Penrith City Council

Proposed Multi-Dwelling Development
at
143 Stafford Street PENRITH NSW 2750

for
Cazbuild Constructions

STATEMENT OF ENVIRONMENTAL EFFECTS

and notes in support of Development Application

prepared by

0413 604 092 - email info@obriendesign.com.au
abn 75949053186

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1. SUMMARY

1.1 This Statement of Environmental Effects in made to Penrith City Council in support of a Development Application for the proposed Multi-Dwelling development.

1.2 The subject site is 143 Stafford Street Penrith – Lots 131 & 132 DP 710273. Zoned R3 - Medium Density Residential under the Penrith LEP 2010.

1.3 The application seeks the construction of 10 x 3 bedroom townhouses and 7 x 4 bedroom townhouses (17 total), consisting of 6 buildings separated by open courtyards.

1.4 The site is located within close proximity to public infrastructure.

1.5 The site is not affected by any bushfire area, mine subsidence, landslip or contamination.

1.6 The subject site is located on the northern side of Stafford Street, and has dimensions of 38.14m x 97.41m, with a total area of 3695m2

1.7 The site is bounded to the east and west by similar and smaller sized residential blocks. To the north are similar sized blocks off Derby Street. To the south is Stafford Street.

1.8 The (combined) subject site currently contains 2 single storey brick veneer dwellings and a metal shed. It is proposed to remove approximately 50% of the existing trees on site. These will be enhanced by all-new landscaping to the site. The land slopes away from the street, approximately 4m from south to north. Stormwater is proposed to drain into the existing stormwater easement as described in the attached hydraulic design.

1.9 The locale is a split of older residential dwellings, with a series of new, townhouse developments scattered throughout the area. It is noted that multi-dwelling developments surround the site in all directions.

Multi-Dwelling development in the immediate area

Street view – Stafford Street Frontage

2. PROPOSAL

2.1 The proposal consists of 6 detached buildings, separated by a common driveway through the centre of the combined lots. The two buildings fronting the street feature three units each, the middle two buildings also feature three units each. The rear building on the western side of the lot features three units while the rear building on the eastern side features two units.

This Development Application proposes to construct a 'Multi Dwelling Housing' development pursuant to the Penrith Development Control Plan 2014 Part 2.4 comprising a total of 17 dwellings with 37 vehicle parking spaces. The proposal involves the strata subdivision of the development on completion.

A basic description of each dwelling is described in the following schedule –

	GROUND FLOOR (EXC. STAIR)	FIRST FLOOR (EXC. STAIR)	TOTAL LIVING	GARAGE	TOTAL UNIT (INC. STAIR)	TOTAL POS	BEDROOMS	CAR SPACES
UNIT 1	40.00m2	58.50m2	98.50m2	34.30m2	136.60m2	43.00m2	3	2
UNIT 2	47.00m2	62.00m2	109.00m2	20.00m2	132.80m2	26.00m2	4	2
UNIT 3	40.00m2	58.50m2	98.50m2	34.30m2	136.60m2	49.00m2	3	2
UNIT 4	40.00m2	58.50m2	98.50m2	34.30m2	136.60m2	49.00m2	3	2
UNIT 5	47.00m2	62.00m2	109.00m2	20.00m2	132.80m2	26.00m2	4	2
UNIT 6	40.00m2	58.50m2	98.50m2	34.30m2	136.60m2	49.00m2	3	2
UNIT 7	40.00m2	58.50m2	98.50m2	34.30m2	136.60m2	49.00m2	3	2
UNIT 8	47.00m2	62.00m2	109.00m2	20.00m2	132.80m2	26.00m2	4	2
UNIT 9	40.00m2	58.50m2	98.50m2	34.30m2	136.60m2	46.00m2	3	2
UNIT 10	40.00m2	58.50m2	98.50m2	34.30m2	136.60m2	43.00m2	3	2
UNIT 11	47.00m2	62.00m2	109.00m2	20.00m2	132.80m2	26.00m2	4	2
UNIT 12	40.00m2	58.50m2	98.50m2	34.30m2	136.60m2	49.00m2	3	2
UNIT 13	40.00m2	58.50m2	98.50m2	34.30m2	136.60m2	49.00m2	3	2
UNIT 14	47.00m2	62.00m2	109.00m2	20.00m2	132.80m2	26.00m2	4	2
UNIT 15	40.00m2	58.50m2	98.50m2	34.30m2	136.60m2	49.00m2	3	2
UNIT 16	53.00m2	70.50m2	123.50m2	35.50m2	159.00m2	49.00m2	4	2
UNIT 17	53.00m2	70.50m2	123.50m2	35.50m2	159.00m2	52.00m2	4	2

2.2 All buildings will be constructed using a concrete slab for the ground floor, a timber framed first floor, brick veneer walls, and tiled roofs. There will be 37 car spaces on the site, 34 required for the 17 dwellings with an additional 3 visitor spaces.

2.3 The property is defined as "Multi Dwelling Housing" and is zoned R3 Medium Density Residential under the Penrith Local Environment Plan 2010

2.4 The proposal complies with the Penrith LEP and DCP controls, as shown in the following summary –

COMPLIANCE SCHEDULE (REFER TO SOEE FOR FULL COMPLIANCES)
LOTS 131 & 132 DP 710273
Zone R3 Med. Density Residential

TYPE	MANDATORY CONTROL	PROPOSED	COMPLIANCE
LOT SIZE		3695.0m2	YES
LOT WIDTH	22M MIN	30.48m	YES
FRONT SETBACK	5.5m or average neighbours	unit 1 - 7.5m unit 10 - 5.7m	YES YES
REAR SETBACK	6m - 2 storey 4m - 1 storey	18.0m - 2 storey 18.0m - 1 storey	YES
DRIVEWAYS & PARKING	3 BEDS 2 SPACES 2 BEDS 1.5 SPACES DRIVE WIDTH 3.0m	3 BEDS 2 SPACES 3.5m MIN TOTAL SPACES 37, inclusive 3 Visitor spaces	YES YES YES
BUILDING SEPARATION	4M MIN	5.5M MIN	YES

TYPE	MANDATORY CONTROL	PROPOSED	COMPLIANCE
BUILDING ENVELOPE	25deg MAX ROOF PITCH	25deg	YES
SIDE SETBACKS	2m MIN SIDE SETBACK	2m MIN	YES
SOLAR PLANNING	DCP CLAUSE 2.4.9	REFER SHADOW STUDY	YES
LANDSCAPED AREA	40% MIN (1478m2) POS 25m2 MIN	>2m - 1490m2 (40.00%) VARIES MIN - 26m2 MAX - 80m2	YES YES
BUILDING LENGTH	20m MAX. LENGTH	ALL BUILDINGS MAX LENGTH 20.0m	YES

2.5 Vehicle Access to the dwellings will be via a common driveway through the centre of the combined lots allowing entry or exit in a forward direction. In accordance with the PDCP2014 a total of 37 spaces are provided

on site. Parking to each unit is provided by the combined use of garages and an open car spaces. The additional amount of traffic likely to be generated by the development will have little or no effect on the existing road system.

2.6 Privacy and Fencing - Privacy to the adjoining dwellings will be maintained by the use of 2.1m high fencing around the perimeter of the site. Units 1 & 10 at the front of the site will feature a 1.8m high timber slat courtyard walls. Internal fencing between units will be 1.8m high. It is proposed to build a 1.2m high brick fence along the front boundary of the site.

3. PLANNING CONTROLS

Statutory Controls

The relevant controls include –

State Environmental Planning Policy – BASIX
State Environmental Planning Policy No.55 – Contaminated Land
Sydney Regional Environmental Plan No.20 – Hawkesbury Nepean River
Penrith Local Environment Plan 2010

Policy Controls

The relevant controls include –

Penrith Development Control Plan 2014

The following summarises and comments on the relevant planning controls in relation to the proposal.

State Environmental Planning Policy – BASIX

A BASIX Certificate, compliant to the State Government water and energy control targets, is attached to this proposal.

State Environmental Planning Policy No.55 – Contaminated Land

Given the historical use of the site as residential use, land contamination is highly unlikely. A report under SEPP 55 is not required. Any contaminated material unearthed during the demolition phase of the development will be disposed of to comply with the legislative requirements and guideline documents.

Sydney Regional Environmental Plan No.20 – Hawkesbury Nepean River

The proposed development incorporates a drainage concept that demonstrates that the stormwater runoff from the site can be adequately conveyed to the existing street network. Appropriate erosion and sediment controls will be implemented during the construction stage.

4. ASSESSMENT

PENRITH LOCAL ENVIRONMENT PLAN 2010

Clause	Controls	Comments	Compliance
Zoning	R3 Medium Density	Multi Dwelling Housing is Permissible	Yes
2.3	Zone objectives and Land Use Table	The proposal is consistent with the R3 zone objectives and will provide additional housing in the area with access to public transport and services. The site as it currently exists is underutilized in terms of its development potential.	Yes
2.7	Demolition requires consent	No demolition is required	Yes
4.1a	Minimum subdivision lot size	A minimum lot size of 800m2 is identified for the site. The subject site has a total area of 3695m2.	Yes
4.3	Height of Buildings – 8.5m	The only variation to this control is the upper roof ridge of units 9 & 17, which exceed the 8.5m limit by no more that 300mm. This is due to the ground floor minimum RL's as set by the flood data. Also, as these units are at the rear of the site, the streetscape impact will be nil.	No
4.4	Floor Space Ratio	No FSR control applies	Yes
5.9	Preservation of Trees or Vegetation	Repealed	Yes
5.10	Heritage Conservation	The site is not within a Heritage Conservation Area. There are no Heritage items within the vicinity of the site. As a result, the subject site will not have any associated heritage restrictions.	Yes
7.1	Earthworks	The proposal requests consent for the excavation of the site as per the attached plans. It is considered the proposed excavation will have minimal environmental or amenity impacts. The proposal will not affect or disrupt the local drainage and flood patterns, or soil stability of the area. The proposed excavation is consistent with the current local Multi Dwelling developments and will be in accordance with the current Council controls.	Yes

7.2	Flood planning	The site is identified as flood prone land. All building comply to the 1% AEP level set for the site plus 500mm freeboard.	Yes
7.3	Development on Natural Resources sensitive land	The site is not identified on the Natural Resource Sensitive Map	Yes
7.4	Sustainable Development	The proposal satisfies the LEP in that – *(a) conserving energy and reducing carbon dioxide emissions,* *(b) embodied energy in materials and building processes,* Please refer to the BASIX Certificate *(c) building design and orientation,* *(d) passive solar design and day lighting,* *(e) natural ventilation,* All dwellings feature good solar access and natural ventilation *(f) energy efficiency and conservation,* *(g) water conservation and water reuse,* Please refer to the BASIX Certificate (h) waste minimisation and recycling, Please refer to the Waste Management Plan (i) reduction of vehicle dependence, Access to close public transport will reduce vehicle dependence for the site (j) potential for adaptive reuse. Dwelling 173 has been designed specifically to be adapted into an accessible dwelling in the future.	Yes
7.5	Protection of Scenic Character and Landscape Values	The site is not identified on the Scenic and Landscape Values Map	Yes

7.6	Salinity	Due to the location of the site, and its historical uses, it is not likely to be affected by Saline soils.	Yes
7.7	Servicing	The development site is currently serviced by water and sewer and the required utility clearances will be obtained prior to the commencement of works.	Yes

PENRITH DEVELOPMENT CONTROL PLAN 2014

D2 RESIDENTIAL DEVELOPMENT

Clause	Controls	Comments	Compliance
1.1	Site Planning	*1.1.1 Site Analysis* A site analysis comprising the architectural drawings along with the discussions within this statement is provided. This analysis identifies the relevant controls and considerations required by Council. *1.1.2 Key Areas with Scenic and Landscape Values* The subject site is not located within a Scenic and landscape Values area.	Yes
1.2	Design Principles	*1.2.2 Built Form – Energy and Efficiency Conservation* The site has a north / south aspect to maximise solar access to all dwellings. All dwellings on the western side of the lot will allow afternoon light directly into the living areas. The dwellings on the eastern side will allow morning light directly into the living areas. A BASIX Certificate is attached *1.2.3 Building Form – Height, Bulk and Scale* As the locality and wider neighbourhood is undergoing a transformation to Multi Dwelling developments, it is considered the proposal is appropriate in height, bulk and scale. The site is currently surrounded in all directions by existing multi-dwelling developments. The proposal complies to all setback and height controls within the DCP.	Yes

		1.2.4 Responding to the site's topography and landform The subject site falls away from Stafford Street. The extent of the fall is approximately 4m south to north over a site depth of 97m. (1:20 fall) The proposal has been designed to minimise cut and fill. All buildings are stepped down the site and follow the natural contours where possible, and given the flood level constraints. *1.2.5 Safety and Security.* The proposal features and active façade that promotes casual surveillance to both Stafford Street and the driveway, along with the garden areas and courtyards. The front dwellings will address Stafford Street. *1.2.6 Maximising Access and Adaptability* The proposal has been designed to allow access for people with a disability. Dwellings 16 & 17 have been designed to allow for future adaptation into an accessible dwelling. Please refer to the architectural drawings for detail.	
2.1	Preservation of trees and vegetation	The subject site is within an established residential area. The application seeks council consent for the removal of approximately 50% of the site's trees. Please see the Demolition Plan for detail. The site is not identified as being within the Natural Resources Sensitive Map under the LEP. The development proposes extensive landscaping works to soften the built form and blend the development into the streetscape.	Yes
2.2	Biodiversity Corridors and Areas of remnant Indigenous Vegetation in Non-Urban Areas	The subject site is not identified on the Natural Resources Sensitive Land under the LEP	Yes

2.3	Bushfire Management	The subject site is not in a bushfire zone.	Yes
3.2	Catchment Management and Water Quality	The site will be appropriately managed during demolition and construction works. These measures will contribute towards the protection of the water system. An environmental management plan is included in the architectural plans.	Yes
3.3	Watercourses, Wetlands and Riparian Corridors	The subject site is approximately 2.5km from the Nepean River. The existing Riparian Corridor around the river will not be affected.	Yes
3.4	Groundwater	As the proposal is for a Multi Dwelling Housing development, the risk of site contamination during construction and future use of the site is low.	Yes
3.5	Flood Planning	The site is identified on the Flood Planning Map. Please refer to the Flood management discussion above.	Yes
3.6	Stormwater Management and Drainage	A detailed Stormwater Management Plan has been designed and included within the submission.	Yes
3.9	Water Sensitive Urban Design	The proposal incorporates WSUD principles that seek to minimise and manage stormwater on the site and surrounding area. The proposal addresses the unique characteristics of the site and will provide efficient management of stormwater. Please refer to the attached Hydraulic Design.	Yes
4.1	Site Stability and Earthworks	It is considered that the proposed earthworks and excavation will have minimal adverse impacts on the local environment and amenity. The outcome will be appropriate considering the nature of the development and the unique characteristics of the site. The proposed earthworks comply to the Council's DCP controls. The proposal will not affect or disrupt the existing drainage or flood patterns, it will not affect the soil stability in the area. The proposed excavations are consistent with the prevailing development in the vicinity and is unlikely to disturb any relics.	Yes
4.3	Erosion and Sedimentation	As 4.1 above. An Environmental Management Plan (Erosion and Sediment Control) is included in the Architectural Plans.	Yes

4.4	Contaminated Lands	The site is not known for any previous uses apart from residential, therefore there is a very low likelihood of contamination. If any contaminates are unearthed by the excavation and demolition works, appropriate actions consistent with the legislative requirements and guidelines will be undertaken.	Yes
C5	Waste Management	A waste management plan in included with the submission. Waste will be appropriately managed during demolition and construction phases of the proposal. Bin storage and bulk waste areas have been designed to comply with Council's DCP requirements.	Yes
C6	Landscape Design	A Landscape Plan is included within the submission. The proposed landscape works is consistent with the landscaping of other comparable Multi Dwelling developments in the vicinity and will contribute to the amenity of the streetscape.	Yes
10.2	Traffic Management and Safety	The proposal details the vehicular access and movement within, along with entering and exiting the site. The proposal will not contribute to the creation of traffic hazards, nor will it have a negative impact on the traffic flow along Stafford Street.	Yes
10.3	Key Transport Corridors	The site is not located on a Key Transport Corridor. The proposal will not result in negative outcomes on the local road network.	Yes
10.5	Parking, Access and Driveway	The proposal complies to the PDCP controls for parking and the PDCP controls for driveway design.	Yes
2.4.2	Multi Dwelling Housing Preferred Configuration	*1) New multi dwelling housing development should incorporate the traditional configuration of the cottages and cottage gardens that define the character of Penrith's established neighbourhoods, because:* *a) Traditional development demonstrates social and urban design benefits, particularly the orientation of dwellings and their private open spaces towards the street rather than overlooking neighbouring dwellings and gardens;*	Yes

b) Patterns of buildings and private gardens in established neighbourhoods have visual and symbolic richness that are valued by their community;
c) the use of traditional features softens the popular perception that redevelopment is changing the traditional character of Penrith City.

Units 1 & 10 front Stafford Street, and adapts a traditional orientation with the living rooms and front veranda facing the street front. All garages are to be concealed behind each dwelling. The proposed landscaping will soften the built forms considerably and will blend the development into the streetscape.

2) Within the relevant zones, established development is detached buildings or semi-detached pairs which are:

a) separated from one another by landscaped courtyards;
b) stepped floor plans and projecting verandahs;
c) capped by a variety of pitched roofs.

The proposed layout and siting of the buildings are consistent with the prevailing multi-unit developments in the area. The proposal consists of six detached blocks separated by landscaped courtyards.

3) Within the relevant zones, established development provides a "green corridor" of trees and shrubs along the rear boundary:

a) conserving remnant vegetation; and
b) providing new shelter and habitat; and
c) contributing to streetscape.

The rear portion of the site will feature a landscaped zone, compliant to the setback controls.

4) Within the relevant zones, established development provides a front garden setback which may be filled by verandahs and private garden-courts:

		a) encourages active use by residents; *b) provides for attractive front gardens.* The proposal will feature an attractive landscaped front setback to Stafford Street, appropriate in scale to the surrounding properties. This will positively contribute to the local streetscape. *5) Within the relevant zones, established development provides parking areas which are concealed from the street and consequently avoids the appearance of "garage architecture"* The visual appearance of the development from Stafford Street will conceal the garage doors as they are all setback from the driveway building lines and will be hidden by the driveway landscaping.	
2.4.3	Development Site	*A minimum lot frontage and lot width of 22m is required for multi dwelling housing development within the following zones:* *a) the R3 Medium Density Residential Zone* The proposal complies with a frontage of 38.14m.	Yes
2.4.4	Urban Form	*1) For dwellings fronting the street, adopt a traditional orientation:* *a) living rooms, verandahs and the paths to entrances face the street rather than neighbouring properties; and* *b) private gardens fill the front setback area; and* *c) garages are concealed behind dwellings.* Units 1 & 10 front Stafford Street, and adapt a traditional orientation with the living rooms and front verandas addressing the street front. All garages are concealed behind the driveway building lines and will not be a dominant feature as viewed from Stafford Street. *3) Avoid "gun-barrel" style developments with long rows of attached dwellings, long straight driveways and rows of uniform width garden courtyards:*	Yes

a) break buildings into separate blocks, each one not longer than 20m;

The maximum building length is 20.00m – therefore compliant. It is noted that the control is attempting to avoid “gun barrel” style development which are long rows of attached dwellings. The development that has been presented consists of 6 separate buildings with each building stepping down the site and sufficiently separated to not be presented as a long row of attached buildings when viewed from the street. The proposal achieves the objective of the control as provided:

b) provide "open space corridors" between buildings at least 4m wide across each site (this does not include front/rear setback areas);

Proposal complies with a minimum 6.06m (most have a 6.36m) landscaped opening between buildings.

c) a combination of garden areas and parking courtyards; or

Proposal complies with a combination of open garden, private courtyard areas.

d) open parking spaces that are lined by an "avenue" of shady, overhanging trees;

e) along common driveways, step the alignment of buildings, and / or their external walls plus eaves;

Proposal complies with significant stepping and relief in all facades.

f) at the head of common driveways, a distinctive building or landscape feature should terminate the vista from the street.

Proposal complies with a featured Illawarra Flame tree at the head of the driveway.

4) "Articulate" building forms by design measures that cast deep shadows:

		Proposal complies with significant stepping and relief in all facades. *a) separate neighbouring buildings by irregularly-shaped garden courts that are at least 3m wide;* Proposal complies with a 6m minimum landscaped opening between buildings. *b) external walls should not be longer than 5m between distinct corners;* Proposal complies with a max 4m unrelieved length on all external walls. *c) the upper storey surrounded by a larger ground floor plan that incorporates projecting rooms, shady verandahs and carports;* Proposal complies with a physically smaller first floor over the ground floor. Projecting rooms on both the ground and first floors area a feature of the building design. *d) use a variety of roof forms and pitches;* Proposal complies. *e) include windows in every elevation.* The proposal has been designed with articulated facades that will cast varied shadows and provide relief to the mass of the buildings. All blocks are separated by compliant width courtyards (4m minimum) with a minimum building separation of 6m. Each building provides a variety of roof forms and pitches and includes windows in every elevation.	
2.4.5	Front and Rear Setbacks	*1) Determine the maximum development footprint for your site:* *a) The minimum rear setback for a single storey building (or any single storey component of a building) is 4m.* *b) The minimum rear setback for a two*	Yes

storey building (or any two storey component of a building) is 6m.

c) adopt a front setback that matches the neighbourhood character.

The proposal complies with a 16.53m rear setback on the ground and first floors. The minimum front setback of 6.2m is the average of the adjoining properties and the prevalent front setback in the street. It is noted that the proposed 6.2m front setback for Unit 10 is minimum. The Unit 1 front setback is considerably larger at 7.5m.

2) Within the rear boundary setback:

a) there shall be no building encroachments either above or below ground (eaves excepted);

b) maximise the amount of undisturbed soil, encouraging rapid growth of healthy trees and shrubs;

c) where there are physical encumbrances such as open drains, increase the setback accordingly.

The proposal complies as the rear setback will be used wholly as a landscaped area

3) Determine an appropriate front setback:

a) either average the setbacks of the immediate neighbours; or

b) a 5.5m minimum whichever is the greater dimension.

The front setback of 6.2m is consistent with the adjoining properties and the prevalent front setbacks in the street. The DCP stipulates that the front setback should be either the average setback of the immediate neighbours or 5.5m, whichever is the greater dimension. An average front setback from the two immediate neighbours is 6.2m.

4) Permissible encroachments within the front setback are:

		a) verandahs and pergolas only which are a 4.5m minimum setback to the face of the verandah or pergola; and maximum 50% of elevation. *5) Garages and parking spaces are not permissible within the front setback.* The proposal complies with a front verandah setback minimum of 6.2m. There will be no carparking within the front setback.	
2.4.6	Building Envelope and Side Setbacks	*1) Development is to comply with the building envelope for the site.* *The building envelope means a height plane over the site at 45 degrees from a specified height above natural ground level at the side boundaries of the site: The building envelope is measured from natural ground level perpendicular to the side boundary at any given point along the wall.* *2) The building envelope shall be measured relative to:* *a) Side boundaries only; and* *b) Existing ground level.* *Only minor encroachments through the building envelope shall be permitted:* *a) eaves to main roofs* *b) chimneys and antennas* *c) pergolas.* The proposal complies to the required building envelope. Please refer to the architectural drawing set, as the elevations indicate the envelope compliance. The only variation to this control is the upper roof ridge of units 9 & 17, which exceed the 8.5m limit by no more that 300mm. This is due to the ground floor minimum RL's as set by the flood data. Also, as these units are at the rear of the site, the streetscape impact will be nil. *4) Cut and fill and maximum ground floor heights:*	Yes

a) on sloping sites provide stepping building platforms inline with existing topography with floors no higher than 1m above natural ground level;

b) restrict cut-and-fill to a maximum of 500mm; and

c) provide effective sub-soil drainage.

Proposal complies. Cut will be restricted to the hydraulic underground tank requirements only. Fill will be restricted to the general benching of the site and building platforms to comply with the 1% AEP levels plus 500mm freeboard.

5) Pitches for main roofs are not to be in excess of 25 degrees in order to reduce the visual bulk of the building.

Proposal complies with a maximum roof pitch of 22 degrees.

6) Provide reasonable separation and landscaping between neighbouring buildings, consistent with the following parts of this section:

a) Driveways and parking
b) Landscaped area
c) Solar planning; and
d) Privacy and outlook.

All units feature compliant width courtyards (4m minimum) with each building separated by a min 6.0m landscaped space – compliant to the DCP controls.

7) Setbacks from side boundaries should be varied to articulate walls to side boundaries:

a) a minimum setback of 2m, but only
b) along not more than 50% of any boundary.

The side setbacks on all buildings are 2m minimum.

2.4.7	Driveways and Parking Areas	*1) Provide on-site parking in accordance with the parking section of this DCP.* The proposal complies with all parking requirements stipulated within the PDCP2014. Please refer to the figures above. *2) Driveways should:* *a) have a minimum paved width of 3m providing one-way movement; b) incorporate passing-bays and queue space at the street frontage where more than 5 dwellings are served, and driveways are longer than 30m;* *c) minimise the paved area within the front setback;* *d) be separated from dwellings by a landscaped verge at least 1m wide;* *e) where possible, also separated from boundary fences by a landscaped verge;* *f) prevent adverse long-term effect upon any vegetation that must be preserved; provide for effective and healthy landscaping along all site boundaries;* *h) provide for landscaping as continuous verges along both sides, or as a verge beside dwellings with plantings in pavement cut-outs along a boundary fence;* *i) drain by gravity to Council's stormwater network.* The proposal complies with a minimum driveway width of 3.8m. It incorporates a 5.5m wide passing zone within the front setback adjacent the letterboxes. All buildings feature a landscaped verge to the driveway. The driveway will be fully drained to the Council stormwater network. *3) Garages and parking spaces should:* *a) not be located in the front setback;* *b) should not directly face the street;* *c) be setback at least 6.5m from the outside driveway kerb.* Proposal complies with the DCP controls along with AS 2890.	Yes
2.4.8	Landscaped Areas	*1) Landscaped areas should provide:*	Yes

a) effective separation between neighbouring dwellings;
b) healthy growth of new trees and shrubs;
c) long-term survival of existing vegetation required by Council to be preserved;
d) private courtyards for all dwellings and a green outlook;
e) front gardens that contribute to an attractive streetscape; and
f) where more than 10 dwellings are proposed, a centrally located communal open space area that is accessible and available to all residents of the development, comprising 10% of the minimum landscaped area requirement.
g) The area of common open space proposed can be reduced where larger areas of private open space are provided for individual dwellings. Where there is no common open space proposed private courtyards must be a minimum of 40m².

The proposed landscape areas will provide effective separation between buildings. All dwellings will feature a private courtyard compliant to the DCP controls. The front setback landscaping will cover the majority of the front setback and contribute to the streetscape.

2) Landscaped area must meet the following requirements:

a) Landscaped areas should be: R3 Medium Density Residential 40%
b) have a minimum width of 2m –with no basement encroachment; and containing unexcavated soil to promote landscaping that is effective and healthy;
c) may include terraces and patios located not higher than 0.5m above ground and pedestrian pathways to building and dwelling entrances;
d) do not include substantially-paved areas such as buildings, driveways and covered garages;
e) should include verges that surround car parking areas and open driveways;
f) should provide a reasonable area of private open space in accordance with the part within this section on design;

		g) where more than one building is proposed, that part of any easement exceeding 10% of the site area shall not be included in the landscaped area calculation. Please refer to the landscaping calculations at figure 2.4 above.	
2.4.9	Solar Planning	*1) The applicant must demonstrate that dwellings meet acceptable solar standards and that existing neighbouring and proposed private open spaces receive adequate solar access by:* *a) Providing shadow diagrams prepared by a qualified technician for all two-storey buildings and additions;* *b) Illustrating the impacts of proposed development upon existing neighbouring dwellings and their open space areas;* *c) Demonstrating shadows cast by neighbouring buildings;* *d) Maximising potential for solar gain by placing windows in all exterior walls that are exposed to northern sun;* *e) Ensuring that the proposed development provides a minimum of 4 hours sunlight between 9am and 3pm on 21 June, to living zones (ie areas other than bedrooms, bathrooms, kitchen and laundry) of each dwelling, and the living zones of any adjoining dwellings;* *f) Ensuring that the proposed development provides a minimum of 3 hours sunlight between 9am and 3pm on 21 June, to 40% of the main private open spaces of the dwelling and main private open spaces of any adjoining dwellings;* *g) In situations where the existing overshadowing by buildings and fences reduces sunlight to less than the minimums noted above, the development is to not further reduced sunlight to the specified areas by more than 20%.* *h) Applications shall include: shadow diagrams for two-storey buildings or additions prepared by a qualified technician for 9am, 12 noon and 3pm on June 21 and any other time required by Council.* The proposal incorporates design features including the location and size of windows	Yes

		that will permit adequate solar penetration as well as excellent cross-ventilation in the dwellings. All dwellings will receive a minimum 3 hours sunlight between 9am and 3pm during the winter solstice. All living areas have an eastern or western orientation and all POS areas will receive 3 hours sunlight. The proposal will not result in unacceptable overshadowing of any adjoining property, as appropriate setbacks and articulation have been employed to vary the cast shadow.	
2.4.12	Building Design	*1) Development should incorporate a variety of architectural features to minimise the apparent scale and bulk of two storey buildings:* *a) stepped alignment of walls* *b) projections in the ground floor plan:* *c) rooms that extend beyond the upper storey;* *d) attached verandahs and carports;* *e) a variety of shadow-casting roofs:* *f) wide eaves;* *g) projecting verandahs and awnings;* *h) pergolas.* The proposal adopts a variety of architectural features designed to minimise and soften the apparent bulk and scale of the buildings. These features include stepped verandahs and awnings on the ground floor along with deep eaves and first floor facades that are composed of varied finishes and cladding materials. *2) Development should incorporate features that are typical of housing in established areas:* *a) stepped walls and articulated roof-forms;* *b) windows and doors inserted into all visible walls;* *c) a variety of materials including lightweight cladding and brickwork both face and painted.* The proposal incorporates physical articulation of the built form and a mixed	Yes

		palette of materials and colours. The materials and colours used will be consistent with the existing multi dwelling developments in the area, being contemporary with a mix of brick and clad surfaces. The colour scheme proposed will allow significant variation in all facades. *3) Variety in architectural features should be apparent in all visible facades:* *a) facing the street;* *b) facing side driveways; and* *c) facing neighbouring residential properties.* The proposed facades feature windows and doors within all walls to provide an attractive built form.	
2.4.13	Energy Efficiency	*1) All new multi dwelling housing development should employ construction techniques that provide appropriate thermal mass such as:* *a) ground floor: slab-on-ground;* *b) walls: masonry internal walls to ground floor are desirable.* Proposal complies with slab on ground construction with masonry ground floors with clad / masonry first floors. *2) All new two storey townhouse development should provide effective insulation including:* *a) roofs and top-floor ceilings: sarking and batts with a minimum total rating of R3;* *b) walls: sarking and batts with a minimum total rating of R1.5* The proposal includes full BASIX Certification providing energy / water / thermal comfort requirements. Furthermore, all living spaces have been designed to enjoy a west or easterly aspect with flow-through ventilation. *3) All new multi dwelling housing development should adopt an appropriate orientation for rooms and windows including:*	Yes

a) living areas -facing within 30 degrees of solar north is desirable;
b) windows -at least 50% of glazing facing solar north is desirable, unprotected glazing facing east, west or south shall be avoided and for every habitable room, windows in two external walls are desirable;

The proposal has been designed with these controls in mind. Most dwellings comply being oriented within 30% solar north.

4) Where multi dwelling housing development cannot achieve the desired orientation, higher compliance with other energy efficiency standards shall be achieved.

Proposal complies with the BASIX Certification providing individual requirements for each dwelling.

5) All new multi dwelling housing development should provide effective shading from summer sun including:

a) Overhanging eaves: at least 450mm wide;
b) Adjustable exterior shading devices for windows and doors to habitable rooms, and to skylights;
c) Pergolas over courtyards.

All buildings feature 600mm eaves, with fixed awning roofs and pergolas as required.

6) All new multi dwelling housing development should employ effective glazing including:

a) for any large south-facing window: high performance glass e.g. double glazing in thermal break frames;
b) windows and doors facing east, south or west: high performance glass e.g. Double glazing in thermal break frames;
c) all windows and external doors: weather-stripping should be used.

Proposal complies with the BASIX Certification providing individual

		requirements for each dwelling. *7) All new multi dwelling housing development should adopt a configuration for dwellings that promotes cross-ventilation including:* *a) living areas and bedrooms with two external walls for windows;* *b) particularly important for attic rooms.* Proposal complies with the window locations designed to allow maximum cross ventilation of habitable rooms.	
2.4.14	Design of Dwellings and Private Courtyards	*1) A reasonable area of private open space should be provided for each dwelling:* *a) a minimum of 25m²;* *b) including one area measuring at least 5m by 4m, suitable for outdoor dining; and* *c) located immediately beside, and level with, living or dining rooms; and* *d) also incorporating an area for outdoor clothes-drying at least 2m wide, exposed to sunlight and breeze, screened from view by a fence or wall at least 1.8m tall; and* *e) with access direct to the street or common driveway:* *f) through a courtyard at least 2m wide; or* *g) via a carport with an open design.* The proposal incorporates compliant POS areas for each dwelling. It is noted that the POS for each dwelling is significantly larger than the DCP requirement and will allow for adequate outdoor living. All private open space areas are directly accessible from living areas. *2) Landscaped areas should maximise the area available for private courtyards and gardens:* *a) the front and rear boundary setbacks should be used for private gardens,* *b) common open space should be restricted to driveway verges.* Proposal complies	Yes

2.4.15	Garage Design	*1) Garage and parking areas should be planned to:* *a) minimise disruption to traditional or established streetscapes by concealing from the street;* *b) provide flexible accommodation for vehicles, domestic pets, storage, and covered areas for outdoor recreation;* *c) minimise transmission of noise to adjoining dwellings;* *d) provide secure parking;* *e) allow for maintenance access to rear garden courtyards; and* *f) provide for effective and healthy landscaping along verges and boundaries.* *g) permit all turning movements, full opening of vehicle doors as defined by AS 2890.1-1993;* The proposed garages will be located behind the building line of each dwelling. They have been designed to minimise noise transmission between dwellings. Their central positioning on each building maximises solar access to all landscaped areas on the site, while providing compliant (AS 2890) clearances and turning circles. *3) For dwellings that require two spaces:* *a) provide at least one covered space;* *b) for dwellings located one behind the other: the second space may be an open court facing the side driveway; or* *c) for paired dwellings facing the street: the second space may be stacked on the driveway in front of the covered space;* *d) stacked parking is permitted where the second space is supplied between a driveway and another space, stacked spaces are not permitted behind garages.* All dwellings feature two car spaces. Either full enclosed in a garage, or at least a one car garage and an open space. *4) Garages and parking spaces are not permissible within the front setback. Design of covered garages to consider the following:*	Yes

		a) low, open appearance similar to a wide verandah; *b) if exposed at the end of a building, enclosed by semi-transparent screens that provide for natural ventilation and effective security (rather than surrounded by masonry walls);* *c) with shutters that have windows, or are semi-transparent screens providing natural ventilation and effective security.* There are no car spaces within the front setback proposed.	
2.4.16	Garden Design	*1) The rear boundary setback should provide:* *a) private garden courtyards;* *b) a corridor of habitat, and a green backdrop that is visible from the street;* *c) conservation for any existing corridor of mature trees; or* *d) an interlocking canopy of low to medium-height trees and shrubs;* *e) predominantly species indigenous to the soils of Penrith City.* *2) Alongside boundaries, provide:* *a) small-to medium height canopy trees for sun-shading and privacy separation between dwellings;* *b) within the verges to any common driveway: hedges fronting windows to any dwelling;* *3) Alongside boundaries within private courtyards provide:* *a) feature plantings of ground covers and shrubs growing to fence height at maturity;* *b) a level area of well-drained turf, or an alternative water-permeable material such as river pebbles;* *c) street frontage plantings should provide:* *d) private gardens for street-front dwellings;* *e) a civic garden frontage appropriate to the established neighbourhood character; and* *f) mixed species of trees, shrubs, and accent plantings including flowers and ground covers;* *g) level areas of well-drained turf; and*	Yes

		h) along noisy thoroughfares: *i) noise attenuation with an interlocking canopy formed by at least two rows of trees under* planted *with dense hedges.* The proposal is to feature extensive landscaping of planting ranging from small grasses and shrubs, to medium height trees. Please refer to the Landscape Plan for details. It is noted that the landscaped verge along Stafford Street is to be retained.	
2.4.17	Paving Design	*1) Hard paved surfaces should:* *a) maximise the area available for landscaping and gardens;* *b) impose no adverse long term effect on any vegetation that Council requires preserved.* *2) Driveways and associated parking courts should:* *a) provide an attractive "address" for any dwellings without a direct frontage to the street;* *b) minimise the area and width of driveways along the street-frontage; c) be overlooked by continuously-occupied rooms such as kitchens and living rooms;* *d) be divided into panels by bands of contrasting materials or pavers;* *e) provide barrier-free access continuous from the street to the entrance of each dwelling;* *f) provide for landscaping as continuous verges along both sides, or as a verge beside dwellings with plantings in pavement cut-outs along a boundary fence;* *g) incorporate materials and a profile that maximise the potential for direct infiltration of rainfall (other than in areas of recognised high soil salinity);* *h) collect and channel run off into grated sumps located strategically and integrated with the design of surface pavement.* *3) Courtyard paving should be provided:* *a) at the threshold to each doorway leading from a dwelling: at least 1m wide;* *b) beneath clothes lines;* *c) where outdoor storage of garbage bins is*	Yes

		proposed; *d) in the form of widely spaced pavers, or porous unit paving, maximising direct infiltration of rainfall.* The majority of hard surfaces on the site will be concrete (ie: the driveway and waste storage areas). The design seeks to minimise all hard surfaces on the site to allow for maximum landscaping.	
2.4.18	Fences and Retaining Walls	*1) Fences should be no taller than:* *a) 1.8m generally; and* *b) 2.4m on sloping sites, including the height of any retaining wall.* *2) Fences along boundaries forward of the front building alignment:* *a) should not be taller than 1.2m, or if taller, of see-through construction;* *b) should not be constructed of metal panels;* *c) walls of solid construction and taller than 1.2m (such as courtyard walls) should be set back at least 2m from the front boundary (to allow for landscaping) and should not occupy more than 50% of the allotment width.* *d) Be sympathetic to the natural setting and character in form, materials and colour* *e) Maximise natural surveillance from the street to the building and from the building to the street.* *f) Be structurally adequate, in accordance with the Building Code of Australia, and meets the Dividing Fences 1991.* *3) Fences along driveways and separating existing multi-unit housing, or fronting a public park should be 1m tall, or if taller, of see-through construction;* *4) Fences along boundaries around private courtyards should minimise cross-viewing and the transmission of noise;* *5) Fences along boundaries in any location that can be seen from the street or a public park frontage should not be constructed of metal panels;*	Yes

		6) Fences along boundaries fronting noisy thoroughfares: *a) solid masonry walls are acceptable to a maximum of 1.8m; and* *b) incorporating corners and planting beds every 5m;* *7) Where fencing affects easements or stormwater flow paths: consult with Council and the relevant authority.* *8) Fencing of a "see-through" construction includes:* *a) panels set into a timber frame or between brick piers; where* *b) any solid base is not taller than 1m; and* *c) panels are spaced pickets or palings, or lattice.* Fencing is to be provided that is consistent with that in the existing locality and compliant to the DCP controls. Please refer to the architectural plans for the fencing proposal and details.	
2.4.19	Visual & Acoustic Privacy	*1) Demonstrate a package of measures that achieves reasonable privacy:* *a) for adjacent dwellings: at least3m between any facing windows, screened by landscaping or other means including courtyard walls, or pergolas to prevent cross viewing from first storey windows;* *b) dormer windows generally to be oriented to face the street or the rear boundary;* *c) private courtyards should be screened by pergolas and masonry walls to prevent direct cross-viewing and excessive transmission of noise;* *i) screening measures, including:* *ii) offsetting of windows; or* *iii) oblique orientation for windows; or* *iv) external screens to windows; or* *v) courtyard walls and pergolas;* *vi) note that landscaping (other than established trees and shrubs that are proposed to be retained) should not provide the principal means of screening;* *vii) rooms other than bedrooms should have*	Yes

any windows facing a driveway screened by landscaped verges at least 2m wide,
viii) bedroom windows facing a driveway should be screened by masonry walls at least 1.5m tall located at least 1m from the face of the window;
d) for windows of habitable rooms with a direct outlook onto windows of habitable rooms of adjacent dwellings:
i. are offset by a distance sufficient to limit views between windows; or
ii. have sill heights of 1.7 m above floor level; or
iii. have fixed obscure glazing in any part of the window below 1.7 m.
e) All balconies and decks higher than 800mm above existing ground level shall incorporate privacy measures such as screening or landscape planting.
2) Demonstrate measures that protect dwellings from external noise sources:
a) windows to ground-level living rooms screened by landscaped verges at least 2m wide,
b) within any dwelling, bedrooms should not adjoin the garage or living rooms of a neighbouring dwelling; internally, bedrooms should be segregated and separated from living areas by hallways, stairs or service rooms;
c) sound resisting construction of separating walls, floors and windows, in accordance with BCA;
d) zoning of dwellings into active living areas and passive sleeping areas, separated by corridors and/or service zones;
e) plant and equipment should be effectively screened and located away from sleeping areas;
f) along frontages to noisy arterial roads or the rail corridor:
g) locate habitable rooms and private open spaces away from noise sources and if required protect with appropriate noise shielding devices.

The proposal has been designed to reduce potential visual, privacy and noise impacts, and provide a high standard of residential amenity. This includes the siting and layout of all dwellings, along with the garage

		locations and window positioning. In addition, the location and size of planting has been provided to aid in privacy to each dwelling. The proposed design is considered appropriate for the site and will provide a high level of residential amenity for all residents and will not adversely affect the amenity enjoyed by the local community.	
2.4.20	Safety and Security	*1) Encourage a sense of community:* *a) dwelling entrances, the window to at least one continuously-occupied room and private courtyards should face the street and/or a common driveway;* *b) fences should be designed to facilitate glimpses or filtered views from dwellings and private courts to the street and to driveways.* *2) Ensure that at least one continuously-occupied room in each dwelling (a kitchen or living room) overlooks:* *a) the front street;* *b) driveways and garage forecourts.* *3) Prevent concealment of intruders by:* *c) uniform lighting levels across common areas such as driveways;* *d) planning which does not provide hidden recesses;* *e) along common pathways: selection of appropriate plant species according to height and density.* The proposal incorporates an active façade that promotes casual surveillance to both Stafford Street, the driveway and landscaped areas of the site. The positioning of buildings, landscaping and fencing will not permit easy concealment of intruders and allow for 360-degree surveillance by the residents.	Yes
2.4.21	Accessibility and Adaptability	*1) Demonstrate that planning and design measures do not prevent access by people with disabilities:* *a) Access pathways should slope gently and evenly, with a non-slip finish and no steps*	Yes

		between the street frontage and principal building entrances. *b) Stair nosings should have a distinctive colour and texture.* *c) Dwellings should have:* *i. Dimensions consistent with AS1428.1-1998 Design for access and mobility and AS4299-1995 Australian Adaptable Housing* *ii. Hallways at least 1m wide* *iii. Circulation in bathrooms at least 1m wide.* *d) The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Housing StandardsAS1428-1998 and AS4299-1995.* *e) Car parking and garages allocated to adaptable dwellings must comply with the requirements of the relevant Australian Standard regarding parking for people with a disability.* *2) Demonstrate that dwellings have been designed to meet the needs of an ageing population:* *a) incorporate design measures which are appropriate to people with disabilities; and* *b) employ lever-type door handles and traditional cruciform tap-handles; and* *c) provide for future low-cost modifications to bathrooms:* *d) future removal of hobs from shower recesses;* *e) provision for future attachment of grab-rails to walls.* *f) provide for future low-cost modifications to kitchens including replacement of under bench shelves with drawers & attachment of grab-rails.* *g) provide appropriate levels and location of lighting.* Dwellings 16 & 17 have been designed to allow for future adaptation into an accessible dwelling. Please refer to the architectural drawings for detail.	
2.4.22	Storage and Services	*1) Provide storage for household items:* *a) at least 10m³ per dwelling; either* *b) as cupboard space within the dwelling in*	Yes

addition to wardrobes; or c) within a lockable garage, not encroaching upon the parking space; or
d) in weather-proof lockers that are not visible from the street.

Each dwelling has been designed with at least 10m3 storage space throughout the unit, please refer to the dwelling schedule above.

2) Letter boxes should be provided according to Australia Post specifications:
a) adjacent to the front boundary;
b) located conveniently for residents entering the site (by car or on foot);
c) integrated with the design of landscaped areas, fences and buildings.

Proposal complies – please refer to the architectural drawings.

3) Demonstrate that dwellings have been designed to accommodate home-based telecommunications facilities and information technologies by allowing for:
a) additional telephone lines and outlets;
b) additional electrical outlets;
c) satellite or cable-based reception.

Proposal complies as all telecommunication and data facilities will be provided.

5. IMPACTS

Character and Design
The proposal is consistent with the scale of, and compliments the character of other buildings in the area, and maintains existing residential amenities and views. The gabled roof form is consistent with most other buildings in the street, and is sympathetic to other adjoining multi-dwelling developments located in Stafford Street and its surrounds.

Context
The proposal is within an established residential area that features many Townhouse developments. The bulk and scale of the proposal is appropriate to the locale. The proposed building setbacks are all consistent with the LEP and DCP controls.

Heritage
No heritage controls are applicable to the site or area

Public Domain
The public domain will not be affected by the proposal

Water
The development will have no significant impact on the water resources of the area. The attached BASIX certificate demonstrates the proposed conservation and use of water on the site. Roof water runoff is detailed in the attached Stormwater design drawing.

Erosion and Sediment Controls
The proposal provides for erosion and sediment control measures during construction, including sediment control fencing and site access point soil control.

Utilities
Sewer, electricity, water and telephone services are all currently available at the site. All service providers will be contacted an involved in the connection of services to the proposed dwellings.

Flora and Fauna
The site is to be cleared of all vegetation. The additional landscaping and gardening, as shown on the Landscape drawing, will be implemented during construction.

Noise
There will be no impact to or from the site in regard to noise production, after the completion of construction. The locale is a relatively quiet street, so road noise to the dwellings will be below average.

Safety and Security
Safety, crime prevention and security measures will be employed for all residences. The front dwelling has a good view of the street. All dwellings will overlook the common access driveway. All dwellings feature private courtyards.

Social and Economic
The proposal will have no significant social impacts other than bringing additional residents to the area. The high level of construction and design will have a positive impact. Economic impacts will be positive, as the development will bring employment to the area during construction and possible local business resources in the new residents.

6. CONCLUSION

The proposed development is consistent with the current planning controls that apply to the site.

This Statement of Environmental Effects has demonstrated compliance to the majority of development controls, through a compatible design that will have minimal impact on the amenity of the area.

We trust that this statement provides sufficient information to enable an assessment of the application. Should you have any queries about this matter, please do not hesitate to contact me on 0413 604 092, or email info@obriendesign.com.au.

Yours Faithfully,

Adam O'Brien