



**Planning &
Infrastructure**

STATE SIGNIFICANT DEVELOPMENT ASSESSMENT REPORT:

**Stages 2B and 2C (SSD 5346), 2D (SSD
5347) and 3B (SSD 5349) of the North
Penrith development site**

Infrastructure, Landscaping and Subdivision

Proposed by UrbanGrowth NSW (formerly Landcom)



**Director-General's
Environmental Assessment Report
Section 89H of the
*Environmental Planning and Assessment Act 1979***

June 2013

ABBREVIATIONS

Applicant	UrbanGrowth NSW (formerly Landcom)
CIV	Capital Investment Value
Department	Department of Planning and Infrastructure
DGRs	Director-General's Requirements
Director-General	Director-General of the Department of Planning and Infrastructure, or his delegate.
EA	Environmental Assessment
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
LEP	Penrith City Centre Local Environmental Plan 2008
Maintenance Period	A period of 36 months which commences from the date of issue of the relevant subdivision certificate.
MD SEPP	State Environmental Planning Policy (Major Development) 2005
Minister	Minister for Planning and Infrastructure
SEPP 2011	State Environmental Planning Policy (State and Regional Development) 2011
SEPP	State Environmental Planning Policy
SSD	State Significant Development

Cover Photograph: Aerial view of North Penrith development site (from the north looking south)

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EXECUTIVE SUMMARY

On 9 November 2011, the then Minister for Planning gave concept plan approval for the development of 900-1000 residential dwellings supported by retail, commercial and industrial development and recreational, community and open space facilities on the former defence site at North Penrith in the Penrith local government area.

UrbanGrowth NSW, formerly Landcom (the applicant), is now seeking development consent for three development applications for the development of Stages 2B and 2C (SSD 5346), 2D (SSD 5347) and 3B (SSD 5349). In particular, the applicant seeks consent to construct roads, connect the lots to utilities, landscape the public domain and subdivide the lots of stages 2B, 2C, 2D and 3B. Development application SSD 5346 also seeks consent to undertake earthworks to all remaining stages of the North Penrith development site.

The estimated cost for all the applications is \$41 million.

During the exhibition period (22 November until 21 December 2012), the department received a total of nine submissions for each application. All of these submissions were from government authorities, including Penrith City Council who either did not object to the proposal or raised issues requiring further assessment.

Key issues considered in the department's assessment included:

- Flooding (stages 2B and 2C, 2D);
- Water cycle management (Stage 2B and 2C);
- Public domain works (all stages);
- Subdivision lay (all stages);
- Heritage impacts (Stage 2B);
- Proximity to Mobile Fuel depot (Stage 2D); and
- Development contributions (all stages).

The department has assessed the merits of the project and is satisfied that the key issues associated with the applications can be appropriately managed through the recommended conditions of consent. Key recommended conditions include a requirement to prepare and implement a monitoring and maintenance programme for the canal and wetland and associated infrastructure and other public open space assets before handover to Council; a requirement to extend the length of the right turn lane in Grace Drive to increase storage capacity and a requirement to defer the issue of subdivision certificates until the flood planning levels in the north-west of the site have been finalised.

The applications are considered to be consistent with the approved Part 3A concept plan and are in the public interest. They provide for the efficient redevelopment of government owned land to meet the housing demands of the north-west subregion of Sydney and support development of Penrith as a regional city.

On these grounds, the department recommends the three development applications be approved, subject to the recommended conditions of consent.

1. SITE DESCRIPTION & PROPOSED PROJECT

1.1 THE SITE

The North Penrith development site is located north of the Great Western Highway, east of the Nepean River and directly adjacent to the Penrith Railway station which is immediately to the north of the Penrith city centre (see Figure 1).

The site is located in the Penrith local government area.

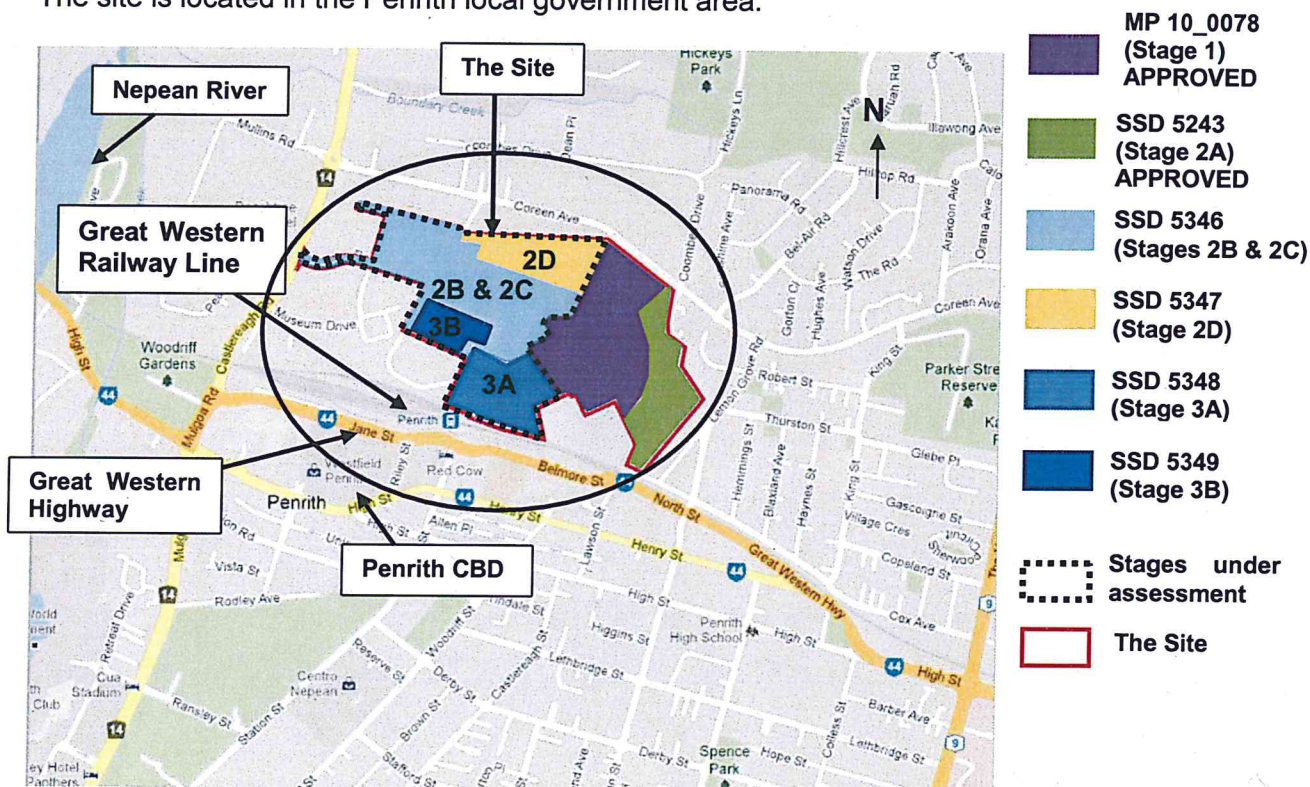


Figure 1: North Penrith Development Site Context and Stages of Development

The topography of the site is relatively flat rising gently towards the east. The site has an area of approximately 40.7 hectares. The location of the stages of development under consideration, being Stages 2B and 2C (SSD 5346), 2D (SSD 5347) and 3B (SSD 5349) (see Figure 1), are clear of any built development with small clusters of shrubs dotted across the site. The site is partially flood affected, in particular in the vicinity of the north western boundary, with primary flooding impacts being to Stages 2C and 2D.

Consent is sought for development of the stages located within the western sector of the site and which total approximately half of the site area (see Figures 1, 2 and 3).

1.2 SURROUNDING DEVELOPMENT

Stages 2B and 2C, 2D and 3B are bounded to the east by future residential development (approved Stage 1) and the town centre (Stage 3A) of the North Penrith Development site (see Figure 1 and 3).

Adjoining the northern boundary of the site are industrial uses including automotive repair workshops, warehousing, a Mobil fuel storage depot, and the historic Combewood House, all of which front onto Coreen Avenue.

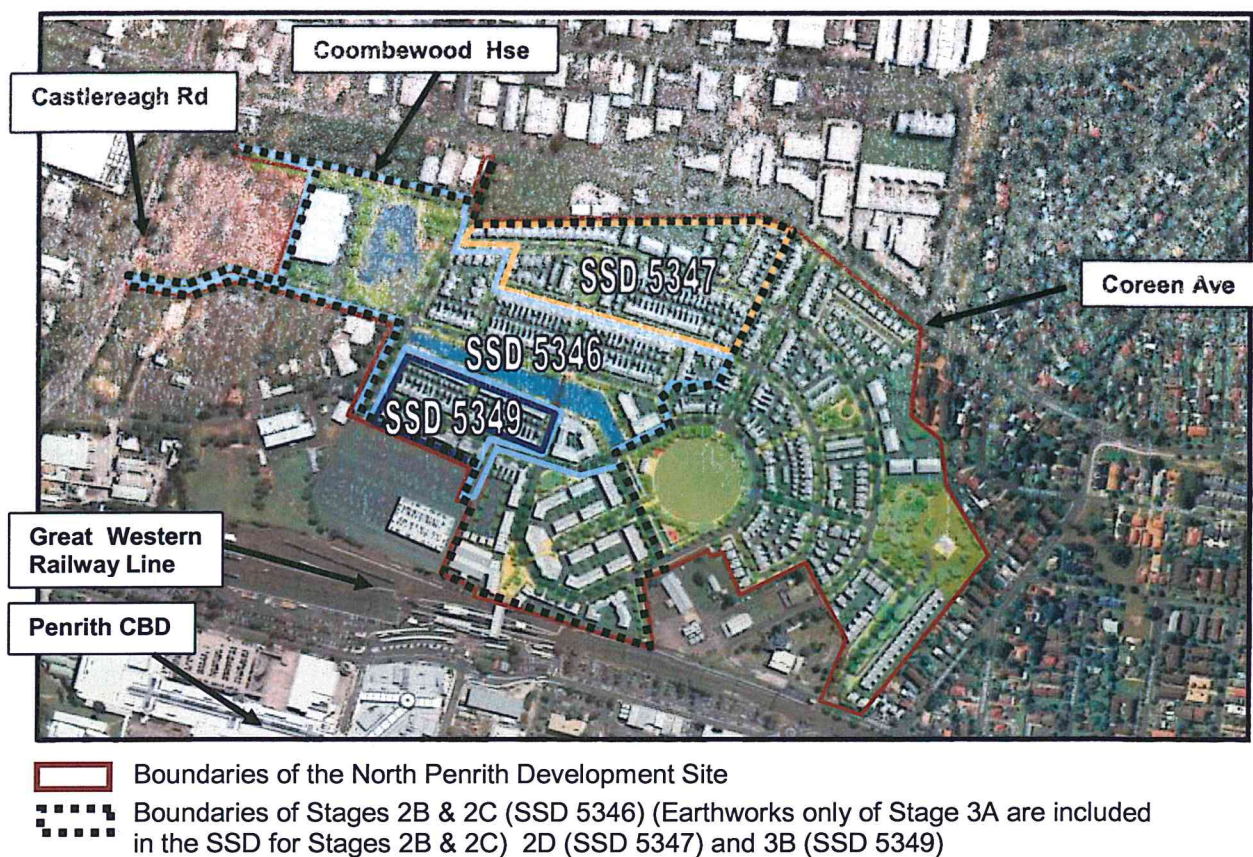


Figure 2: North Penrith Development Site Concept Plan Layout and location of SSD 5346, SSD 5347 and SSD 5349

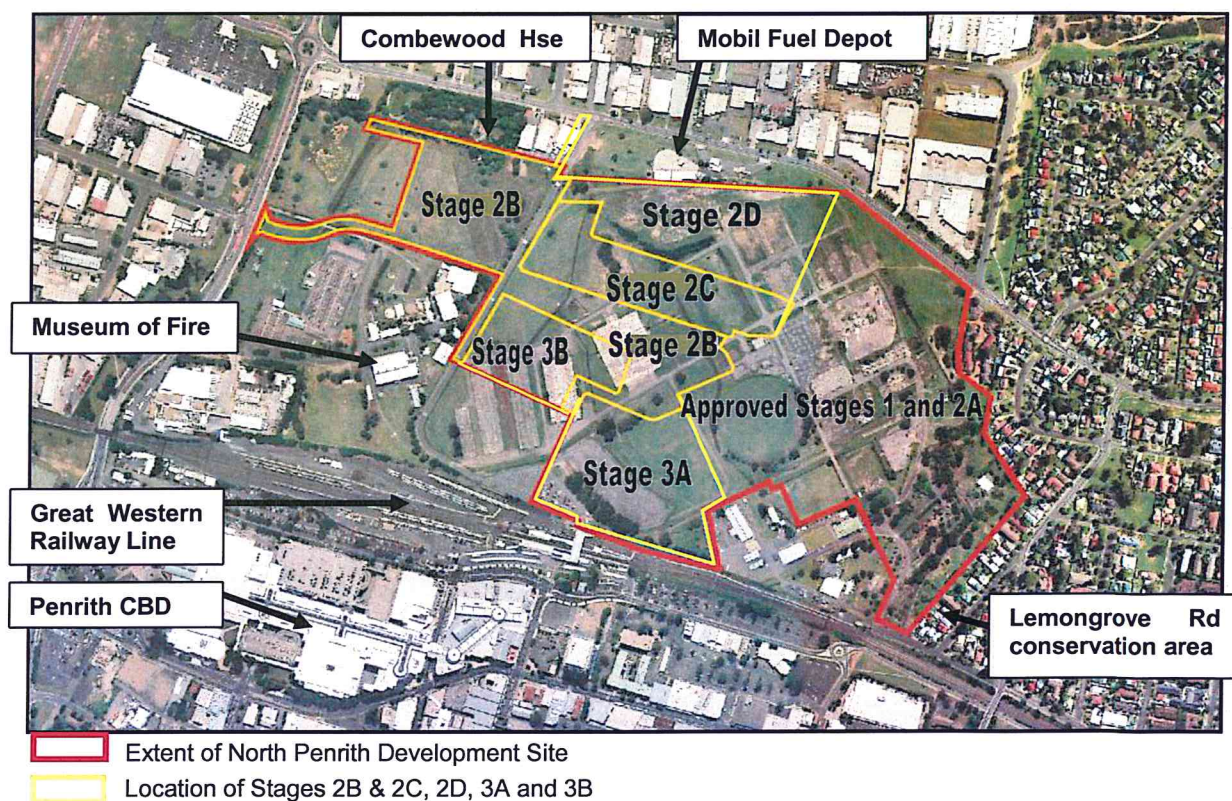


Figure 3: Extent and Stages of North Penrith Development Site

Generally small scale industrial uses also adjoin the western boundary of the site and roads separate the Museum of Fire from the development site (see Figure 3). To the south, the site is bounded by a public car park and The Great Western Railway line. The Penrith CBD is immediately to the south of the railway line.

1.3 BACKGROUND

1.3.1 Site History

The North Penrith Development site is linked with early Australian aviation and sporting history. Three items of European heritage are located within the site being Thornton Hall, the oval and the former speedway. These three items are located within approved Stages 1 and 2A (SSD 5243).

The 1882 heritage listed house, Thornton Hall, and a portion of the original grounds, are to be retained in a separate lot. It is envisaged Thornton Hall will be renovated at a later stage. Part of the original grounds of Thornton Hall is approved to be subdivided to create Thornton Park. Thornton Park is to be retained as a public domain lot and developed as parkland within the North Penrith development site.

Some scattered Aboriginal items of uncertain provenance have been found on the north eastern edge of the site. These items are all located within approved Stage 2A and this location is to be protected under a Section 88B instrument. The indigenous and non-indigenous history of the site is to be referenced in street and open space design, site specific art and place names.

Three items of heritage significance adjoin the site. The Lemongrove Road conservation area adjoins Stage 2A, and of particular relevance to the stages of development under consideration are Combewood house adjoining Stage 2B and Museum of Fire, formerly the Penrith Power Station, south of Stage 2B (see Figure 3).

The most recent use of the North Penrith Development site was as Department of Defence land where an Army Base was located until 1994.

1.3.2 Approvals History

The principle guiding documents for future development on the North Penrith development site are the range of documents approved within the Concept Plan (MP10_0075) under the provisions of Part 3A of the EP&A Act. Stage 1 was approved concurrently with the Concept Plan under Part 3A of the EP&A Act however the site was subsequently identified as State Significant Development (SSD) in Schedule 2 of SEPP 2011 and all following stages of development have been submitted to the department for assessment under the provisions of that SEPP.

The approved Concept Plan (MP10_0075) for the North Penrith development site is for development to be undertaken in a series of stages. Earthworks, infrastructure and subdivision for two of the stages, being Stages 1 and 2A (SSD 5243), have been approved by the department and construction has commenced on site.

The approvals issued on the North Penrith development site are as follows:

Concept Plan (MP 10_0075)

- A Part 3A Concept Plan (MP10_0075) was approved for the North Penrith development site by the then Minister for Planning on 9 November 2011.

The Concept Plan approved the development of 900-1000 residential dwellings supported by retail, commercial and industrial development as well as recreational, community and open space facilities in a new transit orientated village. Figure 2

generally illustrates the approved Concept Plan layout, the pattern of roads, public spaces and development in relation to the railway, Penrith CBD and surrounding development.

- Concept Plan (MP10_0075) MOD 1 - an application to modify the Concept Plan was approved on 23 January 2013. Modification 1 amended conditions of approval in regard to Section 94 contributions, the location of vehicular access to some lots and the requirements of the Design Guidelines.
- Concept Plan (MP 10_0075) MOD 2 - Modification 2 of the Concept Plan (MOD 2) was approved on 11 January 2013. Modification 2 amended the layout of Stage 2D requiring replacement of the site subdivision plan and a range of plans in the Design Guidelines. The staging plan was also amended along with plans indicating the distribution of types of residential dwelling to be constructed.

Project Application (MP10_0078) Stage 1

- The Stage 1 (see Figure 1 and 3) project application was approved concurrently with the Concept Plan. The approval included subdivision to create 97 residential lots, 16 super lots, 2 open space lots, 1 sewer pumping station lot and 2 residue lots. Stage 1 is presently under construction.
- Stage 1 Project Application (MP10_0078) MOD 1 - an application to modify Stage 1 was approved on 23 January 2013. MOD1 was to modify conditions of approval in regard to Section 94 contributions, the location of vehicular access to some lots and requirements of the Design Guidelines.

SSD Application (SSD 5243) Stage 2A

- The department provided consent for early works to Stage 2A on 16 January 2013. Stage 2A includes earthworks, landscaping and subdivision to create 31 residential lots, an integrated housing lot, 1 super lot, 1 heritage lot, 1 open space lot and road reserve.
- Stage 2A (SSD 5243) MOD 1 - Modification 1 to Stage 2A, to clarify conditions of consent was approved on 4 May 2013.

1.4 THE PROPOSAL

Three development applications, being for Stages 2B and 2C (SSD 5346), 2D (SSD 5347) and 3B (SSD 5349) (see Figures 1 and 2), were lodged by UrbanGrowth NSW, the applicant, on 9 November 2012. Essentially, the applicant seeks consent to construct roads, connect the lots to utilities, landscape the public domain and subdivide the lots of stages 2B and 2C, 2D and 3B. The proposal for Stages 2B and 2C seeks consent to undertake earthworks to all remaining stages of the North Penrith development site. Consent for these proposals is sought in order to supply the necessary infrastructure to underpin future residential, commercial and mixed use development on the North Penrith development site. Figure 4 illustrates the proposed road and subdivision layout for these applications.

A considerable degree of remodelling of the landform will be undertaken within the Stage 2B site works in order to construct the waterway consisting of 'Water's Edge' (the canal) and 'The Common' (the wetland) to provide the key infrastructure components in the management and treatment of stormwater for the entire North Penrith development site (see Figure 4). The canal and wetland are also designed to enhance the visual and recreational amenity of the North Penrith development site with the canal proposed to provide a highly developed and landscaped public domain and the wetland being a more informal landscaped open space area.

The extent of each individual stage under assessment is illustrated in Figure 4 and the Scope of Works for the three development applications is detailed in Table 1 below.

Table 1: Scope of Proposed Works

Stage 2B and 2C (SSD 5346) <i>Legal description:</i> Lots 1, 2, 4, 5, and 6 in DP 1020994, Lots 3 and 4 in DP 1017480, and Part Lot 11 in DP 1159973.	Bulk earthworks to Stages 2B and 2C, 2D, 3B as well as 3A comprising: ○ tree removal, demolition, topsoil stripping and stockpiling; and ○ bulk earthworks. Works to Stages 2B and 2C only: ○ subdivision to create: ▪ 44 standard residential lots; ▪ 5 integrated housing lots; ▪ 2 apartment superlots yielding approximately 60 apartments; ▪ 2 open space lots; ▪ 1 industrial lot; ○ construction of water cycle and drainage system including the central waterway (canal feature called 'Water's Edge') and detention basin ('Wetlands Park' or 'The Common'). ○ 'the Common' public domain landscaping, pedestrian/cycle bridge over 'Water's Edge' and public art; ○ internal road network and streetscapes; ○ re-construction of entry road from Coreen Ave to the commuter car park (i.e. Combewood Avenue) and construction of the entry road from Castlereagh Road into the Stage 2B and 2C site and intersection upgrade (i.e. Thornton Drive); and ○ provision of utilities – electrical, sewerage, telecommunications, water and gas. The proposed works have a total CIV of approximately \$ 31,412,000.
Stage 2D (SSD 5347) <i>Legal description:</i> Part Lot 11 in DP 1159973	Works to Stage 2D include: ○ subdivision to create: ▪ 86 standard residential lots; and ▪ 5 integrated lots yielding 32 dwellings; ○ construction of the internal road network, intersections and streetscapes; ○ construction of Howell Park; ○ drainage and stormwater infrastructure; and ○ provision of utilities – electrical, sewerage, telecommunications, water and gas. The proposed works have a total CIV of approximately \$ 5,354,000.
Stage 3B (SSD 5349) <i>Legal description:</i> Part Lot 11 in DP 1159973	Works to Stage 3B include: ○ subdivision to create the North Penrith "Opportunity Site" lots including: ○ 3 super lots; ○ drainage and stormwater infrastructure; ○ provision of utilities – electrical, sewerage, telecommunications, water and gas; and ○ construction of internal road network and connections to existing. The proposed works have a total CIV of approximately \$ 4,181,000.

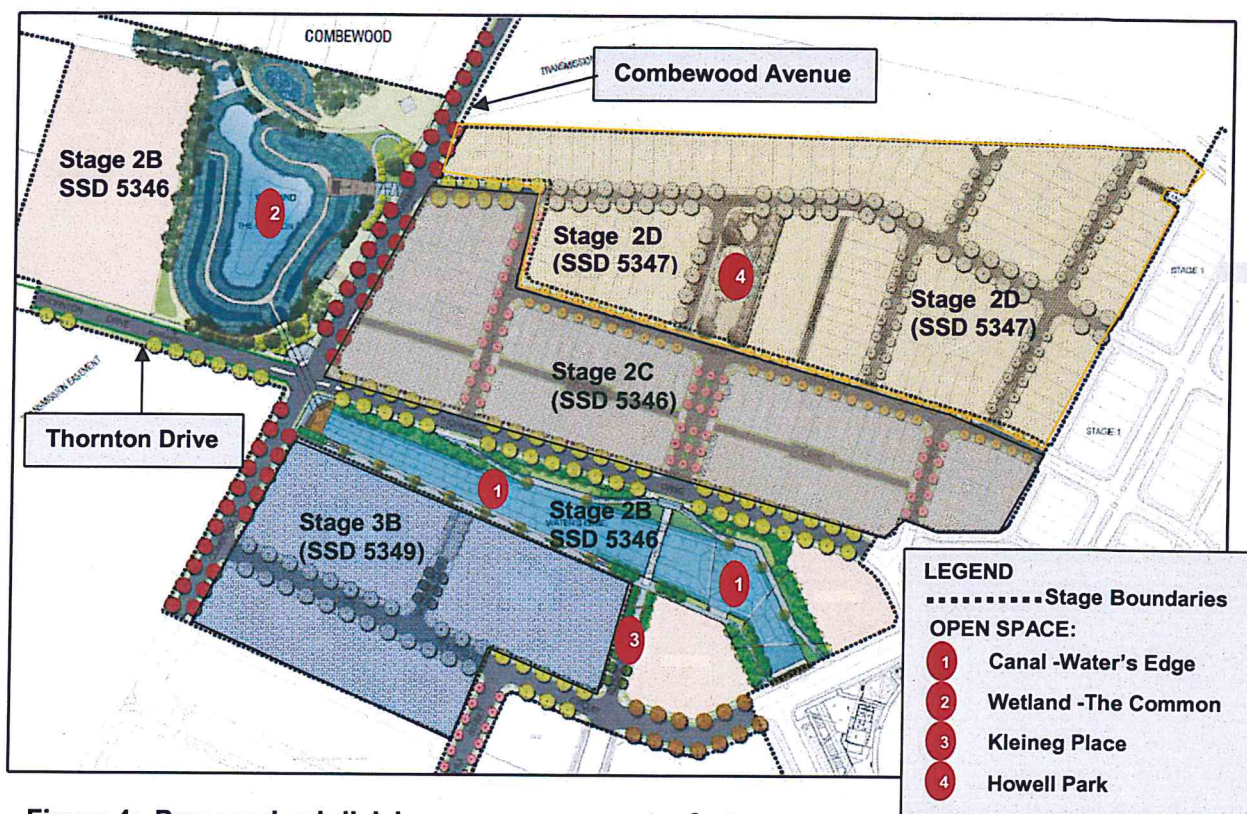


Figure 4: Proposed subdivision, open space, water features and landscaping to Stages 2B & 2C (SSD 5346), 2D (SSD 5347) and 3B (SSD 5349)

2. STATUTORY AND STRATEGIC CONTEXT

2.1 SEPP (STATE AND REGIONAL DEVELOPMENT) 2011

The North Penrith site is identified in Schedule 2 clause 11 of State Environmental Planning Policy (State and Regional Development) 2011 and identified on the State Significant Development Sites Map. Development that is identified in Schedule 2 is State Significant Development. The Minister for Planning and Infrastructure is therefore the consent authority.

2.2 DELEGATION

On 27 February 2013, the Minister for Planning and Infrastructure delegated responsibility for the determination of State significant development under section 89E of the *Environmental Planning and Assessment Act 1979* to the Executive Director, Development Assessment Systems and Approvals.

The delegation applies where:

- (a) the relevant local council has not made an objection, and
- (b) a political disclosure statement has not been made, and
- (c) there are less than 25 public submissions in the nature of objections.

The proposal complies with the terms of the delegation as council has not objected to the proposal, a political disclosure statement has not been made and there were no public submissions received by the department in response to the advertising of the proposal. Therefore the Executive Director, Development Assessment Systems and Approvals can determine the proposal.

2.3 PERMISSIBILITY AND ZONING

Part 7 of Penrith City Centre Local Environmental Plan 2008 (current version 25 November 2011) establishes the zoning, objectives of the zone and land use tables for the North Penrith development site.

Figure 5 is an illustration of the North Penrith land zoning map and specifically identifies the zones relating to the stages under consideration being Stages 2B and 2C, Stage 2D (and Stage 3B). The zoning of each stage is as follows:

SSD 5346: Stage 2B & 2C are zoned:

RE1	Public Recreation
IN2	Light Industrial
R1	General Residential
B2	Local Centre

SSD 5347: Stage 2D is zoned:

R1	General Residential
RE1	Public Recreation

SSD 5349: Stage 3B is zoned:

B2	Local Centre
R1	General Residential

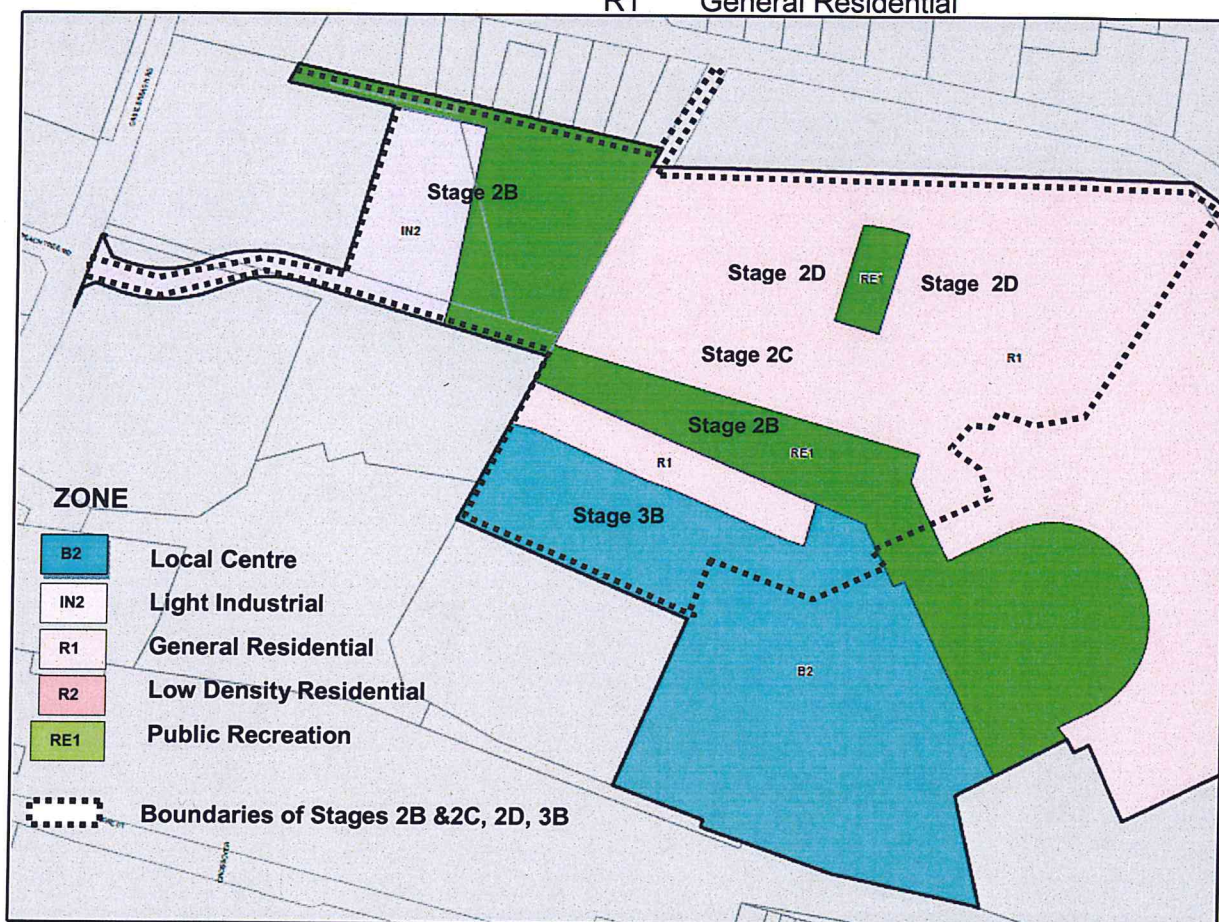


Figure 5: North Penrith Land Zoning Map

The proposed developments submitted for each stage under consideration is consistent with the objectives of the zones and permissible with development consent (see **Appendix C**).

Of particular relevance to the proposals under assessment is Clause 55, 'Earthworks'. The Stage 2B and 2C proposal seeks consent for earthworks for all the remaining stages being Stages 2B, 2C, 2D, 3A and 3B. The objectives of Clause 55 are to ensure earthworks will 'not have a detrimental impact on environmental functions and processes, neighbouring

uses, cultural or heritage items or features of the surrounding land' and the consent authority is required to consider a list of potential impacts before granting development consent.

The impacts listed include drainage patterns, soil stability, effects of the proposal on future use or redevelopment of land, fill, amenity of adjoining properties the likelihood of disturbing relics and the potential for adverse impacts on any water course. An assessment of the impacts listed can be found at **Appendix C**. The recommended determinations for each SSD includes a range of conditions to ameliorate any detrimental impacts from the earthworks including comprehensive construction environmental plans of management, traffic management, erosion and sediment control measures and measures to be undertaken in the event archaeological relics are found.

Clause 16 of the LEP permits subdivision but only with consent. The department has considered the Penrith City Centre LEP 2008 and the applications are in accordance with the zone objectives, the land use table and other relevant clauses within the LEP and are permissible with consent.

It is also noted that under Schedule 6A of the transitional arrangements for Part 3A, the development may be carried out with development consent under Part 4, despite anything to the contrary in an environmental planning instrument (CI 3B (2)(a)) and the development must be consistent with the terms of approval of the Concept Plan (CI 3B(2)(d)).

2.4 CONSISTENCY WITH CONCEPT PLAN

The approved concept plan (MP10_0075) provides the guiding principles which are to be applied to the development of the North Penrith development site. The concept plan approval included the staging and subdivision plans for the site, design guidelines and the statement of commitments.

The applications for Stages 2B and 2C, 2D and 3B are integral stages of the concept plan for the entire North Penrith development site and will provide the stormwater/drainage infrastructure, recreational areas, roads and utilities in order to support the residential dwellings, commercial and other uses approved by the concept plan. The three proposals have been assessed against the requirements as detailed within the concept plan and are considered consistent with the approved concept plan (see **Appendix D**).

2.5 ENVIRONMENTAL PLANNING INSTRUMENTS (EPIS)

The department has considered the following other relevant EPIs (including SEPPs):

- State Environmental Planning Policy (State and Regional Development) 2011
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy No 55 – Remediation of Land

The department's detailed consideration of relevant SEPPs is provided in **Appendix B** and **C**. The proposal is generally consistent with the relevant requirements of the SEPPs.

2.6 OBJECTS OF THE EP&A ACT

Decisions made under the EP&A Act must have regard to the objects of the EP&A Act, as set out in Section 5 of the Act. The proposal for the development of the North Penrith site is consistent with the objects of the EP&A Act as it promotes orderly and economic use of public land, provides essential public services and infrastructure, and promotes ecologically sustainable development.

2.7 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes.

The department has considered the developments in relation to the ESD principles. The precautionary and inter-generational equity principles have been applied in the decision making process via a thorough assessment of the environmental impacts of the projects. Ecological sustainability was considered during consideration of the Concept Plan (see the Director-General's Environmental Assessment Report for the North Penrith Concept Plan, Section 5.29) and again during this assessment of Stages 2B & 2C, 2D and 3B. The proposals are considered to be consistent with ESD principles and are in accordance with the requirements of Schedule 2 of the Regulation.

2.8 STRATEGIC CONTEXT

The department considers that the proposals are consistent with and/or support the following local, state and regional strategies:

NSW 2021

The proposals meet the goals of NSW 2021. NSW 2021 has been formulated to guide the state's policy and budget decisions over the next 10 years. This plan envisages the delivery of infrastructure and transport in support of building liveable centres. The North Penrith development site adjoins Penrith railway and the three developments are specifically designed to provide a range of housing adjoining this transport hub with a range of community facilities to be supplied both on site or are located within the nearby Penrith CBD.

Metropolitan Plan for Sydney 2036

This plan builds on the draft 2031 plan. North Penrith is identified within the Metropolitan Plan for Sydney 2036 as a potential site for employment growth and higher density housing. The site and proposals support the aims of a transport orientated growth centre.

Draft Northwest Subregional Strategy

The northwest subregional strategy translates the objectives of the metropolitan plan and the state plan to the local level. The North Penrith Defence site is specifically identified as a potential redevelopment site in the draft Northwest Subregional Strategy. Significant residential growth is to be promoted which complements the aims of increasing walking, cycling and public transport use.

Draft Metropolitan Strategy for Sydney

A draft Metropolitan Strategy for Sydney has been released by the department. Penrith is identified as a 'Regional City' and the policy prioritises housing and jobs, housing choice close to appropriate infrastructure and city centres. Stages 2B & 2C, 2D and 3B are part of a larger proposal to construct a range of dwellings close to the Penrith CBD, provide good infrastructure and facilities to support a high quality communal environment for future residents.

2.9 DIRECTOR-GENERAL'S REQUIREMENTS

Section 5.0 in each of the three Environmental Impact Statements addresses compliance with the Director-General's Requirements. These matters have been addressed in the EIS and the Response to Submissions documents sufficient to enable an adequate consideration and assessment of the proposal for determination purposes.

3. CONSULTATION AND SUBMISSIONS

3.1 EXHIBITION

In accordance with section 89F of the EP&A Act and clause 83 of the EP&A Regulation, the Director-General has made each of the applications and accompanying information publicly available for at least 30 days following the date of first publication, in accordance with the Regulation.

Table 3 : Public Exhibition Details

Exhibition/Notification	Appearing In	Dates
Publicly exhibited	Department's head office in Bridge Street, Penrith City Centre and City Library and on the department's website.	22 November 2012 to 21 December 2012
Newspaper notice	Sydney Morning Herald and Daily Telegraph	21 November 2012
Newspaper notice	The Penrith City Star	22 November 2012
Newspaper notice	The Penrith Press	23 November 2012
Written notices to	Landholders, public authorities, local community groups	19 November 2012

In response to the exhibition of the applications the department received nine (9) submissions per application. All of the submissions were from public authorities and Penrith City Council.

No public submissions were received to any of the applications.

3.2 PUBLIC AUTHORITY CONSULTATION AND SUBMISSIONS

Penrith City Council – raised concerns in regard to the design of roads and intersections as well as issues pertaining to Council's future management of major items of infrastructure, such as the waterways, open space and landscaping.

The Office of Environment and Heritage – raised concerns in regard to the proposed flood levels generally and the Heritage Council required a Heritage Interpretation Study be undertaken for all three proposals.

Submissions from Council and 3 agencies provided conditions for the department's consideration and requested they be included in any consent.

Where necessary the department has discussed issues of concern with the relevant public authority, Council and/or the applicant, or required further information be supplied. The conditions submitted have been considered and included in the recommended conditions of consent where it is considered appropriate.

A summary of the issues raised in public agency submissions is provided in **Appendix E** and any issue of particular concern is addressed in detail in section 4.

3.3 APPLICANT'S RESPONSE TO SUBMISSIONS

The applicant provided comments on the submissions including further analysis and revised documentation in their 'Response to Submissions' on each application. Modified engineering drawings were provided and, at the further request of the department, a Heritage Interpretation Strategy document was submitted in order to address the DGR requirements for all three stages.

The department is satisfied the issues raised by the agencies have been dealt with in a satisfactory manner or will be addressed by the provision of further documentation and/or by consultation with the appropriate body as required within the recommended determination.

Recommended conditions of consent have been attached for each application to ameliorate any environmental impacts and ensure the appropriate agency, Council or the PCA is consulted where appropriate prior to the commencement of construction or other relevant stage of development.

The department considers the applicant's responses to the issues raised was generally adequate and where necessary further advice was been requested and the issues discussed in section 4.2.

4. ASSESSMENT

The Department considers the key environmental assessment issues for the development to be:

- Flooding (stages 2B and 2C, 2D)
- Water cycle management (Stage 2B and 2C)
- Public domain works (all stages)
- Subdivision layout (all stages)
- Heritage impacts (Stage 2B)
- Proximity to Mobil Fuel depot (Stage 2D)
- Development contributions (all stages)

Section 4.2, Key Issues provides detailed discussion of the above issues.

4.1 SECTION 79C EVALUATION

The table below identifies the matters for consideration under section 79C that apply to State Significant Development, in accordance with section 89H of the EP&A Act. The table represents a summary for which additional information and consideration is provided for in section 4 (Key and Other Issues). Relevant appendices or other sections of this report and the EIS are referenced in the table. The EIS's have been prepared by the applicant to consider these matters and those required to be considered in the DGRs and in accordance with the requirements of section 78(8A) of the EP&A Act and Schedule 2 of the Regulation.

Table 5: SECTION 79C Evaluation

S79C(1) Evaluation	Consideration
(a)(i) any environmental planning instrument	Satisfactorily comply. Consideration of relevant EPIs has been undertaken at Section 2.4 of this report. See Appendix B & C
(a)(ii) any proposed instrument	Not applicable.
(a)(iii) any development control plan	Clause 11 of State Environmental Planning Policy (State and Regional Development) 2011 states that development control plans do not apply to State significant development. The primary controls applying to this proposal are found in the Concept Plan with includes the Design Guidelines (see Appendix D), Penrith City Council LEP (See Appendix C) and the Statement of Commitments in the Concept Plan (see Appendix D). The Stage 2B and 2C, 2D and 3B proposals have also been assessed against the provisions and further assessment requirements of the Concept Plan MP10_0075 and are considered consistent with those requirements.
(a)(iia) any planning agreement	There is no planning agreement. Open space land is to be dedicated to Council on an agreed time schedule. Section 94 developer contributions are to be paid as agreed with Council.
(a)(iv) the regulations [Refer Division 8 of the Regulation]	The development applications satisfactorily meet the relevant requirements of the Regulation, including the procedures relating to development applications (Part 6 of the Regulation), public participation procedures for SSDs and Schedule 2 of the Regulation relating to EIS's.
(a)(v) any coastal zone management plan	Not applicable.
(b) the likely impacts of that development	Impacts have been considered and where necessary, measures taken to ensure they are within an acceptable projected range. Conditions of consent and mitigating measures have been recommended to negate any residual impacts. See section 4.2 of this report. In consideration of the measures being undertaken and the constraints imposed within the conditions of consent the department is satisfied the impacts are acceptable.
(c) the suitability of the site for the development	The North Penrith site is centrally located in Penrith with good public transport, social, employment and public facilities available and therefore the site is considered to be suitable for the proposed development. There are site constraints which can be readily ameliorated for the use proposed.
(d) any submissions	Consideration has been given to submissions received during the exhibition of the development applications (refer to Section 3 of this report and the applicant's Response to Submissions). Key issues raised in each application include design of roads; water cycle management; design of public domain; and flood prone land.
(e) the public interest.	These proposals are considered to be in the public interest (see Conclusion at section 5).
Biodiversity exemption	Not applicable.

4.2 KEY AND OTHER ISSUES

4.2.1 Development on Flood Prone Land

The North Penrith Development site is located on flood affected land. During the exhibition period, submissions in regard to flooding issues were received from the Office of Environment and Heritage (OEH) raising the following concerns:

- a) a Development Control Plan should be provided for all development on the North Penrith site, below the 200 year flood level to limit structural and content damage;
- b) provision for safe retreat to high ground in a flood event is required, including the need to raise site levels, roads and road layout to achieve this outcome; and
- c) consultation with the SES should be undertaken to ensure the acceptability of any evacuation strategy.

In addition, council raised concern in regard to the impact of the reduction in the number of interface weirs at the Penrith Lakes Scheme and the potential to compromise the Flood Planning Levels (FPLs) for surrounding land, including the North Penrith development site.

Flood Prone Land Assessment

The assessment of the Concept Plan included a report submitted by Worley Parsons providing advice in regard to the impact of flooding on the North Penrith development site. Figures 6 and 7 below, from that report, illustrate the 100 year average recurrence interval (ARI) and 200 year ARI floods respectively, and provide an indication of the potential location, depth and extent of any such flood event.

As illustrated in Figure 6, the 100 year (ARI) flood levels would impact a small portion of the north western corner of the site within stages 2D and 2C. The Worley Parsons Report states that this is a backwater effect and the flow velocities are negligible with water depth generally of 0.1m. The 200 year ARI flood levels (see Figure 7) remain contained within the north western part of the site however the extent of the flooding is greater, with some impact to all the stages under assessment, to depths stated to be generally between 0 - 1 metre.

The Probable Maximum Flood (PMF) would affect 87% of the North Penrith development site. The natural land form of the entire North Penrith development site rises gently to the east and approved Stage 2A is at levels above the PMF levels and unaffected by flooding.

The Concept Plan approval includes strategies to ameliorate flood impacts up to the 100 year ARI event as recommended within the Worley Parsons analysis. The Concept Plan established the minimum finished ground level to be the 100yr ARI flood level, being RL 25.4m AHD, roads to be RL 25.6m AHD and a habitable floor level of RL 25.9m AHD (100yr ARI plus an additional 500mm freeboard).



Figure 6: 100 year ARI flood depths and velocity vectors (Source – Worley Parsons Regional Flooding Assessment 2010) (regional FPL RL 25.4m AHD)

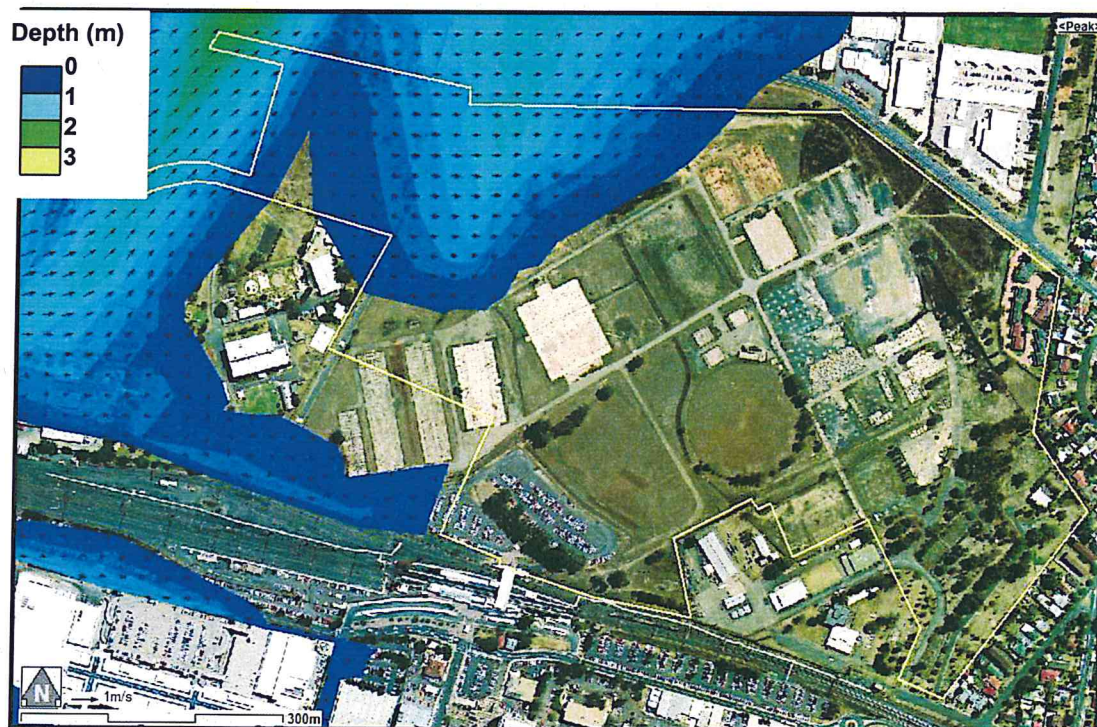


Figure 7: 200 year ARI flood depths and velocity vectors (Source Worley Parsons, Regional Flooding Assessment 2010) (regional FPL RL 26.3m AHD)

Penrith Lakes Scheme

In its submission to the department, council expressed concern that the works being undertaken on the Penrith Lakes site will compromise the flood planning levels (FPLs) for surrounding land including the North Penrith development site.

The Penrith Lakes site has been a quarry and sand mining operation which is in the process of being remediated into a precinct to provide public open space and aquatic activities. Figure 8 illustrates the scale and location of the Penrith Lakes scheme in relation to the site. The Penrith Lakes scheme is approximately 2km northwest of the North Penrith development site.



Figure 8: Location of Penrith Lakes Scheme

The works to be undertaken to remediate and Penrith Lakes site are the subject of an approval from the department. As a part of the requirements for that approval, on 17 August 2012, the Penrith Lakes Development Corporation (PLDC) submitted a draft Stage 1 Water Management Plan (WMP) to the department, including a flood management plan addressing flooding impacts on the Penrith Lakes site and on surrounding areas.

The department undertook a process of consultation and, due to the nature of the technical issues which arose from the submissions, obtained advice from a hydraulic engineer. Flood modelling of the Penrith Lakes site and flood prone land in the vicinity has been ongoing. An element of the assessment involved confirming whether the flood levels predicted by PLDC in its flood model would exceed pre-existing Flood Planning Levels adopted by Penrith City Council. At the completion of this exercise, involving the Department, Council, Office of Environment and Heritage and Office of Penrith Lakes, found that there was only one location where predicted flooding would exceed the FPL. The department's hydraulic

engineer identified that the FPLs approved in the Concept Plan for the North Penrith development site had been set too low. However, as the flood modelling considered for this exercise was undertaken over a large area, the implications for the North Penrith site affected cannot be accurately determined at this stage. The department and OEH are of the view that a relative level of 25.8m AHD is likely to be the appropriate flood level for the North Penrith site i.e. 400mm higher than the presently approved level. As the base data required in order to undertake the modelling is as yet unavailable, the precise FPL specific to this site is unknown. Visually, the new probable FPL is between the 100 year and 200 year ARI flood depths illustrated in Figures 6 and 7.

In order to ameliorate the impact of flooding above the FPL established in the concept plan for the North Penrith development site, some consideration was given to possible mitigating measures in the review exercise undertaken above. An option for further investigation and discussion involves deflecting flood waters before it reaches the site. There is an intention by the department to continue working with Council and Office of Environment and Heritage to further investigate measures that could be implemented in order to provide protection to residential dwellings on the North Penrith development site. However, at this stage, there is no agreed works or funding to carry out any works.

A review of the levels of the proposed earthworks for the three stages under assessment has been undertaken in consideration of the likely FPLs being RL 25.8m AHD and road levels being RL 26m AHD. The impacts of the potential new flood level remains contained within the northwest of the site being across the proposed wetland and also residential stages 2C (SSD 5326) and 2D (SSD 5347).

The bulk earthworks plan for residential lots in this location indicate ground levels for the lots are to be filled from RL 26m to above RL 28.5m AHD with some very small areas of land next to Combewood Drive being from RL 25.5m to RL 26m AHD (see Figure 9). With this small exception, the levels of the earthworks proposed for the subdivision within the stages under assessment are generally higher than the projected FPL for the site.

The internal roads comply with the projected FPL at RL 26m AHD or higher, with the exception of Combewood Avenue which is generally lower than surrounding streets being RL 25.5m AHD at its lowest point and RL 25.77m AHD at the intersection with Thornton Drive.

Combewood Avenue adjoins the wetland lot which is RL 25.5m AHD however the lot zoned for future industrial development to the western extreme of the site, is RL 26.5m AHD i.e. above RL 25.8m AHD.

The department acknowledges that the proposed ground levels are generally at least 400-500mm higher than that established in the concept plan and that the three development applications have been designed to comply with the levels established in the concept plan, which were considered correct with the information available at that time.

Nevertheless, the department must take a precautionary approach to setting flood planning levels for this site and requires the applicant to take into account the latest data available from outputs from the PLDC flood modelling and the council's RMA Regional Flood Model that will be finalised subject to incorporation of the approved Penrith Lakes end-state landform. Whilst council's RMA Regional Flood Model is likely to take some time to be finalised, the department recommends the applicant be required to determine an appropriate FPL using this information prior to the issue of subdivision certificates. In this way, the applicant is able to commence construction on the site whilst refining the final levels for that small part of the site likely to be affected. Importantly, no future housing can be constructed until such time as the appropriate FPL has been established.

Impact on Adjoining Land and Impact of Climate Change

The 'further environmental assessment requirements' of the Concept Plan approval (term C6) includes a requirement for a further assessment of flooding behaviour including an assessment of the impact of filling on flood levels at adjoining properties and the impact of climate change on flooding behaviour and the consequent impact on flood levels on and adjoining the site.

In the Concept Plan, assessment of the impact of fill on the flood levels of adjoining properties, had been addressed in the Worley Parsons report which states:

'the proposed filling will meet the Council's criteria by not causing any significant changes to flood behaviour, no potential for cumulative flood impacts, no significant adverse impacts on surrounding development and local drainage problems.' (pg10)

The report submitted with the EISs by J. Wyndham Prince, includes flooding information and assessment of the cumulative impacts of the cut and fill proposed, including the canal and wetland water features. The report confirms:

'peak flows at the downstream boundary of the site will not increase as a result of the development and, hence, there will be no significant adverse impact on flood levels downstream of the site as a result of the development.'

In regard to climate change the J. Wyndham Price report references the document 'Impacts of Climate Change on Urban Stormwater Infrastructure in Metropolitan Sydney, Sydney Metropolitan Catchment Management Authority' (January 2011) and concluded:

'Part of the standard freeboard requirement includes a component to account for climate variability. It is anticipated that any increases in flood levels as a result of climate change can be accommodated in the minimum 0.5m freeboard allowance to the dwelling floor levels.'

The department notes that the 'Floodplain Development Manual', Appendix K5 states that the freeboard can be justified due to the uncertainty of a number of factors including local issues in modelling, climate change and the cumulative effect of subsequent infill development of existing zoned land.

OEH has informed the department that *'There is no requirement that councils include the impact of climate change (either from sea level rise or increased rainfall) in setting their flood planning levels. Generally OEH requests that planners undertake a sensitivity analysis of the impacts on climate change on flood levels... In most non-coastal catchments the climate change impacts on flood levels from predicted increased rainfall (rather than sea level rise) is insignificant (less than 0.1m) and not taken into consideration in setting planning levels.'*

The site will not be impacted from coastal flooding due to the distance of the site from the coast and any climate change impacts from flooding are likely to be rainfall related. OEH notes that the large flood range of the Nepean River is likely to provide an impact on flood levels which is 'minor' which is worse than 'insignificant'.

In the assessment of coastal subdivisions the department generally does not accept that the climate change allowance is part of the freeboard component however the comments from OEH in relation to inland sites is noted and based on advice from OEH no further assessment of climate change will be required.

It is understood that in this instance further modelling will be required to accurately predict the FPL and the climate change component of this allowance for the North Penrith site however preliminary data has provided a likely FPL of RL 25.8m AHD. This level does not

contain a climate change component however in consideration of the location of the site and the proposed levels, generally being a minimum of 400mm above the required earthworks levels, approval is recommended subject to condition requiring the establishment of the FPL appropriate for the site prior to the issue of a subdivision certificate.

Site Evacuation Routes and Consultation with the SES

The probable maximum flood (PMF) established by Worley Parsons report (2010) for the site is RL 31m AHD. In regard to evacuation from the site in a flood event the Worley Parsons report states:

'Access to and from the site in a flood is not constrained as all the land to the immediate East is above the PMF level being thereby producing a ready and fail safe access to high land and refuge facilities. ...The primary evacuation route will locally be Coreen Avenue... The Crescent, adjacent to the railway, will serve as an alternate route. Both of these routes provide rising egress away from the site to flood free land.' (pg 18)

The supporting documentation with the Stage 2B and 2C development application includes a report prepared by J. Wyndham Prince on the proposed water cycle management entitled 'North Penrith Stages 2B-2C Water Cycle Management Strategy Report Incorporating Water Sensitive Urban Design Techniques'. In discussing site evacuation this report states:

'The site is so located that there is ready access to The Northern Road which forms part of the SES regional flood evacuation plan for the Penrith area. An examination of the population and travel times in the local area of the site indicated that there was ample time for evacuation and the proposed development would not adversely impact on the evacuation of adjacent areas.' (pg 2)

The Worley Parsons report states that a flood evacuation strategy and supporting plan has been developed by Egis Consulting in consultation with the SES.

Primary evacuation routes to higher ground from the site are to the north and east. A review of the proposed bulk earthworks plan indicates that the site levels rise towards the north east which adjoins the evacuation routes. The department considers residents of this site would have adequate opportunity and ready access to higher ground in a flood event and no further action is necessary.

4.2.2 Earthworks and Subdivision

Earthworks

Earthworks for Stages 2B and 2C, 2D, 3A and 3B are to be undertaken within the works for Stages 2B and 2C (SSD 5346). The following earthworks are proposed to be undertaken to these sites:

- Cut and fill where necessary and particularly fill across the north western corner of the site to raise the levels to above the FPL set for the 100 yr ARI being RL 25.4m AHD;
- Earthworks to provide falls to enhance drainage and surface flows; and
- Roads to have a minimum level of RL 25.60m AHD which includes a freeboard of 200mm above the 100 yr ARI flood level, as required by the Concept Plan.

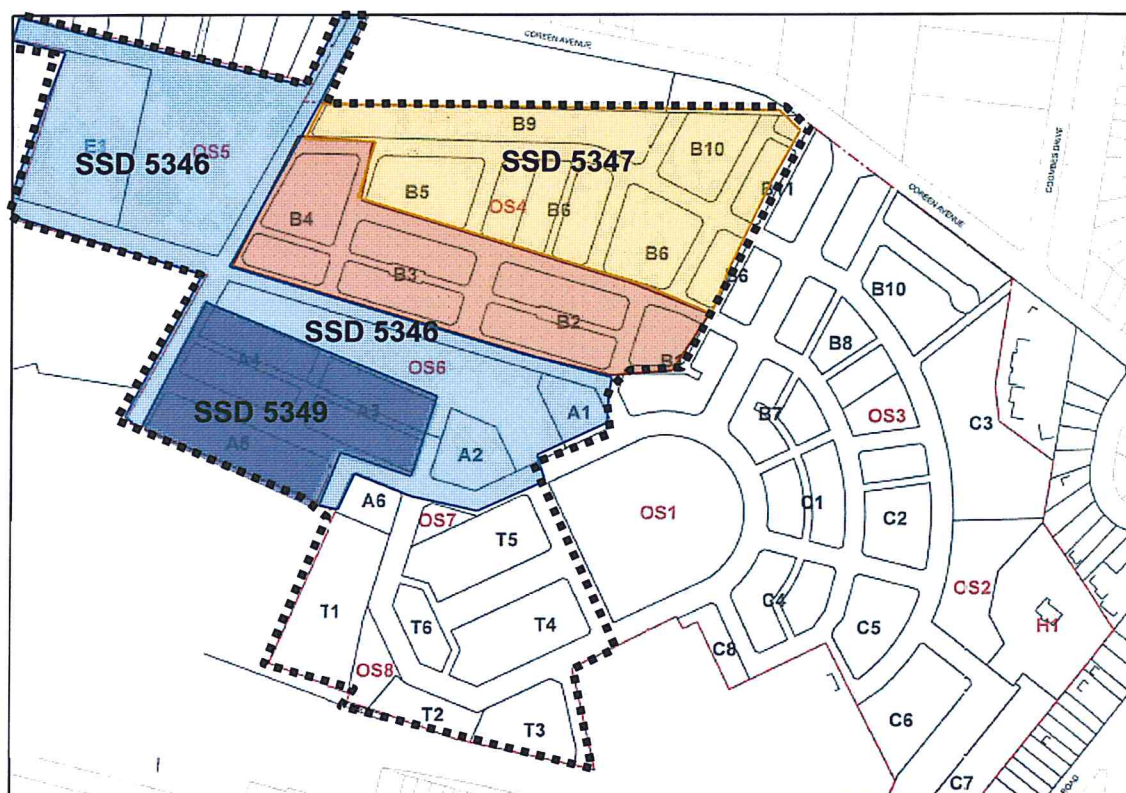
Plans by the engineers, J. Wyndham Prince illustrating the levels of cut and fill, drainage layout and road layout are included in the EIS for Stages 2B and 2C. The earthworks for the stormwater and drainage system throughout the site, including the canal and wetland, have been designed in consideration of the potential for flooding up to the 100 year ARI. It is now generally accepted that these levels are too low however it is noted that the earthworks are almost entirely designed to a higher level which is appropriate to the new projected FPL of RL 25.8m AHD for the North Penrith site.

It is anticipated there will be no imported soil due to reuse of soil from the site, however soil will be transported off the site. The excess material is to be validated prior to being removed from the site.

The department is satisfied that the earthworks proposed is appropriate to underpin the development of the infrastructure required in order to support future development of the North Penrith site.

Subdivision

The LEP states that subdivision is permissible with consent and the LEP and Concept Plan documentation provide the constraints which apply to development on the site, such as lot sizes and diversity of housing types.



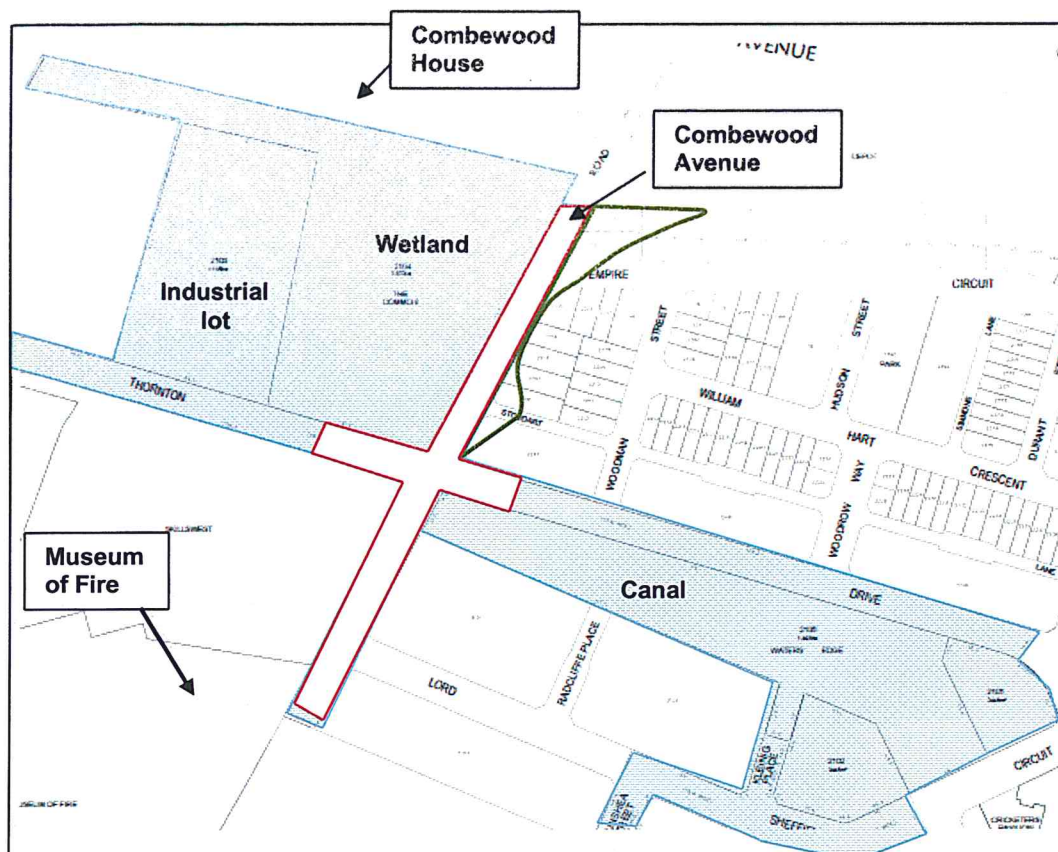
Area of site under consideration

Figure 9: Block Subdivision layout approved in MOD 2 to the Concept Plan

Studies undertaken during the Concept Plan established that there is a need for greater diversity in housing in the Penrith LGA, including a need for smaller housing types. Minimum lot sizes of 120m² are permissible at select locations on the North Penrith site in order to facilitate higher residential densities. The Concept Plan approved an indicative subdivision layout plan. The subdivision plan was modified by MOD 2 of the Concept Plan. The approved layout of the internal roads and block orientation is illustrated in Figure 9.

The subdivision plans submitted within the EISs for each stage under consideration illustrate the proposed lot and street layout for that individual stage (see Figures 10-13).

The subdivision of Stage 2B (SSD 5346) (see Figure 10) includes 2 open space lots for the canal and wetland respectively, 2 residential flat building lots of 2448m² and 3445m² and one industrial lot, at the western extremity of the site, of 1.165 hectares.



☐ RLs 25.5m to 26m AHD within residential areas

☐ Road not complying with new probable FPL of RL 25.8m AHD

**Figure 10: Stage 2B (SSD 5346) Proposed Subdivision – including
The waterways being the canal and wetland, 1 industrial lot and
2 residential flat building lots**

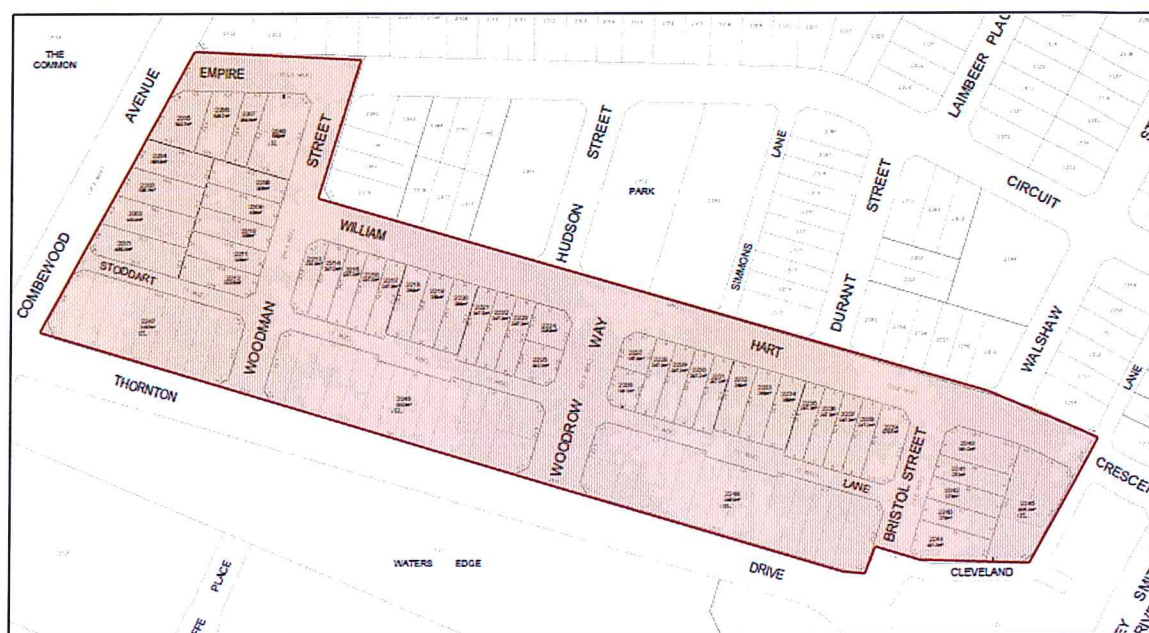


Figure 11: Stage 2C (SSD 5346) Proposed Subdivision – including 44 residential lots and 5 integrated housing lots

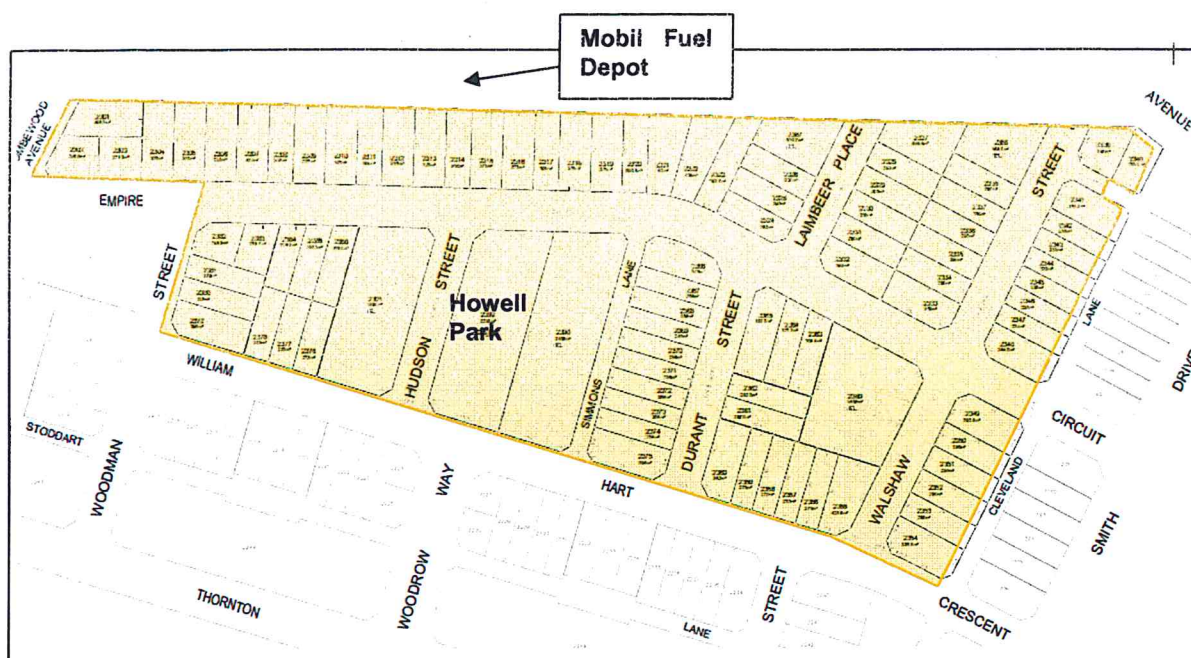


Figure 12: Stage 2D (SSD 5347) Proposed Subdivision – includes Howell Park, 86 residential lots and 5 integrated housing lots

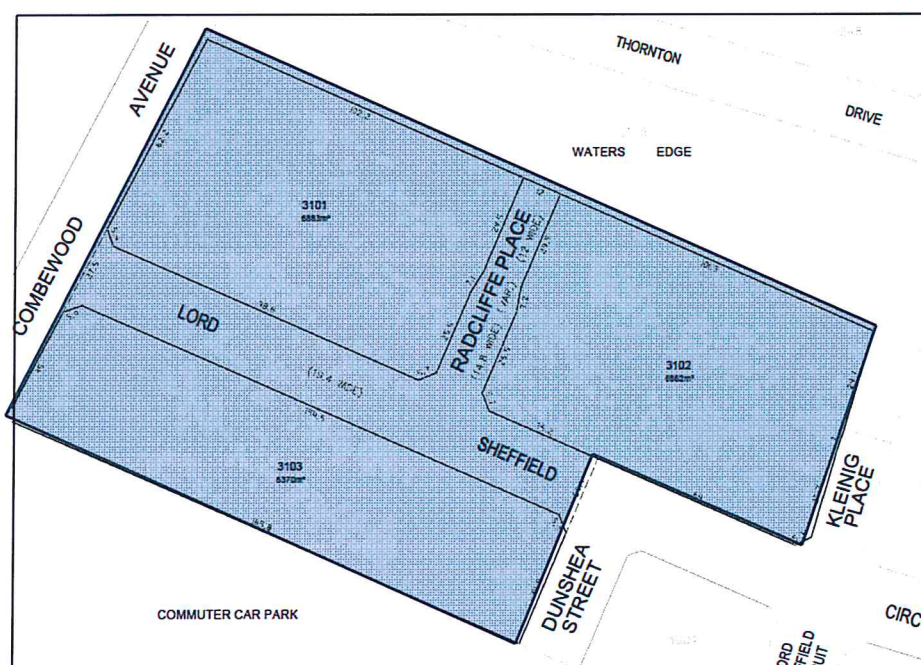


Figure 13: Stage 3B (SSD 5349) Proposed Subdivision – includes 3 super lots for mixed use development

The subdivision of Stage 2C (SSD 5346) (see Figure 11) is residential development and includes 44 residential lots ranging in size from approximately 187m² to 458m² and 5 integrated housing lots which are approximately 905m² to 3482m².

The subdivision of Stage 2D (SSD 5347) (see Figure 12) includes an open space lot for Howell Park, 86 residential lots ranging in size from 235m² to 456m² and 5 integrated housing lots which are approximately 515m² to 2406m².

Stage 3B (SSD 5349) (see Figure 13) consists of three superlots. Due to the location of Stage 3B, near the proposed town centre and railway station, the three superlots are designated as opportunity lots. The lots are 6883m², 6862m² and 6370m² in size and are

designated opportunity lots in order to provide higher densities and diversity of development types such as residential flat buildings or commercial/retail uses.

The three EISs for the SSD proposals include building envelope plans as required by the Design Guidelines. The building envelopes illustrate the location of the setbacks, building envelope, private open space and preferred garage locations.

The Design Guidelines also require confirmation that the target of 900-1000 dwellings to be constructed across the site will be met. At the department's request the applicant provided an updated estimate of the total yield. The current estimated yield has been confirmed to be 970 dwellings which is within the 900-100 dwelling target for the site.

The detailed design of dwellings, residential flat buildings and mixed use development will be assessed at a later date when development applications for the construction of buildings are submitted to Council.

The department is satisfied that the proposed pattern of subdivision of roads and lots within the three SSD applications reflect the approved subdivision plan and the lots are in accordance with the requirements of the LEP and the Concept Plan. The department is also satisfied that the proposal will provide the yield required for the North Penrith development site.

4.2.3 **Water Cycle Management**

A water treatment system is proposed within Stage 2B (SSD 5346) as an integral part of the stormwater/drainage infrastructure for the entire North Penrith development site. Central to the water treatment system is a canal called 'Waters Edge' and wetland called 'The Common'. The canal and wetland will also provide significant visual and landscaped open space features integral to the public domain (see Figure 4 on pg 9 and Figures 15 and 16).

The stormwater drainage for the North Penrith development site is designed to drain to the central waterway (the canal) for initial treatment and is then directed through boxed culvert units under the Combewood Avenue/Thornton Drive intersection to a detention basin ('The Common' wetland) (see Figures 14). The water is then recirculated for further treatment (see Figure 14) in order to achieve the prescribed water quality outcomes. The water is discharged from the wetland at two locations to the north of the wetland.

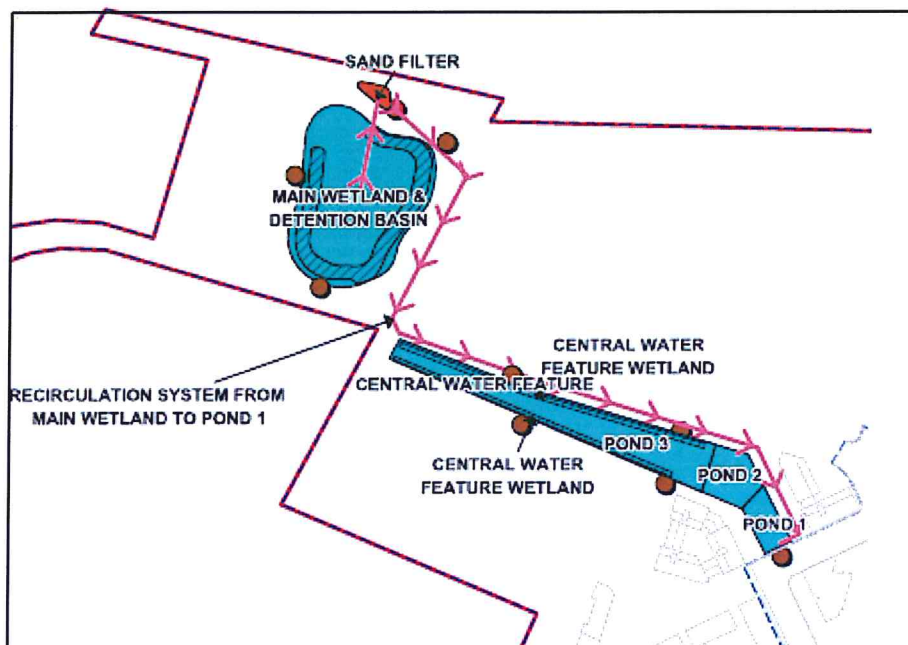


Figure 14: Proposed Water Cycle Management Plan (Source: Water Cycle Management Strategy by J. Wyndham Prince)

In order to achieve the required water quality outcomes the system is reliant on vegetation management, regular maintenance including removal of any build up of sedimentation and litter and the efficient functioning of infrastructure items such as gross pollution traps (GPTs) aerators and pumps as well as the design of the waterways to provide the required water flows, water detention time and depth.

Pedestrian pathways are to be constructed either side of the canal at a height above the 100 year ARI. The southern edge of the canal is to be terraced down to the water. Aquatic plants and turfed spaces will provide a softer border on the northern side of the canal. Timber viewing decks, a cascade, public art and a pedestrian/cyclists bridge, linking stage 2C with Stage 3B, will enhance the visual and recreational features of the canal (see Figures 15 and 16).

The applicant has agreed to develop, maintain and manage the waterway for a period of three years prior to handover to Council.

Water Quality

Council has expressed concerns in regard to the final water quality, the potential for algal growth and future general maintenance of the canal and wetland. In this regard Council has provided conditions to be attached to any consent including the following:

- water quality testing and reporting is to be undertaken within the three year maintenance period prior to the handover of the asset to Council;
- a detailed operation and maintenance manual is to be developed and provided to Council;
- the opportunity to review and approve some of the items of infrastructure prior to commencement of works is also requested.



Figure 15: 'Waters Edge' – Canal (Stage 2B)

With specific reference to the water quality, Council requested a testing program be prepared and provided to Council for approval prior to implementation and that monthly sampling is undertaken during the maintenance period and regular reports furnished to Council.

In the 'Response to Submissions' the applicant confirmed the commitment to managing and maintaining the water feature infrastructure for a period of 36 months, is agreeable to providing an operation and maintenance plan and is of the view that the water features, as designed, generally fulfil Council's requirements and will provide the requisite water quality outcomes. The applicant however considered the specific requirements of Council's proposal for the water quality monitoring program to be excessive.

Council responded by providing an alternative condition to ensure they are involved in the preparation of the monitoring program.

As the future manager of the canal, wetland and the associated infrastructure Council has an interest in the design, construction and operation of the assets. The department understands Council has been consulted during development of the project and in consideration of Council's future role continued consultation is appropriate.

The department has generally included Council's requested conditions in order to ensure Council is consulted, and in some cases approves, details such as the design of the gross pollution traps given Council's responsibility for management of the site in the long term.



Figure 16: 'The Common' Wetland (Stage 2B)

In regard to the water quality monitoring program a condition of consent requires the program be submitted to Council for approval prior to the commencement of the maintenance period. The maintenance period will commence after the embellishment works are completed for the relevant lot and a subdivision certificate is issued. The program is to be implemented during the maintenance period with regular sampling of a range of indicators. The performance of the water feature is to be compared against the defined objectives and performance criteria within the engineer's report. The water quality reports are to be provided to Council quarterly or as otherwise agreed with Council.

Interception or Extraction of Groundwater

The Department of Primary Industries has made submission to the department in regard to the potential for interception of groundwater or extraction for topping-up the water feature and advised that a licence may be required under Part 5 of the *Water Act 1912*.

It is also noted that a 'further environmental assessment requirement' of the Concept Plan approval (No. 5 of Part C) states *'the canal should be designed so that it does not require topping up from external sources'*.

The Water Cycle Management Strategy by J. Wyndam Prince states the following:

'The results of the water balance and water quality investigations identify that the wetland and central water feature are sustainable with stormwater runoff generated from the site and do not require an external top up source of water supply.' (pg39)

The applicant has confirmed there is no intention or expectation to intercept or use groundwater during the construction or the operation of the water features. The applicant is also aware that in the event groundwater is unexpectedly encountered a licence may be required under the *Water Act 1912*.

The Department of Primary Industries have acknowledged that the Geotechnical report confirms the construction of the water feature should not intersect ground water and there is no requirement to extract water for topping-up of the water feature.

The department is satisfied that the canal has been designed not to require topping up from external sources in compliance with the 'further environmental assessment requirement' C5 of the Concept Plan.

An Advisory Note has been added to the conditions of consent confirming the requirement to contact the Office of Water in the event a licence is required.

4.2.4 Public Domain

Public domain works, including soft and hard landscaping, lighting and street furniture is to be undertaken within all three stages of development. Two sculptures are proposed to be located within Stage 2B, in the vicinity of the canal.

Plans and cross sections for the water features, landscaping and public domain works have been included in the applications including, design layout, species of plants and an indicative public space furniture palette.

The primary public domain areas within the three applications under assessment are the canal and wetland (Figures 15 and 16), their landscaped surrounds within Stage 2B, and Howell Park within Stage 2D. Figure 4 (see pg 9, No. 4) indicates the location of Howell Park and Figure 17 illustrates the design of Howell Park. Landscaping and embellishment, such as lighting and pavement are also integral to the streetscapes within all stages under assessment.

Council expressed a range of concerns, in regard to public domain works and requested the submission of further details, including use of anti graffiti coatings, consideration of issues of surveillance and safety when selecting lighting design, the height of any walls or plants. Council requested confirmation, prior to the issue of the construction certificate, of the provision of durable, vandal resistant materials for furniture in the public domain and further opportunity to review the tree species proposed to ensure that the roots are not invasive in the vicinity of the canal and in order to provide a higher proportion of native species.

The applicant responded that a landscape maintenance schedule was submitted during preparation of the approved Concept Plan, the landscape materials are consistent with the Concept Plan and the Stage 1 works under construction and the selected tree species are non-invasive. The applicant has also however confirmed they are happy to consult further with Council.



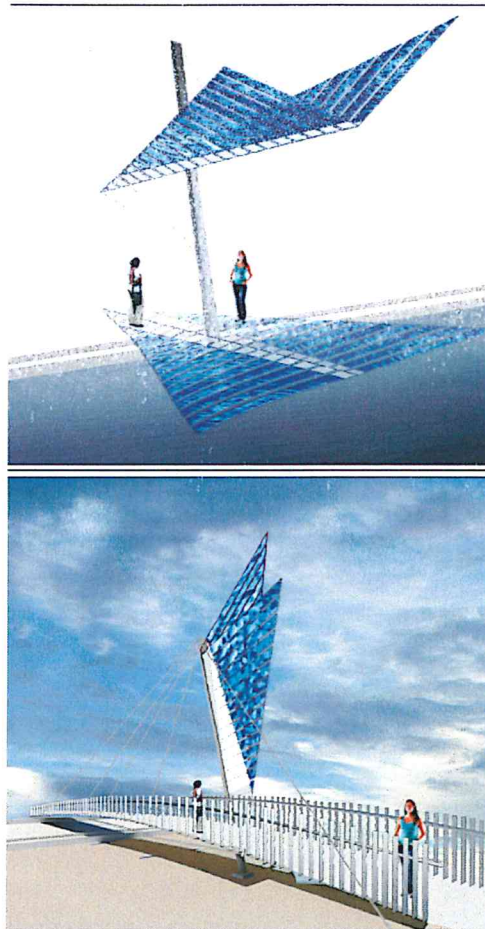
Figure 17: Howell Park (Stage 2D)

Council confirmed they are generally satisfied with the responses from the applicant in the 'Response to Submissions'.

Maintenance and replacement of soft and hard landscaping, the impacts of the design of the public domain and issues of safety and security for the North Penrith development site will be the responsibility of Council in the long term.

The landscape plans provided with the EISs, adequately detail the proposed design layout and details of the public domain works. It is however reasonable that Council review the details of finishes such as anti-graffiti and vandal resistant materials, and be satisfied that safety and security is addressed adequately in details such as height of proposed plants.

The department is satisfied these issues can be dealt with prior to the commencement of construction works as requested by Council, and conditions in this regard are included within the recommended approval.



**Figure 18: Public Art 'Pheonix'
(Stage 2B)**

Two large glass and steel sculptures in Stage 2B (SSD 5346) (see Figure 18) are to be constructed in the vicinity of the canal. Council has requested engineering details, future maintenance schedule and safety issues of the two public art sculptures.

The applicant commented that Council's proposed conditions of consent were '*unnecessary and could unduly constrain the design process for the public art.*'

Council's concerns in regard to the quality of the materials, safety issues and ability to obtain replacement components are considered reasonable. These are matters which can be readily dealt with prior to commencement of works. A recommended condition of consent has been included within the Stage 2B and 2C determination, requiring the applicant to submit details including the final design, materials and structural details of the public art sculptures to Council for approval.

Council also requested a condition requiring the provision of a deed of agreement indemnifying Council for the duration of the maintenance period (36 months), plus 12 months, and a public liability insurance policy. The applicant did not agree with the extra 12 month indemnity, over and above the 36 month maintenance period, and suggested alternative wording. Council was consulted in order to obtain agreement in regard to the requirements for the deed of agreement.

The deed has been agreed between the applicant and Council. A recommended condition of consent has been included requiring the applicant to entered into the deed of agreement with Council prior to the issue of a subdivision certificate for the relevant lot. Overall the department considers the proposed public domain works comply with the Concept Plan and is acceptable subject to the recommended conditions of approval.

4.2.5 Road and Transport Issues

The Concept Plan for the North Penrith development site includes roads, paths and cycleways to be constructed within each stage of development (see Figure 21) and also includes a number of new and/or upgraded intersections to connect into the newly constructed road network within the North Penrith development site; provide access to the site, and in order to provide for the increased traffic movements in the vicinity of the site (see Figure 19).

The submissions in regard to roads and transport were from Council, Transport NSW and RMS and included the following issues:

Castlereagh Road and Thornton Drive

The Concept Plan 'further environmental assessment requirements' specifically require a detailed design of the intersection of Castlereagh Road and Thornton Drive (formerly Grace Drive) be submitted within the Stage 2C application (see Figure 19 intersection No. 1).

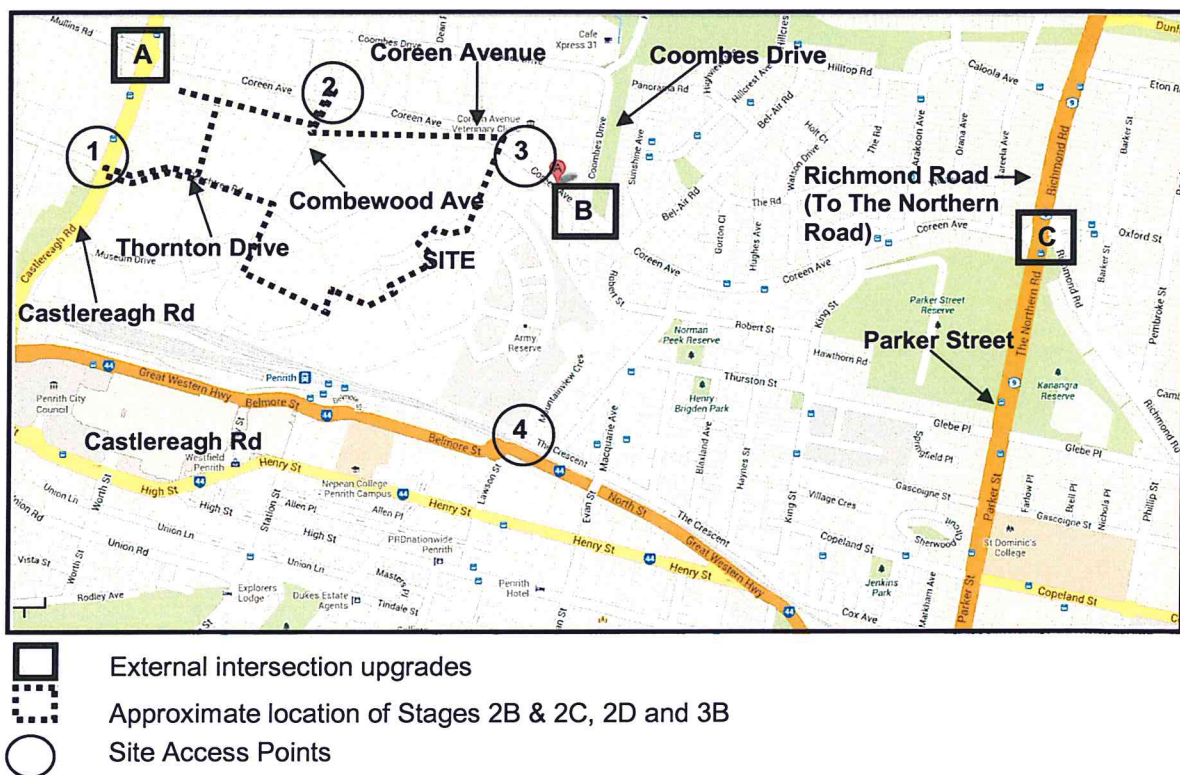


Figure 19: Intersections Requiring Works under the Concept Plan
Intersection No. 1 is relevant to the Stage 2B & 2C (SSD 5346) proposal

A design for this intersection was provided in the Stage 2B and 2C EIS however submissions from Council and RMS requested that the right turn bay length on Thornton Drive turning into Castlereagh Road, be amended to maximise capacity.

In the 'Response to Submissions' the applicant provided an extension to the right turn bay however the extension provided was shorter than Council requested. Council has again requested the capacity of the bay be extended further (see Figure 20).

Figure 20 indicates the length of the right turn bay on Thornton Drive as proposed in the EIS, the extension the applicant proposed in response to both Council and RMS submissions and the length of bay Council would like to see constructed.

The applicant states that Council's request is inconsistent with the original Concept Plan, the revised design has been agreed by RMS and that Council is to meet any additional costs of increasing the scope of works.

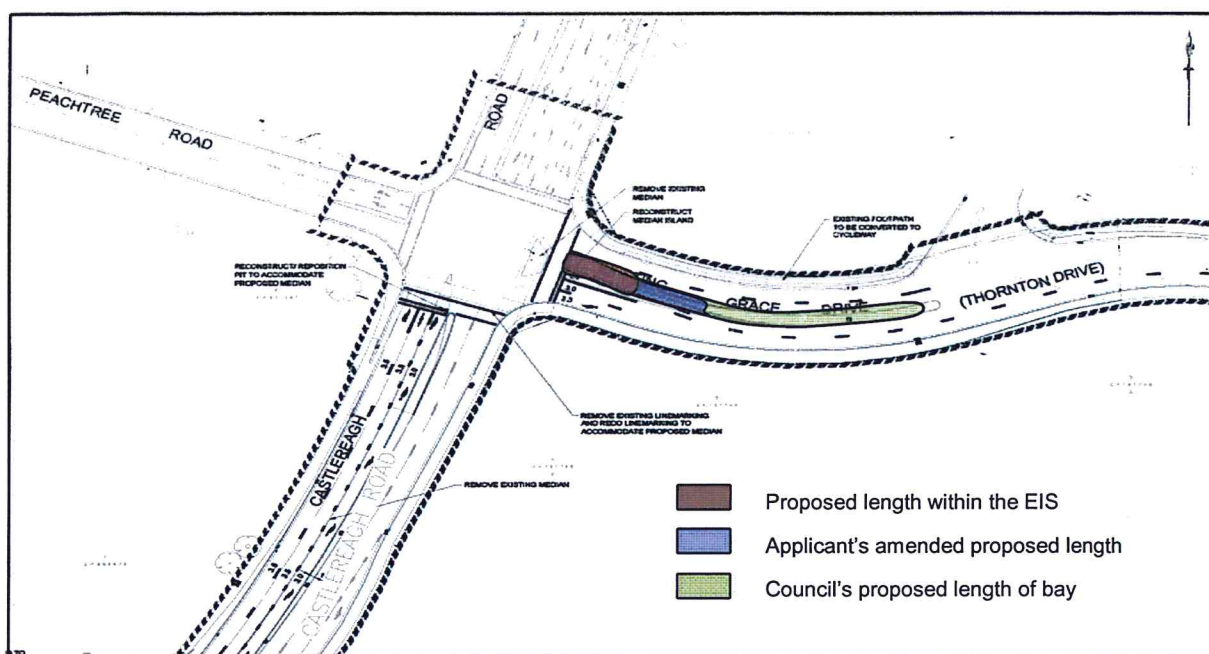


Figure 20: Approximate Proposed Lengths of Right Turning Bay from Grace Drive

Further consultation confirmed Council considered the proposed lane marking to be confusing and a longer right turn bay would protect against queuing overflow.

Council is of the view that a longer right turn bay can be achieved within the existing road reserve and that this is an issue which can be resolved by reconsidering the lane marking.

A review of the Concept Plan documentation indicates that the issue of a right turn bay on Thornton Drive initially arose from submissions for the Concept Plan, received from the then Road and Transport Authority (RTA) and Council. Parsons Brinckerhoff undertook further traffic modelling and costing prior to adoption of the proposal and final approval of the Concept Plan. There is no indication on the file that a length of bay was agreed, however the applicant has provided an illustration indicating a 15 m long bay.

Council is strongly of the view that the lane markings could be clarified and traffic conditions improved with a longer right turn bay. The department supports Council's proposal as it would further improve the functioning and capacity of the intersection and a condition of consent has been included requiring a longer right turn bay on Thornton Drive.

Combewood Avenue and Thornton Drive

Council expressed concern that the intersection of Combewood Avenue and Thornton Drive, within stage 2B, will not cater for expected traffic volumes. Council suggests a roundabout controlled intersection should be provided to cater for traffic growth.

The 'Response to Submissions' noted that the proposal is consistent with the Concept Plan and also that the Parsons Brinckerhoff analysis and modelling, undertaken in the Concept Plan and re-examined in the EIS, indicates the intersection has ample capacity.

Parsons Brinckerhoff provided an analysis and 'Review of Consistency with Transport Management and Accessibility Plan' within the EIS submitted with the Stage 2B and 2C application.

It is concluded that *'the proposed give-way controlled intersection has sufficient capacity to cater for anticipated future demand i.e. the upgrade to a roundabout is not required for traffic capacity.'* Parsons Brinckerhoff makes recommendations within this analysis requiring the provision of median islands and signage to provide visual cues to drivers. It is noted that Council expressed general satisfaction with the applicant's response.

The department accepts the Parsons Brinckerhoff analysis and recommendations. The Parsons Brinckerhoff Plan is an appendix of the EIS which is recommended as a consent documents. The median islands and signage at this intersection, recommended in the Parsons Brinckerhoff report, will therefore be undertaken as part of the works.

Richmond Road and Coreen Avenue

Council requested the creation of a right hand turn bay from Richmond Road into Coreen Avenue (see Figure 19 intersection No. C) and the installation of a seagull treatment on Coreen Avenue at the eastern intersection with Coombes Drive to be constructed 'upfront'.

Both Richmond Road and Coombes Drive are outside the boundaries of the site however upgrades of some surrounding road networks, including the Richmond Road intersection, are required by the Concept Plan.

These works do not form part of the stages of development under assessment and have been approved as a part of a previous application. A condition in the Stage 1 project approval includes an upgrade of the intersection at Richmond Road prior to the occupation of the 100th dwelling.

Details of the seagull treatment on Coreen Avenue and of the design for the Coreen Avenue roundabout are to be submitted with the Stage 3A application.

Coreen Avenue

Concerns have also been raised by Council in regard to lack of details supplied for the upgrade of the existing Coreen Avenue roundabout and also the ability of this roundabout to accommodate turning for large vehicles.

Further details of the Coreen Avenue intersection with Coombes Drive as well as details of the Coreen Avenue roundabout is required to be submitted when the development application for Stage 3A is submitted to the department.

Street Cross Sections

Council landscape comments note that some street cross sections are inconsistent with Council standards and as a consequence there is insufficient space for street trees.

The applicant responded that the cross sections are consistent with the Concept Plan approval.

The Concept Plan includes a range of widths permitted for the verge to roads in accordance with road type. The design of local roads and verge widths submitted with the three applications are consistent with those approved in the Concept Plan and are therefore acceptable.

Cycleways

A minor variation to the cycleway layout is sought by the applicant. An approved shared-use cycleway on Combewood Avenue, between Coreen Avenue and Thornton Drive, is proposed to be removed (see Figure 21) and a substitute cycle way from Castlereagh Road along Thornton Drive provided. The Parsons Brinckerhoff Traffic and Transport Assessment within the EIS states *'This cycle route will be replaced by the section of cycleway already*

constructed along Castlereagh Road and a cycle route along Thornton Drive between Castlereagh Road and Combewood Avenue.'

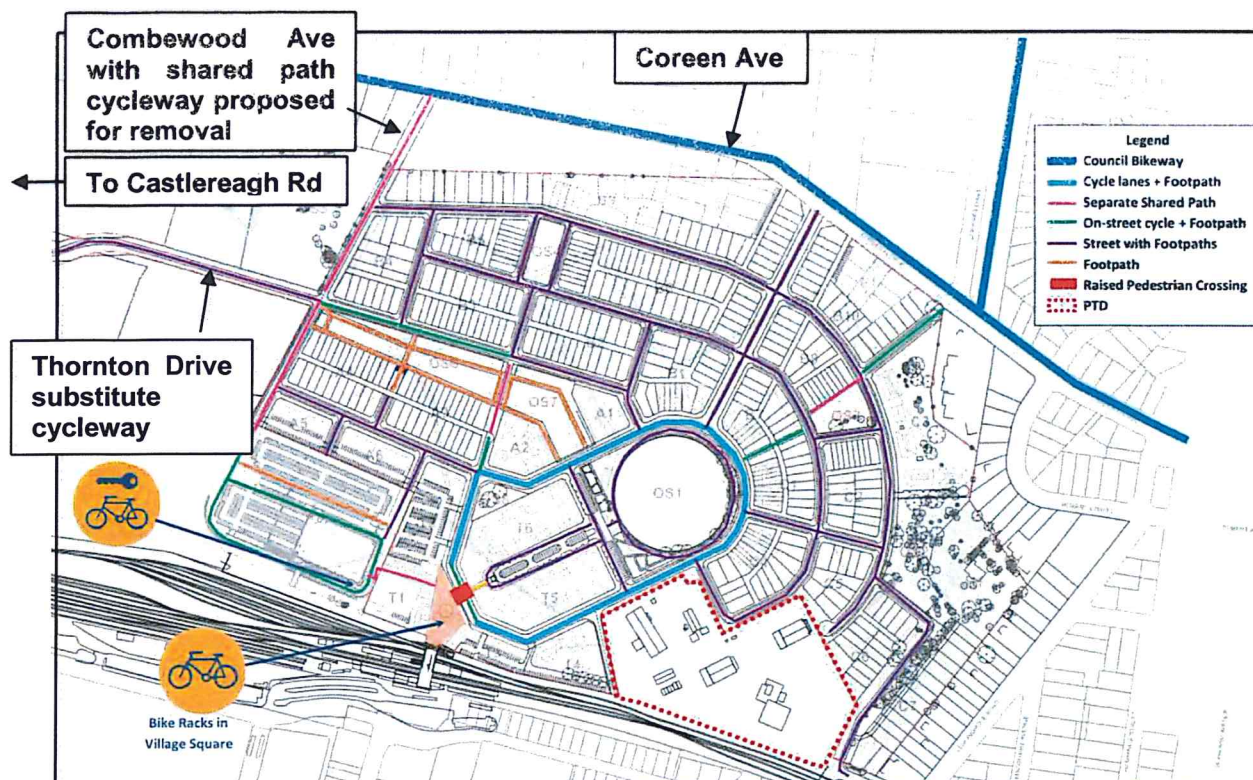


Figure 21: Approved Concept Plan Cycleways

As a transit-orientated development, walking and cycling connections to the rail station are integral to the design as approved by the Concept Plan. The provision of the newly proposed cycleway connecting the site from Castlereagh Road to the west, along Thornton Avenue, is supported. The department also notes there is a north eastern cycle link connecting Coreen Avenue from the north east of the site to the station.

The retention of the Combewood Avenue northern link, as shown in the Concept Plan, would however shorten cycle trips for residents from the north to the rail station or alternatively provide more direct access to employment areas in the industrial sites to the north of the development site.

The department discussed this matter with Council and requested the applicant review the viability of retaining the Combewood Avenue share cycle path.

The applicant consulted with Council and investigated the constraints of the existing road reserve. The verge width is constrained on the eastern side which the applicant did not consider adequate for a 2.5 metre shared path. Council requested clarification of the intended new arrangements for cyclists prior to confirming they are agreeable to the applicant's new proposed arrangements and the substitution of the link on Combewood Avenue north of Thornton Drive. Council confirmed the proposal to provide a cycleway along Thornton Drive is an acceptable alternative to the Combewood Avenue proposal.

The department is satisfied that this matter has been investigated and the proposed new cycle link from Castlereagh Road is acceptable to replace the link on Combewood Avenue north of Thornton Drive.

Bus Routes

Transport for NSW requested maximum flexibility for future bus operations and identified roads and intersections within Stage 3B (SSD 5349) which would permanently inhibit buses or larger service vehicles.

A review of the bus routes approved within the Concept Plan, in order to provide both the interim bus corridor and the long term bus corridor was undertaken. The intersections requested for modification by Transport for NSW to accommodate buses are not approved bus routes within the site.

4.2.6 Impact on Heritage Item and Heritage Interpretation Strategy

Combewood

Combewood House is located adjacent to the northern boundary of Stage 2B (SSD 5346). This house is considered to be a good example of a two storey 19th century Federation Queen Anne style villa. The Museum of Fire is located to the west and south of Stage 2B (see Figure 3, pg 5 and Figure 10, pg 23). Neither of these items are located on the North Penrith development site however former grounds of Combewood House form part of the North Penrith development site and foundations of some former outbuildings of Combewood house are within the site boundaries of Stage 2B (SSD 5346).

Combewood house and the garden associated with Combewood House are locally listed heritage items within Penrith Local Environmental Plan 1991 (Environmental Heritage Conservation). The statement of Heritage Impact notes that *'land associated with the house and grounds, which lies within the North Penrith Defence Lands site, is not included in the listing.'*

Museum of Fire

The Museum of Fire (see Figure 3, pg 5 and Figure 10, pg 23) is listed as a local heritage item in the Penrith Local Environmental Plan 2010. It was constructed in 1953 and is listed in the State Heritage Inventory as a fine example of post-war international style and post war expansion. The existing Museum building is surrounded by a range of buildings and the curtilage to the Museum of Fires is stated as *'sufficient to protect the building'* which will be unaffected by the proposed works.

The Statement of Heritage Impact concludes that the Stage 2B works will have no impact on the heritage significance of Combewood and the Museum of Fire.

The recommendations in the 'Non-Indigenous Archaeological Testing Results' report by Casey & Lowe within the EIS, confirm the bricks from the foundations of the former outbuildings of Combewood House are to be removed under archaeological supervision and offered to the owners of Combewood. A submission received from the Heritage Council noted and supported this recommendation. The Heritage Council of NSW also requested a Heritage Interpretation Study for Thornton Hall and Combewood House be provided by the applicant, as required by the DGRs, prior to the approval of this application.

The department requested the applicant provide a Heritage Interpretation Study for the three project applications under assessment. A Study was provided on 8 April 2013. The Heritage Council reviewed the study and noted the key heritage themes were correctly identified as follows:

- i. the presence of Aboriginal people on the site, evidence of which still remains;
- ii. the historic associations of the Smith family and Thornton Hall, which can be appropriately interpreted through sensitive adaptive reuse of Thornton Hall, interpretation of the early driveway leading to the house and street names;
- iii. former agricultural, recreational and aviation-related activities, which took place in open parts of the site and Belmore Park; and
- iv. respecting the visual connections across the whole site, especially those relating to views to and from Thornton Hall.

The Heritage Council considered these themes are however not fully communicated through the proposed interpretative measures. The public art work, discussed in 4.2.4 above, was also not considered by the Heritage Council to be of any real value in furthering the interpretation of the heritage significance of the site.

The interpretative works to be undertaken within the three applications under assessment are minimal, being names of parks and streets only. The relationship of the works to the site should however be considered holistically as a greater variety and number of interpretative references are included within approved Stages 1 and 2A (SSD 5243). Thornton Hall is to be retained and view corridors to the Hall and Park developed and enhanced within Stage 2A. A range of interpretative references to indigenous and non-indigenous heritage, including in the landscape works within Thornton Park, are to be undertaken within Stage 2A. The speedway and oval are referenced within Stage 1 in form, public space and local names.

The location of the heritage and archaeological items and activities within the North Penrith development site are primarily within Stages 1 and 2A. The department considers it appropriate that the majority of interpretative references are contained within these stages. The proposed naming of streets and places within Stages 2B and 2C, 2D and 3B is consistent with the approved Concept Plan and considered adequate in these stages of development.

The proposed public art sculptures are contemporary works with little reference to the site history. The analysis of ideas in order to provide inspiration for the imagery of the public art, as discussed within the Concept Plan, suggests a range of imagery including box kites or the fragile structure of early planes to reference the history of early flight connected to the site. The proposed sculptures still appear to reference ideas of flight however they have evolved into a more contemporary, and less obvious, reference to the history of the site. The inclusion of contemporary art on the site is not considered inappropriate.

4.2.7 Proximity to Mobil Fuel Storage Depot

Potential Hazard

A Mobil storage depot adjoins the northern boundary of Stage 2D (SSD 5347) (see Figures 3, pg 5 and 12, pg 24). The depot is the central Mobil lubricant distribution depot warehouse which stores petroleum hydrocarbon products. The development within Stage 2D adjoining this boundary is residential. Council raised a concern regarding the lack of an assessment of the potential risk between the proposed residential dwellings on the northwest part of the site and the adjoining Mobil fuel storage depot.

The department was also directed to investigate the Mobil Fuel Storage Depot by a 'further environmental assessment requirement' of the Concept Plan approval which required, 'further assessment of the interface of the development with adjoining industrial land uses...' and the DGRs included a general direction to '*consideration of potential cumulative impacts due to other development in the vicinity; and measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment.*'

During the assessment of the Concept Plan investigations were undertaken to ascertain if this facility is potentially hazardous. The department's hazards specialist confirmed that the department was satisfied the underground tanks, that previously stored petroleum products,

were no longer in use and they were to be removed. It was also confirmed that the Mobil storage depot is no longer deemed to be hazardous under the provisions of SEPP 33.

The Geotechnique Pty Ltd report submitted with the EIS for Stage 2D (SSD 5347) confirms that the underground tanks for the bulk storage of fuel have in fact recently been removed from the Mobil site.

The department is satisfied adequate investigation was undertaken during the Concept Plan assessment and the requirement for further investigation has provided confirmation that the Mobil storage depot poses no risk to residential development.

Groundwater Contamination

The Statement of Commitments approved with the Concept Plan, required sampling, testing and assessment of the groundwater in the vicinity of fuel depot to be undertaken to confirm that the site is not impacted by any contamination inflow to be undertaken as part of the Stage 2 application. A groundwater assessment was undertaken by Geotechnique Pty Ltd to ascertain the contamination status. Monitoring wells near the boundary with the Mobil site found ground water levels at a depth of 6-7 metres. The findings of the report conclude:

'there is no indication of contamination of groundwater from the former site uses and activities associated with the adjoining Mobil site.'

The department is satisfied that appropriate investigations have been undertaken and that the groundwater does not pose any risk to further residential uses.

4.2.8 Development Contributions

Section 94 Contributions to be paid to Council were negotiated during the assessment of the Concept Plan. It was agreed that the applicant would construct and embellish the public open spaces and infrastructure and dedicate these assets free of cost to Council. Dedication is to be undertaken as part of the relevant subdivision certificate, as an alternative to monetary contributions. It was also agreed that the applicant would be responsible for the maintenance of these assets for a period of 36 months after the issue of the subdivision certificate, prior to hand-over of the asset to Council. A conditions of consent required dedication of the assets to Council prior to the issue of the subdivision certificate.

Council requested that Landcom contribute Section 94 contributions towards regional facilities according to the Penrith City Council District Open Space and Facilities Contribution Plan May 2010. The Contribution Plan had been adopted by Council and submitted to the department but had not come into effect at that time.

The final agreement is detailed within the Concept Plan Statement of Commitments and the 'further environmental assessment requirements' within the Concept Plan approval as follows:

- The Concept Plan Statement of Commitments, number 1, details the assets to be dedicated to Council as local infrastructure contributions;
- The Statement of Commitments, number 2, refers to the apportioning of the costs of works undertaken to road intersections, between the applicant and RMS;

- A 'further environmental assessment requirement' of the Concept Plan, condition C3, requires the works to the public open spaces, the dedication to Council and the maintenance of the assets for a period of 3 years after dedication; and
- 'Further environmental assessment requirement' condition C4 lists the types of development and the rate of the contribution to be paid for district open space. Modification 1 (MOD 1) of condition C4 confirmed this monetary contribution is not to be levied on non-residential development.

Council has confirmed that contributions towards regional facilities are being levied on dwellings at construction certificate or occupation certificate stage and not at the time of the issue of subdivision certificates. The three development applications subject of this report, are for subdivision only and therefore no monetary contribution conditions are required.

The relevant public open space works which are to be dedicated to Council prior to the issue of the subdivision certificate, within the stages under assessment, are detailed within section 6 of each EIS and include the canal and wetland (Stage 2B), Howell Park Stage 2D), roads and public domain works (all stages).

In regard to water and sewer infrastructure, Sydney Water advised that further assessment of any impacts on the water infrastructure will be taken when the developer applies for a Section 73 Certificate. In the event any adjustments are required to Sydney Water infrastructure the developer must fund that adjustment. A Section 73 Certificate is required in each stage of development prior to the issue of a subdivision certificate.

The department is satisfied that the works and maintenance programme detailed within each stage of development under assessment is in accordance with the contributions agreed under the Concept Plan approval.

5. CONCLUSION AND RECOMMENDATION

5.1 CONCLUSION

The department has assessed the merits of the proposed works for Stages 2B and 2C (SSD 5346), 2D (SSD 5347) and 3B (SSD 5349) of the North Penrith development site. Where it is considered necessary conditions of consent have been recommended in order to address and ameliorate concerns which have been raised. The proposals are considered to be consistent with the approved Part 3A Concept Plan and with the provisions of State Significant Development (SSD) under section 89C of the *EP&A Act*.

The department considers the proposals are in the public interest and provide for the efficient redevelopment of government owned land to meet the housing demands of the North West Subregion and support development of Penrith as a regional city.

Consent is recommended for the earthworks, infrastructure, subdivision and landscaping of Stages 2B and 2C, 2D and 3B respectively, to underpin the delivery of the residential, commercial and mixed use development of these stages of the North Penrith development site.

5.2 RECOMMENDATION

In accordance with section 89C of the EP&A Act, it is recommended that the Executive Director, Development Assessment Systems and Approvals, as delegate for the Minister for Planning and Infrastructure:

- **consider** the findings and recommendations of this report;
- **determine** that the three proposals for works to Stages 2B and 2C (SSD 5346), 2D (SSD 5347) and 3B (SSD 5349); respectively are within the scope of section 89C of the EP&A Act.
- **grant** development consent for works to :
 - a) Stages 2B and 2C (SSD 5346)
 - b) Stage 2D (SSD 5347) and
 - c) Stage 3B (SSD 5349)of the North Penrith development site in accordance with the delegation dated 27 February 2013 by
- **signing** the attached instruments of consent (TAG D).

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