



Staged Development Application Statement of Environmental Effects



Penrith Lakes

Stage 2 - 2 hectare subdivision of proposed superlot 4

Submitted to Penrith City Council

On Behalf of Penrith Lakes Development Corporation

March 2014 ■ 13257

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1.0 Introduction

This Statement of Environmental Effects (SEE) is submitted to Penrith City Council in support of Stage 2 of a Staged Development Application (staged DA) at Penrith Lakes, in accordance with section 83B of the Environmental Planning and Assessment Act 1979 (EP&A Act).

The staged DA (DA14/0151) was lodged with Penrith City Council on 13 February 2014 for the following:

- Reconfiguration of allotment pattern into 23 superlots;
- Construction of a car park adjacent to McCarthys Cemetery; and
- In principle support for the Stage 2 proposal.

The Stage 2 DA, to which this SEE relates, seeks approval for:

- The subdivision of superlot 4 into 138 allotments no less than 2 hectares in area;
- The construction of a drainage network to service future development within superlot 4; and
- The construction of road network to service future development within superlot 4 including connections to Castlereagh Road.

Approval for the construction and occupation of residential dwellings is not sought as part of this application.

In accordance with section 91 of the EP&A Act the proposed development is integrated development. Therefore, in addition to development consent under the EP&A Act, it requires approval pursuant to section 138 of the *Roads Act 1993*.

Further, the proposed development will be referred to Roads and Maritime Services (RMS) in accordance with Schedule 3 of *State Environmental Planning Policy (Infrastructure) 2007*.

The SEE has been prepared by JBA on behalf of Penrith Lakes Development Corporation (PLDC), and is based on the engineering plans provided by JWP (see **Appendix A**), Plan of Subdivision (**Appendix B**) and other supporting technical information appended to the report (see Table of Contents).

The land to which the Staged DA applies is the majority of the land known as the Penrith Lakes Site and shown in **Figure 1**. The Penrith Lakes Site refers to all land that is included in the *State Environmental Planning Policy (Penrith Lakes Scheme) 1989* and *State Environmental Planning Policy (State and Regional Development) 2011*. The Staged DA does not apply to certain lands within the Penrith Lakes Site (see **Figure 3**). The subject Stage 2 DA relates only to land identified as proposed superlot 4 within the Stage 1 subdivision application and lands associated with proposed road works. All land to which this DA relates is herein referred to as the 'development site'. A more detailed description of the development site is provided at Section 3.0 of this report (see Section 3).

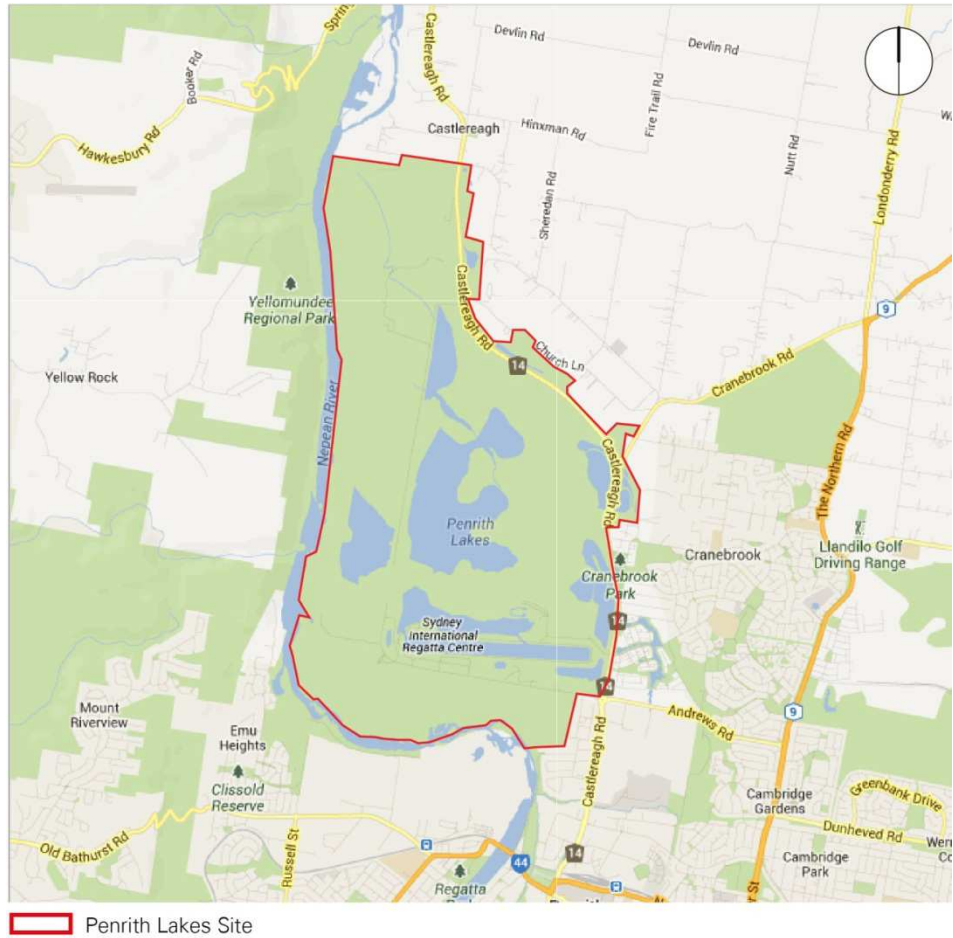


Figure 1 – Indicative Plan of the Penrith Lakes Site

This report describes the site, its environs, the proposed development, and provides an assessment of the environmental impacts and identifies the steps to be taken to protect or lessen the potential impacts on the environment.

1.1 Pre-DA Consultation

In preparing the Staged DA, PLDC met with officers from Penrith City Council for a formal pre-DA meeting on 7 November 2013. The background to and the proposed development was detailed and discussed with various Council officers from different departments, including planning, engineering and environmental management. Issues raised during this pre-DA consultation have principally been addressed in the SEE for Stage 1 of the DA.

2.0 Background

2.1 Penrith Lakes Scheme

The Penrith area has been a major source of supply of medium to coarse grained sand and crushed river gravel for the Sydney construction industry since the 1880's and today provides approximately 45% of Sydney's requirements for these materials.

Initially, excavation of the sand and gravel was from deposits in the Nepean River, however, as these reserves were depleted during the late 1950's attention was turned to the reserves under the Penrith-Castlereagh floodplain. Development consents to quarry parts of the floodplain to the northwest of Penrith were subsequently obtained by five quarrying companies, which through acquisitions have reduced to three parties; namely Boral, Hanson and Holcim.

In the late 1960's, the piecemeal manner in which the quarrying operations were being undertaken and the restriction this placed on the rehabilitation of the quarried areas was causing concern regarding the efficiency of the operations and environmental impacts.

At the request of the Penrith City Council, the State Planning Authority (now the Department of Planning and Infrastructure) examined options for coordinating the extraction of the sand and gravel resources and rehabilitation of the quarried areas. As a result, the Penrith Lakes Scheme Working Party was established, comprising representatives of five State Government Departments, the Penrith City Council and the quarrying companies. Its aim was to examine the feasibility of a program of orderly and economical extraction and comprehensive rehabilitation with a view to creating a regional water-orientated recreation resource in the former quarry areas. This concept became known as the 'Penrith Lakes Scheme'.

In 1976 the working party prepared an interim report for the comprehensive rehabilitation of the area. Further studies were undertaken to assess the technical, environmental and financial feasibility of the proposal, including determining a suitable water supply for the new lakes, and agreed mechanism for coordinating the extraction and rehabilitation activities of the independent companies.

In 1980 the Penrith Lakes Development Corporation Ltd, comprising representatives of the participating companies, was formed and commenced operation as a single entity continuing to research the rehabilitation options for the Penrith Lakes Scheme.

Consequently, in 1984 the State government published the findings of over ten years of detailed investigations in the Regional Environmental Study (RES 1984). This document remains the principle guiding document for the Scheme, outlining the preferred option of a four lakes system, and details the public and social benefits of a major water based recreational parkland to be constructed during the course of orderly excavation and rehabilitation of the Scheme.

2.2 The Corporation and its Shareholders

The PLDC was formed to undertake the coordinated extraction and rehabilitation operations of its three shareholder companies in accordance with the expressed wish of the NSW Government and the Penrith City Council.

The shareholders, Boral, Hanson and Holcim exercise joint control by means of their ownership in the Corporation. The Corporation was established to:

- undertake detailed studies to test the technical, environmental and financial feasibility of the Scheme;
- obtain approvals for quarrying and rehabilitation;
- coordinate the sequential long-term quarrying and rehabilitation operations of the shareholder companies in the Penrith-Castlereagh floodplain;
- ensure that the quarrying and rehabilitation operations were undertaken in an economical and environmentally acceptable manner; and
- maximise the future urban potential of lands within the Scheme

The PLDC undertakes the extraction of the raw material and subsequent rehabilitation work that would otherwise have been carried out separately by the shareholder companies.

By selling the raw material to its shareholders, the Corporation is able to raise sufficient revenue to implement the Penrith Lakes Scheme. The shareholder companies continue to process the raw material in their existing plants.

2.3 The Penrith Lakes Scheme

The Penrith Lakes Scheme, which involves rehabilitating sections of the Castlereagh floodplain concurrently with quarrying operations, is a complex engineering undertaking, requiring the excavation of overburden, sand and gravel to a typical depth of about 14m below ground level over a total area of about 1,935 hectares. The Penrith Lakes Scheme is specifically defined by State Environmental Planning Policy (Penrith Lakes Scheme) 1989, which is the principal planning instrument applying to the development site – see Section 6.1.1 for more detail.

Approximately 50% of the material excavated is processed and sold, while the remaining overburden is redistributed to create a variety of landforms, within the Scheme lands.

To implement the Scheme a total of four large lakes and other water-related areas with a combined water area in excess of 700 hectares are being formed. Approximately 75% of these works have been completed.

The total land area excluding lakes and water bodies will be approximately 1,200 hectares. Approximately 410 hectares of this has been envisaged for possible future urban uses under the Penrith Lakes SEPP – see Section 6.1.1 for more detail.

2.4 Planning History

The extensive deposits of sand and gravel occurring in the floodplain of the Nepean River, north of Penrith, have long been recognised by the State Government as a resource of regional significance. As a result, the resource has been identified in a number of planning instruments with the objective of providing a development control process establishing environmental and technical matters which must be taken into account in implementing the Penrith Lakes Scheme in order to protect the environment. The key documents governing the development of the Scheme since 1981 are listed in **Table 1**.

In 1986, Sydney Regional Environmental Plan 11 (SREP 11) was made. The aim of the SREP 11 was to permit the implementation of the Penrith Lakes Scheme, to identify and protect items of environmental heritage and to identify land which could later be rezoned for urban purposes. SREP 11 was later amended to be

known as State Environmental Planning Policy (Penrith Lakes Scheme) 1989 – see Section 6.1.1 for more detail about the SEPP.

Table 1 – Key documents and outcomes

Date	Document/Report	Outcomes
1984	Penrith Lakes Scheme-Regional Environmental Study	Selection of preferred Scheme and description of its effects.
1986	Sydney Regional Environmental Plan No. 9 – Extractive industry	Identified Penrith Lakes as priority for extraction.
1986	Sydney Regional Environmental Plan No. 11–Penrith Lakes Scheme.	Statutory planning framework for implementation of Scheme.
1987	1987 Deed of Agreement	Formalised the ongoing quarry operations on the site and set out the contractual obligations between the PLDC and the NSW Government.
1988	Amendment No. 1 to SREP 11	The amendment was an administrative amendment to remove the expiry clause.
1989	Amendment No. 2 to SREP 11	Amendment extended REP boundary and made provision to incorporate international standard rowing course into Scheme. This amendment increased the Scheme area by 50 hectares in the south west corner, and increased the Scheme’s resources by another 12 million tonnes of sand and gravel. The Minister for Sport and Recreation lodged a development application in September 1989 to quarry and rehabilitate the area with PLDC as project manager. This was approved in November 1989.
1989	Amendment to the 1987 Deed of Agreement	Amendment made provision for the construction of the Sydney International Rowing Centre (SIRC).
1994	Amendment No. 3 to SREP 11	Amendment to incorporate results of flood and drainage studies, providing the Scheme with design changes to better define flood control and water management arrangements. The amendment established an urban area of 230ha.
1998	Amendment No. 4 to SREP 11 - Structure Plan	Proposed amendment to incorporate implications arising from geological review, providing changes to the lake shape and size.

2.4.1 Deed of Agreement

In 1987 PLDC entered into a Deed of Agreement with the NSW Government, through the Minister administering the *Environmental Planning and Assessment Act 1979*. The implementation and completion of the Penrith Lakes Scheme is a cooperative venture between the Minister and PLDC in accordance with the Deed. The 1987 Deed of Agreement sets out the processes dealing with the use of the land for quarrying, standards for rehabilitation and other associated works related to quarrying operations. The Deed has been varied once, to enable the inclusion of an international standard rowing course known as the Sydney International Regatta Centre (SIRC).

Relocation of Castlereagh Road

PLDC undertook the relocation of Castlereagh Road in accordance with its commitment at Part 11 in the 1987 Deed of Agreement with the NSW Government. These works were completed in 2007 and have created a number of residual lots.

Urban Land

The 1987 Deed states that the Penrith Lakes Scheme cannot be successfully implemented and completed unless the potential urban land identified is considered and redeveloped for urban purposes.

2.4.2 Penrith Lakes Master Plan

We understand that the Department of Planning & Infrastructure intends to undertake a master planning exercise on the Penrith Lakes Site to establish future land use patterns and urban design. A future master plan will underpin a planning proposal to rezone the Penrith Lakes Site in accordance with the long term vision post quarrying operations.

2.5 Development Consents

The Penrith Lakes Site has been the subject of various DAs for quarrying, extraction and rehabilitation. The following details the various DAs that have been approved and are being implemented across the Penrith Lakes Site. All of these approvals have been granted with the objective to deliver the Penrith Lakes Scheme.

Development Application No.1 (DA1)

DA1 (DA 350/81) was approved by the Minister for Planning and Environment in July 1982 and allowed for the extraction of sand and gravel from approximately 100 hectares of land within the Penrith Lakes Site. The approved extraction was designed to be an interim activity while the preferred Scheme for Penrith Lakes was developed. The approval allowed for an estimated 12.5 million tonnes of sand and gravel to be removed from the area. As the site was being quarried under this approval, a Structure Plan for the Penrith Lakes Scheme was finalised and SREP 11 was prepared and adopted by the Minister. Under SREP 11, provision was made for the submission of sequential development applications for the progressive release of resource-bearing land within the site.

Ongoing rehabilitation of the site, with the implementation of the impending Scheme in mind, was also approved under DA1. The rehabilitation was related to extensively quarried areas of the site, undertaken before the approval of DA1.

Development Application No.2 (DA2)

A second DA (DA86-2720 and P92/00744/001) was issued on the 24 February 1987 by the Minister for Planning, for sand and gravel extraction and rehabilitation works. The main scope of the approval for DA2 (as amended) includes:

- extraction of approximately 786 ha of land to generate an anticipated yield of an estimated 39 million tonnes of sand and gravel and 20 million tonnes of overburden;
- rehabilitation and land reformation to give effect to the Penrith Lakes Scheme; and
- importation of Virgin Excavated Natural Material (VENM) to fill areas where extraction has occurred and to assist in land reformation.

In 1989 DA2 was modified to facilitate the construction of the rowing lake and associated facilities (known as SIRC), and the Castlereagh underpass.

On 20 December 2006, DA2 was further modified to undertake trials of dynamic compaction within a 39 hectare area (the DC extension area) within the 327 hectares covered by DA2. The proposal involved:

- stripping and stockpiling approximately 100mm of topsoil from the site;
- placing approximately 500-600mm of fill sourced from other areas within the Scheme over the site's exposed surface;
- flattening the site's surface with a dozer;
- establishing erosion and sediment controls;
- compacting the site to specified geotechnical standards using a 20 tonne weight that would be dropped from a height of up to 25 meters at specified locations; and
- spreading the topsoil and re-seeding the site.

The dynamic compaction testing objective was to assess its effectiveness in alleviating the need for the site to be rehabilitated via more intrusive means such as the re-excavation, re-filling and layered compaction of land, which would generate considerable additional noise and dust impacts.

Development Application No.3 (DA3)

DA3 (P92/00744/001) was approved in July 1995 and allowed for the continuation of mining activity to the north of the area mined under DA2. Approximately 406 hectares of land was approved for mining activity, and this area yielded an estimated 35 million tonnes of sand and gravel resource.

Development Application No.4 (DA4)

DA4 (P97/00237 Pt4) was lodged in November 1997 for the extraction of the remaining resources on the site, being west of Castlereagh Road. Consent was granted by the Minister for Planning on 9 September 1998 and allowed for extraction of resources from approximately 737 hectares of land primarily between the Nepean River and Castlereagh Road in the western part of the site. The mining of smaller areas of land to the north of Church Lane was also approved under DA4.

The quarrying approved by DA4 (as amended) is expected to yield in the order of 57 million tonnes of sand and gravel and 6 million tonnes of fine sand. Approval under DA4 has been granted for:

- the ongoing rehabilitation approximately 407 ha of the Penrith Lakes Site consistent with the eventual development of the Penrith Lakes Scheme; and
- importation of VENM to fill areas where extraction has occurred over the Penrith Lakes Site and to contribute to the work to create final landforms in accordance with the Penrith Lakes Scheme.

Since September 1998 six subsequent modifications have been made and approved relating to DA4 which were minor in nature.

Modification 7 was approved by the Department of Planning and Infrastructure on 2 February 2014, for the formalisation of the use of the existing water body, known as "Lewis Lagoon" as a Water Quality Control Pond to treat water before it enters the Wildlife Lake.

Modifications to DA2, DA3 and DA4 – Importation of VENM

The Department of Planning and Infrastructure approved a collective modification to all three DAs on the 2 February 2014 for the following amendments relating to the Penrith Lakes Site:

- to extend the timing of the consent to late 2015;
- to alter the source of the VENM used to rehabilitate the Penrith Lakes Site;
- minor changes to haulage routes into the Penrith Lakes Site;
- removal of one access point into the Penrith Lakes Site; and
- a change in acoustic legislation in NSW has necessitated updated noise monitoring to assess the works against noise criteria.

2.5.1 Pending Development Applications

There are various development applications that are currently being assessed at the time of preparing this DA.

DA5.1 – Stage 1 Subdivision

Stage 1 (DA14/0151) of the Staged DA was lodged with Penrith City Council on 13 February 2014 for the reconfiguration of the existing 211 allotments into 23 superlots that generally accord with the Structure Plan of the Penrith Lakes SEPP. DA5.1 also included the construction of a 6 space car park adjacent to McCarthys Cemetery.

DA – Cranebrook West 7 Lot Subdivision

PLDC has submitted a DA to Penrith City Council to subdivide land east of Castlereagh Road (reference DA13/1410). The proposal seeks approval to create 7 lots ranging in site area from 585m² to 1,733m² and for associated earthworks. The Staged DA is set to precede DA13/1410 and form a strategic basis for that application.

DA – Escarpment 9 Lot Subdivision

PLDC has submitted a DA to Penrith City Council (DA14/0027) to subdivide approximately 24 hectares of land east of Castlereagh Road and on the southern side of Church Land to create nine rural residential allotments ranging from 2-5 hectares in size. The Staged DA is set to precede DA14/0027 and form a strategic basis for that application.

DA – Nepean River Pump and Pipeline

PLDC will submit an application to the Department of Planning & Infrastructure for the construction of a pumping station and pipeline on the banks of the Nepean River for the purpose of extracting water for use in the Penrith Lakes Scheme. The pumping station is part of the infrastructure required for the first filling and maintenance of lake water levels. The pumping station was envisaged in the RES 1984 as a key piece of infrastructure required by the State government to manage the water based parklands and was agreed by the PLDC to be constructed as part of the deliverables under the 1987 Deed

3.0 Site Analysis

3.1 Site Location and Context

The Penrith Lakes Site is located on the Castlereagh floodplain of the Nepean River, approximately 3 km to the north of the Penrith CBD (Figure 2). The Penrith Lakes Site is approximately 1935 ha in area and is approximately 6.5 km long and 3.5 km wide (at its widest point). It is located at the edge of the Sydney Basin adjacent to the Blue Mountains and bounded by the Nepean River to the south and west, Cranebrook Village and the Cranebrook Escarpment to the east, and rural land to the north. The Penrith Lakes Site sits adjacent to existing rural land uses, villages and residential development. Penrith Lakes is easily accessed by the M4 and in close proximity to Penrith CBD, a key regional city within metropolitan Sydney.

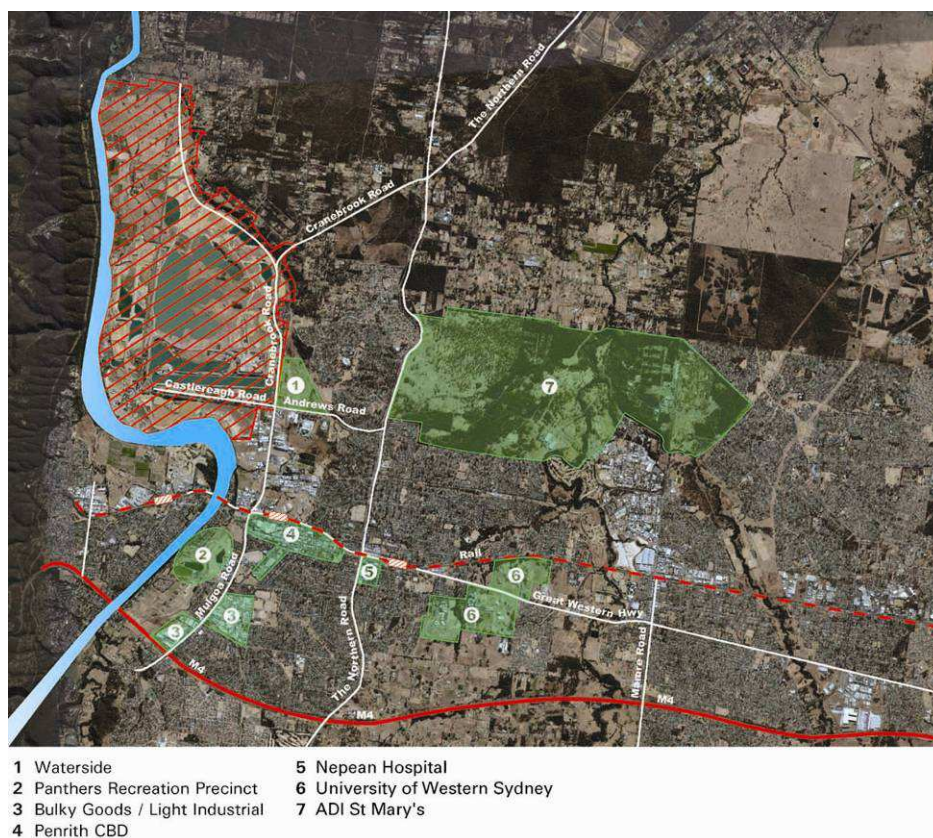


Figure 2 – Penrith Lakes Site Location and Context

3.2 Existing Site Functions

The Penrith Lakes Site has been intensively quarried for sand and gravel over the past 20 years (see Figure 3) and is a major source of sand and gravel for Sydney's building industry and has traditionally supplied about 45% of the sand and gravel resource over the past 20 years. The total sand and gravel resource on the site was approximately 220 million tonnes, of which 200 million tonnes has been extracted. Approximately 8% of the original sand and gravel resource remains available for extraction. At current rates the remaining quarry resource is expected to take around 12-15 months to be fully extracted.

Before quarrying operations the land has been used for agriculture and horticulture, particularly orchards. The Darug people used the land for hunting, gathering and

as a meeting place before European settlement. Due to the current and post European settlement uses the Penrith Lakes Site has limited vegetation left, however, there are stands of native vegetation remaining including Cumberland Plain Woodland. The majority of the Penrith Lakes Site now consists of exotic grasslands or quarried land in various stages of rehabilitation. Consequently, the main environmental considerations relate to the physical heritage and the existing geotechnical and hydrological conditions.

The ongoing quarrying activities have continued to extract sand and gravel and to form the lakes and landforms as identified in the Structure Plan in State Environmental Planning Policy (Penrith Lakes Scheme), the main planning instrument currently applying to the Penrith Lakes Site. Part of Lake A has been formed and the Sydney International Regatta Centre (SIRC) and Penrith White-water Stadium have been established on the Penrith Lakes Site. The SIRC was the location of the rowing competition at the Sydney 2000 Olympic Games. The land adjacent to the SIRC has been landscaped and revegetated. The SIRC is currently used as a recreational and elite sport venue for triathlons, rowing, canoeing, cycling, walking and picnicking.

As quarrying operations are completed the Penrith Lakes Site is being progressively rehabilitated to form a series of lakes and open space areas. Rehabilitation is also being undertaken to allow for future urban development over a portion of the Penrith Lakes Site. PLDC estimate that extractive quarrying operations will be completed by April 2015 (depending on market demand).

3.3 The Development Site

The Staged DA relates to land within the Penrith Lakes Site under ownership of PLDC and the State Government. Land that had been sufficiently remediated and returned to Government ownership, and land relating to heritage items had been excluded from the Staged DA as shown in **Figure 3**. This Stage 2 DA relates to land identified as proposed superlot 4 under the Staged DA subdivision plan and land to which the proposed road works are proposed. This land is hereafter referred to as the 'development site'. The context of proposed superlot 4 within the Penrith Lakes Site is presented in **Figure 3** below.

The development site has an area of approximately 340 hectares. Superlot 4 is bounded by lake development currently being carried out in accordance with the Penrith Lakes Scheme and Castlereagh Road to the north.

Land to which the development site relates has been generally identified as 'Future Urban' in the Structure Plan of the Penrith Lakes SEPP.



Figure 3 – Indicative site area subject to Staged DA

3.4 Heritage

The development site is adjacent to two items of heritage significance being:

- “The Poplars” containing archaeological relics defined under the Heritage Act 1977; and
- McCarthys Cemetery listed under listed for retention in Schedule 3 (Heritage Items) of the Penrith Lakes SEPP.

The location of these items and other items of heritage significance are shown in Figure 4.

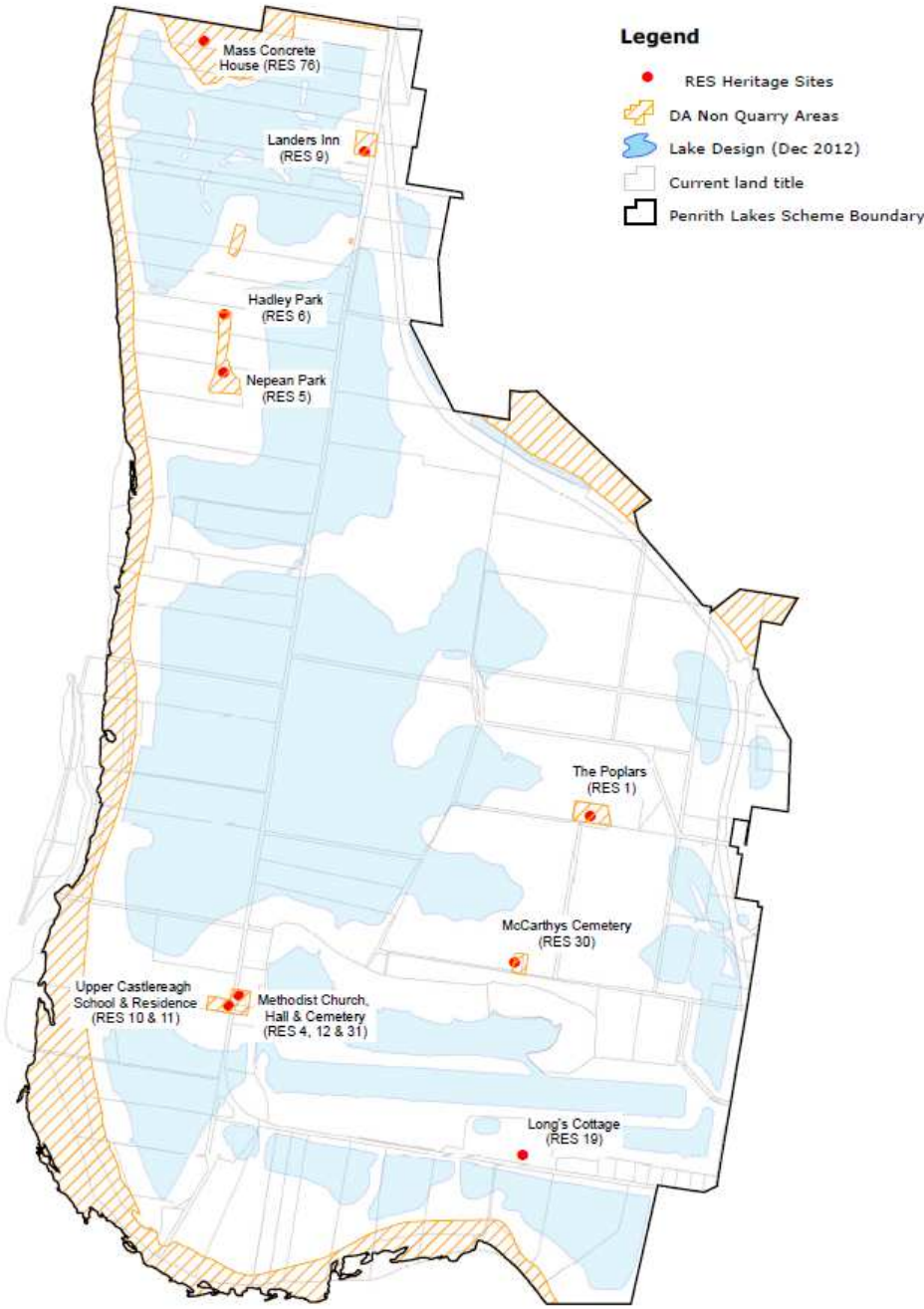


Figure 4 – Heritage items within Penrith Lakes

4.0 Description of Proposed Development

4.1 Purpose of Development

The proposed Staged Development seeks to implement the Penrith Lakes Scheme by consolidating and reconfiguring the allotment pattern for the development site to generally accord with Penrith Lakes Scheme shown in the Structure Plan under the Penrith Lakes SEPP and to facilitate a gradual transition to urban development through the subdivision of superlot 4 into smaller lots of 2ha or greater in size.

Stage 1 of the proposed Staged DA sought to:

- Rationalise the existing subdivision pattern from 211 parcels into 23 superlots that generally reflect the layout of the Penrith Lakes Scheme; and
- Construct a car park adjacent to McCarthys Cemetery.

Each super lot created by Stage 1 is proposed with the intent to facilitate the future and current use of that land (or water body) shown in the Structure Plan and is to be dedicated to the State government or retained for possible future urban purposes.

Stage 2 of the proposed development seeks to subdivide superlot 4 as identified in Stage 1 of the application. This development represents the initial step in the transformation of the Penrith Lakes Site from extractive/quarrying uses to future urban purposes proposed in the Structure Plan. The proposed subdivision represents the highest intensity permissible development under the existing planning controls for the site, whilst affording the ability to this land to be later developed for urban development as intended by the Penrith Lakes Structure Plan. The initial infrastructure provided will not impede future urban development within the Penrith Lakes Site in accordance with the Penrith Lakes SEPP and associated Structure Plan.

No use or change of use of the subdivided land is sought as part of this Staged Development application. Any future urban development will be subject to further development applications to Council, in accordance with the provisions of the current planning instruments at that time.

4.2 Stage 2

This application seeks approval for the following development:

- Subdivision of superlot 4 into 138 allotments no less than 2ha in area;
- Construction of road network and intersections to Castlereagh Road servicing the proposed subdivision; and
- Construction of drainage network servicing the proposed subdivision.

The proposed plan of subdivision is presented at **Appendix B** and engineering diagrams are included at **Appendix A**. Details of the elements of this application are set out under separate heading below.

4.2.1 Subdivision

The proposed development seeks to subdivide superlot 4 to create 138 allotments. The boundaries of the subdivision accord with superlot 4 as proposed under the Stage 1 DA. The proposed lots have been designed in accordance with the subdivision controls in IDO 93, with an area of no less than 2 hectares. No use of the allotments (for residential purposes or otherwise) is sought as part of this

application. The proposed subdivision layout is detailed in **Figure 5** below and a formal plan of subdivision has been tabled at **Appendix B**.



Figure 5 – Proposed subdivision pattern

4.2.2 Road Network

The proposed development incorporates the road network design servicing the proposed subdivision. The proposed network will provide access to individual allotments and provide the following new intersections to Castlereagh Road:

- Road 1 T-intersection (Central Access); and
- Road 8 T-intersection (Northern Access).

The development also proposes the upgrade of the existing McCarthys Lane Intersection that will act as the Southern Access for the development. The proposed road network will formalise and extend the existing access to the Penrith Lakes Site provided by McCarthys Lane (Road 2).

The proposed road network will provide road access to each allotment within the development site and provide for connection to adjoining future precincts within the Penrith Lakes Site.

All road works will be constructed to Australian Standards and intersection upgrades of Castlereagh Road will be conducted in accordance with Roads and Maritime Services requirements.

4.2.3 Drainage Network

The proposed development incorporates the provision of stormwater and drainage services to accommodate the proposed road network. The drainage network has been designed to collect run off from the road network, where the topography does not accommodate free drainage and run off volumes and treatment measures are modelled at **Appendix M**.

4.3 Alternatives to the proposed development

The Penrith Lakes SEPP Structure Plan identifies land generally according with the boundaries of superlot 4 as 'future urban'. Under the existing local planning controls for the development site, a minimum lot size of 2.0 hectares applies and is permitted. The proposed development represents the highest intensity of potential urban land use under the existing local planning controls, which may be developed at a future point in time. The primary alternative to the proposed development would be an application for a non-compliant scheme or a Planning Proposal to Penrith City Council to provide for a traditional urban development. It is considered that this is not a suitable option in this case as the current rehabilitation works are approximately two years from completion and the proposed development represents a staged approach to delivering the Penrith Lakes Scheme as it reaches final rehabilitation.

This approach allows for and does not hinder further urban design investigations, the subject of a future master planning process being undertaken by the DP&I. Nothing in this application inhibits the implementation of a future master planned urban development on the site. The proposed development provides the opportunity for further investigations of neighbourhood centres and urban precincts whilst continuing to implement the Penrith Lakes Scheme.

4.4 Consequences for not carrying out the Development

The proposed development represents the initial step to providing future urban development within the Penrith Lakes Site. The development provides initial road layouts and access points that will service the future urban area. The primary consequence of not carrying out the proposed development is that the portions of the Penrith Lakes Site that are nearing the completion of rehabilitation will remain stagnant rather than progressing the Penrith Lakes Scheme as envisaged for the Penrith Lakes Site. The proposed development continues to provide the opportunity for further investigations of neighbourhood centres and urban precincts to be identified whilst continuing to implement the Penrith Lakes Scheme.

5.0 Assessment of Environmental Impacts

This section considers the planning issues relevant to the proposed development. It contains our assessment of the environmental impacts of the proposal and identifies the steps to be taken to prevent or mitigate the potential impacts on the environment.

5.1 Compliance with Relevant Strategic and Statutory Plans and Policies

The following planning instruments and policies apply to the site:

- SEPP Penrith Lakes;
- SEPP 55 – Remediation of Land;
- SEPP (State & Regional Development);
- SEPP (Infrastructure)
- Interim Development Order 93;
- Penrith Local Environmental Plan 1991 (Environmental Heritage Conservation);
- Draft Penrith Local Environmental Plan 2013; and
- Penrith Development Control Plan 2006.

5.1.1 State Environmental Planning Instruments

State Environmental Planning Policy – Penrith Lakes Scheme (Penrith Lakes SEPP) 1989

The Penrith Lakes SEPP applies to the whole of the development site. It is the key planning instrument that relates to the Penrith Lakes Site and its development.

Unless the development on the Penrith Lakes Site is considered to be State Significant Development or Regional Development pursuant to the EP&A Act, Penrith City Council is the consent authority for all other development pursuant to clause 6 of the Penrith Lakes SEPP. Development for the purposes of this application is not State or Regional Development, consequently Council is the consent authority.

Clause 7 of the Penrith Lakes SEPP requires that no development should be carried out on the Penrith Lakes Site unless the development is authorised by the Penrith Lakes SEPP. Development permitted by the Penrith Lakes SEPP includes that referred to as the ‘Penrith Lakes Scheme’.

Under clause 2 the objective of the SEPP is also to permit the implementation of the Penrith Lakes Scheme, which is specifically defined under Schedule 1 as follows:

*“ The Penrith Lakes Scheme is the creation of a regional recreational lake system as shown on the **structure plan** for the benefit of the public as a result of:*

- (a) the staged optimum extraction of sand and gravel reserves,*
- (b) the staged rehabilitation, reconstruction and landscaping of the land, and*
- (c) the staged formation of a series of interconnected lakes,*

and includes the identification of land for possible future urban purposes as a result of the work referred to in paragraphs (a) and (b).” (emphasis added)

The Structure Plan is shown in **Figure 9** below. It identifies the number, size and structure of lakes and future urban areas to be developed over the Penrith Lakes Site. The plan also identifies heritage items, open space, detention basins and the realigned Castlereagh Road within the Penrith Lakes Site. Pursuant to clause 8 of the SEPP, development for the purposes of the Penrith Lakes Scheme is permissible with development consent.

In accordance with clause 8(2) of the SEPP, Council shall grant consent for development for the purpose of implementing the Penrith Lakes Scheme, on the Penrith Lakes Site unless it is of the opinion that the development:

- does not fully implement the Penrith Lakes Scheme;
- will not ensure the satisfactory implementation of the Penrith Lakes Scheme; or
- does not generally accord with the Structure Plan.

All works pertaining to existing DAs for the Penrith Lakes Site (see Section 2.5) have been or are being carried out to give effect to the implementation of the Penrith Lakes Scheme. Specifically these works have been carried out generally in accordance with the Structure Plan, to create a substantial portion of the lake formations and developable areas of the Penrith Lakes Site generally. Moreover, the new and realigned Castlereagh Road has been provided and accords with that alignment shown in the Structure Plan.

The proposed development does not inhibit the continuation of existing extraction and rehabilitation functions on the overall Penrith Lakes Site and the rehabilitation of superlot 4 is currently being completed in accordance with the existing development consents in operation.

The proposed Stage 2 development is considered permissible on the land as it serves to further implement the Penrith Lakes Scheme by safe guarding land for future urban purposes and establishing a road network and subdivision pattern that will allow for urban development if the land is later rezoned for this purpose. Superlot 4 generally conforms with land identified in the Structure Plan as ‘future urban’. The proposed development represents the initial step towards a more urbanised use of the Penrith Lakes Site as identified by the SEPP and is the highest possible use under the existing local planning controls. The proposed development does not preclude the future intensification of urban development within the development site. The initial subdivision and road alignment signify an ongoing implementation of the Penrith Lakes Scheme. An indicative representation of the gradual urbanisation of the site is presented in **Figures 6-8** which illustrates how the proposed subdivision does not impede potential future urban development of the development site.

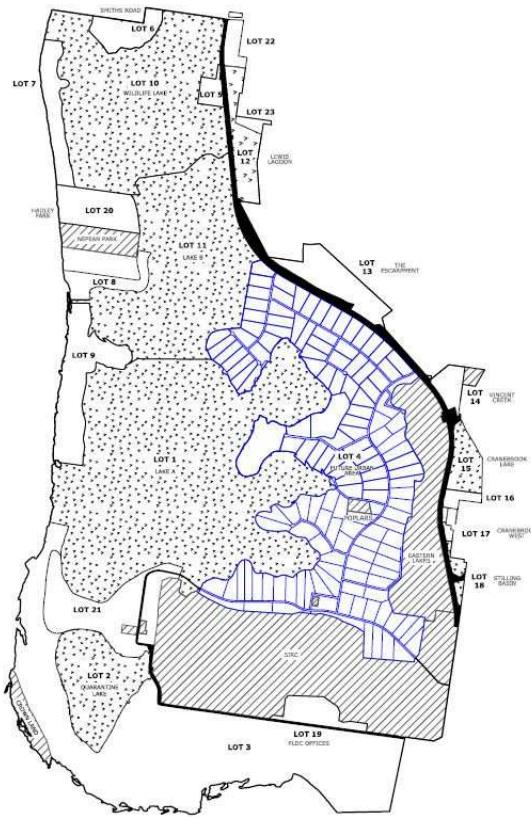


Figure 6 – Indicative urbanisation transition – step 1: Staged DA Application

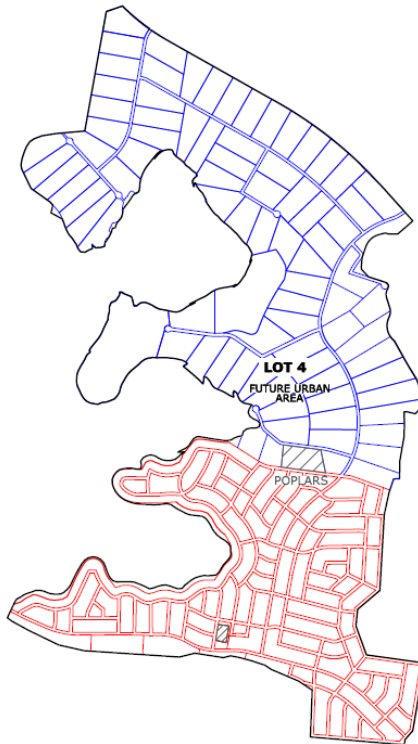


Figure 7 – Indicative urbanisation transition – step 2

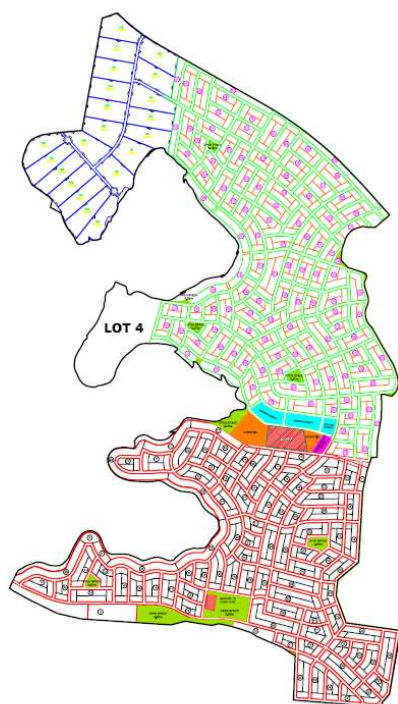


Figure 8 – Indicative urbanisation transition – step 3

The Penrith Lakes SEPP identifies McCarthys Cemetery (part portion 82, shown as Heritage Item No 3 on the structure plan) as an item of heritage significance and is listed for retention under Schedule 3 (Heritage Items). The McCarthys Cemetery site has been excluded from this application. The proposed subdivision of superlot 4, adjoining the item, does not detrimentally impact on the setting of this item. The proposed road and drainage works have been designed to result in minimal impact on this item. A Heritage Impact Statement that will confirm this and will be tabled with Council, in due course.

This SEE report has been prepared in accordance with clause 8(3) of the Penrith Lakes SEPP, which requires the SEE to consider and address all matters listed in Schedule 2 and in clause 8(4). **Table 2** and **Table 3** below address in detail the various matters listed in these provisions.

Table 2 – Matters Specified in Schedule 2 of Penrith Lakes SEPP

Schedule 2	Matter	Location addressed in SEE
Subclause 1		
(a)	Justification of proposed development	Section 4.0
(b)	A full description of the development	Section 4.0
(c)	A statement of the objectives of the proposed development	Section 4.0
(d)	A full description of the existing environment likely to be affected by the proposed development if carried out	Section 3.0
(e)	Identification and analysis of the likely environmental impacts or consequences of carrying out the proposed development	Section 5.0
(f)	Analysis of the likely environmental impacts or consequences of carrying out the proposed development	Section 5.0
(g)	Justification of the proposed development in terms of environmental, economic and social considerations	Section 5.0

Schedule 2		Matter	Location addressed in SEE
(h)		Measures to be taken in conjunction with the proposed development to protect the environment and an assessment of the likely effectiveness of the measures.	Section 5.0
(i)		Energy requirements of the proposed development	N/A
(j)		Any feasible alternatives to carrying out the proposed development and the reasons for choosing the latter	Section 4.3
(k)		The consequences of not carrying out the proposed development	Section 4.4
Subclause 2			
(a)		Relationship and extent of the proposed development to the completed scheme	Sections 2.5 and 5.2
(b)		Integration of the proposed development with development previously carried out	Section 6.2 and 2.5
(c)		The sequence of extraction and rehabilitation	N/A
(d)		The proposed control and management of the land	N/A
(e)		The management and control of water resources	N/A
(f)		The rehabilitation and reconstruction of the land	N/A
(g)		Any effect upon a locality, place or building not listed in Schedule 3	Section 5.5
(h)		Measures to conserve and preserve items of heritage	Section 5.5
(i)		Access to supply of water	N/A

Table 3 – Matters for Consideration under Clause 8(4) of Penrith Lakes SEPP

Subclause	Matter	Location addressed in SEE
(a)	Penrith Lakes Scheme Regional Environmental Study	Section 5.1.1
(b)	Recommendations of technical working parties as may be established	N/A
(c)	Statement of Environmental Effects	This report
(d)	Proposed sequence of extraction and rehabilitation	N/A
(e)	Proposed control and management of land, if not dedicated to Crown	N/A
(f)	Management of water and control of water resources	N/A
(g)	Rehabilitation and reconstruction of the land	N/A
(h)	Access to water supply	N/A
(i)	Heritage items listed in Schedule 3	Section 5.5
(j)	Any effect upon a locality, place or building not listed in Schedule 3	Section 5.5
(k)	Provisions of the Act that apply to the development of implementing the Penrith Lakes Scheme	Section 5.1.1

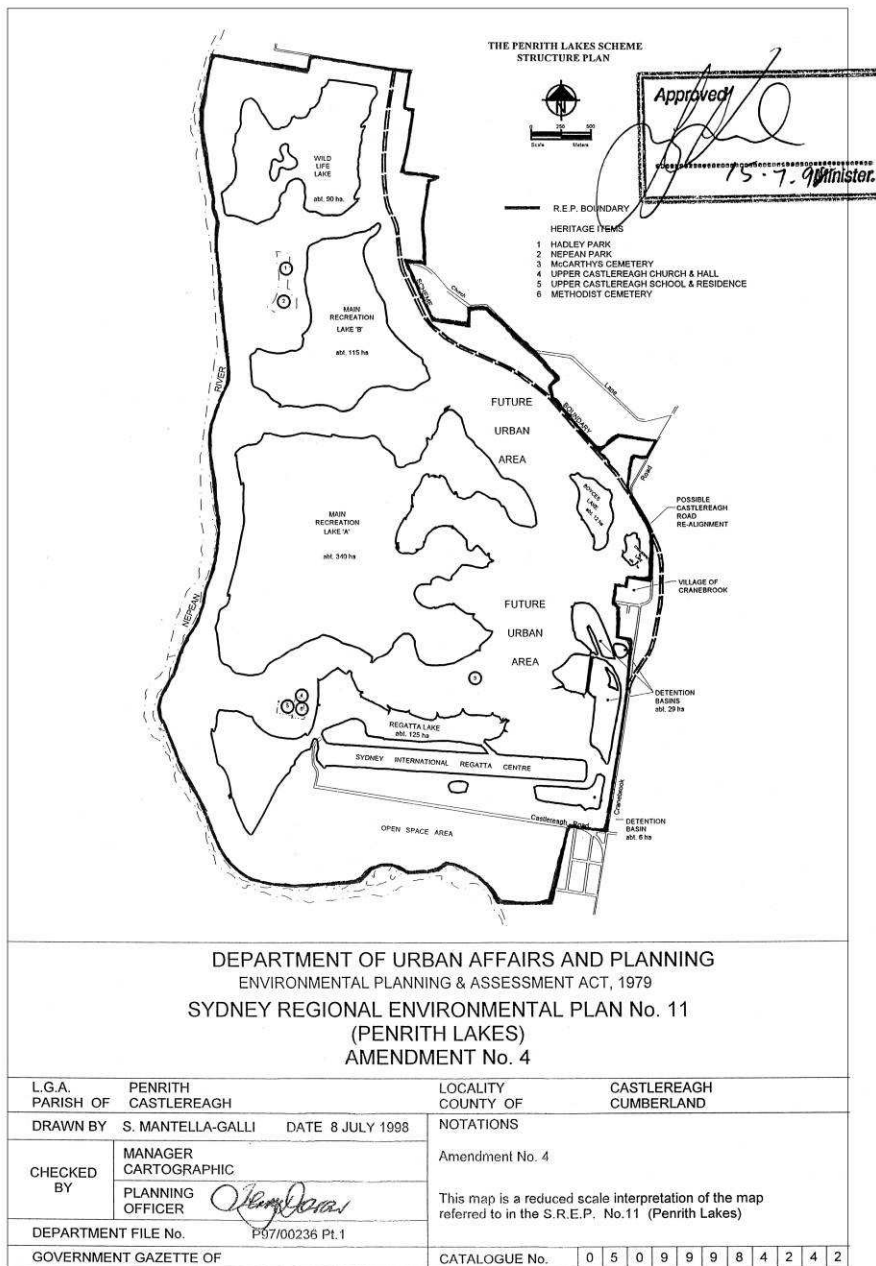


Figure 9 – Penrith Lakes SEPP Structure Plan

State Environmental Planning Policy 55 – Remediation of Land

SEPP 55 provides that a consent authority must not consent to the carrying out of development on land unless:

- it has considered whether the land is contaminated, and
- if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and
- if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

The Land Use Suitability Review, conducted by DLA Environmental and tabled at **Appendix H**, confirms that the remediation works carried out under existing consents on the development site are sufficient to facilitate the proposed development.

The development site is considered suitable for the purposes of the subdivision and does not require further remediation beyond that already undertaken or being carried out by the various DAs for the Penrith Lakes Scheme. Furthermore, the site and its development do not propose any measurable contamination risk during the construction of the road and drainage networks.

State Environmental Planning Policy (State and Regional Development) 2010

The Penrith Lakes Site is identified at clause 8 of Schedule 2 of the State and Regional Development SEPP. Development for the purposes of extraction, rehabilitation or lakes formation (including associated infrastructure) is prescribed as State Significant Development. The proposed development does not fall within these land uses and therefore the provisions of the S&RD SEPP do not apply to the proposed development.

State Environmental Planning Policy (Infrastructure) 2007

The proposed development is categorised as 'traffic generating development' as per Schedule 3 of SEPP Infrastructure as the site adjoins a classified road being Castlereagh Road. This application will be referred to the Roads and Maritime Services for comment. The Traffic Report, appended at **Appendix I**, confirms that the proposed intersection upgrades where the proposed development connects to Castlereagh Road will be sufficient to accommodate the existing and future traffic demands of the site, if dwellings are later constructed on the proposed allotments.

5.1.2 Local Environmental Planning Instruments

Interim Development Order No. 93 (IDO 93)

Under IDO 93 the majority of the development site is zoned 1(a2) Rural A2.

Development permitted with consent under the 1(a2) zone includes:

- *advertising structures, dwelling houses, educational establishments, extractive industries, home industries, home occupations, open space, roads, sand and gravel processing, utility installations.*

Under clause 5 of IDO No. 93 the minimum size of allotments that can be created with consent of Council over land zoned 1(a2) is 2 hectares (20,000m²).

The subdivision of superlot 4 creates allotments no smaller than 2 hectares, consistent with IDO 93. Further, road works and associated drainage works are considered permissible with consent in the zone.

Penrith Local Environmental Plan 1991 (Environmental Heritage Conservation)

Penrith Local Environmental Plan 1991 lists individual significant heritage assets (refer to **Figure 4**) that should be conserved and outlines the development consent and planning processes required to alter or demolish such places. Additional items of non-indigenous heritage (not listed in Schedule 3 of the existing Penrith Lakes SEPP) are included in this LEP.

For those items that are listed in the Penrith LEP but have been excluded from Penrith Lakes SEPP, clause 4 of the LEP states that Penrith Lakes SEPP prevails over the Local Environmental Plan to the extent of any inconsistency.

Notwithstanding this, the items within this plan remain applicable heritage items to consider with regard to the proposed development. It is noted that there is no consideration of indigenous heritage in LEP 1991.

The additional items of non-indigenous heritage (not listed in Schedule 3 of the Penrith Lakes SEPP) included in this LEP are:

- 'Ruin of Stone Stables associated with Landers Inn' (C6)(RES 9);
- 'Slab Cottage' (C7)(RES 16) (Puddledock);
- 'Ruins of Pise House Portion 280' (C13)(RES 37);
- 'The Poplars, Old Slab Cottage, Pise House & Garden' (CR8)(RES 1); and
- 'Upper Castlereagh War Memorial (part of Church/school precinct' (UC4)(RES 4, 10, 11 & 12).

The heritage impact of the proposed development is discussed under Section 5.5 below.

5.1.3 Draft Environmental Planning Instruments

Draft Penrith Local Environmental Plan 2010

Under section 79C(a)(ii) of the EP&A Act and in assessing the proposed development, consideration must be given to all draft planning instruments that have been or are currently on public exhibition that apply to the development site and the proposed development.

Council placed Draft LEP 2010 on exhibition in June 2013. The draft plan is intended to amend the existing Penrith LEP 2010, which applies to much of the rural and employment lands throughout the Penrith LGA.

Draft LEP 2010 proposed to repeal the following current planning instruments applying to the development site:

- Penrith Planning Scheme Ordinance
- Penrith Interim Development Order No. 13
- Penrith Interim Development Order No. 47
- Penrith Local Environmental Plan 1991 (Environmental Heritage Conservation)
- Penrith Local Environmental Plan 1998 (Urban Land)
- Draft Amendment No.1 to Penrith Local Environmental Plan 1991 (Environmental Heritage Conservation).

It is noted that Penrith Interim Development Order No. 93 was not listed as one of many IDO's to be repealed by Draft LEP 2010 despite being listed as one of many existing environmental planning instruments in Appendix A of the Council's Planning Proposal Document in support of Draft LEP 2010 (dated May 2013), and despite the fact that this IDO applies to the development site.

Since exhibition, Council recently resolved to exclude the Penrith Lakes Site from being included as part of the lands to which the draft LEP is to apply. This means that all the existing local planning instruments applying to the development site remain (insofar as they relate to the Penrith Lakes Site) and will not be repealed by the Draft LEP once gazetted.

Despite this, the following provides an assessment of the proposed Stage 1 development against the provisions of the Draft LEP as is required under section 79C of the EP&A Act.

Under the exhibited Draft LEP the development site was proposed to be zoned RU1 Primary Production (see **Figure 10**).

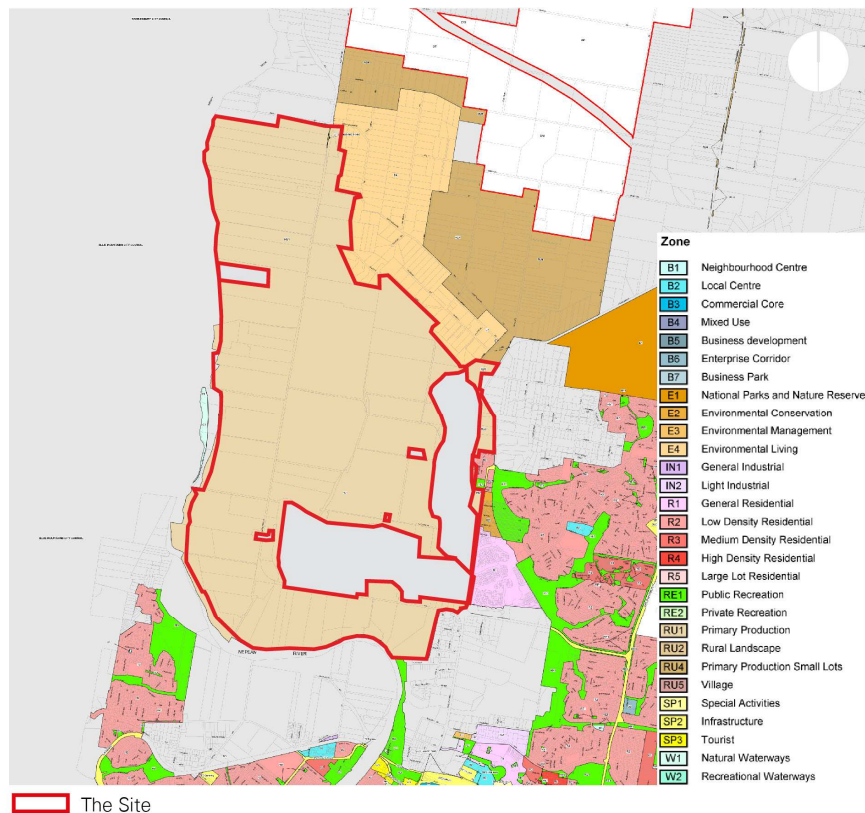


Figure 10 – Proposed zoning map for development site under exhibited Draft Penrith LEP 2010

Under the RU1 zone the following types of development are permissible with consent of Council:

agricultural produce industries; Agriculture; Animal boarding or training establishments, Bed and breakfast accommodation; Building identification signs; Business identification signs; Cellar door premises; Community facilities; Dual occupancies; Dwelling houses; Environmental facilities; Environmental protection works; Extractive industries; Farm buildings; Farm stay accommodation; Flood mitigation works; Forestry; Home-based child care; Home businesses; Home industries; Information and education facilities; Intensive livestock agriculture; Open Cut Mining; Roads; Roadside stalls; Rural supplies; Secondary dwellings; Stock and sale yards.

All other types of development are prohibited under the RU1 zone.

Under clause 4.1 the minimum permitted lot size under Draft LEP 2010 for the RU1 zone was proposed to be 20ha. It is noted that the proposed development is inconsistent with this development standard, however, development for the purpose of primary production with allotments no less than 20ha would not be permissible on the site as this development would be inconsistent with the Penrith Lakes SEPP which prevails over another environmental planning instrument to the extent of any inconsistency.

5.1.4 Development Control Plans

The compliance of the proposed development is assessed against the relevant provisions of the Penrith DCP 2006 in **Table 4** below.

Table 4 – Penrith DCP 2006 Compliance Table

Provision	Compliance	Comment
Penrith Development Control Plan 2006		
<p>2.1 Contaminated Land Objectives:</p> <p>a) To enable Council more adequately identify, record and manage known and potentially contaminated land;</p> <p>b) To provide direction for Council in the gathering and assessment of information in relation to previous land use activities that may have resulted in contamination;</p> <p>c) To assist Council in the discharge of its functions and responsibilities in relation to existing and potential land contamination with reasonable care and due diligence to minimise potential risk to both public health and the environment;</p> <p>d) To inform the community, particularly those interested or involved in the planning and development process, of Council's procedures relating to existing or potential land contamination; and</p> <p>e) To ensure that all stakeholders are aware of their responsibilities for the ongoing management of contaminated land.</p>	✓	<p>The proposed subdivision does not seek a change of use to the land in question. However, the Land Use Suitability Statement prepared by DLA Environmental (see Appendix H) confirms that lands within Lot 4 are suitably remediated under the NSW Site Audit Scheme to comply with NEPC 2013 and SEPP 55 Guidelines.</p>
<p>2.2 Crime Prevention Through Environmental Design Objectives:</p> <ul style="list-style-type: none"> - Enhance and improve community safety within the City of Penrith. - Create a physical environment that encourages a feeling of safety - Address community concerns with regard to issues of community safety and crime prevention. - Reduce the level of crime within the City of Penrith. - Prevent the opportunity for criminal activity. - To ensure that new developments promote crime prevention through environmental design. 	✓	<p>The proposed subdivision does not preclude the future use of the Penrith Lakes Site achieving crime prevention through environmental design. CPTED controls will be implemented as part of any future relevant development application.</p>
<p>2.3 Engineering Works</p> <p>All Engineering Works shall be undertaken in accordance with the provisions of the Penrith City Council's "Guidelines for Engineering Works for Subdivisions and Developments – Part 1 – Design" and "Guidelines for Engineering Works for</p>	✓	<p>The proposed road network and drainage system has been designed in accordance with Council's Guidelines for Engineering Works for Subdivisions and Developments.</p>

Provision	Compliance	Comment
Subdivisions and Development – Part 2 – Construction”.		
<p>2.5 Heritage Management Objectives:</p> <p>(a) To conserve the environmental heritage of Penrith;</p> <p>(b) To conserve the heritage significance of existing significant fabric, relics, settings and views associated with the heritage significance of heritage items and heritage conservation areas; and</p> <p>(c) To allow for the protection of places which have the potential to have heritage significance but are not identified as heritage items; and</p> <p>(d) To ensure that the heritage conservation areas throughout Penrith retain their heritage significance.</p> <p>(e) To provide guidance on the range and application of available conservation incentives.</p> <p>(f) To ensure archival records of heritage items and potential heritage places are undertaken in certain circumstances to a prescribed standard.</p> <p>(g) To ensure that proposals for development of environmental heritage are sustainable and appropriate way that conserves its values</p>	N/A	This item specifically identifies that it does not apply to the Penrith Lakes Site.
<p>2.10 Flood Liable Land Objectives:</p> <p>(a) To reduce the impact of flooding and flood liability on individual owners and occupiers;</p> <p>(b) To limit the potential risk to life and property resulting from flooding;</p> <p>(c) The potential for flood losses in all new developed areas shall be contained by the application of effective planning and development control;</p> <p>(d) A “merit approach” to all development and building decisions, which takes account of social, economic and ecological as well as flooding considerations, shall be followed;</p> <p>(e) To reduce the risk and implications of flooding to existing areas by flood mitigation works and other measures; and</p> <p>(f) To prevent the introduction of unsuitable land uses onto the land identified by council as being flood liable.</p>		See Appendix F
2.10.2 The applicant shall be required to demonstrate to the satisfaction of Council:		See Appendix F

Provision	Compliance	Comment
<p>1. That the development will not increase the flood hazard or risk to other properties as well as including details on the structural adequacy of any building works associated with the development with regard to the effects of flood waters. All applications for development shall be accompanied by a survey plan;</p> <p>2. That the proposed building materials are suitable; and</p> <p>3. That buildings are sited in the optimum position to avoid flood waters and allow safe flood access for evacuation.</p>		
<p>3.9 Subdivision</p> <p>(a) Council will not support the subdivision of any land located in floodway or high hazard areas.</p> <p>(b) Subdivision of flood liable land that either consolidates or does not create additional lots will be considered on its merits.</p> <p>(c) Subdivision of flood liable land in rural zones creating additional allotments will generally not be supported; however, where the applicant can demonstrate that the flood hazard is classified as “low” and for each allotment there is sufficient area of land (with a minimum of 1000 sqm) above the standard flood to allow for the erection of all buildings and ancillary works to be used in conjunction with development to be carried out on the allotment, then Council may consider a subdivision application. Flood free access shall also be provided.</p> <p>(d) Generally, land situated within existing residential, commercial and industrial zones may only be subdivided to enable its development for urban purposes where the level of the existing land to be developed is not lower than the standard flood. All lots created by such subdivision shall have the portion of the lot that can be built upon filled to a level at least 0.5m above the standard flood.</p> <p>(e) If any filling is required on flood liable land, then the requirements of section 3.11 also applies.</p>		<p>See Appendix F</p>

5.2 Integration with previous development

The Stage 1 subdivision directly reflects the works completed and currently being carried out under the existing consents detailed in Section 2.5 of this report. Primarily these works consist of the rehabilitation works that form the lakes

system under the Scheme. The proposed subdivision provides for the separation of the water bodies (and associated buffer area) from the land parcels within the development site.

The proposed Stage 1 subdivision pattern reflects the land reformation works following the extraction uses and seeks to facilitate the future hand over of land as prescribed in the Deed of Agreement.

The proposed Stage 2 subdivision of superlot 4 and associated road and drainage works, is consistent with preparing the land for 'future urban' uses in accordance with the Structure Plan.

Overall, DAs1-4, the Staged DA and this subject DA and future investigations carried out by DP&I for urban development represent the continual delivery of the Penrith Lakes Scheme.

5.3 Urban Design

The proposed subdivision does not limit the future urban use of this part of the Penrith Lakes Site in accordance with the Structure Plan presented at **Figure 9**.

The DP&I has been tasked with preparing a future master plan for the Penrith Lakes Site however this process is in a very preliminary stage and no negotiation with the PLDC has commenced. The master plan, nor the master planning process, do not form a matter for consideration under Section 79C of the *Environmental Planning and Assessment Act 1979* and it is considered that refusing consent to this development application on the grounds of a potential future master plan for the development site would be in contrary to the aims and objectives as set out under the Penrith Lakes SEPP.

5.4 Traffic Impacts

The proposed subdivision will not directly generate any significant traffic impacts. However, the proposal has taken into consideration the existing and potential future use of the development site, and the road network and intersection capacities have been designed accordingly. The Traffic Report tabled at **Appendix I** confirms that the existing road network, inclusive of the proposed RMS upgrades, will sufficiently cater for the utilisation of the development site in accordance with the Penrith Lakes Scheme.

PLDC has provided that existing access arrangements to all other allotments within the Penrith Lakes Site will be maintained and reinstated through the registration of titles and the transfer of ownership as necessary.

5.5 Acoustic Impacts

The proposed development is not expected to generate any significant noise impacts once the construction of road and drainage systems are completed. The development site is located at a significant distance to sensitive noise receptors. Given the existing extractive industry uses on the site, the proposed impacts of construction are considered minimal. However, the Construction Specification report, prepared by PLDC (see **Appendix N**) details mitigation measures controlling noise pollution associated with the construction of the proposed development.

An Acoustic Report has been prepared by TTM to assess the impact of noise on the potential future population that the proposed subdivision would provide for (see **Appendix J**). Castlereagh Road was identified as a primary generator, with the potential to impact on proposed allotments adjoining the road. The Acoustic Report concluded that sleep disturbance levels are expected to be met in all

locations and that a noise barrier to Castlereagh Road is both unnecessary and ineffective in reducing the noise levels.

5.6 Heritage

The proposed subdivision pattern has taken into consideration the heritage significance of the development site. The applicant is currently meeting with the Office of Environment and Heritage to discuss the impact of the proposal on the items listed on the State Heritage Register.

The limited works proposed under this application will not result in the disturbance or damage to any items of European or indigenous heritage. A further Heritage Impact Statement will be submitted to Council shortly to confirm this view.

5.7 Flora and Fauna

The Flora and Fauna Assessment, prepared by PLDC and appended at **Appendix K**, confirms that the development site does not currently provide habitat for any listed threatened species. The land is generally barren, given the history of quarrying uses on the site. The proposed development will not generate any measurable impact on local flora and fauna within or surrounding the site.

5.8 Flooding

5.8.1 Flood Affection

In 2012, a detailed Water Management Plan was commissioned for the Penrith Lakes Site in accordance with conditions of consent for DA4 for rehabilitation works. The Water Management Plan 2012 (WMP 2012) scheme incorporated flood infrastructure, flooding behaviour assessment and flood benefits and impacts both internal and external to the Penrith Lakes Site. Both the WMP 2012 and the associated Penrith Lakes Scheme: Flood Infrastructure Concept Design 2012 were endorsed by the Director-General of the DP&I in November 2013.

The WMP 2012 analysed the Flood Planning Level (FPL) resultant of the completion of the Penrith Lakes Scheme and found a reduction in the 100yr and 200yr ARI both within the site and in surrounding localities. The Flood Planning Level Statement prepared by Cardo and presented at **Appendix E**, confirms that under the endorsed WMP 2012, the appropriate FPL across superlot 4 is 100yr ARI + 0.5m, consistent with the PDCP 2006 which equates to 22.2AHD across the development site.

The Flood Impact Statement, prepared by Cardo and appended at **Appendix F**, confirms that the current rehabilitation works being completed in accordance with DAs1-4 will create the terrain of superlot 4 above 22.2AHD, reflected in the WMP 2012. Therefore all allotments created under the proposed subdivision, and associated road and drainage works, will be completed above the FPL. Furthermore, any future development on the site will be carried out above the 100yr ARI.

5.8.2 Flood Evacuation

The Flood Evacuation Statement, prepared by J Wyndham Prince and appended at **Appendix D** confirms that the proposed subdivision would be evacuated in the event of flooding, in accordance with the *SES Hawkesbury Nepean Flood Emergency Sub Plan 2005*, toward the Northern Road. The primary recommended flood evacuation route is reproduced in **Figure 11**. This statement confirms that if the proposed development was developed for residential purposes at a future date, the traffic generated by 138 allotments, approximately 250 vehicles, would be

sufficiently accommodated by the existing road network in the event of a flood evacuation event. This statement provides that:

“The expect warning time of seven (7) hour would suggest that this limited number of vehicles would have ample time to joining any existing traffic on Castlereagh Road and be safely evacuated for the Penrith Lake area prior to flood water inundating the proposed development.”

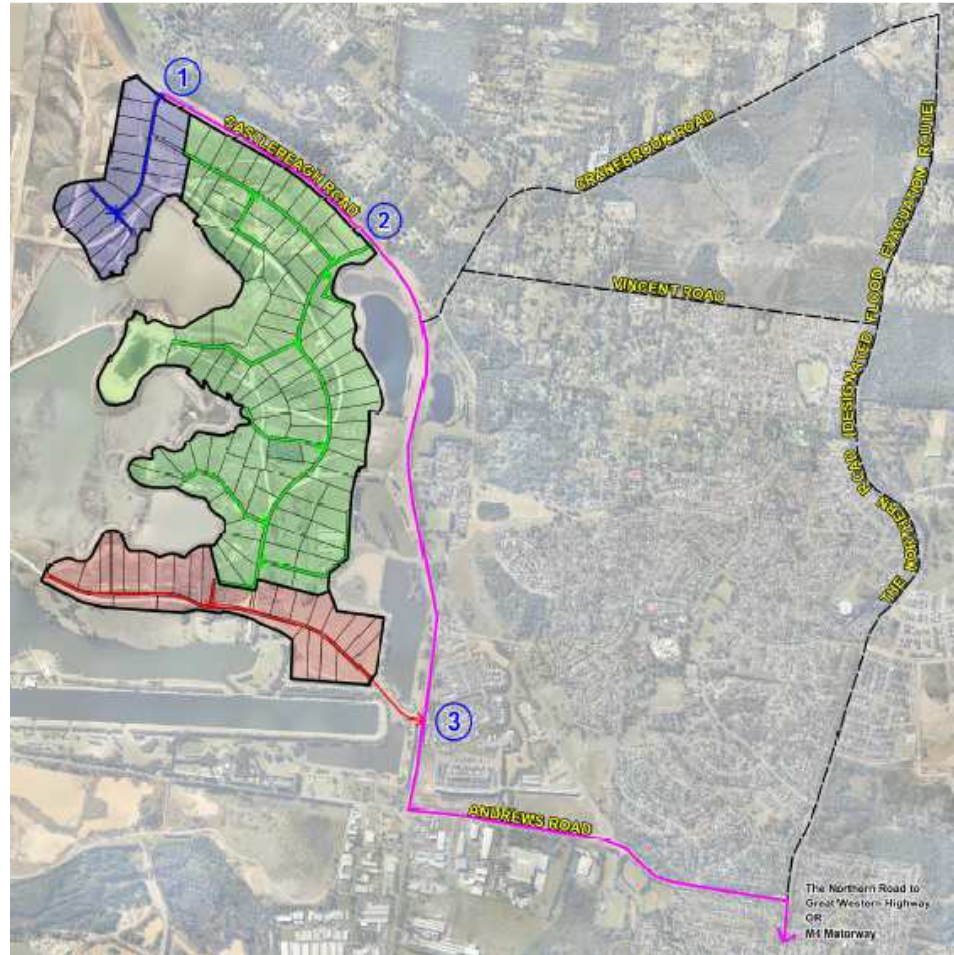


Figure 11 – Recommended primary flood evacuation route

Source: Reproduced from **Appendix D**

5.9 Geotechnical Impacts

The landform creation on the Penrith Lakes Site to date has been carried out in accordance with DAs 1-4 and generally aligns to that set out in the Penrith Lakes SEPP Structure Plan. The Geotechnical Report, prepared by Coffey and tabled at **Appendix G** details that the landform created, and in the process of being created, under DAs 1-4 have been designed to a sufficient standard to accommodate future urban development including the provision of roads and other services, as well as the construction of dwellings.

The Geotechnical Report confirms that the site is suitable for the proposed development once all extraction and rehabilitation works are complete in accordance with DAs 1-4. No further earthworks are required to make the site suitable for the proposed development.

5.10 Stormwater

The proposed road network has generally been designed to follow ridgelines within the development site. Stormwater will shed onto adjoining lots before discharging into the lakes system. The Stormwater Report prepared by J. Wyndham Prince and tabled at **Appendix M** provides that given the surface area of the proposed allotments, stormwater runoff will be sufficiently filtered by natural process before entering the lakes system.

Where stormwater drains onto road surfaces, the proposed drainage system has been designed to capture runoff into a table drain system for primary treatment.

The Stormwater Report (see **Appendix M**) provides modelling of pollution control measures to ensure that the water quality targets of both PLDC and the Department of Environment, Climate Change and Water's *"Managing Urban Stormwater – Environmental Targets / Treatment Techniques"* are met.

5.11 Bushfire Prone Land

The Bushfire Hazard Assessment Report prepared and submitted with Stage 1 confirmed that land within superlot 4 was not classified as bushfire prone land as presented in **Figure 12** below.

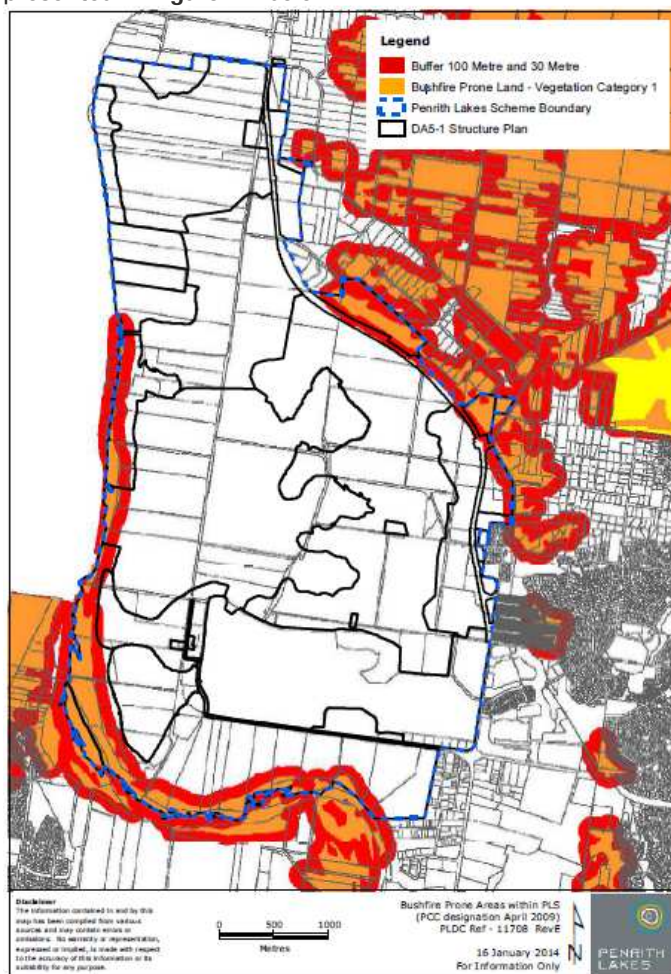


Figure 12 – Excerpt from Stage 1 DA Bushfire Hazard Assessment Report.

5.12 Servicing

The Infrastructure Report prepared by J. Wyndham Prince Pty Ltd, confirms that the proposed subdivision can be adequately serviced with electricity, water and sewer. This report has been tabled at **Appendix L**.

5.13 Construction Impacts

The road and drainage works will generate noise and dust impacts associated with construction. A Construction Specification report has been prepared by PLDC to implement sufficient minimisation and mitigation measures and detailing on site management processes. This report has been tabled at **Appendix N**. All construction works will be carried out in accordance with this plan of management.

5.14 Social and Economic Impacts

The proposed subdivision and associated works is not expected to generate any measurable social impact on the surrounding local community. The proposed road network will allow public access through proposed superlot 4 and future public access to lakeside open space. It is also expected that the proposed development will generate local employment during the construction process.

5.15 Site Suitability

The proposed 2 hectare subdivision of proposed superlot 4 is considered suitable use for the development site as the land generally accords with land identified as 'future urban' under the Penrith Lakes SEPP. The 2 hectare subdivision represents the highest intensity of subdivision permissible under the current local planning controls. Nothing in the proposed subdivision layout, precludes the intensification of urban land uses should the planning controls for the site be amended at a future date. Rehabilitation works currently being carried out on the development site in accordance with DAs 1-4, will render the land suitable for future urban development, creating landforms that will meet the relevant Australian Standards for dwelling houses and the site, once rehabilitated will not create any contamination risk to future urban development. Therefore, the development site is considered suitable for the proposed development.

6.0 Conclusion

This application is submitted to Penrith City Council as Stage 2 of a Staged DA (DA14/0151) for the subdivision of the Penrith Lakes Site to facilitate the delivery of the Penrith Lakes Scheme.

The application seeks to further subdivide proposed superlot 4 within the Stage 1 subdivision into allotments no less than 2 hectares in area that have the potential to facilitate urban development subject to further consent. This DA also seeks consent for the construction of road and drainage networks to service the subdivision. This application represents the initial steps in a gradual transition from extractive and quarrying uses to future urban development within the Penrith Lakes Site in accordance with the Penrith Lakes SEPP and associated Structure Plan.

The Stage 2 proposal contributes to further the implementation of the Penrith Lakes Scheme, conforming with the key environmental planning instrument – the SEPP (Penrith Lakes Scheme) 1989 and associated Structure Plan – and enables the implementation of the Penrith Lakes Scheme in accordance with the cooperative venture between the PLDC and the NSW Government in accordance with the 1987 Deed of Agreement. The proposal is consistent and compliant with the relevant provisions of the environmental planning instruments applying to the development site and is generally consistent to the applicable development control plans.

This application does not generate any significant environmental impacts and is considered to be in the public interest as it facilitates the orderly return of public recreation areas within the Penrith LGA to public ownership works towards the delivery of the Penrith Lakes Scheme as envisaged by the Penrith Lakes SEPP.

In light of the considerations prescribed under Section 79C of the EP&A Act, we respectfully request that Council grant approval to the proposed development.