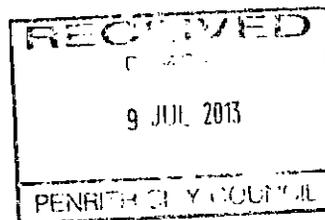


This plan/document relates to:
Development Application

No: 1 2 1 2 6 0 

*(COUNCIL DOES NOT ATTEST TO THE
ACCURACY OF DETAIL IN PLANS.)*

Development Application
Statement of Environmental Effects



LOT 1157 SYDNEY SMITH DRIVE, THORNTON NSW.
D.P. 1159973
Submitted to Penrith City Council
On Behalf of Landcom

Instructions on how to complete the following Statement of Environmental Effects (SEE) Template

- This Statement of Environmental Effects (SEE) template includes a number of 'help boxes' located throughout the document to provide instructions on how to assist you with preparing and filling in the SEE for your project.
- Simply follow the advice in the box and then delete each box before finalising the SEE document ready for lodgement with the DA.
- Each section of the SEE template includes text that is highlighted in grey. These sections are to be replaced with specific information about the project (e.g. site area, lot numbers, etc.) or are to be amended to suit the development, or can be utilised if the text is considered an appropriate response.
- The SEE template has been prepared to cover a range of key and potential issues and may address matters which are not relevant to the application. Where matters are not deemed relevant, these should either be deleted or stated that these are not relevant.
- Key sections that must be completed include Sections 1.0 (Introduction), 2.0 (Site Analysis), 3.0 (Description of Proposed Development) and 4.0 (Conclusion). These sections have been prepared so that you need to insert relevant information specific to your specific development.
- Section 4.0 includes a range of key assessment matters that relate to the development. Please amend to suit the DA and add any additional written assessment as maybe relevant to the SEE.
- It is important to start with a fresh template each time an SEE is prepared in order to ensure that all the relevant matters are tailored to each DA/project
- The checklist included at the end of this SEE template provides a comprehensive list of what documents and plans are required to be submitted with each DA – these are also referenced as appendices throughout the SEE to assist Council in their assessment of each DA.

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Appendices

Insert all material to be appended to the DA and who they were prepared by.

- A Site Survey
CRAIG AND RHODES
- B Architectural Drawings
- C BASIX Certificates
- D Landscape Plans
- E Stormwater Plans
- F Signed DA Form & Owners Consent
- G Notification Plan
- H Sediment and Erosion Control Plan
- I Waste Management Plan
- J Tables of Compliance

1.0 Introduction

This Statement of Environmental Effects (SEE) is submitted to Penrith City Council in support of a Development Application (DA) for a dwelling house as part of the North Penrith project.

The following description of the development has been provided as a guide and should be amended as appropriate to the specific DA. It is important to list all the elements of the project you are seeking approval for.

This DA seeks approval for construction of an detached dwelling and associated landscaping and parking.

The SEE has been prepared by Firststyle Homes and is based on the Architectural Drawings provided by Firststyle Homes (see **Appendix B**) and other supporting technical information appended to the report (see Table of Contents).

This report describes the site, its environs, the proposed development, and provides an assessment of the proposal in terms of the matters for consideration under Section 79C(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1 Planning Background

On 9 November 2011, the Minister for Planning approved a concurrent Concept Plan (MP 09-04536) and Project Application (MP 10-0078), which was followed by the gazettal of an amendment to the *Penrith City Centre Local Environmental Plan 2008* for the redevelopment of the North Penrith site.

1.1.1 Concept Plan and State Significant Site Listing

The Concept Plan and the Schedule 3 amendment were intended to facilitate the development of a transit oriented and cohesive mixed uses development incorporating residential, retail, commercial, business, civic, community, industrial and recreation uses.

The statutory elements of the approved Concept Plan are contained in the Instrument of Approval and the amendment to Schedule 3 of State Environmental Planning Policy (Major Development) 2005.

The Schedule 3 amendment replaced the former local environmental planning instruments applying to the land and rezoned the land to R1 General Residential, B2 Local Centre, B4 Mixed Use, IN2 Light Industrial, RE1 Public Recreation and R2 Low Density Residential (Thornton Hall and curtilage). The Amendment also identified:

- principal development standards that broadly guide yield and density of future development across the site;
- heritage items and nominated matters for consideration for future development to, on or within the vicinity of the heritage items must address; and
- the future consent role and approvals requirements/responsibilities.

The Concept Plan Approval included the following:

- land use type and distribution;
- approximately 900 – 1,000 dwellings, comprising a minimum of:
 - 100 seniors living/aged care dwellings;
 - 44 affordable/social housing dwellings; and
 - 44 adaptable dwellings;
- a range of dwelling typologies, building heights and densities;

- a Village Centre located adjacent to the Penrith Railway Station and centred around a public square;
- up to approximately 15,150m² of retail, business and commercial floor space;
- the retention and protection of land for Thornton Hall, a 19th Century homestead building and its associated curtilage;
- appropriate interpretation of the European and Aboriginal heritage values of the site including retention of Thornton Hall;
- an open space network (including water bodies) of approximately 7ha including the general location, level of embellishment and function of passive and active areas to serve the future residential and worker population;
- a road network and hierarchy for the site and a pedestrian, cycle and public transport network;
- a water cycle management strategy for the development; and
- strategies for the provision of other associated infrastructure including water and sewer (including a new sewer pumping station), power, telecommunications and gas.

1.1.2 Project Application

The Stage 1 Project Application granted approval for:

- subdivision to create 108 lots comprising:
 - 84 future residential lots;
 - 1 Village Centre lot;
 - 16 super lots;
 - 3 future open space lots, including 1 lot to accommodate the community centre;
 - 1 future industrial lot;
 - 1 sewer pumping station lot; and
 - 2 residue lots;
- site establishment and perimeter security measures;
- establishment of environmental and safety controls and traffic control measures;
- preparatory works, including small building demolition, trees/shrub removal, topsoil stripping and stockpiling for later reuse and the disposal of unsuitable topsoil material, and taking up and stockpiling existing concrete and asphalt hardstands and roads for later reuse in other stages of the construction works;
- bulk earthworks – cut and fill, including the importation of material to raise levels;
- sections of the retaining wall next to the Penrith Training Depot;
- roads and road intersections;
- drainage and stormwater management infrastructure;
- utilities servicing infrastructure, viz electrical, sewerage (including a sewer pumping station), telecommunications, potable water and gas;
- lots formation;
- minor works external to the site, such as footpaths;
- construction of the community pavilion;
- landscaping;
- erecting informative signage; and

- site de-establishment and handover.

1.1.3 Repeal of Part 3A

The NSW Government repealed Part 3A of the EP&A Act in October 2011. However, Schedule 6A of the EP&A Act sets out the transitional arrangements for projects that were subject to the now repealed Part 3A. Clause 3B of Schedule 6A provides for development that is subject to a Part 3A Concept Plan approval. The relevant provisions of Clause 3B are:

- if Part 4 of the EP&A Act applies to the carrying out of the development, the development is taken to be development that may be carried out with development consent under Part 4 (despite anything to the contrary in an environmental planning instrument),
- any development standard that is within the terms of the approval of the concept plan has effect,
- a consent authority must not grant consent under Part 4 for the development unless it is satisfied that the development is generally consistent with the terms of the approval of the concept plan,
- the provisions of any environmental planning instrument or any development control plan do not have effect to the extent to which they are inconsistent with the terms of the approval of the concept plan,
- any order or direction made under section 75P (2) when the concept plan was approved continues to have effect.

1.1.1 Amendment of North Penrith LEP

In November 2011 the NSW Minister for Planning made the State Environmental Planning Policy Amendment (North Penrith) 2011 which amended the Penrith City Centre Local Environmental Plan 2008 to include provisions that relate to North Penrith.

1.2 Project Background

If appropriate insert further background information that is relevant to the proposed development including but not limited to:

- matters discussed in any pre-DA and agency meetings;
- which sections of the SEE address these matters; and/or
- site / concept plan specific history.

2.0 Site Analysis

2.1 Site Location and Context

The North Penrith site is located approximately 50 km to the west of Sydney CBD on the northern side the Penrith CBD. The North Penrith site's southern boundary adjoins the Penrith Railway Station. The North Penrith site is between Lemongrove Road to the east and Castlereagh Road to the west both of which are accessible via Coreen Avenue to the north – see **Figure 1**.

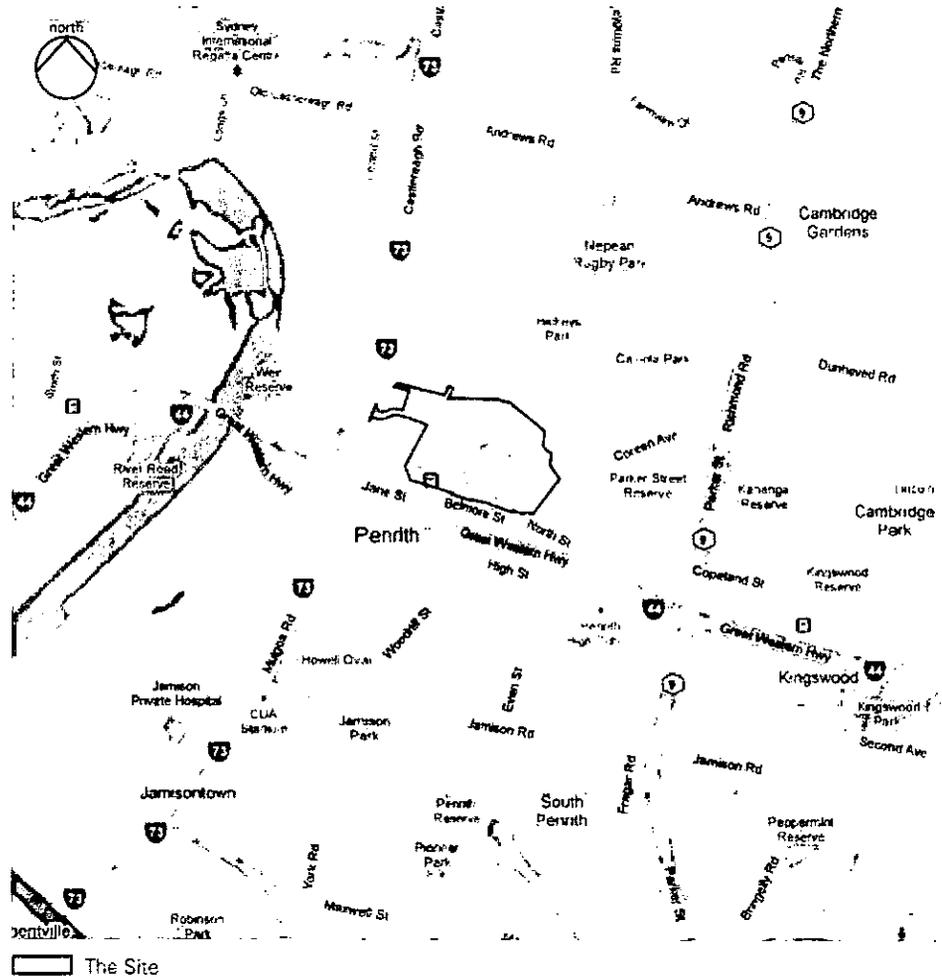


Figure 1 – Location of North Penrith site

2.2 Site Description

In the Site Description section identify the following:

- the address and general location of the site within the North Penrith site;
- the size, shape and topography of the lot; and
- the legal property description (Lot and DP) and owner.

The proposed development site is located at LOT1157 SYDNEY SMITH DRIVE THORNTON NSW.

The location of the site of the proposed development is within residential precinct E2 as established within the Concept Plan and shown in **Figure 2**. The site is shown on the Location Plan at **Figure 3**.

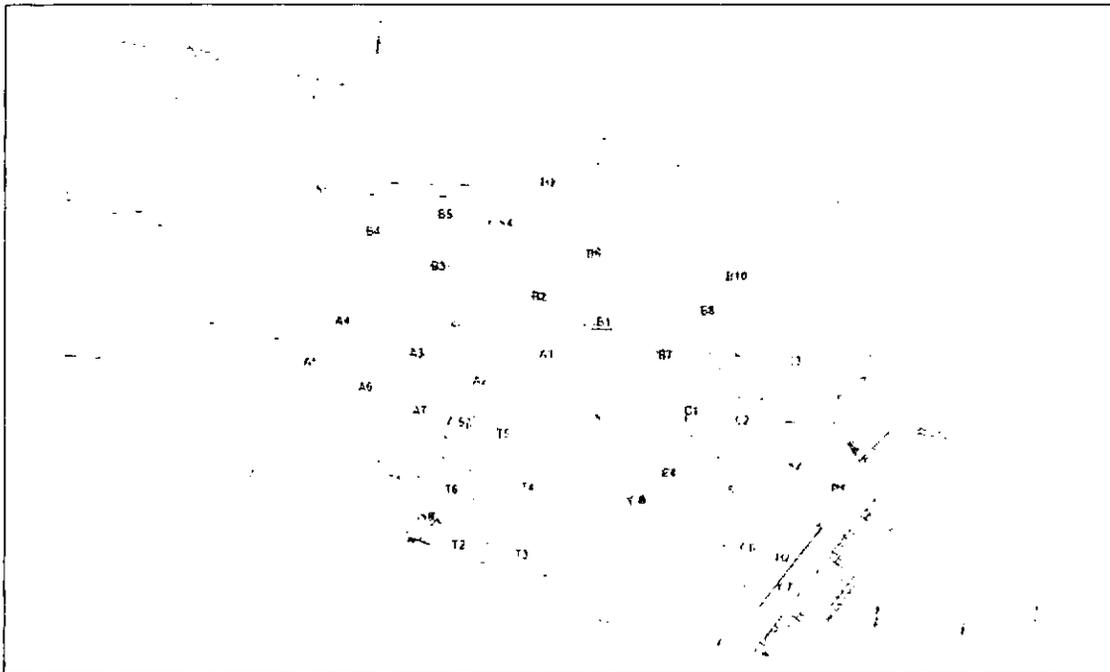


Figure 2 – Location plan

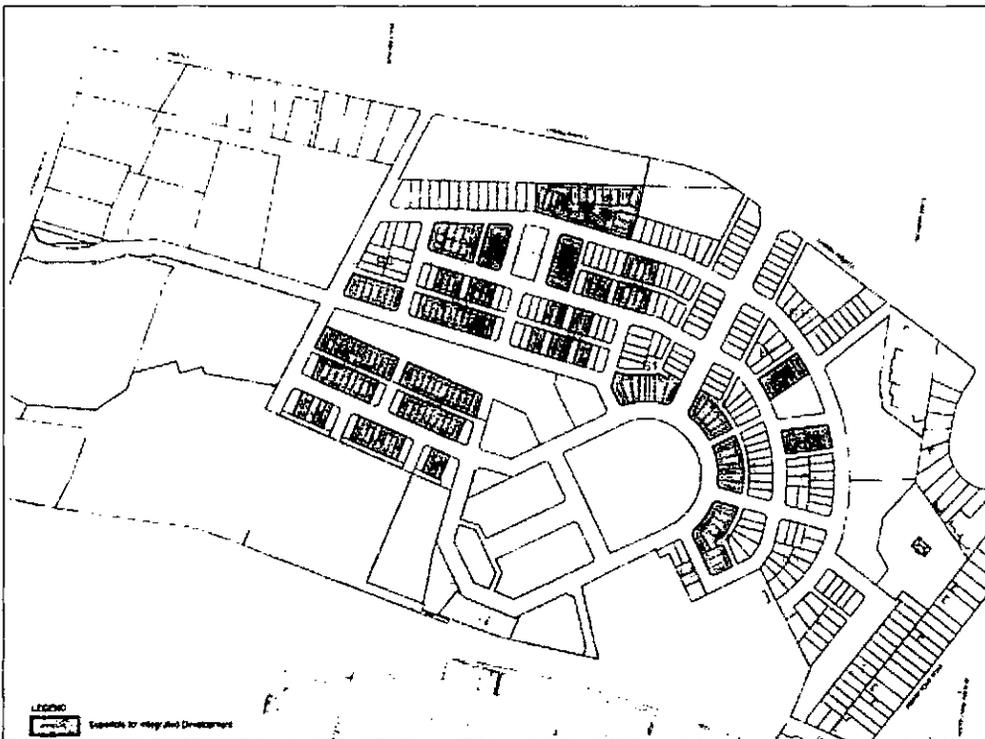


Figure 3 – Location of site

The site of the proposed development is 234.9m² in area and is legally described as LOT 1157 DP 1159973 and is owned by Landcom.

The site's levels have been prepared as part of the Stage 1 Project Application earth works. Once completed the site will have a gradual slope of 0.6m fall from the

South/West boundary to the North/east boundary. The site is cleared of existing vegetation and does not contain any existing structures.

The site has direct frontage to Sydney Smith Drive and has rear access via Cleveland Lane.

2.3 Surrounding Development

Provide a general description of the future / existing surrounding development under the Concept Plan / Project Applications:

- There are to be future developments proposed on neighbouring Lots to the Southern boundary.
- Lot 1156, 1158, and 1159 will be similar in size and dimension with differing facades and material finishes.

To the north of the site is a vacant block of land to the east is Sydney Smith Drive and the Lots Primary street frontage, to the west is Cleveland Lane and to the south is a vacant Lot that is to be developed By Firststyle Homes in future.

The broader surrounding land uses to North Penrith as shown in **Figure 1** comprise residential, business and industrial uses including:

- industrial development north of Coreen Avenue and east ;
- the Penrith Railway Station and the Penrith Town Centre CBD to the south; and
- the existing residential suburb of Lemongrove to the east.

3.0 Description of Proposed Development

The following description of the development has been provided as a guide and should be amended as appropriate to the specific DA. It is important to list all the elements of the project you are seeking approval for. Ensure this section is consistent with the description in Section 1.0.

This chapter of the report provides a detailed description of the proposed development. Architectural drawings showing the proposed dwelling are located at **Appendix B**. Landscape plans showing the proposed landscape works are located at **Appendix D**.

This DA seeks approval for construction of an detached dwelling and associated landscaping and parking.

3.1 Development Overview

The proposed development seeks approval for the construction of an detached dwelling. **Table 1** provides an overview of the key development information.

The proposed development will connect to the electricity, stormwater, water, sewer, gas and telecommunication services within the road reserve which were provided as part of the Stage1 Project Application.

Table 1 - Key development information

| Component | Proposal |
|--------------------------------------|----------------------|
| GFA (m ²) | 200.26m ² |
| Height (m and storeys)) | 2 storeys (7.573) |
| Front Setback (m) | 3m |
| Rear Setback (m) | 0.65m to garage |
| Landscape Area (m ²) | 102.43m ² |
| Private Open Space (m ²) | 50.22m ² |
| Car Spaces | 2 |

3.2 Development Form and Orientation

The architectural character of the proposed dwelling has been designed in accordance with the development principles included in the North Penrith Design Code. As such the proposed dwelling:

- is of contemporary architectural style and character;
- is appropriately designed to respond to the microclimate including sun, shade, breeze and general weather;
- relates well to and form a good interface with the overall subdivision, road and open space layout approved for the North Penrith site;
- incorporates appropriate durable and high quality materials, textures, forms and colours that will also complement the local landscape;
- includes opportunities for indoor/ outdoor relationships; and
- incorporates energy efficient measures.

The predominant bulk of the dwelling is situated within the front half of the allotment facing the street and has family rooms to the rear, opening directly onto the rear outdoor courtyards and open space.

3.3 External Materials and Finishes

The proposed external materials and finishes are shown on the plans at **Appendix B** have been selected from the Residential Design Palette included in the North Penrith Design Code to provide a contemporary appearance and ensure use of modern and lightweight materials.

3.4 Landscape and Open Space

The proposed landscape treatment is shown in the Landscape Plans at **Appendix D** and has been designed to contribute to the overall form of the dwelling and to provide versatile and functional outdoor living areas.

3.5 Access and Parking

The dwelling will be accessed from Sydney Smith Drive, which it fronts. The site is also accessible via a rear laneway by vehicle.

The development has a double garage.

3.6 Stormwater

The drains will connect to the stormwater drainage infrastructure within the road, as approved as part of the Stage 1 Project Application. The lot drains directly to Sydney Smith Drive via a collective easement. All stormwater will ultimately drain into the overall integrated stormwater management system for the broader North Penrith site.

3.7 Utility Services

Telephone, electricity, gas, water and sewer services will be installed underground within each of the adjoining road reserves. These services will be installed within trenches in the road reserves.

3.8 Erosion and Sediment Control

Erosion and sedimentation control measures will be implemented during construction in accordance with the erosion and sediment control plan included at **Appendix H**.

4.0 Assessment of Planning Issues

This chapter contains our assessment of the environmental effects of the proposed development as described in the preceding chapters of this report.

Under Section 79C(1) of the EP&A Act, in determining a development application the consent authority has to take into account a range of matters relevant to the development including the provisions of environmental planning instruments; impacts of the built and natural environment, the social and economic impacts of the development; the suitability of the site; and whether the public interest would be served by the development.

A number of planning issues which would usually be considered as part of a DA were addressed as part of the Concept Plan and Project Application Environmental Assessments. As the proposed development is consistent with the Concept Approval these issues do not require further assessment (see Section 4.2). These issues include:

- Social and Economic Issues
- Community Services and Facilities
- Transport and Accessibility
- European Heritage
- Indigenous Heritage
- Geotechnical, Soil and Contamination
- Biodiversity
- Visual Impact
- Water and Hydrology
- Ecological Sustainable Development
- Utilities and Infrastructure
- Crime and Public Safety

Pursuant to Section 75P(1)(a) of the EP&A Act, Schedule 3 of the North Penrith Concept Approval sets out specific future environmental assessment requirements that apply to future development under Part 4 of the EP&A Act.

Accordingly, the assessment provided in this SEE includes the aforementioned matters in addition to other potential planning issues which are relevant to the detailed design of the building under the Concept Approval.

4.1 Compliance with Relevant Strategic and Statutory Plans and Policies

The following legislation, strategies and planning instruments, which are relevant to the proposed development to be addressed:

- State Environmental Planning Policy 55 – Remediation of Land (SEPP 55);
- State Environmental Planning Policy (State and Regional Development Development) 2005 (S&R SEPP);
- State Environmental Planning Policy (BASIX) 2008 (SEPP BASIX);
- Sydney Regional Environmental Plan Hawkesbury Nepean River;
- Penrith City Centre Local Environmental Plan 2008; and
- North Penrith Design Code 2011.

The DA's consistency and compliance with the relevant statutory plans and policies is located in **Table 2** below and in the detailed Tables of Compliance at **Appendix J**. Variations to, and non-compliance with, the key standards and guidelines highlighted in the table are discussed in detail in the following sub-sections of this environmental assessment.

Before completing the North Penrith Design Code section of Table 2, review the proposal's compliance against the relevant controls in Sections 4.3 onwards. If the proposal complies, use the provided text in the comments box and remove the specific section from later in the report. If non-compliances exist, deal with them under the separate section and reference it within the table, ie. 'see Section 4.X'.
When justifying non-compliances refer to the relevant objectives in the Design Code and demonstrate that the proposal will still achieve these objectives.

Table 2 – Summary of consistency with key strategic and statutory plans and policies

| Instrument/Strategy | Comments | |
|--|---|--|
| State Planning Instruments and Controls | | |
| SEPP 55 | The Stage 1 Project Application will undertake the necessary works to ensure the site is suitable for the proposed residential use. | |
| S&R SEPP | Clause 11 of Schedule 2 sets out certain types of development in North Penrith that is State Significant Development. The proposed development for a dwelling is not a type of development specified. As such it would not be State Significant Development and is therefore a DA to Council. | |
| SEPP (BASIX) | BASIX Certificate is included at Appendix C . | |
| SREP No. 20 Hawkesbury Nepean River | The proposed development complies with the broad aims and objectives of the SREP in that it will not have any direct impact on any environmentally sensitive areas, or the water quality or quantity of the aquatic ecosystem on the site, which the SREP seeks to preserve. Consideration of the impacts of proposed development has been undertaken in accordance with the aims of the SREP and its strategies. Impacts of this proposal were considered Concept Plan and Stage 1 Project Application before the preparation of this application. | |
| Local Planning Instruments and Controls | | |
| Penrith City Centre LEP 2008 (Part 7) | Clause 49 - Zoning | The site is zoned as R1 General Residential |
| | Clause 50 – Land Use Table – Zone R1 General Residential | All kinds of residential accommodation are permissible in the R1 General Residential Zone. |
| | Clause 51 - Height of Buildings (Xm - Check SEPP Map for height limit at specific lot) | The proposed development will have a maximum height of 7.573m and therefore complies with the maximum height specified by this clause. |
| | Clause 53 – Architectural Roof Features | The development does not include an architectural roof feature that exceeds the height limit set out in clause 51. |
| | Clause 54 – Heritage Conservation | The site is not on land where a heritage item is located or in the vicinity of a heritage item. |
| | Clause 55 - Earthworks | The proposal does not include substantive earthworks, which have been completed as part of the |

| Instrument/Strategy | Comments | |
|---|---|--|
| North Penrith Design Code | | subdivision works. |
| | Building Envelopes | The proposed development complies with the building envelope controls in Section 3.3 of the Design Code. See Section 4.3.3 below. |
| | Building Design and Articulation | The proposed development complies with the Building Design and Articulation controls in section 3.4 of the Design Code. See Section 4.3.1 below. |
| | Private Open Space and Landscaping | The proposed development complies with the Private Open Space and Landscaping controls in section 3.5 of the Design Code. / See Section 4.4 below. |
| | Fencing | The proposed fencing has been provided in accordance with Section 3.6 of the Design Code. |
| | Garages, Site Access and Parking | The proposed development complies with Section 3.7 of the Design Code. |
| | Visual and Acoustic Amenity | The proposed development complies with Section 3.8 of the Design Code. |
| | Specific Provisions - Key Sites | <p>The proposed site is identified in Figure 14 of the Design Code.</p> <p>Entry Boulevard Lots _ The proposal complies with the specific provisions and controls (see also Table of Compliance at Appendix J).</p> |
| Specific Provisions - Ancillary Dwellings | The proposed development does not comprise any ancillary dwellings. | |

4.2 Consistency with the Concept Plan

The North Penrith Concept Plan Approval established the vision and planning framework to be used by Penrith Council to assess the detailed design of the future buildings on the site. The Concept Plan Approval contains:

- Terms of Approval;
- Future Environmental Assessment Requirements;
- Statement of Commitments; and
- North Penrith Design Code.

Development for the purposes of residential dwelling on this lot is consistent with the Concept Plan Terms of Approval and Statement of Commitments.

4.3 Urban Design and Built Form

The proposed design and layout for development is considered suitable given that:

- the provision of more compact and efficiently shaped allotments enables affordable, yet amenable dwelling designs to be constructed;
- the subdivision pattern maximises the opportunity for a greater number of dwellings to obtain views across the public open space and the public domain; and

- the dwelling designs endeavour to ensure that a high quality product continues to be delivered within the North Penrith site.

4.3.1 Design Quality

The proposed dwelling design is a high quality product that generally accords with the objectives and outcomes sought by the North Penrith Design Code. The proposed dwelling will have a positive impact upon the built environment and streetscape in that:

- the proposed dwelling is sympathetic in terms of scale, height, bulk and design in accordance with that envisaged in the Design Code;
- the dwelling is appropriately designed to respond to the microclimate including sun, shade, breeze and general weather;
- the dwelling offers the ability to form a good interface with the public domain;
- the dwelling incorporates appropriate materials, textures, forms and colours that complement the local landscape and other future residential development;
- the dwelling incorporates energy efficient measures; and
- the dwelling has private outdoor spaces in the form of courtyards or soft landscaped areas.

4.3.2 Streetscape

As shown in the proposed architectural drawings at **Appendix B**, the proposed design for the dwelling will have a positive impact on the North Penrith site as a whole and the local streetscape for the following reasons:

- the proposed design will contribute to an attractive and varied streetscape;
- the proposed design is of a high quality contemporary architectural design which will contribute to the character of the local environment and provide an attractive visual outlook;
- the proposed dwelling will use high quality and durable finishes to ensure that it fits in with the residential character of the estate and provides visual amenity for this part of the North Penrith site;
- the dwelling is designed to address the street frontages;
- The use of architectural elements helps define the dwelling entries and facades.

4.3.3 Building Envelopes

The proposed dwelling fully complies with the minimum required building envelope controls at Section 3.3 of the North Penrith Design Code.

4.3.4 Overshadowing

The Architectural Plans at **Appendix B** include shadow diagrams depicting the shadows cast by each dwelling at 9am, 12noon and 3pm during the winter solstice. These diagrams show that the development is able to achieve the required 3 hours of solar access between 9am and 3pm during the winter solstice.

- the other private open space areas on each lot receives adequate solar access between 9am and 3pm during the winter solstice;
- the private open space areas are directly accessible from the living rooms, maximise privacy for the occupants and neighbours and are suitably positioned away from the road;

- the proposed dwelling design complies and exceeds the minimum provision requirements for landscape open space and private open space; and
- the aims and objectives of the Design Code are not compromised.

4.3.5 Privacy

The proposed dwelling has been designed to minimise the potential for adverse visual and acoustic privacy impacts on the adjacent dwellings. The dwelling has been designed to ensure windows are off-set against windows of neighbouring dwellings.

Furthermore, the main living rooms are located on the ground floor – opening to the rear of the lot - and bedrooms are located on the first floor.

The dwelling provides adequate setbacks, (as discussed above) so as not to impact on the visual privacy of neighbouring dwellings.

4.3.6 Internal Amenity

The internal layouts of the dwelling provides open plan layouts for ease of movement and efficient use of space. All bedrooms are adequately sized, have built in storage and have easy access to bathrooms.

4.3.7 Energy Efficiency

A BASIX certificate has been prepared for the proposed dwelling and this is included at **Appendix C**. The certificate indicates that the BASIX scores meet or exceed the BASIX target rates for water, thermal comfort and energy.

The BASIX commitments that form part of this proposal include the use of water efficient fixtures and energy efficient cooling, heating and ventilation systems and appliances, and the provision of a rainwater tank and insulation.

4.4 Landscape Design

The dwelling will be landscaped in accordance with the Landscape Plans included at **Appendix D**. These plans have been designed in accordance with the development controls for private open space and landscaping included at Section 3.5 of the North Penrith Design Code.

Based on the site's characteristics and proposed dwelling design, the landscape design is appropriately structured to take into consideration:

- views;
- northerly aspects;
- prevailing westerly winds; and
- the location of easements and on-site services.

As a result of these considerations the development includes:

- gardens that are compatible in scale and form with the dwelling;
- integrated outdoor and internal living areas, allowing outdoor areas to act an extension of the internal living areas;
- reduced stormwater runoff, increased water infiltration and beneficial air and water exchange to tree roots through the use of porous and permeable paving solutions such as gravel;
- a microclimate suited to seasonal conditions; and

- reduced water consumption through
 - the provision and use of rainwater tanks that can be used for garden watering; and
 - the use of water efficient plants;
- integration with the proposed landscaping for public areas and road reserves.

4.5 Construction and waste management

Construction activity involves disturbing soils during construction of dwellings and landscaping. Accordingly, there is some potential for unconsolidated soils to be eroded by water and wind action.

The sediment and erosion plan submitted and included at **Appendix H**, will provide the necessary measures to ensure that soil and sediment remains on site and is prevented from entering the broader stormwater system for the North Penrith site.

Further, all waste material resulting from construction on the site will be disposed of, recycled or reused in accordance with the parameters set out in the Waste Management Plan included **Appendix I**.

4.6 Stormwater management

Stormwater will run into the broader integrated stormwater system for the North Penrith site as approved under the respective Project Application. This integrated approach to the stormwater management will:

- protect natural systems – including the rehabilitated lake system and further downstream, the protected wetland and the greater Hawkesbury- Nepean Catchment;
- integrate stormwater management with the provision of open space;
- protect water quality – by filtering stormwater from the urban environment prior to draining to the lake system;
- reduce run-off and peak flows – through localised detention measures; and
- add value while maintaining development costs in its construction and long term maintenance.

4.7 Contamination

Investigations undertaken as part of the Concept Plan assessment have concluded that the site is suitable for the proposed development without need for further investigations or remediation. Hence, the site is suitable for the proposed development with regard to the issue of contamination.

4.8 Social and Economic Impacts

This proposal will further commence the transformation of vacant and disused land into a functioning and attractive residential community.

During construction, construction personnel are likely to patronise local shops and services - providing a temporary economic benefit to these businesses. New residents will also patronise local shops and services and start to develop a residential community as envisaged.

4.9 Site Suitability

The site is considered suitable for the proposed development on the basis that it:

- does not contain any heritage items, nor is it associated with heritage values;
- contains the necessary services to support development such as water, sewer reticulation, electricity and telecommunications;
- will include the necessary infrastructure to support residential development including the provision of roads and stormwater measures.

The proposed development is suitable for the site in that it:

- is permissible with consent pursuant to SEPP Major Development;
- adds to the diversity of residential development to be delivered throughout the North Penrith site;
- will provide diversity in the design outcomes for the streetscapes throughout the North Penrith site;
- the development generally complies with the relevant built form development controls within the North Penrith Design Code; and
- will provide additional housing choice for local populations.

4.10 Public Interest

The development proposed in this application will contribute to the overall delivery of a unique residential development that will complement and support the Penrith Town Centre as envisaged by the approved Concept Plan and North Penrith DC. Hence, no element of the proposal will be detrimental to the public interest.

5.0 Conclusion

Conclusion is to:

- Include a brief statement about the proposed development.
- Identify any non-compliances and why variation to standards should be supported.
- Identify any key planning issues and how they are being addressed.
- Provide overview of why the project has merit / public benefit and should be approved.

The following provides a template of what this section may include and can be amended to suit your proposed development.

This DA seeks approval for construction of a detached dwelling and associated landscaping and parking; and Lot 1157 Sydney Smith Drive, Thornton NSW, as part of the North Penrith Project.

The proposed development is consistent with the approved Concept Plan. Furthermore, the development:

- is consistent with the objectives of SREP No.20 – Hawkesbury – Nepean River;
- is generally consistent with the provisions of SEPP Major Development and the North Penrith Design Code ;
- will implement suitable sediment and erosion measures will be used during construction to ensure minimal impact to stormwater quality;
- will further progress the transformation of predominantly vacant land into a functioning and attractive residential community which will have economic and social benefits to the wider community;
- has a design that is of a high quality contemporary architectural design and generally complies with Design Code built form development controls; and
- will add to the varied and diverse streetscape within North Penrith site.

In light of the merits of the proposal and in the absence of any significant adverse environmental, social or economic impacts, we have no hesitation in recommending that the application be approved subject to standard conditions of consent.

MANAGING DIRECTORS
MATTHEW PALAVIDIS
VICTOR FATTORETTO



DIRECTORS
MATTHEW SHIELDS
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20120708.1/1508A/RO/HP

15/08/2012

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ATTN: MS NICOLE WOODROW

North Penrith Development - Traffic Noise Review

1 INTRODUCTION

This letter presents our review of traffic noise exposure of the North Penrith Demonstration homes. The subject site is Lot 1221, bound by Sydney Smith Drive (North), William St, Cleveland Lane, Hope Place, Grace Drive and Sydney Smith Drive.

This review is based on the following project drawings:

Table 1 – Referenced Drawings

| Architect | Drawing Number | Dated |
|------------|----------------|----------|
| PAA Design | A-001 | 16/12/11 |
| | A-101 | 11/5/12 |
| | A-102 | 11/5/12 |
| | A-103 | 11/5/12 |
| | A-104 | 11/5/12 |
| | A-105 | 11/5/12 |

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In addition to the above drawings, this assessment is based on the project Noise and Vibration Assessment (NVA) by Benbow Environmental dated 19th October 2010 and the North Penrith Development Transport Mobility and Accessibility Plan (TMAP) by Parsons Brinckerhoff dated 29th October 2010.

2 SITE DESCRIPTION

The subject site sits on the corner of the main entrance road, Sydney Smith Drive and opposite the village oval (Public Open Space).

For preparation of the NVA, unattended noise monitoring was undertaken at a number of locations on the overall North Penrith development site. The Lot 1221 site which is the subject of this review is in close proximity to R02, which is described in the NVA as "... an area of potential acoustic refugia..." once the buildings fronting the railway line and Correen Avenue have been constructed.

2.1 EXISTING NOISE LEVELS

The existing noise levels at the subject site (R02), presented in the NVA are as follows:

Table 2 – Existing Noise Levels at Lot 1221

| Location | Noise Level dB(A) | Time of Day | | |
|----------|-------------------------------|------------------|-----------------------|---------------------|
| | | Day (7am–6pm) | Evening (6pm–10pm) | Night (10pm–7am) |
| Lot 1221 | Rating Background L_{90} | 39 | 41 | 36 |
| | Average L_{eq} | 47 | 47 | 46 |

2.2 FUTURE NOISE LEVELS

Given that the subject site is "... an area of potential acoustic refugia..." from external noise sources, the only significant impacts on the site itself will be from traffic serving the development driving on the development roads.

The predicted flow on Sydney Smith Drive is 2000-3000 vehicles per day (Reference: Figure 18 of TMAP). Based on the road design diagrams within the TMAP and the project design drawings, using CORTN modelling, the predicted noise level at the residential façade is 58dB(A) L_{eq} .

3 INTERNAL NOISE GOALS

In accordance with the NVA, the project internal goals for road traffic noise are as follows:

Table 3 – Residential Internal Noise Goals

| Room Type | Internal Noise Goals dB(A) | |
|-------------|----------------------------|--------------------|
| | Day (7am – 10pm) | Night (10pm – 7am) |
| Bedroom | 40 $L_{eq(15hour)}$ | 35 $L_{eq(9hour)}$ |
| Living Room | 40 $L_{eq(15hour)}$ | 40 $L_{eq(9hour)}$ |

4 REVIEW

The internal noise levels of the property will be primarily as a result of noise transfer through the roof, windows and entry doors. This is due to the relatively light building elements used, which offer less resistance to the transmission of sound.

Any noise transferred through masonry wall elements will not be significant and does not need be considered further.

4.1 RECOMMENDED CONSTRUCTIONS

The following constructions are recommended to comply with the noise objectives stated in Table 3.

4.1.1 Glazed Windows

The recommended window glazing constructions for the proposed unit, to ensure internal noise levels comply with AS2120:2000 internal noise criteria are presented in Table 2.

Table 4 – Glazing Requirements

| Room | | Glazing Thickness | Acoustic Seals |
|---------------------------------|---------------|-------------------|----------------|
| Bedrooms facing Sydney Smith Dr | Sliding Doors | 6mm Float | Yes |
| | Windows | 4mm Float | Yes |
| Remaining Bedrooms | All | 4mm Float | No |
| Living Areas | All | Standard | No |

The proposed glazing thickness will satisfy the internal noise goals. For structural, safety or other purposes thicker glazing may be required. Where this is the case, thicker glazing will also be acoustically acceptable.

In addition to complying with the minimum selected glazing thickness, the STC rating of the glazing fitted into operable frames fixed into the building opening should not be lower than the values listed in Table 5 for all rooms. Where nominated, this will require the use of acoustic seals (equal

to Q-Ion seals from Schlegal) around the full perimeter of openable frames and the frame will need to be sealed into the building opening using a flexible sealant. Note that mohair seals in windows and doors are not acceptable where acoustic seals are required.

Table 5 – Minimum STC of Glazing

| Glazing Assembly | Acoustic Seals | Minimum STC/Rw of Installed Window |
|------------------|----------------|------------------------------------|
| 6mm float | Yes | 29 |
| 4mm float | Yes | 27 |
| Standard Glazing | No | 22 |

4.1.2 Walls

The proposed brick veneer walls do not require upgrades for compliance with the project acoustic goals.

4.1.3 Roof/Ceiling

The proposed metal roof, with plasterboard ceiling and insulation in the roof/ceiling cavity is acoustically acceptable without upgrade.

Penetrations in ceilings (such as for light fittings etc.) must be sealed gap free with a flexible sealant. Any ventilation openings in the ceilings would need to be acoustically treated to maintain the acoustic performance of the ceiling construction.

4.1.4 Entry Doors

Entry doors should be installed with all gaps minimised, but acoustic seals are not required.

5 CONCLUSION

An acoustic review of the traffic noise intrusion into Lot 1221 has been conducted.

Acoustic seals are required to bedroom windows and doors facing Sydney Smith Drive for compliance with the project internal noise goals. Standard building constructions are suitable otherwise.

We trust this information is satisfactory. Please contact us should you have any further queries.

Yours faithfully,



Acoustic Logic Consultancy Pty Ltd
Hilary Pearce

North Penrith - Acoustic Checklist

Dwellings shall incorporate the following;

- | | | | |
|-----|--------------------------------|--|-------------------------------------|
| A1. | Walls | Typical brick veneer & cladding systems | <input checked="" type="checkbox"/> |
| A2. | Windows | As per ABSA & Basix certificates | <input checked="" type="checkbox"/> |
| | | Float/Laminated glass & q-lon seals (STC rating 29) | <input checked="" type="checkbox"/> |
| | | Must be sealed to brickwork externally, either silicon or angles & silicon depending on the width of gap | <input checked="" type="checkbox"/> |
| A3. | Thermal insulation | As per ABSA & Basix certificates | <input checked="" type="checkbox"/> |
| A4. | Ceilings | Typical timber framed & plasterboard lined systems | <input checked="" type="checkbox"/> |
| | | Any penetrations in the ceilings under a roof space need to be sealed with silicon | <input checked="" type="checkbox"/> |
| | | Exhaust fans require treatment, sealed duct or top hat closer | <input checked="" type="checkbox"/> |
| | | Downlights with roof space above require a downlight seal/guard similar to "Isolite" <i>N/A</i> | <input checked="" type="checkbox"/> |
| | | A/C systems require treatment, sealed duct only | <input checked="" type="checkbox"/> |
| A5. | External doors to living areas | Doors should be fitted with foam seal/weather stripping to sides & top | <input checked="" type="checkbox"/> |
| | | Doors should be fitted with weather seal to bottom | <input checked="" type="checkbox"/> |
| | | Must be sealed to brickwork externally, either silicon or angles & silicon depending on the width of gap | <input checked="" type="checkbox"/> |

SECTION " " LOT 1157 SYDNEY SMITH DRIVE