JBA planning

State Significant Development

Environmental Impact Statement

North Penrith

Subdivision, Civil and Infrastructure Works (Stage 2D)

Submitted to Department of Planning and Infrastructure
On Behalf of Landcom

Volume 1 of 1

November 2012 ■ 12364

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20/11/12

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20/11/12

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M Concept Plan Specialist Report Summaries
Multiple Authors

N Ground Water Assessment Report
Geotechique

Statement of Validity

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Qualifications	BUrbRegPlan
Address	Level 7, 77 Berry Street, North Sydney
In respect of	Stage 2D Development Application for State Significant Development
Applicant name	Landcom
Applicant address	PO Box 237, Parramatta, NSW 2124
Land to be developed	North Penrith Development Project Site
Proposed development	Subdivision, civil and infrastructure works as described throughout this Environmental Impact Statement
Environmental Impact Statement	An Environmental Impact Statement (EIS) is attached.
Certificate	I certify that I have prepared the content of this EIS and to the best of my knowledge: ▪ It is in accordance with Part 4 of the *Environmental Planning and Assessment Act 1979* and Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. ▪ It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.
Signature	
Name	Kate Raine
Date	20 November 2012

Executive Summary

Purpose of the Report

Landcom has lodged a Development Application (DA) for Stage 2D of the North Penrith Development, seeking consent for subdivision, and the carrying out of civil and associated infrastructure works.

Under Schedule 2, Clause 11 of the *State Environmental Planning Policy State and Regional Development 2011* (SEPP SRD), development on the North Penrith Development site for the purposes of a principal subdivision establishing major lots or public domain areas, and the creation of new roadways and associated works is State Significant Development. This Environmental Impact Statement (EIS) has therefore been prepared to satisfy Part 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), *Environmental Planning and Assessment, Regulation1979* and the SEPP SRD.

The proposal has a total Capital Investment Value (CIV) of approximately $9.524 million.

Stage 2D Site

The land the subject of this DA (herein referred to as the 'Stage 2D Site') was formerly used as an army camp. The land has been progressively vacated, however there are still some road pavements and other structures scattered throughout the Site.

The Site is relatively flat slightly rising from the north-west. Vegetation comprises predominantly scattered trees, amongst cleared land of native and exotic pastures.

Landcom owns the Stage 2D Site.

Project Outline

A Part 3A Concept Plan was approved by the Minister for Planning and Infrastructure on 9 November 2011. The Concept Plan Approval provides for a transit-oriented mixed uses development to accommodate 900-1,000 dwellings, employment generating uses, open space and associated infrastructure and facilities. A Stage 1 Project Application for the first phase of development was concurrently approved with the Concept Plan, and is currently under construction. A DA for Stage 2A was submitted to the Department of Planning and Infrastructure in July 2012 and has recently been publicly exhibited (9 August 2012 - 7 September 2012). Landcom and its consultant team is currently in the process of responding the public and agency submissions.

The proposal the subject of this DA represents the next stage of the North Penrith Development. Landcom is seeking consent for:

- Subdivision to create various lots including:
  - 86 standard residential lots; and
  - 5 integrated lots yielding 32 dwellings;
- construction of the internal road network and streetscapes;
- construction of Howell Park, a pocket park located centrally within the site;
- site establishment and perimeter security measures;
- establishment of environmental and safety controls and traffic control measures;
- construction of roads and road intersections, and connections to existing or approved road intersections;

- drainage and stormwater management infrastructure;
- utilities servicing infrastructure - electrical, sewerage, telecommunications, potable water and gas;
- erection of informative signage at different road entries to the wider site; and
- site de-establishment and handover.

Through the design process, Landcom has identified opportunities for design refinements to the superlot and road layout which necessitate a Section 75W Modification to the approved Concept Plan and Design Guidelines. A separate Section 75W Modification Application has been prepared and concurrently submitted to the Department under separate cover.

Planning Context

The land is zoned R1 General Residential and RE1 Public Recreation under the *Penrith City Centre Local Environmental Plan 2008* (PCCLEP 2008). The proposal is permissible with development consent and meets the objectives of the zonings.

The Stage 2D Development Application is consistent with the relevant planning strategies and policy instruments including the following:

- Metropolitan Strategy and Draft South West Sub-Regional Strategy;
- State Environmental Planning Policy (State and Regional Development) 2011;
- State Environmental Planning Policy No.55 – Remediation of Land;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy (BASIX) 2004;
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008;
- Penrith City Centre Development Control Plan 2008; and
- North Penrith Design Guidelines.

Environmental Assessment

Detailed investigations of the site's opportunities and constraints were comprehensively assessed during the assessment of the approved Concept Plan. Those existing studies established the planning framework and have subsequently informed the development parameters for the Stage 2D Site. This EIS now goes further by providing an assessment of the environmental impacts of the proposal in accordance with the Director-General's Environmental Assessment Requirements issued for the DA.

The DA subdivision and civil and infrastructure works has environmental planning merit in the following respects:

- it is consistent with the urban design principles established in the Part 3A Concept Plan for North Penrith, and particularly in providing:
  - a low scale residential subdivision pattern that respects the adjacent heritage items and other approved surrounding subdivision patterns;
  - an accessible and connected grid network of streets with good linkages to the transport network, and other community facilities;
- transport infrastructure initiatives are included in accordance with the North Penrith Concept Plan including pedestrian cycle path network and road infrastructure upgrades;
- the road network with the proposed road and traffic management works has capacity to accommodate traffic generated by the development;

- a water cycle management plan consistent with the principles of Water Sensitive Urban Design is included to ensure the quantity and quality of stormwater leaving the Stage 2D site meets statutory requirements and predevelopment flow levels;
- there is no flood risk as the development will be above the 100 year ARI flood level;
- geotechnical constraints will be managed through measures in soil and water management plans prepared prior to construction, and the risk of unstable slopes arising from the bulk earthworks is very low and able to be managed;
- the site is subject to a Site Audit Statement confirming the site is suitable for the proposed residential and open space uses, and the risk of unexpected contamination can be appropriately managed;
- community infrastructure contributions are being provided for parks, road works, and cycleways which are to be dedicated to Penrith City Council; and
- a construction environmental management plan will be prepared prior to the commencement of works to manage the methods and impacts of construction activities.

Conclusion

The proposal delivers the next component of the North Penrith Development in accordance with the approved Concept Plan. The development will facilitate the delivery of housing and will facilitate the delivery of significant open space and infrastructure. The potential impacts of the development are able to be managed through proposed mitigation measures outlined in Section 7.0. Given the planning merits of the proposal, the proposal warrants approval by the Minister for Planning and Infrastructure.

1.0 Introduction

This DA and EIS are submitted to the Minister for Planning and Infrastructure pursuant to Division 4.1 of the *Environmental Planning and Assessment Act, 1979* (EP&A Act). The DA seeks consent for the subdivision, and carrying out of civil and infrastructure works for Stage 2D of Landcom's North Penrith Development, as well as the carrying out of bulk earthworks across the remaining undeveloped portions of the North Penrith Development, as described in Section 4.0 of this EIS.

The lodgement of this DA by Landcom follows:

- the approval of the North Penrith Development Concept Plan (MP10_0075) and Stage 1 Project Application (MP10_0078) by the Minister for Planning and Infrastructure on 9 November 2011 under the former Part 3A provisions of the EP&A Act;
- the rezoning of the North Penrith Development site on 25 November, 2011 via the State Significant Site process pursuant to the State Environmental Planning Policy (Major Projects) 2005; and
- the lodgement of a DA to the Department of Planning and Infrastructure, which is currently under assessment, for the subdivision and carrying out of civil and infrastructure works on Stage 2A of the North Penrith Development.

The DA and EIS have been prepared by JBA Urban Planning Consultants Pty Ltd (JBA), for the proponent, Landcom. They describe the site, its environs and the proposal, and includes an assessment of the proposal in accordance with the Director-General's Environmental Assessment Requirements (DGRs) issued on 4 July 2012 pursuant to Schedule 2 of the *Environmental Planning and Assessment Regulation, 2000* (EP&A Regulation) (**Appendix E**).

This EIS is informed in the first instance by the detailed assessments included in the Concept Plan, State Significant Site listing and Stage 1 Project Application, and should therefore be read in conjunction with the Environmental Assessment Report prepared by JBA (dated November 2010), the Preferred Project Report (PPR) for the Concept Plan Application and Stage 1 Project Application prepared by JBA (dated April 2011), and the Section 75W Modification Application for Mod 1 prepared by Landcom (dated February 2012). Where relevant, information submitted with the Concept Plan and Stage 1 Project Application has been re-submitted in this EIS to assist in the assessment and determination of this DA.

Plans and drawings specific to the current proposal have been prepared by Craig and Rhodes (**Appendix A**); J. Wyndam Prince (**Appendix B**); Place Design Group (**Appendix C**) and other supporting technical documents provided by the Landcom's expert consultant team (see Table of Contents). The EIS should therefore be read in conjunction with the studies and other information appended to this report, as well as those that were prepared in support of the Part 3A Concept Plan approved for the North Penrith Development (refer to Section 1.1). The studies collectively provide a technical assessment of the proposal's environmental impacts, and recommend mitigation measures to manage potential environmental impacts, where necessary.

1.1 Background

1.1.1 Approved Concept Plan

The approved Concept Plan provides for a transit-oriented and cohesive mixed use development incorporating residential, retail, commercial, business, civic, community, industrial and recreational uses.

It is supported by a suite of supporting documents prepared by specialist consultant reports which are appended to the approved Concept Plan, and summaries of which are provided at **Appendix M** of this EIS for reference.

More specifically, the Concept Plan approve s the following development:

- land use type and distribution;
- approximately 900 – 1,000 dwellings, comprising a minimum of:
  - 100 seniors living/aged care dwellings;
  - 44 affordable/social housing dwellings; and
  - 44 adaptable dwellings;
- a range of dwelling typologies, building heights and densities;
- a Village Centre located adjacent to the Penrith Railway Station and centred around a public square;
- up to approximately 4,500m^2 of retail space and 10,650m^2 of business and commercial floor space;
- up to approximately 7,000m^2 of light industrial floor space;
- up to approximately 7 ha of open space and associated infrastructure;
- the retention and protection of land for Thornton Hall, a 19th Century homestead building and its associated curtilage;
- appropriate interpretation of the European and Aboriginal heritage values of the site including retention of Thornton Hall;
- an open space network (including water bodies) of approximately 7ha including the general location, level of embellishment and function of passive and active areas to serve the future residential and worker population;
- a road network and hierarchy for the site and a pedestrian, cycle and public transport network;
- a water cycle management strategy for the development; and
- strategies for the provision of other associated infrastructure including water and sewer (including a new sewer pumping station), power, telecommunications and gas.

Figure 1 illustrates the Indicative Master Plan approved under the Concept Plan.

The Concept Plan approval is underpinned by the North Penrith Design Guidelines that contain detailed controls for the future built form on the site. Condition B2 requires Landcom to make amendments to the approved Guidelines, which Landcom has undertaken and which have since been endorsed by the Department of Planning and Infrastructure. This EIS has been prepared with regard to the approved Design Guidelines.

The approved Indicative Staging Plan specifies Landcom will deliver the North Penrith project in five (5) stages (Figure 44 of the Concept Plan EAR). However, the State Government has recently instructed Landcom to deliver 10,000 new lots in Western Sydney over the next 4 years - a 25% increase on previous targets. The North Penrith Development forms part of this lot production program, which has prompted Landcom to review the staging. In the first instance, this has resulted in Landcom fast-tracking the area now defined as Stage 2D (formally all Stage 2B), being the land the subject of this DA. The revised staging is further addressed at Section 4.1 of this EIS.

Figure 1 – North Penrith Concept Plan - Indicative Master Plan

1.1.2 Staged Detailed Applications

Stage 1 Project Application

The EAR for the Stage 1 Project Application was submitted and subsequently approved concurrently with the Concept Plan. The Project Application Approval permits:

- staged-subdivision to create 120 lots comprising:
  - 97 future residential lots;
  - 1 sales centre lot;
  - 16 super lots;
  - 2 open space lots;
  - 1 sewer pumping station lot; and
  - 2 residue lots site preparation works;
- establishment of environmental and safety controls and traffic control measures; bulk earthworks and construction of retaining walls;
- internal and external road works;
- landscaping; and
- construction of a sales centre.

The Stage 1 Project Application works, currently under construction, create Sydney Smith Drive and Daniel Wood Drive which provides vehicular access in to the Stage 2A works (discussed in further detail in Section 4.5).

Stage 2A Development Application

Stage 2A is a residential subdivision and open space DA, submitted to the Department of Planning and Infrastructure in July 2012, which will facilitate the construction of Thornton Park. The application has completed public exhibition (7 September 2012), and Landcom and its consultant team are currently preparing responses to submissions received during the consultation period.

Future Development Applications

A staging plan illustrating the extent of the individual stages is provided at Section 4.0, **Figure 11**.

Landcom has obtained the DGRs under Schedule 2, Clause 3(1) of the EP&A Regulation for the subsequent stages of the North Penrith Development, and has concurrently prepared the respective EIS' for Stage 2D and 3B of the North Penrith Development. The Stage 2B and 2C DA works are particularly relevant to this particular DA as they seek consent for:

- preparatory works, including trees / shrub removal, topsoil stripping and stockpiling for later reuse and the disposal of unsuitable topsoil material, and taking up and stockpiling existing concrete and asphalt hardstands and roads for later reuse in other stage of the construction works;
- bulk earthworks comprising lots formation, and construction of the water cycle and drainage system including a central waterway and detention basin; and
- site de-establishment and handover;

Therefore these preparation works are not subject to the Stage 2D Development Application.

The EIS for Stage 3A, being the Village Centre and final stage of the North Penrith Development, is scheduled to be lodged in the coming months.

1.1.3 Part 3A Repeal & State Significant Development

The Concept Plan (and Stage 1 Project Application) were approved under transitional arrangements introduced as part of the State Government's Part 3A repeal on 1 October 2011.

The EP&A Act was subsequently amended to establish the environmental assessment framework that now replaces the former Part 3A provisions. Under the new framework, certain classes of development identified in Schedules 1 and 2 of the SRD SEPP are 'State Significant Development' for which the Minister for Planning and Infrastructure (or his delegate) is the consent authority.

The North Penrith Development is listed as a State Significant Development Site under Schedule 2 of the SEPP SRD. Schedule 2, Clause 11 provides that development on land identified as being within the North Penrith Site for the following purposes is State Significant Development:

(a) a principal subdivision establishing major lots or public domain areas, or

(b) the creation of new roadways and associated works.

The Stage 2D DA primarily relates to the second stage of subdivision and civil and infrastructure works of the North Penrith Development, and accordingly satisfies the Schedule 2, Clause 11 criterion of the SRD SEPP. This has been confirmed through the issuance of DGRs on 4 July 2012 for Stage 2D pursuant to Schedule 2, Clause 3(5) of the EP&A Regulation (**Appendix E**).

1.2 Summary of Approval Sought

Development Application

The Development Application seeks approval for the creation and construction of residential lots and associated services and infrastructure. In summary, this Development Application seeks approval for:

- Subdivision to create various lots including:
  - 86 standard residential lots; and
  - 5 integrated lots yielding 32 dwellings;
- construction of the internal road network and streetscapes;
- construction of Howell Park, a pocket park located centrally within the site;
- site establishment and perimeter security measures;

- establishment of environmental and safety controls and traffic control measures;
- construction of roads and road intersections, and connections to existing or approved road intersections;
- drainage and stormwater management infrastructure;
- utilities servicing infrastructure - electrical, sewerage, telecommunications, potable water and gas;
- erection of informative signage at different road entries to the wider site; and
- site de-establishment and handover.

Section 75W Modification to Concept Plan

Planning for the Stage 2D Site has identified opportunities for design refinements to the superlot and road layout. Landcom has therefore sought concurrent approval from the Minister for Planning and Infrastructure concurrently to modify the approved Concept Plan consider Section 75W of the EP&A Act (refer to application submitted under separate cover).

The scope of the Section 75W Modification entails:

- reconfiguration of approved Development Blocks B5 and B6;
- reconfiguration of the indicative subdivision pattern and placement of lots adjoining the proposed open space lot (Howell Park);
- rationalisation of the north-south streets;
- updating of the plans and figures in the approved Design Guidelines to illustrate the revised layout;
- approval of the revised staging plan.

1.3 Project Team

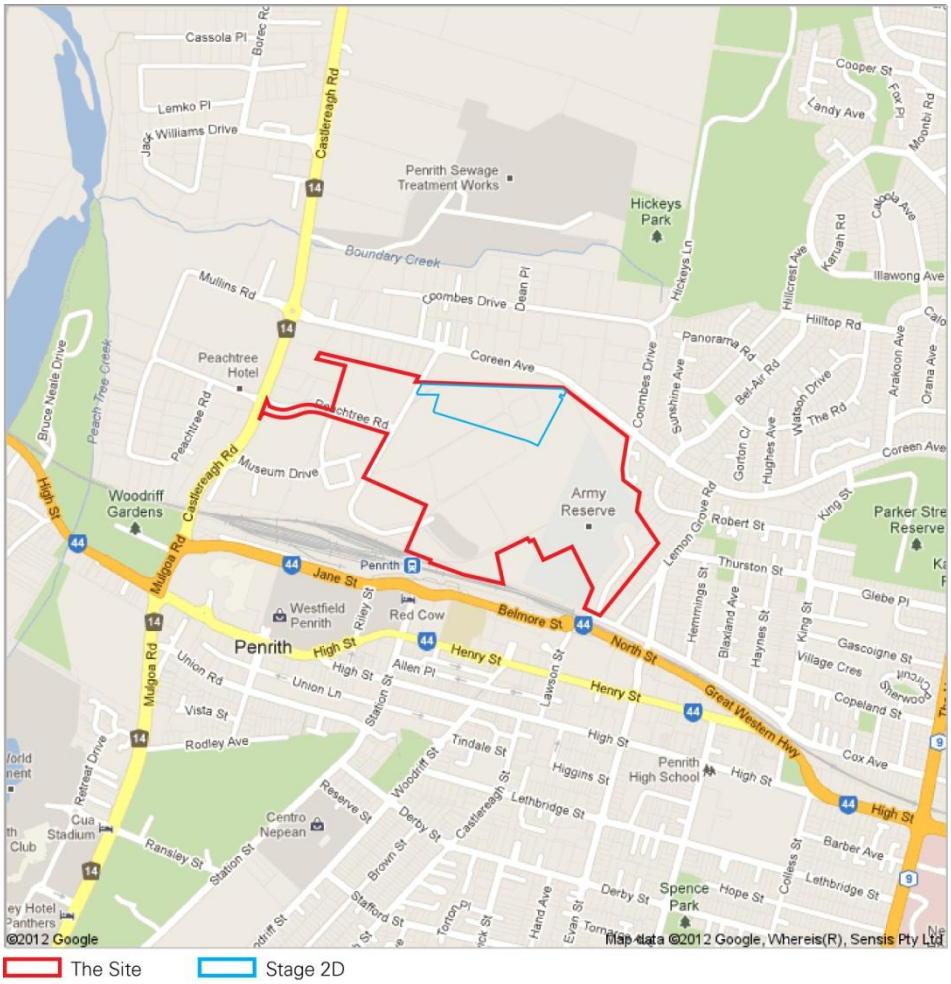
An expert project team has been formed to deliver the project and includes:

Proponent	Landcom
Urban Planning	JBA Urban Planning Consultants
Subdivision Design	Craig and Rhodes
Civil Engineering	J. Wyndham Prince
Landscape	Place Design Group
Ecological	Eco Logical
Traffic and Transport	Parsons Brinckerhoff
Heritage	Tanners Architects
Contamination and Remediation	Geotechnique
Geotechnical	Geotechnique
Stormwater and Drainage	J. Wyndham Prince
Soil and Water	J. Wyndham Prince
Environmental, Construction and Site Management	National Project Consultants

2.0 Site Analysis

2.1 Site Location and Context

The North Penrith Development site is located approximately 50km to the west of Sydney CBD on the northern side of the Penrith CBD. The Stage 2D site comprises 4.9ha and is located within the mid-western portion of the North Penrith Development site, as shown in the Location Plan at **Figure 2.** An Aerial Photograph illustrating Stage 2D in the context of the North Penrith Development site is provided at **Figure 3.**



The Site Stage 2D

Figure 2 – Location Plan

Figure 3 – Aerial Photo of the Site

2.2 Legal Description and Land Ownership

Landcom owns the entire North Penrith Development Site, including the Stage 2D site.

Stage 2D straddles one (1) of the ten (10) allotments that make up the North Penrith Development site. The North Penrith Development site, and consequently the Stage 2D Site, are legally described as per the lots identified in **Table 1**, with lots the subject of this DA being bolded. The area of each of the lots is also shown in **Table 2**. A site survey is attached at **Appendix F**.

Table 1 – Legal Descriptions and Areas of Lots Comprising the Site

Legal Description	Area
Lot 1 in DP 1020994	4, 815m^2
Lot 2 in DP 1020994	1.357ha
Lot 4 in DP 1020994	987m^2
Lot 5 in DP 1020994	1.863ha
Lot 6 in DP 1020994	1,179m^2
Lot 3 in DP 1017480	2,795m^2
Lot 4 in DP 1017480	446m^2
Lot 11 in DP 1159973	**32.64ha**
Lot 1 in DP 33753	1.977ha
Lot 1 in DP 532379	1.788ha
Total	40.6ha

2.3 Site Description

Existing Site Features

Former building slabs and an internal road and service network remain over portions of the land, but otherwise the Site is characterised by grass cover and disparate clusters of trees.

A geotechnical report has been undertaken by Geotechnique to summarise the Stage 2D Site's geotechnical characteristics and is provided at **Appendix G.**

The existing topography of the Stage 2B and 2C Site is extremely flat with level changes across the Site in the order of 70 centimetres.

Fluvial deposits, which have low to moderate potential for groundwater underlay the Stages 2B & 2C Site and include:

- Richmond Group - a Quaternary terrace of the Nepean River comprising clay, loam and sand; and
- Cranebrook Formation - Quaternary fluvial deposits consisting of cobbles and gravel in silty sandy or clayey matrix.

The Salinity Potential in Western Sydney Map indicates that the site is located in a 'Moderate Salinity Potential' area.

The approved Concept Plan considered contamination issues and was supported by a Site Audit Statement and Report which demonstrates the entire North Penrith Development is suitable for the approved land uses. Notwithstanding this, Geotechnique has prepared a supplementary Contamination Report which reaffirms the Stage 2D Site is not constrained by contamination (**Appendix H**).

Vegetation Cover and Cumberland Plain Woodland

Cumberland Plain Woodland (CPW) is located in small patches within the eastern portions on the North Penrith Development (**Figure 4**). CPW is listed as a critically Endangered Ecological Community (CEEC) under the *NSW Threatened Species Conservation Act 1995* (TSC Act) and also under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), although the definitions as to what constitutes CPW under the TSC Act and the EPBC Act differ.

The approved Concept Plan examined the distribution and quality of vegetation across the entire North Penrith Development, and concluded that the Stage 2D Site does not contain any CPW or other vegetation worthy of retention. Vegetation on the Stage 2D Site consists of exotic and non-endemic flora (Australian species non-native to the Cumberland Plain), or is in a degraded state and isolated from other native vegetation. Accordingly, the vegetation within the Stage 2D Site was mapped under the Concept Plan as 'Other Woody Vegetation' and not considered to form a remnant of native ecological community due to the site disturbance and extent of introduced flora including these trees.

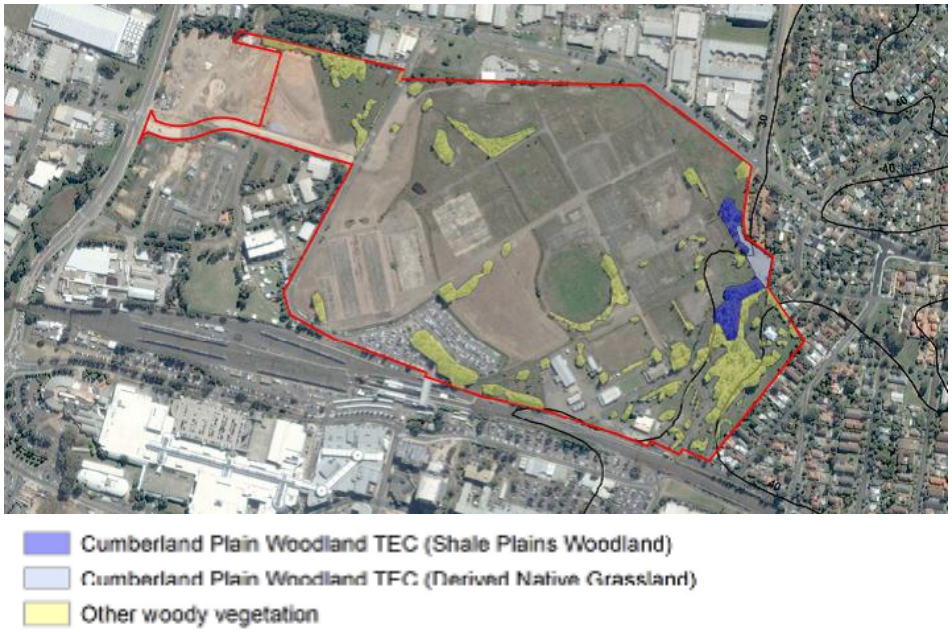


Figure 4 – Distribution of vegetation communities

Heritage and Archaeology

The approved Concept Plan provides a comprehensive discussion of the site's European and indigenous heritage values, and is supported by:

- A Statement of Heritage Impact;
- Heritage Interpretation Strategy;
- Non-Indigenous Archaeological Assessment;
- Brief Reassessment of the Site (Aboriginal Cultural Heritage)
- Aboriginal Heritage Management Plan for Aboriginal Site No. 45-5-2491.

The Concept Plan approval confirms that there is no heritage values associated with the Stage 2D site.

Traffic and Access

The Stage 2D Site is currently only accessible from within the North Penrith Development via Cleveland Lane which was approved and is currently under construction, following the Stage 1 Project Application approval. Combewood Avenue, a newly proposed road that forms part of the Stage 2D scope of works, will provide additional access from Coreen Avenue.

Utilities and Infrastructure

The site is well serviced with utilities and infrastructure, however existing infrastructure on the development site is not adequate to service the proposed development and augmentation will be required to deliver key utilities services and provisions, in accordance with the site servicing strategy approved under the Concept Plan.

2.4 Surrounding Development

The Stage 2D Site is bounded by:

- Stage 1 and future Stages 2B and 2C (being residential uses) to the south and south-east;
- existing industrial uses including automotive repair workshops, building supplies warehousing and the Mobile fuel storage depot to the north; and
- Wetland Park, known as The Common, proposed under the Stages 2B and 2C DA to the west.

3.0 Consultation

The specific consultation undertaken in the preparation of the Stage 2D DA is outlined below. In addition, and as part of the Concept Plan, Landcom developed an on-going consultation strategy that encompassed Penrith City Council (Council), Government agencies, the original design workshop participants, other community groups and Aboriginal groups. The outcomes agreed during the early stages of the project have been reflected in the approved Concept Plan and have subsequently informed the Stage 2D DA as now proposed.

The consultation detailed below sets out the on-going meetings Landcom has held with State Government Agencies, utility providers and Council on a range of matters associated with the Stage 2D as the project has evolved.

3.1 Council and Agency Consultation

The DGRs require Landcom to undertake consultation with relevant public authorities during preparation of the EIS.

Penrith City Council

Specifically in relation to this DA, Landcom has held numerous meetings with Penrith City Council to discuss Stages 2B, 2C, 2D and 3B concurrently prior to lodging the DA. These meetings have primarily focussed on issues relating to engineering design, landscape design, heritage and statutory planning. Key issues and Landcom's responses are further outlined throughout this EIS.

A key change from the approved Concept Plan is the revised road and subdivision layout throughout Stage 2D that is the subject of a concurrent Section 75W Modification. Landcom presented its justification for the revised layout to Council prior to commencing design for the DA. Council indicated its general support for the proposed modifications on the basis that it achieves enhancements to the overall outcomes for the project. Council also noted that:

- the proposed subdivision layout should be addressed with a dwelling typology plan, which has been provided in the form of the Building Envelopes Plan consistent with the requirements of the approved North Penrith Design Guidelines;
- the proposed wider spaces to break up the laneways are a positive refinement to the scheme, and could be further enhanced with additional landscaping. Landcom has incorporated this suggestion into the landscaping scheme, as shown on the Landscape Drawings attached at **Appendix C**; and
- the close offset intersections need to be supported by engineering / traffic analysis (see further discussion at Section 6.4 and **Appendix I**).

Roads and Maritime Services (RMS)

Landcom has consulted with the RMS to further define the scope of intersections upgrades Landcom committed to undertaking or contributing towards under the approved Concept Plan. No specific road infrastructure works or upgrades are proposed to RMS owned or controlled roads as part of Stage 2D.

Transport for NSW (TNSW)

Landcom has engaged in ongoing extensive consultation with TNSW about the North Penrith Development. The consultation has recently focused on the interface with the railway station and addressing the future operational requirements of RailCorp. These issues are confined to Stage 3A of the project, and TNSW has not raised any further issues relevant to the Stage 2D proposal. Further consultation

regarding the interface of the railway with Stage 3A will continue and documented in that particular DA in due course.

Office of Environment and Heritage (OEH)

Landcom contacted the OEH during the course of preparing the Stage 2D DA, and also in the context of OEH's response to the Stage 2A DA which has recently been publicly exhibited. OEH confirmed that its primary interest relates to Stage 2A, and it had no specific issues to be addressed by the Stage 2D DA.

3.2 Community Consultation

Extensive consultation has been undertaken with the community, Council and Government agencies during the formulation of Concept Plan. Subsequently, Landcom distributed a newsletter to the community in December 2011 following approval of the Concept Plan. The newsletter advised the community of the approval milestone and discussed the program for upcoming Stage 1 works and future planning. Landcom continues to maintain a 1800 community information line and online feedback for members of the community. There has been minimal contact from the community since the last newsletter. This is reflected in the Mitigation Measures at Section 7.0.

4.0 Description of Proposed Development

This DA seeks approval for the following works, each of which are described in further detail below:

- Subdivision to create various lots including:
  - 86 standard residential lots; and
  - 5 integrated lots yielding 32 dwellings;
- construction of the internal road network and streetscapes;
- construction of Howell Park, a pocket park located centrally within the site;
- site establishment and perimeter security measures;
- establishment of environmental and safety controls and traffic control measures;
- construction of roads and road intersections, and connections to existing or approved road intersections;
- drainage and stormwater management infrastructure;
- utilities servicing infrastructure - electrical, sewerage, telecommunications, potable water and gas;
- erection of informative signage at different road entries to the wider site; and
- site de-establishment and handover.

The proposed development works have a total Capital Investment Value (CIV) of approximately $9.524 million.

It should be noted that the Stages 2B and 2C DA which has been submitted to the Department of Planning by Landcom under separate cover seeks consent for all preparatory works, including bulk earthworks, trees / shrub removal, demolition and taking up and stockpiling existing concrete and asphalt hardstands and roads for later reuse in other stage of the construction works. Those works therefore do not form part of the Stage 2D scope of works.

4.1 Proposed Subdivision

Draft plans of subdivision prepared by Craig and Rhodes are attached at **Appendix A** and reproduced at **Figure 5**. Subdivision engineering plans have been prepared by J.Wyndham Prince and are provided at **Appendix B.** In addition, a Building Envelopes Plan has been prepared by JBA, in accordance with Section 3.2(2) of the Design Guidelines, and is attached at **Appendix D**.

The draft plans of subdivision illustrate Landcom's intention to create 86 residential lots, 5 integrated lots, and 1 open space lot to accommodate a pocket park, known as Howell's Park. The proposed distribution of lot types by land use, range of lot typologies and mix is shown in **Tables 2** and **3** respectively.

Table 2 – Overview of Stage 2D Lots

Land Use	Lots Nos.	Area (ha)
Residential lots	2301-2386	2.2664
Integrated housing lots	2387, 2388, 2389, 2390, 2391	0.7037
Open Space (Pocket Park)	2391	0.2233
Total		**3.1934**

Table 3 – Proposed Lot Types and Mix

Lot Type (m²)	No. of Lots	Dwelling Yield	% of Total Lots
Residential lots	86	86	94.5%
Integrated housing lots	5	32	5.5%
Preferred ancillary dwellings	10	10	10.99%
Total	**91**	**128**	

Figure 5 – Draft Plan of Subdivision

Source: *Craig & Rhodes*

4.2 Demolition, Tree Removal and Site Preparation Works

The Stage 2D Site preparation works and tree removal will be undertaken as part of the Stage 2B and 2C DA. Stage 2B and 2C removed approximately 131 trees across all the remaining stages of the North Penrith Development, including the Stage 2D Site. The Stages 2B and 2C DA also proposed all demolition and the installation of site grading and retaining walls for the subdivision preparation.

4.3 Earthworks

The Engineering Plans and Civils Report prepared by J. Wyndham Prince detail the proposed earthworks (**Appendices B** and **I** respectively).

Site regrading will be established under the Stage 2B and 2C DA which provides the existing and proposed surface levels, and shows the location, extent and quantities of proposed cut and fill volumes required to facilitate the development. The earthworks will facilitate the proposed stormwater management system and will regrade the site for the formation of road works and lot grading.

The Stage 2D design levels have been informed by the design levels approved (and under construction) for Cleveland Lane and the Speedway Circuit intersection gradings approved and under construction, following the Stage 1 Project Application.

4.4 Landscaping and Public Domain

The Stage 2D Development Application includes 0.2233ha of open space for the pocket park identified within the Concept Plan, as Howell Park as well as street tree planting. The overall Landscape Plan for Stage 2D has been prepared by PLACE Design and is provided at **Appendix C** and reproduced at **Figures 6** and **7**. Howell Park is proposed to be dedicated to Penrith City Council.

The key landscape principles for Howell Park are to offer a park to service a small residential community; and to provide an area for passive and active recreation, children's play and quiet contemplation.

Figure 6 – Stage 2D Indicative Landscape Concept Plan

1. Turf open space / kick about space
2. Granite pedestrian paths with porphyry sett banding
3. Concrete path to terrace housing
4. Sunken plaza / Sandstone crazy pave
5. Concrete walls & steps
6. Feature bench seating element
7. Formal mass planting
8. Large deciduous trees
9. Trees in grass
10. Small deciduous tree screening

Figure 7 – Howell Park Landscape Concept

4.5 Access and Parking

Vehicular , Cyclist and Pedestrian Access

The approved Concept Plan includes a Road Hierarchy Plan that sets out the location, road typologies, public transport routes and pedestrian and cycle pathways approved for the Stage 2D sites (Figure 39 of the Concept Plan). The Road and Drainage Design Plans prepared by J. Wyndham Prince and attached at **Appendix B** are consistent with the approved Road Hierarchy Plan.

Access into Stage 2D sites will be via Combewood Avenue to the west and Sydney Smith Drive to the east. Other remaining internal roads to be constructed as part of the Stage 2D works include the western half of Empire Circuit, Laimberer Place, Simmons Lane, Durant Street, Stoddart Lane, Hudson Street, Walshaw Lane and the completion of Cleveland Lane

The new streets accessed off Empire Circuit have been designed to accommodate two 2.3m wide parking lanes and a 3m wide travelling lane in addition to verges (3.6m wide) on each side and footpaths at 1.5m on each side of the road. All proposed laneways will provide a 4.8m wide travelling lane with a 1.5m verge width on one side and a 0.7m verge on the other side. The proposed street cross sections are shown on Drawing No. DA104 of the Engineering Plans prepared by J. Wyndham Prince at Appendix B and reproduced in **Figures 8** and **9**.

No formal bicycle paths or bus routes are proposed in Stage 2D, as the bus and cycle routes do not pass through Stage 2D under the approved Concept Plan (see further discussion under Section 6.3 of this EIS).

As outlined earlier in this EIS, the planning for the Stage 2D Site has identified opportunities for design refinements and accordingly the road layout (and consequently superlot configuration) now proposed necessitate a concurrent Section 75W modification to the approved Concept Plan (refer to separate application).

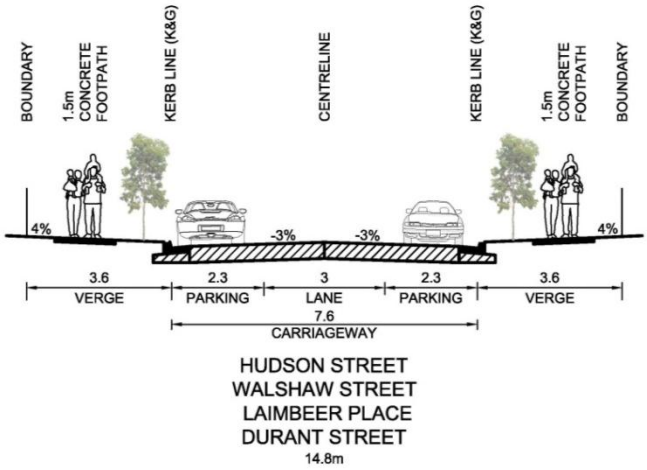


Figure 8 – Street Cross Section (Hudson, Walshaw, Durant Streets and Laimbeer Place)

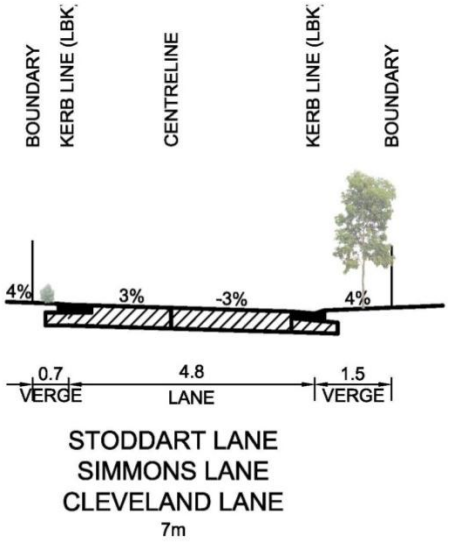


Figure 9 – Street Cross Section (Stoddart, Simmons and Cleveland Lanes)

Each residential lot is required to provide a minimum of one off street car parking space (refer to Section 3.7 of the Design Guidelines). Whilst the location and design of off street car parking is outside the scope of this Development Application, the proposed location of driveways to each of the residential lots is shown on the Road and Drainage Design Plans at **Appendix B**.

4.6 Water Cycle Management

The Stage 2D Development Application seeks approval for the construction of the stormwater management measures described in the Drainage Plan and Sediment and Erosion Control Plans prepared by J. Wyndham Prince at **Appendix B**, including the following:

- surface runoff from lots and roads directed to the piped drainage system in Empire Circuit, Durant Street and Walshaw Street; and
- construction of an emergency overland flow path for events greater than the 100 yr ARI event.

The stormwater management measures for Stage 2D are contingent in part upon the delivery of the significant the Water Cycle Management Strategy proposed to be delivered under Stages 2B and 2C.

4.7 Infrastructure and Services

Stage 2D servicing and infrastructure will be provided in accordance with the '*North Penrith Utilities Servicing Report'* approved under the Concept Plan. The Civils Report by J. Wyndham Prince details the arrangements for the provision of utility services to the Stage 2D lots (see **Appendix J**).

4.8 Waste Management

Waste will be managed in accordance with the NSW Government's Waste Reduction and Purchasing Policy. Demolished materials which are deemed appropriate for re-use will be loaded and stockpiled accordingly using an excavator with heavy rigid truck tippers. Any demolished materials considered unfit for re-use and recycling and requiring disposal shall be loaded wholly within the site and carted to an approved waste handling facility.

A draft Construction Environmental Management Plan (CEMP) has been prepared for the Stage 2D DA (**Appendix L**). The final CEMP will be prepared by the appointed construction contractor prior to commencement of works and will provide detailed waste management practices and procedures.

4.9 Staging

As outlined at Section 1.0, the proposed extent of the Stage 2D works differ from the approved Indicative Staging Plan (Figure 44 of the approved Concept Plan EAR and reproduced below in **Figure 10**). The Section 75W Modification submitted under separate cover addresses the revised staging plan and demonstrates that there are no significant issues arising from the revised phasing.

Landcom intends to lodge separate applications for future stages, albeit noting that a number of these applications may be lodged concurrently, consistent with the revised staging plan for the development is provided at **Figure 11**.

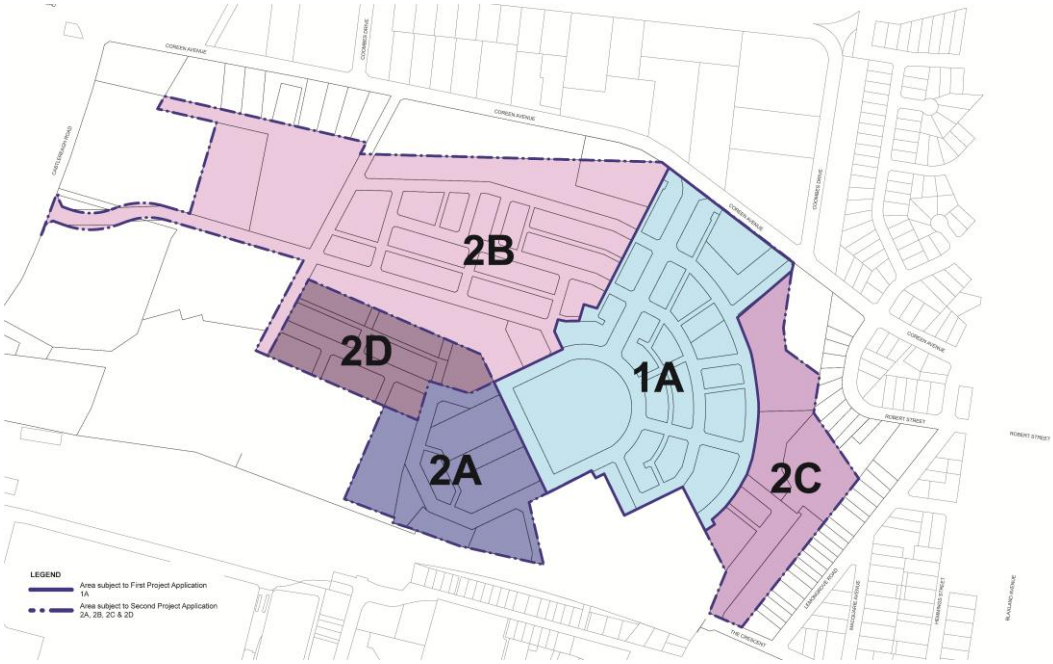


Figure 10 – North Penrith Concept Plan Approval Staging Plan

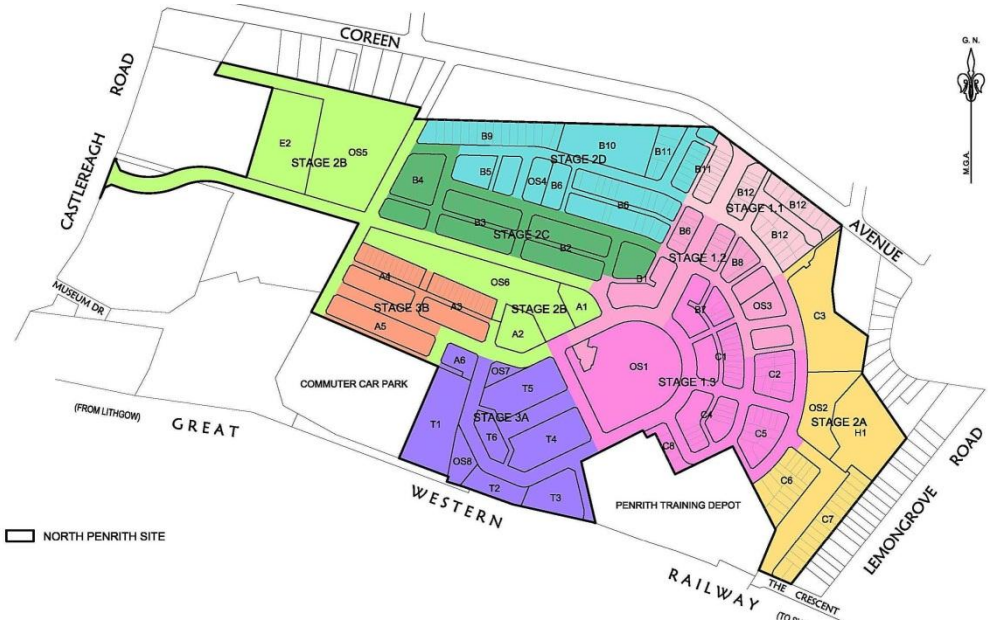


Figure 11 – North Penrith Revised Staging Plan

5.0 Director-General's Environmental Assessment Requirements

On 4 July 2012, the Director-General of the Department of Planning and Infrastructure issued the requirements for the preparation of the Stage 2D EIS. The DGRs are attached at **Appendix E** and replicated in **Table 4. Table 4** also identifies where each of the Stage 2D DGRs have been addressed in this report and the accompanying technical studies.

Table 4 – Director-General Requirements

Requirement	Location in Environmental Assessment	
General		
The Environmental Impact Statement (EIS) must: ▪ meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the EP&A Reg 2000. ▪ include an environmental risk assessment to identify the potential environmental impacts associated with the development. Where relevant must include: ▪ adequate baseline data; ▪ 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.		
Key Issues	**Report**	**Technical Study**
1. Environmental Planning Instruments (EPIs) Address the relevant statutory provisions applying to the site contained in all relevant EPIs, including: ▪ State & Regional Development SEPP ▪ Infrastructure SEPP; and ▪ Penrith City Centre LEP 2008 *Permissibility* ▪ Detail the nature and extent of any prohibitions that apply to the development. *Contamination* ▪ Demonstrate that the site is suitable for the proposed use in accordance with SEPP 55 and *Managing Land Contamination: Planning Guidelines – SEPP 55 Remediation of Land (DUAP)*	Section 6.1 Sections 6.9	-Appendix M
2. Policies, Guidelines and Planning Agreements Address the relevant planning provisions, goals and strategic planning objectives in the following: ▪ NSW State Plan ▪ Metro Plan 2036 ▪ North West Subregional Draft Strategy Detail how the development promotes or is consistent with these provisions and strategic objectives.	Section 6.1	-

Requirement	Location in Environmental Assessment	
3. Concept Plan ▪ Demonstrate consistency with the Concept Plan (MP 10_0075) and that the relevant future environmental assessment requirements identified in the Concept Plan approval and Statement of Commitments have been met, including those identified as being required prior to Stage 2B (sic) given the changes to the staging plan.	Sections 6.1-6.13	-
4. Urban Design ▪ Design quality, with specific consideration of the overall site layout, axis, vistas and connectivity, open spaces and edges, primary elements, gateways and interface with adjoining industrial uses. ▪ Detail consistency with the North Penrith Design Guidelines.	Sections 4.1, 4.4, 4.5, 6.2, 6.3, 6.4 and 6.5	Appendices A-D, and I
5. Ecological Sustainable Development (ESD) ▪ Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the EP&A Reg) will be incorporated in the design, construction and ongoing operation phases of the development. ▪ Include a description of the measures that would be implemented to minimise consumption of resources, water and energy, including an Integrated Water Management Plan which details any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design including the canal system.	Sections 4.6, 6.5 and 6.9	Appendices B and K
6. Noise ▪ Identify the main noise generating stages of construction, and any noise sources during operation. Outline measures to minimise and mitigate the potential noise impacts on future occupants of the site from identified noise generating sources, including the Railway line. ▪ Relevant Policies and Guidelines: – *NSW Industrial Noise Policy (EPA)* – *Interim Construction Noise Guideline (DECC)*	Section 6.11	Appendix L
7. Transport and Accessibility (Operation) ▪ Detail access arrangements at all stages of operation and measures to mitigate any associated traffic impacts. ▪ Describe the measures to be implemented to promote sustainable means of transport including public transport usage and pedestrian and bicycle linkages in addition to addressing the potential for implementing a location specific sustainable travel plan. ▪ Demonstrate consistency with the Concept Plan in regards to traffic generation and any potential need for upgrading or road works, including upgrade works for the Parker Street, Oxford Street, Coreen Avenue and Richmond Road intersection. ▪ Relevant Policies and Guidelines – *Guide to Traffic Generating Developments (RTA)* – *EIS Guidelines – Road and Related Facilities (DoPI)* – *NSW Planning Guidelines for Walking and*	Sections 4.5 and 6.4	Appendix I

Requirement	Location in Environmental Assessment	
Cycling.		
8. Transport and Accessibility (Construction) ▪ Detail impacts on transport network, including access arrangements at all stages of construction and measures to mitigate any associated public transport, pedestrian, cycleway or traffic impacts.	Section 6.11	Appendix I
9. Sediment, Erosion and Dust controls (Construction and Excavation) ▪ Detail measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. ▪ Relevant Policies and Guidelines: – *Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Landcom)* – *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA).*	Section 6.11	Appendices, B and J
10. Utilities ▪ In consultation with relevant agencies, the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure shall be addressed.	Section 4.7	Appendices B and J
11. Staging ▪ Details regarding any staging of the proposed development and consistency with the overall staging of the redevelopment of the North Penrith site outlined in the Concept Plan approval and justify any variations (if proposed).	Section 4.1	-
12. Contributions ▪ Address Council's Section 94 Contribution Plan and/or details of any Voluntary Planning Agreement.	Section 6.10	-
13. Drainage ▪ Drainage associated with the proposal, including stormwater and drainage infrastructure.	Sections 4.6 and 6.5	Appendices B and K
17. Servicing and Waste ▪ Identify, quantify and classify the likely waste streams to be generated during construction and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.	Section 4.8 and 6.11	- Appendix L
Plans and Documents ▪ The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. Provide these as part of the EIS rather than as separate documents. ▪ In addition, the EIS must include the following: – *Subdivision Plan, including covenants, easements and notations proposed for each land title;* – *Stormwater Concept Plan;* – *Landscape Plan, including details on any ongoing maintenance requirements for public domain areas;* – *Construction Management Plan, inclusive of a Construction Traffic Management Plan;*		Appendices A-C, G, H, I, J.

Requirement	Location in Environmental Assessment	
– *Geotechnical and Structural Report;* – *Arborist Report;* – *A Heritage Interpretation Strategy;* – *Public Art Strategy.*		
Consultation ▪ Penrith City Council ▪ Roads and Maritime Services ▪ RailCorp ▪ Transport NSW ▪ Office of Environment and Heritage ▪ Deerubbin Local Aboriginal Land Council, other registered Aboriginal stakeholders in the North Penrith area and the Aboriginal community. ▪ The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been made to address an issue, a short explanation should be provided.	Section 3.0	-

6.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the proposed development. It addresses the matters for consideration set out in the DGRs (see Section 5.0) and is also benchmarked against the parameters established under the approved Concept Plan. Accordingly, this EIS should be read in conjunction with Landcom's Environmental Assessment Report (prepared by JBA, November 2010) and Preferred Project Report (prepared by JBA, April 2011), however for reference purposes each of the following sections provides a summary of the approved Concept Plan's Findings prior to providing an assessment of the specific Stage 2D works. The Mitigation Measures at Section 8.0 complement and support the findings of this section.

6.1 Statutory Context

The following key planning strategies and policy instruments are relevant to the Stage 2D DA:

- Metropolitan Strategy and Draft South West Sub-Regional Strategy;
- State Environmental Planning Policy (State And Regional Development) 2011;
- Penrith City Centre Local Environmental Plan 2008;
- State Environmental Planning Policy No.19 – Bushland in Urban Areas;
- State Environmental Planning Policy No.55 – Remediation of Land;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy (BASIX) 2004;
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008;
- Penrith City centre Development Control Plan 2006; and
- North Penrith Design Guidelines.

The Environmental Assessment Report prepared for the approved Concept Plan provides a detailed assessment of the North Penrith Development, including Stage 2D, against the key planning strategies and policy instruments. An assessment of the proposal against the provisions of existing SEPPs and Section 117 Directions is provided at Appendix W of that EAR.

The Stage 2D DA is consistent with the Concept Plan proposal and is therefore considered to comply with or meet all relevant statutory and strategy requirements. Key matters of specific relevance to the Stage 2B and 2C DA are summarised in **Table 5** below.

Table 5 – Consideration of Relevant Policies, Guidelines and Environmental Planning Instruments

Instrument/Strategy	Comments
Strategic Plans	
NSW State Plan (NSW 2021)	The Plan articulates the State's response to Housing Affordability. It acknowledges the impact of housing supply on affordability and recognises that there is a need to ensure competitive tension in the supply of land so there is a continuing flow of new properties to the market. The State Plan does not include specific goals for housing and land supply but refers to the goals set in the Metropolitan and Regional Strategies.

Instrument/Strategy	Comments	
Metropolitan Plan for Sydney 2036 and Draft North-West Subregional Strategy	The Strategic Justification for the North Penrith Development is addressed in the EAR accompanying the Concept Plan and State Significant Site proposals. This includes consideration of the overall project in relation to the Sydney Metropolitan Strategy and the Draft North West Sub-Regional Strategy. The North West Sub-Regional Strategy aims to ensure that adequate land is available and appropriately located to sustainably accommodate the projected housing and employment needs of the region's population over the next 25 years. The North Penrith Development site is identified as a key site earmarked for residential and employment generating uses. The commencement of the works proposed in this Stage 2B and 2C DA will contribute towards delivery residential lots, consistent with the land use framework established for the site. The project will also support and promote transit oriented development in proximity to the Western rail line, and establish the new Waterfront Park and The Common (open space area) delivering the next stage of the public domain framework for the North Penrith Development.	
EP&A Act and EP&A Regulation		
EP&A Act	The proposal is consistent with the objects of the EP&A Act, particularly as: – it allows for the orderly and economic development of land; – it is development for public purposes (i.e.: Waterway Park and 'The Common') and will facilitate the delivery of a key aspect of the public domain; – it seeks to protect the environment including threatened populations; and – provides for the provision and maintenance of affordable housing.	
EP&A Regulations	The EIS has addressed the specification criteria within Schedule 2, Clauses 6 and 7 of the EIS. The EIS has also addressed the principles of ecologically sustainable development through the precautionary principle (and other considerations), which assesses the threats of any serious or irreversible environmental damage.	
Permissibility		
Penrith City Centre LEP 2008	Part 7 Clause 49 and 50 Land Use Zoning	The Stage 2B and 2C Site is zoned Part R1 – General Residential and Part RE1-Public Recreation. The proposed subdivision, civil and infrastructure works and construction of public domain are permissible within the relevant zonings and meet the zone objectives.
	Clause 51 - Height of buildings	No buildings are proposed and as such the height of building clause does not apply.
	Clause 52 - Development Near Zone Boundaries	Stage 2D does not need to rely on the flexible zone provisions provided by Clause 52.
	Clause 53 - Architectural Roof Features	No buildings are proposed and therefore Clause 53 is not applicable at this stage.
	Clause 54 - Heritage	The proposed works satisfy the requirements of clause 54 of the Penrith City Centre LEP 2008 (Heritage Conservation) and Section 5.0 of the Design Guidelines (Thornton Hall) as the Stages will deliver recommended curtilage for the heritage listed property 'Combewood' as well as facilitating proposed landscaping works and road alignments for clear view corridors to and from heritage listed Thornton Hall to the east of the site.

Instrument/Strategy	Comments	
	Clause 55 - Earthworks	Stage 2D does not trigger the earthworks provisions identified in Clause 52 given that Stages 2B and 2C propose to deliver all of the required earthworks.
State Environmental Planning Policies		
SEPP (State and Regional Development) 2011	SEPP (SRD) identifies development that is State Significant Development and for which the Minister for Planning and Infrastructure is the consent authority. The proposed development is on the North Penrith Development Site and falls into a class of major development described in Schedule 2, Clause 11 of the SEPP.	
SEPP 55	SEPP 55 provides controls and guidelines for the remediation of contaminated land. In particular, this Policy aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. Before determining a development application that changes the use of land, a planning authority must consider whether the land is contaminated and be satisfied that it is suitable in its current state or will be suitable, after remediation for the proposed development. A Site Audit Statement and Report has been issued for the North Penrith site indicating its suitability for the various proposed land uses sought by the range of uses approved under the Concept Plan. Contamination is also addressed in Sections 2.3 and 6.9 and **Appendix H** of this EIS.	
SEPP (Infrastructure)	The ISEPP provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency. The Stage 2D DA is not inconsistent with the ISEPP.	
SEPP (BASIX) 2004	The SEPP BASIX operates in conjunction with the Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the implementation of water conservation and energy efficiency targets in the design and construction of housing in NSW. SEPP (BASIX) will apply to future applications for the design and construction of housing in Stage 2D at North Penrith.	
SEPP (Exempt and Complying Development Codes) 2008	The Exempt and Complying Codes SEPP streamlines assessment processes for development that complies with specified development standards including dwelling houses. The Policy provides exempt and complying development codes that have State-wide application including the General Exempt Development Code which identifies types of development that are of minimal environmental impact that may be carried out without the need for development consent. The General Housing Code identifies types of complying development including dwelling houses on lots of at least 200m^2 that may be carried out in accordance with a complying development certificate issued by either an accredited private certifier or Council. The General Housing Code in the SEPP will apply to the design and construction of housing on allotments of at least 200m^2.	

6.2 Consistency with the Concept Plan

The DGRs specifically require Landcom to *Demonstrate consistency with the Concept Plan (MP 10_0075) and that the relevant future environmental assessment requirements identified in the Concept Plan approval and Statement of Commitments have been met, including those identified as being required prior to Stage 2B* (sic) *given the changes to the staging plan"*.

This EIS and the following sections in their entirety respond to the above requirement. **Table 6** below summarises compliance with the approved future environmental assessment requirements and Statement of Commitments specifically.

Table 6 – Stage 2D's Compliance with North Penrith Concept Plan Approval

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
PARTS A & B - ADMINISTRATIVE TERMS OF APPROVAL AND MODIFICATIONS TO CONCEPT PLAN		
A1 Development Description Except as modified by this approval, Concept Plan approval is granted only to development solely within the Concept Plan area as described in the document titled "North Penrith State Significant Site Study, Concept Plan and Stage 1 Project Application" report prepared by JBA Planning dated November 2010, as amended by the "Preferred Project Report - North Penrith Mixed Use Development" dated April 2011, prepared by JBA Planning Consultants to facilitate the following development: a) 1000 residential dwellings b) 4,500 m^2 of retail floor space, c) 10,650 m^2 of commercial floor space, d) 7,000 m^2 of light industrial floor space e) 7 hectares of open space; and f) Associated estate works and infrastructure.	Stage 2D is the next stage of the North Penrith development, and will contribute to the overall maximum yield approved under the Concept Plan.	✓
AZ Development in Accordance with Plans and Documentation (1) The development shall generally be in accordance with the following plans and documentation (including any appendices therein): . "North Penrith State Significant Site Study, Concept Plan and Stage 1 Project Application" report prepared by JBA Planning dated November 2010, as amended by Preferred Project Report for the North Penrith Mixed Use Development prepared by JBA Urban Planning Consultants dated April 2011. The indicative subdivision plan produced by Craig and Rhodes, ref 07210113 (02), dated 13.04.2011 Except for otherwise provided by the Department's modifications of approval set out in Schedule 2, Part B and further assessment requirements set out in Schedule 2, Part C. In the event of any inconsistencies between the modifications of this concept approval and the plans and documentation described in Part A, Schedule 2, the modifications of this concept approval prevail. In accordance with Section 75P(2)(a) of the Act, where there is an approved Concept Plan, any approval given under Part 4 of the Act, must be generally consistent with the terms of the approval of the Concept Plan.	Stage 2D is consistent with the plans approved under the Concept Plan.	✓
A5 Approval Authority In the event that the Council is the consent authority for any future applications on the site, any reports specified in the Statement of Commitments to be submitted to the Director General for approval, shall be instead be required to be approved by	Noted. Not applicable to Stage 2D given the consent authority is the Minister for Planning and Infrastructure.	N/A

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
the Council.		
A6 Approvals by the Director General If any of the terms of the approval specify that an agreement is to be made between the proponent and a government agency or council, all parties to the agreement are to act reasonably. If no agreement is reached within 3 months of the commencement of negotiations, the issue can be referred to the Director General for a decision. Full details of the discussions and the dispute are to be provided in order for the Director General to make a decision.	Not applicable to Stage 2D.	N/A
A7 Lapsing of Approval Approval of the Concept Plan shall lapse 10 years after the determination date in Part A of Schedule 1 , unless an application is submitted to carry out a development for which concept approval has been given.	Stage 1 has been approved and is currently under construction. The lapsing of the Concept Plan approval is therefore no longer an issue.	N/A
B1 Concept Plan Drawings All plans submitted with the Concept Plan, including but not limited to- the indicative subdivision plans; the land use plan; the yield block plan; and illustrative concept plan are to be modified to be consistent with the following: 1) The lots north of the commuter car park, referred to as block A5 and the southern parts of blocks A3 and A4 on the indicative subdivision plan are to be super lots as shown on the indicative subdivision plan produced by Craig and Rhodes, ref 07210113 (02), dated 13.04,201 1 . 2) The maximum height of buildings plan shall be amended so that the 10m building height restriction continues from Thornton Hall (Thornton Park)to the edge of the oval, including part of lots 1112 and 1113 (as labelled in the Stage 1 Subdivision Plan).	Not applicable to Stage 2D.	N/A
B2 Design Guidelines Prior to the determination of any future development approval on the site, the proponent shall submit modified Design Guidelines (referred to as Development Control Plan in the proposal documentation) to the Department for approval. Condition goes on to specify a range of amendments.	The revised Guidelines were submitted to Department of Planning and Infrastructure in February 2012 and have been approved. Section 6.3 demonstrates the Stage 2D proposal's compliance with the relevant provisions of the Design Guidelines as do other sections of this EIS.	✓
B3 Opportunity Site The Design Guidelines shall include specific controls for the opportunity site identified in Figure 14 of the Draft DCP. The controls shall promote higher residential densities and a mix of uses that achieve high levels of activity and pedestrian movement and are appropriate within 400m within a railway station. The Concept Plan drawings (in Appendix B of the PPR)	Not applicable to Stage 2D.	N/A

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
and the figures in the Draft DCP (in Appendix of the EA) shall be amended to show this precinct as a mixed use area.		
B4 Minimum Lot Size The minimum lot sizes shown on the "Lot Size Plan" in Appendix B of the PPR do not apply to strata subdivisions.	Not applicable to Stage 2D.	N/A
B5 Road Names The road names shown in the Concept Plan are indicative only. The road names shall be determined in consultation with and approved by Council.	Noted. Indicative road names have been provided for ease of reference. Final names will be subject to consultation and approved by Council.	N/A
B6 On-Street Car Parking The On-Street Car Parking Strategy submitted with the Preferred Project Report is indicative only. The restrictions to on-street parking, provided in accordance with Condition 1 above, shall be determined in consultation with and approved by Council.	Not applicable to Stage 2D.	N/A

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
PART C. FURTHER ENVIRONMENTAL ASSESSMENT REQUIREMENTS		
C1 Road Works - Site Access The following intersections (which provide direct access to the site) shall be constructed or upgraded by the proponent. The detailed design of the intersections shall be included with the relevant application as identified in the table below. The works shall be completed to the satisfaction of the RTA (sic) or Council prior to the issue of a Subdivision Certificate for the relevant stage. – Access to the site via the existing roundabout at the intersection of Coreen Avenue and the commuter car park access road. – Access to the site from Castlereagh Road, opposite its existing Peach Tree Road.	Not applicable to Stage 2D.	N/A
C2 Road Works - Regional Improvements 1) The upgrade to the Parker Street, Richmond Road, Coreen Avenue and Oxford Street intersection shall be undertaken to accommodate the traffic generation from the North Penrith development in its entirety prior to the occupation of the 100th lot. Alternatively, this contribution may be in the form of a monetary contribution. 2) The design of the upgrade of the Parker Street, Richmond Road, Coreen Avenue and Oxford Street intersection shall be submitted to the RTA for approval.	Not applicable to Stage 2D.	N/A
C3 Dedication of Open Space and Community Facilities 1) Approximately 2 hectares of public open space and drainage reserves, as identified on the Landscape Concept Master Plan dated October 2010, is to be dedicated to Council free of cost as part of relevant subdivision certificates. 2) The temporary sales centre shall be converted into a community facility shall be dedicated free of cost to Council prior to the occupation of the 400th dwelling, or at a time mutually agreed by the proponent and Council. 3) The landscaping and embellishment of public open space and the fit out of the community facility including the landscaping of its surrounds shall be completed prior to dedication to Council and maintained by the proponent to the satisfaction of Council for a period of 3 years after dedication.	As outlined in Section 4.4 of this EIS, consent is sought for the delivery of Howell Park a key component of the overall public domain and landscaping framework approved under the Concept Plan. Landcom intends to dedicate the open space to Council consistent with the requirements of Condition C3, 3 years after completion of the open space area to ensure it is well established and maintenance costs to Council are minimised. The references to the temporary sales centre and community facility are not relevant to this DA as they were delivered under the approved Stage 1 Project Application.	✓
C4 Development Contributions 1) Contributions shall be made to Penrith City Council for the purposes of district open space facilities at a rate as shown below (identified in the Instrument of Approval). The contributions are to be paid to Council prior to a Construction Certificate being issued for this development (the rates are subject to quarterly reviews). If not paid within the current	Refer to Section 6.12 which reaffirms Landcom's commitment to pay Section 94 levies in accordance with Condition C3.	✓

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
quarterly period, this contribution will be reviewed at the time of payment in accordance with the adopted Section 94 plan.		
C5 Drainage 1) Further detailed design and assessment of the operation of the central drainage canal shall be submitted with the relevant Stage 2 development application. The canal should be designed so that it does not require topping up from external sources. 2) Stormwater runoff shall not be discharged into the rail corridor. This shall be addressed in the relevant development application in Stage 2B.	This EIS and supporting appendices provide a detailed assessment of the proposed stormwater and drainage system g - refer to Sections 4.6 and 6.5 and **Appendix K** for details.	✓
C6 Flooding Prior to the determination of any development approval for infrastructure works in Stage 2, the proponent shall submit a further assessment of flooding behaviour that includes: 1) An assessment of the impact of filling on site on flood levels at adjoining properties; and 2) An assessment of the impact of climate change on flooding behaviour, changes to temperature, rainfall and evaporation and the impact this may have on flood levels on and adjoining the site and the stormwater management strategy.	Refer to Section 6.6 for relevant assessment.	N/A
C7 Construction Environmental Management Plan The Construction Environmental Management Plan submitted with the Concept Plan is approved in concept only. A Construction Environmental Management Plan for each stage of development shall be developed in consultation with and approved by Council.	Noted. Refer to Section 6.11 for relevant assessment.	✓
C8 Sewerage Treatment plant Final detailed design of the on-site sewerage pumping station is to be undertaken in consultation with and approved by Sydney Water.	Not applicable to Stage 2D.	N/A
C9 Cumberland Plain Woodland Replanting in areas where Cumberland Plain Woodland is to be removed should be with plants grown from local provenance seed, Details are to be submitted with the development application for Stage 2C.	Not applicable to Stage 2D.	N/A
C10 Aboriginal Heritage A Section 88B instrument (or other suitable means) is to be provided to protect the aboriginal heritage item in Lot C3. Details are to be submitted with the development application for Stage 2C.	Not applicable to Stage 2D.	N/A

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
C11 Fencing on Coreen Avenue The details of fencing and/or landscaping to be provided for residential lots adjoining Coreen Avenue shall be submitted to Council for approval as part of future development applications for those lots.	Not applicable for Stage 2D as all lots back onto the Mobile site, not Coreen Avenue.	N/A
C12 Assessment of Interface with Adjoining Development Further assessment of the interface of the development with adjoining industrial land uses shall be submitted with the relevant Stage 2 development application.	Refer to Section 6.3.	N/A
STATEMENTS OF COMMITMENT		
Landcom will provide local infrastructure contributions in accordance with Table 7 at Section 6.13 of the Concept Plan Environmental Assessment Report prepared by JBA Urban Planning Consultants Pty Ltd dated October 2010, and as amended by Table 7 at Section 4.8.2 of the Preferred Project Report prepared by JBA Planning dated April 2011 (subject to SoC No. 2 below).	Refer to Section 6.12.	✓
Landcom will continue to work with the RTA to define the exact scope and cost of works for the intersections nominated in Table 7 at Section 4.8 of the Preferred Project Report prepared by JBA Planning dated April 2011. Notwithstanding this, the proportion of proposed works/upgrades required to be paid by Landcom and the timing by which Landcom must deliver the works shall be provided consistent with the percentages and timing identified in Table 7 at Section 4.8 of the Preferred Project Report prepared by JBA Planning dated April 2011.	Not applicable to Stage 2D.	N/A
Landcom will promote housing diversity in Penrith by including a wide mix of dwelling types and sizes for a range of household types within the development.	Refer to Section 6.3 for assessment.	✓
Landcom will produce a mix of properties for sale and/or rent that include a proportion that are affordable for households within the very low, low, and moderate income bands (based on Affordable Housing SEPP definitions).	Not applicable to Stage 2D.	N/A
Future applications shall consider the Development Control Plan included at Appendix D of the Preferred Project Report prepared by JBA Planning dated April 2011, as relevant.	Section 6.3 demonstrates Stage 2D's compliance with the relevant provisions of the Development Control Plan (now known as the North Penrith Design Guidelines) as do other sections of this EIS.	✓
Landcom will convene a Design Review Panel comprising Landcom, Penrith City Council and the project architect.	Noted.	N/A
Development on the site will include uses that generate at least 783 full time jobs.	Not applicable to Stage 2D.	N/A
Landcom and Penrith City Council are to enter into a Memorandum of Understanding (MOU) to jointly explore higher order employment outcomes that compliment and do not compete with the Penrith CBD. Consideration of such a use must consider what potential impacts may be generated by this type of development including (but not limited to) matters regarding traffic, service infrastructure, stormwater,	Not applicable to Stage 2D.	N/A

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
flooding (including evacuation), heritage and social and economic impacts. Where unsustainable, detrimental or significant impacts are associated with taking forward the proposal then Council and Landcom may agree not proceed with the search to secure a tenant, or the scope of what may be feasible will be re-scoped.		
Landcom will provide a community pavilion in accordance with the plans attached at Appendix A, B and C of the Preferred Project Report prepared by JBA Planning dated April 2011.	Not applicable to Stage 2D.	N/A
Landcom will convert the community pavilion into a publicly accessible community centre in accordance with the plans attached at Appendix C of the Preferred Project Report prepared by JBA Planning dated April 2011 and dedicate it to Penrith City Council.	Not applicable to Stage 2D.	N/A
Landcom will construct and embellish the land zoned public recreation on the Open Space Concept Plan Master Plan in accordance with the plans at Appendix X of the Concept Plan Environmental Assessment Report prepared by JBA Urban Planning Consultants Pty Ltd dated October 2010 prior to dedicating it to Council.	Refer to Section 4.4 and **Appendix C**.	✓
The Concept Plan identifies the heritage values of Thornton Hall. The Future Project Application will implement the design, layout and landscape values which recognise the identified heritage values of the site.	Not applicable to Stage 2D.	N/A
An archival recording of the place will be undertaken prior to work commencing.	Not applicable to Stage 2D.	N/A
An Interpretation Strategy prepared in conjunction with a Public Art Strategy will be submitted in conjunction with subsequent Project Applications to ensure that opportunities to recognise the site's heritage values through landscaping and public art are fully realised.	Not applicable to Stage 2D.	N/A
Prior to commencing works within the vicinity of Thornton Hall (i.e.: the area denoted as H1 on the Indicative Subdivision Plan map) and Coombewood (ie: the area shown as OS5 on the Indicative Subdivision Plan map), Landcom will investigate and record any European archaeological remains within the areas utilising current best practice methodologies.	Not applicable to Stage 2D.	N/A
Landcom will consider the views of the Aboriginal community when determining the management regime and interpretation of the mapped and identified indigenous artefact identified as No. 45-5-2491.	Not applicable to Stage 2D.	N/A
Landcom commits to implementing public art throughout the site in the locations illustrated on the Opportunities Plan and generally in accordance with the Public Art Strategy attached at Appendix Z of the Concept Plan Environmental Assessment Report prepared by JBA Urban Planning Consultants Pty Ltd dated October 2010.	Refer to Section 4.4. Public art elements will be provided within Stages 2B & 2C. Not applicable for Stage 2D.	N/A
Landcom will prepare a street and place naming strategy for future open space and streets throughout the site.	Noted. Post construction.	✓
A Construction Environmental Management Plan (CEMP) is to be prepared which includes a site-specific construction traffic management plan.	Refer to Section 6.11 and **Appendices B** and **L**.	✓
Landcom will carry out the road works identified in Road Hierarchy Plan and dedicate those works on a stage by stage basis to Penrith City Council.	Refer to Section 4.5 and 6.4 and **Appendix I**.	✓
The widened kerbside lanes along the public transport (ie: bus) corridor to Coreen Avenue, and the Station Square	Not applicable to Stage 2D.	N/A

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
(OS8) adjacent to the station and the land reserved for the bus underpass of the Western Railway Line are considered to be works in kind as they are in excess of the bus requirements for this project and are included to benefit the transport needs of other developments and the broader community.		
Landcom will undertake road works and upgrades to the following intersections: – Parker St/Oxford St/Coreen Ave/Richmond Road; – Coreen Avenue/Coombes Drive (eastern intersection); – Coreen Avenue/new site entrance road (Sydney Smith Drive); – Coreen Avenue & commuter car park road (Daniel Woodriff Drive); – Castlereagh Road/Coreen Avenue; and – Castlereagh Road/Peachtree Road.	Not applicable to Stage 2D.	N/A
In addition to the above, Landcom will provide the following transport related works in kind: – The widened kerbside lanes along the public transport corridor to Coreen Avenue, and the interchange facilities in the plaza adjacent to the station to promote the use of transit for travel; – Land reserved for a bus underpass of the Western Rail Line to promote the future development of the CBD bus network; – Direct and safe cycle and pedestrian routes from Coreen Avenue to Penrith Station (northern side); – A wide plaza and good pedestrian access from Penrith Station to the new commuter car park; and – Landcom will provide an upgraded access road to the commuter car park.	Not applicable to Stage 2D.	N/A
Landcom will consult with the RTA in the design and construction of RTA owned and managed road works and upgrades and where necessary enter into a works authorisation deed. Landcom will pay the applicable administration and plan checking fees where relevant during these consultations.	Not applicable to Stage 2D.	N/A
The estimated cost of the proposed road network upgrades, the apportionment to the North Penrith project on the basis of traffic growth contribution, and the proposed timings are shown in Table 3.3 of the document titled Testing of RTA and Penrith Council Requested Intersection Changes and Parking Strategy prepared by Parsons Brinckerhoff and dated 22 March 2011 at Appendix G of the Preferred Project Report prepared by JBA Planning dated April 2011. Landcom commits to continuing to work with the RTA to confirm the final scope and costs of the nominated works identified in that Table.	Not applicable to Stage 2D.	N/A
Commercial premises will provide cyclist end-of-trip facilities in accordance with the Planning Guidelines for Walking and Cycling (NSW Planning, December 2004).	Not applicable to Stage 2D.	N/A
Landcom, through conditions on its future sales and tenancy agreements, will produce Transport Access Guides for new residents and require commercial tenants to produce a Workplace Travel Plans for their employees and clients.	Not applicable to Stage 2D.	N/A

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
Landcom will prepare a Bushland Plan of Management for the Cumberland Plain Woodland within OS2 (Thornton Park). This Plan will include a suggested planting palette that preferences local plantings and seed banks over other resources in the Penrith LGA or broader Western Sydney.	Not applicable to Stage 2D.	N/A
Landcom will create a positive covenant over the trees within Block C3 to protect: – the Cumberland Plain Woodland; and – indigenous archaeological values.	Not applicable to Stage 2D.	N/A
Stormwater Infrastructure for the Concept Plan will be provided in accordance with the Stormwater Management Strategy and Stormwater Management Report Worley Parsons at Appendix N of the Concept Plan Environmental Assessment Report prepared by JBA Urban Planning Consultants Pty Ltd dated October 2010.	Refer to Section 6.5 and **Appendix K** for a detailed assessment that demonstrates compliance with this SoC.	✓
The targets for annual post development loads are: – 85% for Total Suspended Solid (TSS); – 65% for Total Phosphorus (TP); – 45% for Total Nitrogen (TN); and – 90% for Gross Pollutants (GP).	Refer to Section 6.5 and **Appendix K** for a detailed assessment that demonstrates compliance with this SoC.	✓
WSUD features will be maintained in accordance with Managing Urban Stormwater: Treatment Techniques (1997), published by the Environment Protection Agency (EPA).	Refer to Section 6.5 and **Appendix K** for a detailed assessment that demonstrates compliance with this SoC.	✓
Development on the site will be in accordance with the objectives of the NSW Government's Flood Prone Land Policy and the Flood Plan Development Manual 2005 published by the then Department of Infrastructure, Planning and Natural Resources (DIPNR) and will integrate with the State Emergency Service's regional evacuation strategy.	Refer to Section 6.6 and **Appendix K** for a detailed assessment that demonstrates compliance with this SoC.	✓
The final ground surfaces will be at or above the regional 100 year ARI flood level of RL 25.4m (AHD).	Refer to Section 6.6 and **Appendix K** for a detailed assessment that demonstrates compliance with this SoC.	✓
The minimum habitable floor level for the site will be RL 25.9 AHD, being a 0.5m freeboard above the 1 in 100 year annual recurrence interval (ARI) flood event (in accordance with the Regional Flooding Assessment by Worley Parsons at Appendix O of the Concept Plan Environmental Assessment Report prepared by JBA Urban Planning Consultants Pty Ltd dated October 2010.	Refer to Section 6.6 and **Appendix J** for a detailed assessment that demonstrates compliance with this SoC.	✓
Landcom will continue to work with a Site Auditor in recognition that there may be a requirement for further assessments, particularly relating to the importation of fill and the possibility of unexpected finds. Site Audit Statements will be prepared for individual Project Applications.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
The Construction Environmental Management Plan (CEMP) is to include a site-specific Unexploded Ordnance Protocol (UOP). The UOP is to be implemented throughout the construction works under the responsibility of the Principal Contractor.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
The CEMP is to include a site-specific Unexpected Finds Protocol (UFP). The UFP is to be implemented throughout the construction works under the responsibility of the Principal	Refer to Section 6.7 and **Appendix H** for assessment.	✓

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
Contractor.		
After removal of the existing concrete slabs, a suitably qualified environmental engineer/scientist will inspect the exposed ground for indicators of contamination. Sampling and testing might be required.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
Remediation and validation pursuant to an unexpected find or contamination found after removal of concrete slab. If remediation is required, a specific Remediation Action Plan (RAP) will be prepared. The remediation works will be carried out in accordance with the RAP. Validation of the remediated area by the environmental engineer/scientist will be carried out after completion of remediation works.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
Any identified ash/coal materials will be tested to confirm the contamination status. The ash/coal materials with concentrations of analytes within the assessment criteria can be re-used on-site. To mitigate the potential for site occupiers to have aesthetic-based concerns and/ or because the materials may be unsuitable as a planting medium, ash/coal materials will not be placed near-surface in any location in the site.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
In the event groundwater extraction is envisaged for any purpose, then further groundwater assessment will be undertaken to verify the suitability of the groundwater for the specific use.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
Further sampling, testing and assessment of the groundwater inside the northern site boundary, which is in the vicinity of the Mobil fuel storage and distribution depot, will be undertaken to confirm that the site is not impacted by any contamination inflow from the Mobil depot. The further assessment will be undertaken prior to lodgement of the Project Application for that part of the site.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
The crushed concrete and asphalt will be assessed according to The Recovered Aggregate Exemption 2010 under the "Protection of the Environment Operation (Waste) Regulations 2005", prior to re-use.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
With reference to a comment by the Site Auditor in the Site Audit Statement, the design specification and construction approach for the refurbishment of Thornton Hall is to recognise the potential presence of lead paint attention. The CEMP is to describe the measures to be taken when carrying out work in and around Thornton Hall to safeguard construction workers and the environment.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
The Virgin Excavated Natural Material (VENM) classification will be reassessed in the event of the following observations during construction activities: – foreign matter being found mixed with the soil; – soil staining and discoloration being identified within the stockpile; – odours emanating from the stockpile.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
With reference to a comment by the Site Auditor in the Site Audit Statement, the soil in the stockpile should not be used on the surface of residential areas.	Refer to Section 6.7 and **Appendix H** for assessment.	✓
A Construction Environmental Management Plan (CEMP) is to be prepared which includes a site-specific Soil and Water Salinity Management Plan. The Soil and Water Salinity Management Plan is to be implemented throughout the construction works under the responsibility of the Principal	Refer to Section 6.11 for assessment and **Appendix L**.	✓

Approved Concept Plan Condition / Statement of Commitment	Stage 2D Proposal	Compliance
Contractor.		
Further targeted investigations will be required to confirm the detailed design, including ascertaining the suitability of soils for re-use on the site.	Refer to Section 6.11 for assessment and **Appendix L**.	✓
The CEMP is to include measures to ensure imported fill is suitable for the intended use on site.	Refer to Section 6.11 for assessment and **Appendix L**.	✓
Development requiring excavation or other ground penetration of greater than 2m and within 25m of the rail corridor will be required to be supported by: – a Geotechnical and Structural Report, and Excavation and Construction methodology that meets RailCorp's requirements. – detailed cross section drawings showing ground surface, rail tracks, sub soil profile, proposed basement excavation and structural design of sub ground support adjacent to the rail corridor. – a services search confirming the existence and location of any rail services/utilities; – drainage diagrams that confirm discharge will be directed away from the railway corridor; and – any electrolysis risk	Not applicable to Stage 2D.	N/A
Any proposed fencing or landscaping within 20m of the rail corridor will be supported by RailCorp endorsement.	Not applicable to Stage 2D	N/A
During the detailed design process road grades shall be designed to minimise the amount of fill required at the site, where possible, to assist in providing a more sustainable outcome and also reduce the extent of retaining walls required at the property boundaries.	One retaining wall is proposed - refer to **Appendix B**.	✓
Additional geotechnical investigations are required to confirm the extent of excavated cut volumes that can be placed as engineering fill within the site.	Refer to Section 6.8 for assessment and **Appendix G**.	✓
Testing of the existing asphalt and concrete slabs should be undertaken to determine their respective suitability for re-use in the road profile of the internal road network.	Refer to Section 6.8 for assessment and **Appendix G**.	✓
Future development shall be generally consistent with the findings and the recommendations of the Noise and Vibration assessment at Appendix DD of the Concept Plan Environmental Assessment Report prepared by JBA Urban Planning Consultants Pty Ltd dated October 2010.	Not applicable to Stage 2D.	N/A
Landcom will appoint Penrith City Council as the authority to issue Subdivision Certificates for future stages of the project.	Required prior to Construction Certificate. Can be reinforced as a condition of consent.	✓
Landcom will obtain the relevant approvals and licenses from relevant utility and service providers (including Sydney Water Corporation) that are required to undertake the development. In particular, Landcom will obtain a Section 73 Certificate(s) and engage a Water Servicing Coordinator as required and relevant.	Required prior to Construction Certificate. Can be reinforced as a condition of consent.	✓

6.3 Urban Design Concept and Subdivision

6.3.1 Concept Plan Approval

The location and interrelationship of subdivision patterns, road networks, pedestrian and cycle movement, community facilities and open space for Stage 2D are underpinned by a number of key urban design principles that drive the planning and development for the site. These include:

Village Centre Focus of Activity

- A focus of business and community activity in the Village Centre with a mix of retail, commercial and community uses adjacent to the main rail/ bus interchange providing employment opportunities and meeting the business services and retail needs of the community.
- The urban and built form of the Village Centre has a main street focus and is pedestrian friendly.

Transit Oriented, Accessible and Connected Development

- Higher density housing is provided within walking distance of the Village Centre, rail station and bus/rail interchange.
- Public transport and arterial roads upgrades give access connections to and from other business centres, employment lands and community facilities in surrounding localities.
- A hierarchy of roads and paths provide clear and convenient access links throughout the precinct and particularly between key urban places.
- A cycleway network link destination points and open spaces.
- Creation of a safe walkable community.

Community Places

- A series of community spaces with distinct identify is embedded in the urban structure.
- Community and social infrastructure is incorporated into the precinct including a multi-purpose community facility, local neighbourhood parks and public art.
- Streets and public spaces are designed for formal and informal social engagement.
- A safe and secure environment is provided with high levels of passive surveillance of the public domain.

In addition, as outlined earlier detailed Design Guidelines and a Landscape Strategy (**Appendix C**) have been prepared for the North Penrith Development including the Stage 2D Site. These documents address:

- housing density and diversity;
- subdivision;
- building envelopes;
- building design and articulation;
- private open space and landscaping;
- fencing;
- garages, site access and parking;
- visual and acoustic amenity;

- development in proximity to the rail corridor;
- Specific Provisions - Key Sites; and
- Specific Provisions - Ancillary Dwellings.

Development within the Stage 2D Site is required to demonstrate compliance with both the Concept Plan and the relevant provisions of the approved Design Guidelines.

6.3.2 Stage 2D Assessment

Urban Design

The Stage 2D DA is consistent with the urban design principles and layout of the Concept Plan. In particular, the proposed road layout and subdivision pattern is consistent with that approved under the Concept Plan. Accessible linkages to the approved Stage 1 and future Stages are provided.

In addition, the proposed Stage 2D subdivision delivers:

- view corridors to the Blue Mountains to the west as established under the Concept Plan through the creation of Empire Circuit, an east-west street;
- connectivity to Howell Park; and
- orientation of all lots to the front street for natural surveillance.

Subdivision Layout and Size

The proposed subdivision and layout is generally consistent with the Indicative Subdivision Plan and dwelling targets approved under the Concept Plan and Design Guidelines. Section 3.1(1) of the Design Guidelines indicates that precincts B5-B12 should contribute to delivering a maximum of 313 dwellings, in conjunction with precincts B1-B4 which will form part of Landcom's Stages 2B and 2C proposal. With reference to Table 3, Stage 2D is projected to deliver 91 residential lots, ultimately capable of accommodating 128 dwellings.

The revised superlot layout that is now proposed that constitutes a concurrent Section 75W Modification (refer to application submitted under separate cover). The revised layout is considered appropriate on the basis that:

- the proposed subdivision pattern is designed to accord with the modified grid form street layout that allows for a high level of permeability, facilitating a highly connected urban outcome;
- there is no significant increase in south facing dwellings anticipated beyond that already approved under the Concept Plan;
- a mixture of lot sizes is proposed to be distributed to continue to provide housing choice to cater for different household types; and
- there will be an increase in the number of lots orientated to address and adjoin Howell Park; this outcome provides higher amenity and greater safety for both the open space uses and on-street pedestrians, as well as the future occupants of these allotments.

Furthermore, the revised layout is acceptable as it:

- is contained within the approved footprint and to be undertaken on land designated for urban purposes;
- will not alter the broader street layout or the overall urban layout approved under the current Concept Plan and thereby will not give rise to perceptible streetscape changes. In addition, the dwelling typologies will continue to be the same as those delivered to date and recognised in the approved Concept Plan;

- will not reduce the overall delivery of approved open space or landscaped areas;
- will not generate significant increases in traffic to local or regional traffic flows or reduce the effectiveness of the connecting intersections (refer to Traffic and Transport assessment below); and
- will not generate new or additional impacts beyond those already deemed acceptable under the terms of the approved Concept Plan.

There is no minimum lot size prescribed for the North Penrith site under the Penrith City Centre LEP 2008 or the Concept Plan. However, the North Penrith Design Guidelines require residential lots within the R1 zone to have a general lot depth between 25-30m and a minimum lot width of 4.5m (Section 3.2(4)). In addition, any lots with an area of less than 235m^2 and a lot width of less than 8m are to be accompanied by plans for proposed dwellings (Section 3.2(1)).

The Building Envelope Plan at **Appendix D** reflects the objectives and controls of the Design Guidelines and identifies the required setbacks, preferred location of the Principal Private Open Space and solar access requirements can be achieved. All proposed residential lots are greater than the minimum lot dimensions required by the Design Guidelines, with lot depths ranging from 23.9 - 30m and lot widths ranging from 8-10m. The smallest proposed lots are 247.2m^2 and therefore dwelling plans are not required to accompany the Stage 2D DA.

A limited number of proposed residential lots are located on corners and accordingly Landcom intends to construct "Patio Dwellings" on these lots. Landcom has recently undertaken a detailed design exercise for these lots to confirm that a well designed and high quality dwelling can be located on Patio Lots as shown in **Figure 12**.

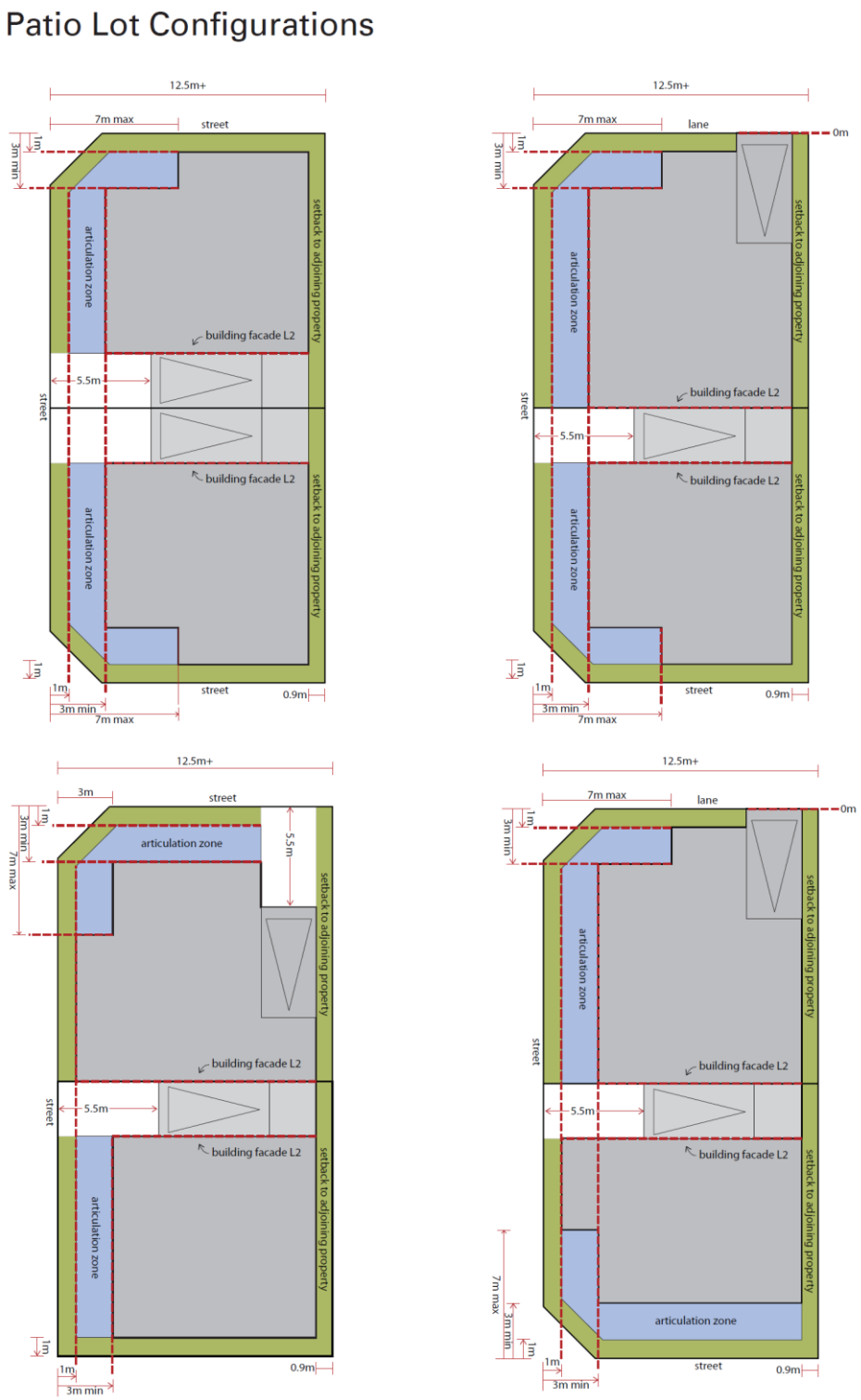


Figure 12 – Patio Lot Controls

6.4 Transport and Accessibility

6.4.1 Concept Plan Approval

The Road Hierarchy Plan (Figure 39 of the Concept Plan) nominates the location and road typologies to be constructed within Stage 2D. Under the approved Concept Plan:

- Empire Circuit is identified as a Local Street;
- all north-south oriented streets are 'Minor Local Streets'; and
- a series of north-south and east-west laneways are also approved.

All streets, other than laneways, are approved under the Concept Plan as "*streets with footpaths*" and have been designed to accommodate bicycle access either within the road reserves or on the footpaths (refer to Figure 42 of the approved Concept Plan).

A Transport Management and Accessibility Plan (TMAP) was undertaken for the entire North Penrith Development by Parsons Brinckerhoff (refer Section 8.7 of the Concept Plan and summary at **Appendix M** of this EIS). The approved TMAP outlines a strategy for managing traffic and transportation at North Penrith through the progressive implementation of local and regional road and intersection upgrades, public transport initiatives, and pedestrian and cycling initiatives.

More specifically, the Concept Plan commits Landcom to:

- delivering the road works identified in the Road Hierarchy Plan and dedicating those works on a stage by stage basis to Penrith City Council; and
- undertaking a range of road works and intersection upgrade works that have been apportioned to reflect the respective impact of the North Penrith Development.

6.4.2 Stage 2D Assessment

Impacts on Road Network

Parsons Brinckerhoff has prepared a Traffic Impact Assessment, attached at **Appendix I**. Following a detailed assessment of vehicle trip generation rates expected once the Stage 2D Site is occupied, Parsons Brinkerhoff has found that:

- the land use mix and overall dwelling yield is generally consistent with the approved Concept Plan and within the maximum yield modelled as part of the TMAP;
- minor variations to the overall land use mix undertaken by Landcom during assessment of the Concept Plan, will result in an overall reduction in traffic generated by the Stage 2D Site compared to that under the approved Concept Plan;
- the reduction in the number of vehicle trips throughout the day, particularly at peak times, will translate into shorter queue lengths and reduced waiting times at surrounding intersections, and will consequently facilitate improved network performance compared to the scenario approved under the Concept Plan;
- Particular intersections that will experience improved operational performance include:
  - Parker Street / Coreen Avenue / Richmond Road;
  - Coreen Avenue / Sydney Smith Drive;
  - Castlereagh Road / Peachtree Road / Thornton Park Drive;
  - Castlereagh Road / Jane Street; and
  - Castlereagh Road / Great Western Highway / Mulgoa Road.

In light of the above the observations and anticipated impacts on the road network, the proposed Stage 2D proposal will result in reduced traffic generation and an improved outcome compared to that endorsed and deemed acceptable under the approved Concept Plan. The Stage 2D investigations conclude that the proposed road system is generally consistent with the Road Hierarchy Plan

approved under the Concept Plan and is able to cater for traffic generated by the development, particularly as the DA proposes less dwellings that approved under the Concept Plan. No significant traffic generation is expected and as such the Stage 2D Site can proceed.

Driveways and Car Parking

Each proposed residential lot is sufficiently sized to accommodate an off-street car parking space as required by the approved Design Guidelines. All streets in the Stage 2D Site have also been designed to accommodate on-street car parking for visitors.

The proposed driveway arrangements for residential lots comply with Sections 3.7(7) and (8) of the approved Design Guidelines on the basis that they:

- have been located with regard to lot widths, future dwelling design and orientation, street gully pits and tree bays;
- maximise on-street car parking; and
- satisfy the requirements of AS 2890.1-2004.

In addition, the road network has been designed to comply with AMCORD and Australian Standard AS2890.5-1993 On-street Parking.

Pedestrian and Cycle Access

The development remains committed to providing design features that support sustainable transport means, with the inclusion of footpaths along all streets proposed to be constructed as part of Stage 2D Site. Specifically footpaths with a width of 1.5m will be provided on both sides of all streets, supporting the creation of a straightforward and legible walking and cycling network throughout the entire development. All footpaths will be appropriately dimensioned and designed in accordance with Austroads 'Guide to Road Design Part 6A: Pedestrian and Cyclist Paths.'

The proposed cycleways and walkways are considered to be acceptable as they provide an outcome that is consistent with the approved Concept Plan, comply with the relevant design standards, and will be effective at encouraging walking and cycling within the development.

Construction Traffic Impacts

Construction traffic volumes and routes for Stage 2D Site are not able to be determined at this point. However, to manage the impacts of construction traffic on the locality, Landcom has prepared a draft Construction Environmental Management Plan (CEMP) attached at **Appendix L**, to safely manage construction traffic and to mitigate any potential impacts to public transport, walking and cycling accessibility, amenity and safety during construction. Notably, the significant scope of earthworks and Landcom's intention to balance cut and fill as far as possible on site, the impacts of traffic flow onto the surrounding street network is expected to be minimal.
The Draft CEMP identifies the following construction traffic management objectives that will need to be further refined and implemented by way of a final CEMP:

- primary construction entry to the Site will be off the access road to the Commuter Car Park. Some access through the Stage 1 area may also be required during various stages of work. Vehicles will enter and exit the Site in a forward motion. All large construction vehicles will be required to turn left from the Commuter Access Road into Coreen Avenue. Alternative access to the commuter car park will be provided via the Stage 1 area before the existing access road is shutdown.
- Local Roads will not be impacted by construction traffic.

- Appropriate management arrangements and where necessary, diversions, will be implemented for pedestrians and cyclists as required.
- The nearest public transport route is along Coreen Avenue and it will only be impacted by the Works for those works beyond the boundary of the Site in Coreen Avenue.
- There will be car parking for Site Personnel within the Site. Site Personnel will be encouraged to car pool. The existing road network within the Site will be used, wherever practical.
- Construction traffic will be generated by these principal activities:
  - trucks removing excess material off the site;
  - general delivery of materials and equipment; and
  - daily movement of small vehicles for site personnel coming to from work.
- Adjacent the Site is Castlereagh Road, a main arterial road, which via Mulgoa Road, connects directly with the M4 motorway, the predominant major route in the region. It can be expected the majority of large vehicles will use this route.

Subject to adoption of the above objectives, the preparation of a detailed construction traffic management plan will ensure the impacts of construction works on the public domain, particularly to vehicular and pedestrian traffic, are minimised and appropriately managed, where required.

6.5 Water Cycle Management

6.5.1 Concept Plan Approval

The conceptual stormwater drainage networks approved under the Concept Plan are integral to the bulk earthworks strategy for the site (see summary at **Appendix M** of this EIS). In summary, the North Penrith Development requires the provision of approximately 11,000m^3 of detention volume to attenuate post-development peak flow rates back to pre-development levels prior to discharging into existing drainage infrastructure. The volume of storage is approved to be provided within the central watercourse, wetlands and detention basin described at Section 4.7 and **Appendices B, C** and **K**.

A suite of WSUD measures have been approved to reduce the average annual pollutant loads for Total Suspended Solids (TSS), Total Phosphorus (TP), Total Nitrogen (TN) and Gross Pollutants (GP). Measures include rainwater tanks, bio-retention sales, gross pollutant traps, sedimentation basins and constructed wetlands. These WSUD measures are strategically located throughout the broader North Penrith development to provide a treatment train approach to stormwater quality management.

Landcom has committed to undertaking the stormwater works in accordance with the approved strategy and has also committed to achieving the following average annual post development pollutant loads:

- 85% for Total Suspended Solid (TSS);
- 65% for Total Phosphorus (TP);
- 45% for Total Nitrogen (TN); and
- 90% for Gross Pollutants (GP).

6.5.2 Stage 2D Assessment

J. Wyndham Prince (**Appendix B**) has prepared a drainage concept for Stage 2D consistent with the parameters of the conceptual stormwater drainage approved under the Concept Plan's (**Appendices B** and **K**).

The concept drainage strategy for Stage 2D provides an integrated system to cater for external catchments, proposed connections, defined catchment boundaries and inter-allotment drainage requirements. A proposed pit, pipe, and channel drainage system is proposed to capture the flows, from storm events up to and including the 100 year ARI.

Flows will also be directed towards the Water Cycle Management Strategy proposed under the Stage 2B and 2C DA comprising the watercourse/ wetlands/ detention basin "treatment train" which entails the following elements to manage both water quality and quantity:

- subdivision/development treatment will be incorporated within the development to reduce the total suspended solids and nutrient loads generated from the site comprising:
  - a central drainage canal consisting of four constructed wetlands of total area 1,360m^2 and four ponds of total volume 4,820m^3
  - a constructed wetland of total area 6,800m^2
  - a sand filter of total area 210m^2
  - a detention basin of approximate total volume 24,340m^3
- on lot treatment:
  - implementation of water efficient fittings and appliances in all dwellings (dual flush toilet, AAA shower heads, water efficient taps and plumbing)
  - minimisation of impervious areas through acceptable development controls
  - the provision of rainwater tanks on each allotment
- water quality:
  - Gross Pollutant Traps (GPTs) to remove litter, vegetative matter, free oils and grease and coarse sediments prior to discharge to a downstream treatment device

The collective Stage 2D and Stages 2B and 2C stormwater works will contribute to achieving the established environmental, urban amenity, engineering and economic objectives for stormwater management and site discharge. Further detailed design and calculations during preparation of the Construction Certificate documentation will be undertaken using the drainage analysis and design software programs DRAINS as committed to in the Mitigation Measures at Section 7.0.

6.6 Flooding

6.6.1 Concept Plan Approval

A Flood Risk Assessment was undertaken by Worley Parsons for the Concept Plan (see Sections 3.7 and 8.12 and Appendix O of the Concept Plan and summary at **Appendix M** of this EIS). The assessment demonstrated that flooding impacts of the site represent a constraint to development over the majority of the site.

However, the site's flooding constraints can be overcome through:

- the proposed bulk earthworks strategy to raise the site to or above the regional 100 year ARI flood level of RL 25.4m (AHD);

- adoption of a 0.5m freeboard above the RL 25.4 AHD flood planning level.

6.6.2 Stage 2D Assessment

The management of any potential flooding in the Stage 2D area is covered in the Civils Report prepared by J. Wyndham Prince (**Appendix K**). The report concludes that there is no flood risk associated with the site on the basis that the minimum RL observed is approximately RL 26.50m (Lot No. 2390). This level already exceeds the minimum habitable floor level of RL 25.9m established under the Concept Plan.

6.7 Contamination

6.7.1 Concept Plan Approval

Numerous investigations have been undertaken into the presence of contamination and unexploded ordinance (UXO) on the site. As outlined in Section 2.3, a Site Auditor's Statement has been issued for the North Penrith Development (including Stage 2D) as part of the approved Concept Plan, confirming that the site is suitable for the proposed development.

The Concept Plan included a number of commitments relating to on-going investigations, monitoring and management as part of a comprehensive program through subsequent stages. A summary is provided at **Appendix M** of this EIS

Following Concept Plan Approval the Director-General issued further requirements for Stages 2B, 2C, 2D, 3A and 3B, which call for further demonstration that individual stages are appropriate for their intended future use.

Geotechnique Pty Ltd were therefore commissioned to undertake further assessment to determine the suitability of individual sites for the proposed land uses and to recommend any further assessments, investigations and/or actions to be undertaken during construction. The key conclusions and recommendations of this report are set out below.

6.7.2 Stage 2D Assessment

Site Suitability

Based on the results of investigations, remediation and validation works and the Site Audit considers that the site is suitable for the proposed residential and open space land uses, subject to:

- further assessment of any groundwater extracted during construction works; and
- any existing stockpiles on the site not being used on the surface of residential areas.

The site specific Contamination Report prepared by Geotechnique for the Stage 2D works, and attached at **Appendix G**, has recommended:

- screen testing be undertaken to confirm that ash materials found on site are not contaminated; and
- further investigations be undertaken to determine the presence of contamination after removal of existing bitumen/roadways, and carrying out of remediation of required.

Management of Unidentified Contamination

Any potential, and as yet, unidentified contamination within the site will be managed as follows:

- ongoing investigations (where required) in accordance with relevant NSW EPA/DECCW Guidelines including but not limited to NSW EPA Site Auditor Guidelines;
- remediation of any additional impacted areas identified through current investigations and during construction works;
- preparation of validation reports; and
- provision of a Site Audit Statement (SAS) by a NSW DECCW Accredited Contaminated Land Site Auditor and in accordance NSW EPA Site Auditor Guidelines with respect to the site suitability for the proposed development; and
- implementation of an Unexpected Finds Protocol prior to the issue of a Site Audit Statement.

A Construction Environmental Management Plan (CEMP) has been prepared by Landcom and is included at **Appendix L**. The CEMP includes an Environmental Management Framework that sets out the policies and procedures for training, monitoring, reporting on all environmental matters during construction. It also includes Unexpected Finds Management Plan, the key objective of which is to provide an appropriate implementation strategy to *'manage the process immediately following discovery of unexpected in-ground find in the course of construction.'*

Unexploded Ordinance

The Stage 3B area generally incorporates maintenance areas and storage areas and did not include training activities which could result in the presence of Unexploded Ordinance (UXO). Based on the results of investigations carried out to date, Geotechnique considers that the site is suitable for the proposed residential and open space land use as the areas where potential UXO are likely to be encountered are outside the Stage 3B site. Notwithstanding this, there is the potential for unexpected finds during development given the site's historical military use. Accordingly, the CEMP prepared for Stages 2B-3B (**Appendix L**) includes an Unexploded Ordinance Management Plan, the key objective of which is to provide an appropriate implementation strategy to *'manage the process immediately following discovery of an item that may or may not be a UXO to safeguard the risk to life and the environment.'*

6.8 Geotechnical

6.8.1 Concept Plan Approval

Numerous investigations have been undertaken into the geotechnical, hydrogeological and soil characteristics of the site. These were summarised and augmented in the Concept Plan (refer to Sections 3.5 and 8.11 and Appendices K and L of the Concept Plan and summary at **Appendix M** of this EIS). The assessment identified that there are unlikely to be risks associated with subsurface conditions, or actual or potential Acid Sulfate Soils. However, potential geotechnical constraints to the development of the site have been identified in relation to:

- the presence of uncontrolled fill in some areas of the North Penrith site that may not be suitable; and
- piling to depths below 5m which is likely to encounter groundwater.

6.8.2 Stage 2D Assessment

Geotechnique has prepared a Geotechnical Report included at **Appendix G**. The report assesses the existing ground and groundwater conditions to determine the suitability of Stage 2D and concludes that neither of the constraints identified during the Concept Plan assessment render the site unsuitable for development. Geotechnique has recommended:

- a Soil and Water Salinity Management Plan be implemented throughout the construction of works;
- detailed geotechnical investigations during the detailed design and construction phases to determine the suitability of existing soils on the site for re-use as fill material; and
- a geotechnical assessment of the imported fill to ensure it is suitable for the proposed uses on site.

In accordance with these recommendations a CEMP has been prepared for the site which includes a' Soil and Water Salinity Management Plan' and a 'Construction Sediment and Erosion Control Plan', the key objectives of which are to:

- *'To provide guidelines for the management of stormwater during construction.*
- *To minimise the risk of soil erosion and loss during construction.*
- *To provide procedures to ensure water quality objectives are met during construction.'*

The recommendations made by Geotechnique are also incorporated as Mitigation Measures in Section 7.0.

In addition, Geotechnique has prepared a Groundwater Assessment Report (**Appendix N**) which presents the findings of groundwater assessment within the vicinity of the Mobil Site. The Report concludes that the Mobil Site does not contain groundwater issues and is suitable for residential development within the vicinity of the site.

6.9 Environmentally Sustainable Development

6.9.1 Concept Plan Approval

An assessment of the proposed sustainability measures was undertaken as part of the Concept Plan (see Concept Plan Section 6.4). Landcom's sustainability strategy considered a range of factors comprising:

- retention of core ecological communities within the site and provision of conservation and open space connectivity with a long term ownership and maintenance regime;
- water sensitive urban design measures that will improve water quality, and form a critical component of the site's urban design;
- adoption of potable water supply conservation target and identification of integrated options for water supply, wastewater and stormwater servicing;
- conservation in energy demand by facilitating orientation of lots that can ensure optimal solar access;
- reduction in travel distances and improved mode share split by (amongst other things):
  - providing a street network with a high level of connectivity and permeability;
  - locating the majority of dwellings within 400 metres walking distance of public transport services and nodes;

- providing an interconnected network of pedestrian priority streets and open space corridors to encourage walking between residences and facilities; and
- providing a system of on-street and off-street cycle ways to encourage bicycle usage.

6.9.2 Stage 2D Assessment

The sustainability strategy for Stage 2D is on-going and must be considered in the context of the staged planning process set up by the Concept Plan framework. The ESD opportunities approved under the Concept Plan have been incorporated into the design and technical assessments of the Stage 2D area, where applicable. In particular Stage 2D delivers the following ESD outcomes:

- retention of identified trees;
- protection of environmental heritage through incorporation of heritage features and vistas into the road alignment and open space network; and
- provision of a subdivision layout that:
  - is consistent with the target yields required by the Concept Plan;
  - contributes to the realisation of the North Penrith Development as a transit oriented development that recognises its proximity to public transport, the Penrith CBD and employment opportunities;
  - provides a range of lot sizes to accommodate a range of affordable housing forms and typologies that meet the needs of a diverse range of age groups and family types; and
  - facilitates solar access and high amenity.

6.10 Contributions

6.10.1 Concept Plan Approval

Condition C4 of the North Penrith Concept Plan establishes the contributions framework applicable to the North Penrith Development. The subdivision of Stage 2D will attract the payment of contributions to Penrith City Council for district open space facilities.

6.10.2 Stage 2D Assessment

Landcom intends to meet its obligations with respect to development contributions via a combination of carrying out of works-in-kind, dedication of land free of cost and provision of material public benefits. The proposed scope of local contributions is in the following table.

Table 7 – Contributions

Contribution	Specification and Timing
Howell ark (Lot No. 2392) – Passive Area – local park	▪ Embellishment to be generally in accordance with the specifications identified in the North Penrith Village Environmental Assessment Landscape Concept Plan prepared by Place Design Group and dated October 2010. ▪ Timing to be agreed with Penrith City Council.
Roads & Traffic ▪ Empire Circuit ▪ Hudson Street ▪ Durant Street ▪ Laimberer Street ▪ Walshaw Street ▪ Cleveland Lane	▪ As per specifications in the Road Design Plans prepared by J. Wyndham Prince at **Appendix B**.

Land designated as Public Open Space is to be transferred into the ownership of Penrith City Council and will ultimately need to be managed in accordance with a Plan of Management prepared in accordance with *the Local Government Act 1993*.

6.11 Construction Management

A Construction Environmental Management Plan has been prepared for the proposed development and is included at **Appendix L**. The CEMP includes an Environmental Management Framework that sets out the policies and procedures for training, monitoring, reporting and actioning on all environmental matters and impacts during construction. Specifically it addresses the following:

- management responsibility and reporting, and key personnel and responsibilities including workplace health and safety officers;
- environmental management including the following detailed management plans:
  - Construction Air Quality Management Plan;
  - Construction Air Quality Plan;
  - Construction Sediment and Erosion Control Plan;
  - Unexpected Finds Management Plan;
  - Construction Waste Management Plan;
  - Working Adjacent Site Boundary Management Plan;
  - Construction Heritage Management Plan;
  - Construction Noise and Vibration Management Plan;
  - Construction Traffic Management Plan;
  - Unexploded Ordnance Management Plan; and
  - Soil and Water Salinity Management Plan.

The detailed CEMP when prepared will also address workplace health and safety policy and on-site safety requirements including risks and control methods, safe work method statements, traffic management, electrical power supply and safety, signs, protective equipment and clothing, fire prevention, communication, public safety, inspections and safety audits, site inductions and visitors, plant and equipment, as well as site emergencies including procedures for evacuation, fire, injury, crime, flood, storm, dust, first aid and incident reporting.

7.0 Mitigation Measures

Table 8 – Mitigation Measures

Subject	#	Commitment	Responsibility / Timing
Consistency with Concept Plan		In undertaking the Stage 2D works, Landcom will implement the relevant Statements of Commitment approved under the Concept Plan.	To be demonstrated by the proponent during relevant stage of project.
Local Infrastructure Contributions		Landcom will construct and embellish the Water's Edge Park and The Common Open Space lots in accordance with the plans at **Appendix C** prepared by PLACE Design Group dated October 2012.	To be demonstrated by the proponent prior to issue of the Subdivision Certificate.
		Landcom will provide local infrastructure contributions in accordance with Condition C4 of the Concept Plan Approval.	To be demonstrated by the proponent prior to issue of the Occupation Certificate (consistent with Landcom's Section 75W to the Concept Plan dated February 2012).
		Landcom will maintain any local infrastructure contributions that are to be dedicated to Penrith City Council for a period of 36 months from the date of practical, completion of the works, unless otherwise agreed by Landcom and Penrith City Council.	To be demonstrated by the proponent prior to issue of the Subdivision Certificate.
Traffic and Access		Landcom will carry out the road works identified in Engineering Plans at **Appendix B** prepared by J. Wyndham Prince dated October 2012 and dedicate those works on to Penrith City Council.	To be demonstrated by the proponent prior to issue of the Construction Certificate.
		Landcom will undertake the road works in accordance with the recommendations of the Parsons Brinckerhoff Traffic Impact Statement at **Appendix I** and dated October 2012.	To be demonstrated by the proponent prior to issue of the Construction Certificate.
		Landcom will undertake a road safety audit to verify that the road design raises no safety issues.	To be demonstrated by the proponent prior to issue of the Construction Certificate.
Drainage and Stormwater		Stormwater infrastructure will be provided in accordance with the Drainage Plans at **Appendix B** prepared by J.Wyndham Prince dated October 2012 and the Civils Report prepared by J.Wyndham Prince at **Appendix J** dated October 2012.	To be demonstrated by the proponent prior to issue of the Construction Certificate and during works.
Construction Impacts		A final Construction Environmental Management Plan (CEMP) is to be prepared which includes a site-specific Soil and Water Salinity Management Plan. The Soil and Water Salinity Management Plan is to be implemented throughout the construction works under the responsibility of the Principal Contractor.	To be demonstrated by the proponent prior to issue of the Construction Certificate.
Contamination		After removal of the existing concrete slabs, a suitably qualified environmental engineer/scientist will inspect the exposed ground for indicators of	To be demonstrated by the proponent during works.

Subject	#	Commitment	Responsibility / Timing
		contamination. Sampling and testing might be required.	
		Landcom will continue to work with a Site Auditor in recognition that there may be a requirement for further assessments, particularly relating to the importation of fill and the possibility of unexpected finds.	To be demonstrated by the proponent prior to issue of the Construction Certificate.
		The Construction Environmental Management Plan (CEMP) is to include a site-specific Unexploded Ordnance Protocol (UOP). The UOP is to be implemented throughout the construction works under the responsibility of the Principal Contractor.	To be demonstrated by the proponent prior to issue of the Construction Certificate.
Geotechnical Matters		Further targeted investigations will be required to confirm the detailed design, including ascertaining the suitability of soils for re-use on the site. The CEMP is to include measures to ensure imported fill is suitable for the intended use on site.	To be demonstrated by the proponent prior to issue of the Construction Certificate.
Heritage		– The bricks of the stable or couch house shall be offered to the owners of Combewood. – The removal of bricks should be carried out under archaeological supervision to record any additional aspect of the building's layout or use.	To be demonstrated by the proponent during works.

8.0 Conclusion

The proposed North Penrith Development provides the opportunity to create a new mixed uses community immediately north of the Penrith CBD, and in doing so implement the key objectives and outcomes of the Draft North West Subregional Strategy associated with accommodating population and employment growth outcomes. The North Penrith Development Concept Plan creates the planning and development framework for the key component of the Draft North West Subregional Strategy. Overall justification for the proposed North Penrith Development has been established in the Concept Plan. This environmental impact statement provides further detailed assessment and justification for the development of the Stage 2D area, consistent with the Concept Plan.

The Stage 2D Development Application has environmental planning merit in the following respects:

- it is consistent with the zoning and development controls applicable to the site under the Penrith City Centre LEP and Design Guidelines;
- it is consistent with the urban design principles established in the Part 3A Concept Plan for North Penrith, and particularly in providing:
  - a low scale residential subdivision pattern that respects the adjacent heritage items;
  - an accessible and connected grid network of streets with good linkages to the transport network, and other community facilities; and
  - Howell Park which will provide accessible open space to service the local community;
- transport infrastructure initiatives are included in accordance with the Concept Plan including pedestrian cycle path network, and road infrastructure upgrades;
- the road network with the proposed road and traffic management works has capacity to accommodate traffic generated by Stage 2D;
- a water cycle management plan consistent with the principles of Water Sensitive Urban Design is included to ensure the quantity and quality of stormwater leaving the Stage 2D site meets statutory requirements and predevelopment flow levels;
- there is no flood risk as Stage 2D is above the 100 year ARI flood level;
- geotechnical constraints will be managed through measures in soil and water management plans prepared prior to construction, and the risk of unstable slopes arising from the bulk earthworks is very low and able to be managed;
- the site is subject to a Site Audit Statement confirming the site is suitable for the proposed residential and open space uses, and the risk of unexpected contamination can be appropriately managed;
- community infrastructure contributions are being provided for parks, road works, and cycleways which are to be dedicated to Penrith City Council; and
- a construction environmental management plan will be prepared prior to the commencement of works to manage the methods and impacts of construction activities.

Given the above planning merits, Landcom requests the Minister for Planning and Infrastructure approves the Stage 2D DA.