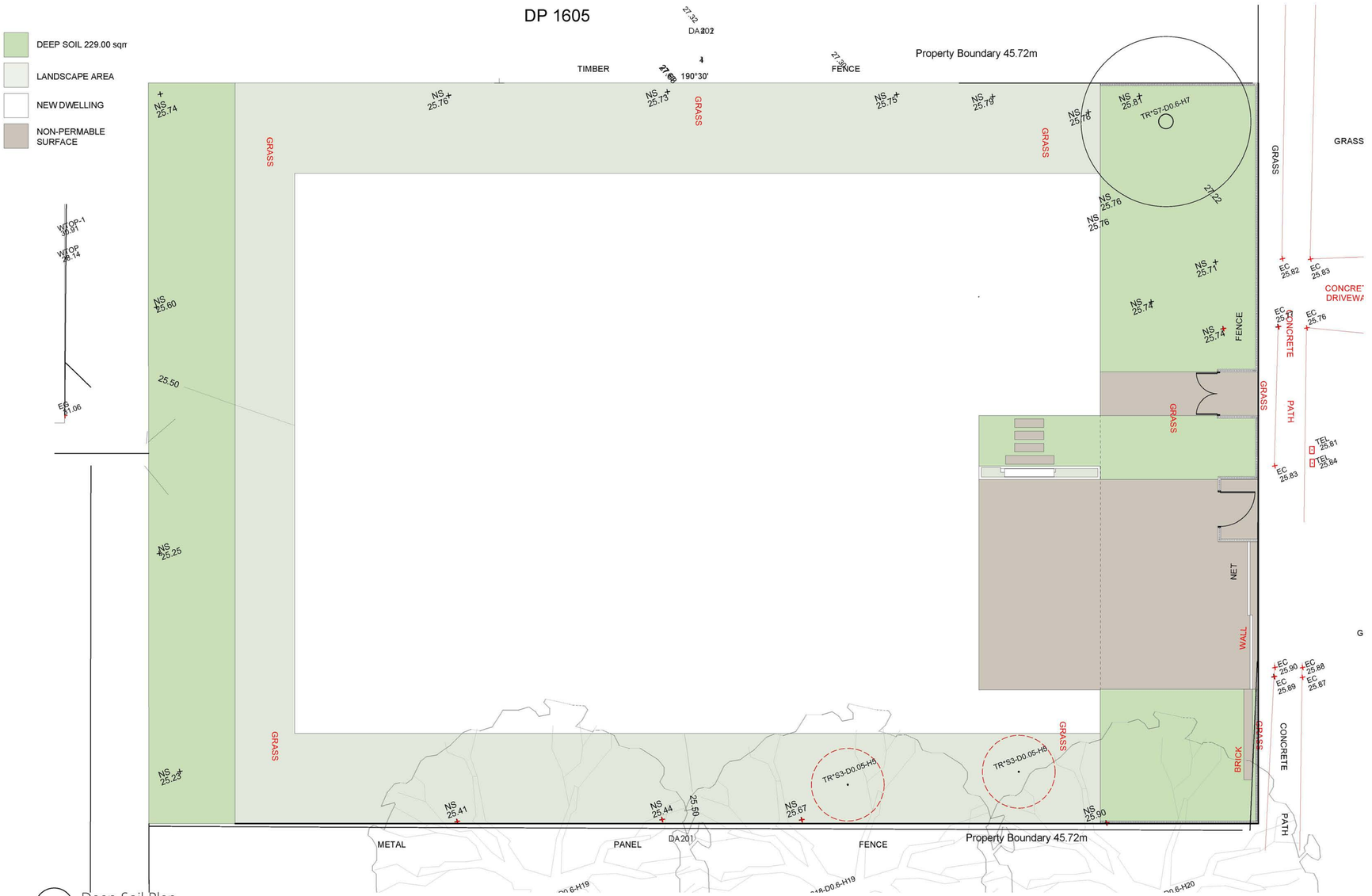
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DEEP SOIL 229.00 sqm

LANDSCAPE AREA

NEW DWELLING

NON-PERMABLE SURFACE



3 Deep Soil Plan
Scale: 1:100

PLANTING NOTES

SITE PREPARATION
All existing plants marked for retention shall be protected for the duration of works. Remove from site all perennial weeds and rubbish before commencing landscape works.

SOILWORKS
Thoroughly cultivate the subsoil to a depth of 300mm. Supply and install to a depth of 300mm quality garden soil mix to all planting beds and 150mm turf-underlay to lawn areas.

EDGING
All garden bed areas to be clearly defined by metal, brick, concrete or timber edging with its top edge flush with the surface of adjected grass area

MULCH
Supply and install a 75mm layer of hardwood horticultural grade mulch to all planting beds set down 25mm from adjacent paving or garden edge.

MAINTENANCE
All failed or defective plant species to be replaced by landscaper for a 3 months period following completion of work.
Further maintenance during and after this period should include watering, weeding, fertilising, pest and disease control, pruning and hedging, reinstatement of mulch and keeping the site neat and tidy.

LANDSCAPE NOTES

EROSION CONTROL AND DRAINAGE
Install required sedimentation control devices as required by council DCPs.
Proposed development to include new pits and grates to accommodate runoff from hard surfaces to be connected to existing stormwater system to control flows. Subsoil drainage/Ag.lines to be used in garden beds.

PAVING/TIMBER DECKING/WALLING/POOL CONSTRUCTION
All hard landscaping work to be carried out in accordance with the building code of Australia and all relevant Australian standards and all codes and regulations of local council and other authorities.
All timber construction shall be in accordance with the timber framing code. All footings and walls to future structural engineers detail.

TREE PROTECTION
All trees to be retained will have tree protection in accordance to Arborist or equivalently qualified person's recommendations.

IRRIGATION
All garden bed areas and pots to be connected to automatic drip irrigation system. Water supply to be adjusted accordingly. Controller to be easily accessible. Location to be confirmed

SUGGESTED PLANTERS

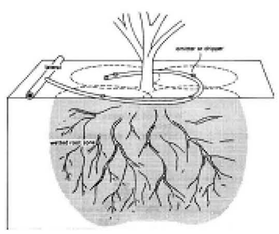




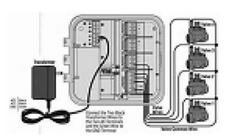






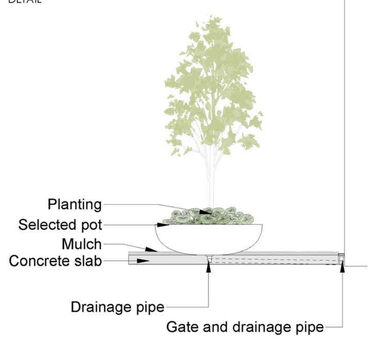


DRIP IRRIGATION

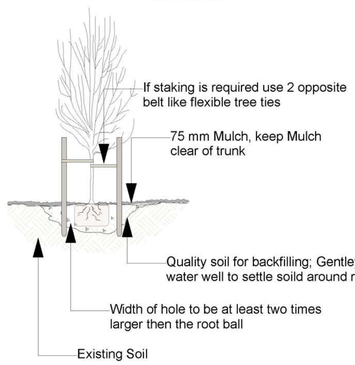


AUTOMATIC IRRIGATION CONTROLLER

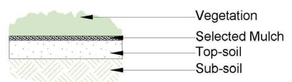
PLANTER DRAINAGE DETAIL



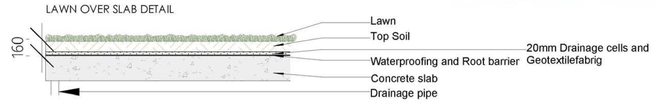
SOIL/MULCH INSTALLATION



GENERAL PLANTING SOIL/MULCH INSTALLATION



LAWN OVER SLAB DETAIL



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PROJECT.
Georges Wehbe
10-11 Railway Street, Werrington NSW 2747

DRAWING TITLE.
Deep Soil Plan / Details

SHEET No. DA-02
Rev. No. C
SCALE. 1:100 @ A1

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1 West Elevation A-A
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DRAWING TITLE.
Elevation A-A

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1 South Elevation B-B
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Elevation B-B

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2 South Elevation C- C
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PROJECT.
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DRAWING TITLE.
Elevation C-C

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1 North Elevation D-D
Scale: 1:100

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PROJECT.
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Werrington NSW 2747

DRAWING TITLE.
North Elevation

SHEET No. DA-06
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