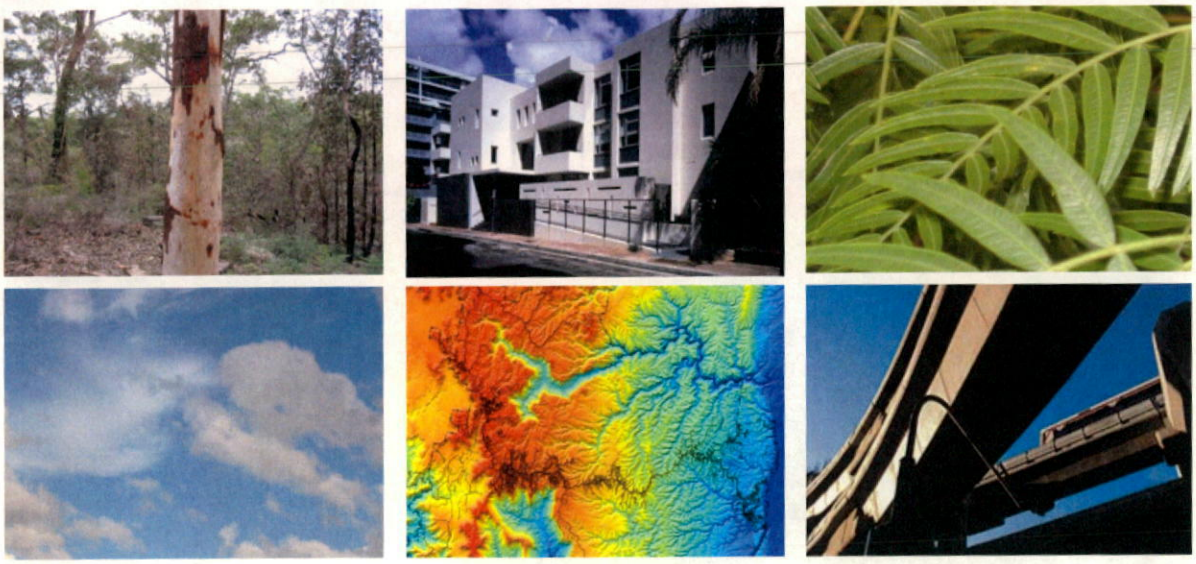


cityscapeplanning+projects

# BUSHFIRE HAZARD ASSESSMENT

## PROPOSED STAGED SUBDIVISION OF PENRITH LAKES SCHEME

DA No: 5 – STAGE 1

**FEBRUARY 2014**

PREPARED BY:

**cityscape planning + projects**

abn: 37 089 650 386

phone: 4739 3374
fax: 4739 3408
mobile: 0408 866913
email: cityscape@cityscape.net.au
www.cityscape.net.au
post: PO Box 127
Glenbrook NSW 2773

DOCUMENT CONTROL

| Version | Date | Prepared By: | Authorised |
|---|---|---|---|
| Draft | 21/11/13 | Vince Hardy | |
| Draft | 16/12/13 | Vince Hardy | |
| Final | 30/01/14 | Vince Hardy | |

CPP
CERTIFIED PRACTISING PLANNER



DISCLAIMER

This report is provided to accompany a Development Application to be lodged on the subject land and is to be used for that purpose solely and for the client exclusively. No liability is extended for any other use or to any other party. Whilst the report is derived in part from our knowledge and expertise, it is based on the conditions prevailing at the time of the Report and upon the information provided by the client.

# TABLE OF CONTENTS

# 1.0 INTRODUCTION

This report represents a Bushfire Assessment to accompany a Development Application for the proposed subdivision of the Penrith Lake Scheme.

The report and assessment has been undertaken in a manner consistent with that identified in the relevant sections of ***Planning for Bushfire protection 2006***, and has been compiled through research, discussions with Council officers and on-site inspections.

# 2.0 SUBJECT SITE

## 2.1 LOCATION AND CONTEXT

The Subject site is a large landholding located at the western edge of the Sydney basin, at the foot of the Blue Mountains and on the eastern floodplain of the Nepean River.

It is located 3km to the north of the Penrith CBD and rail station and enjoys vehicle access via the M4 Motorway and Castlereagh Rd.

The location of the site is demonstrated at Figure 1.

**FIGURE 1: LOCATION OF SITE**


cityscapeplanning+projects

## 2.2 AREA + DIMENSIONS

The site has a total area of 1,935 hectares with a length of 6.5km along its north-south axis and a width of 3.5km. Figure 2 provides an aerial photo that defines the extent of the site.

## 2.3 OWNERSHIP + LEGAL DESCRIPTION

Site ownership is dominated by Penrith Lakes Development Corporation (PLDC), however, there are also sections of the site that are owned by the NSW Government and some very small private landholdings.

## 2.4 PREVIOUS + EXISTING LAND-USE

The site has previously and continues to undergo extensive quarrying. The quarries have operated for more than 50 years, representing Australia's largest supplier of sand and gravel to the construction industry. Some 200 million tonnes have been extracted from the site. The remaining supply of 20 million tonnes is expected to be exhausted by mid 2015.

Southern sections of the site have already undergone rehabilitation in accordance with the Deed of Agreement. This includes the development of the Sydney International Regatta Centre.

Figure 2 demonstrates the extent of those parts of the site have undergone rehabilitation and continue to be quarried.

## FIGURE 2: AERIAL IMAGE OF SITE

## 2.5 LONG TERM DEVELOPMENT OUTCOMES

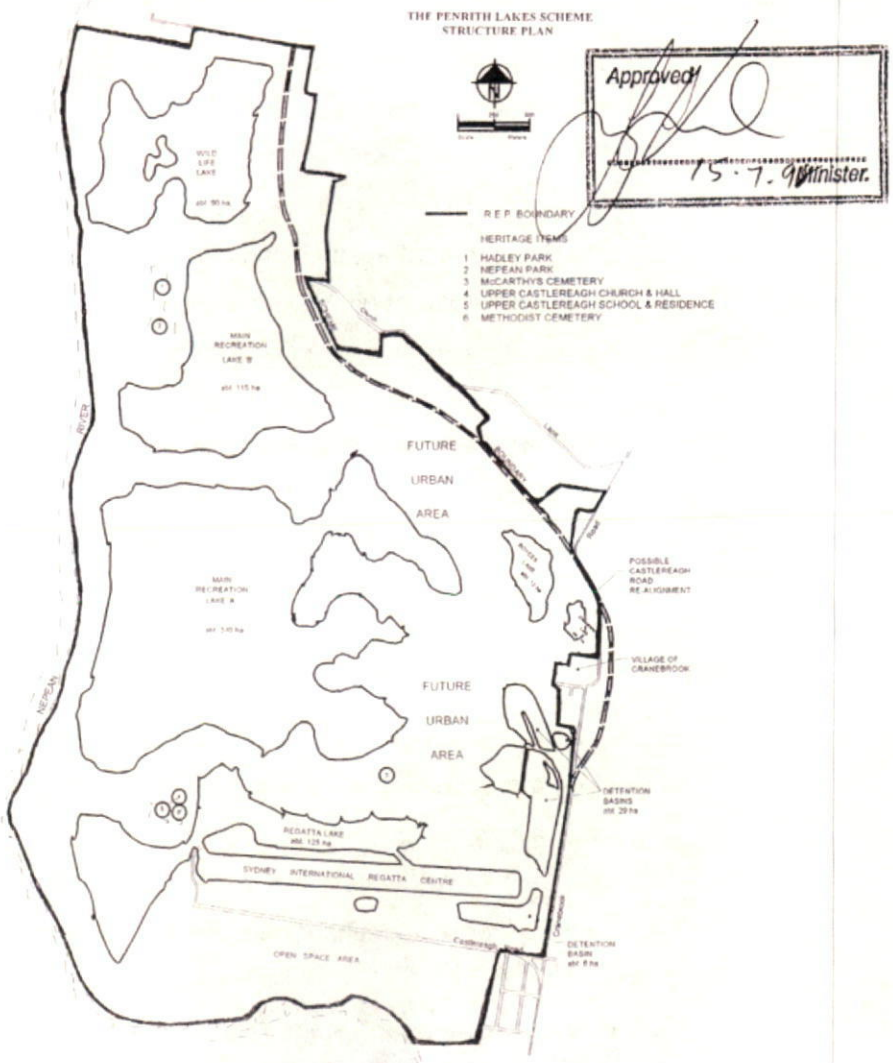
Strategic planning outcomes have always identified the creation of large lakes and parkland, to be dedicated to the NSW Government, and significant urban development of the site post completion of the quarrying activities.

The NSW Government established the Office of Penrith Lakes (OPL) in November 2011 reporting to the Minister for Sport and Recreation. The OPL will manage the NSW Government's interests in completion of the Penrith Lakes Scheme by PLDC and the staged transfer of land to Government ownership.

A key priority for OPL is the development of a masterplan that will facilitate and inform the long term future land uses of the site including the vision for the parklands and potential urban development.

A copy of the relevant SEPP Structure Plan is provided at Figure 3 and gives a good indication of likely future land use outcome for the site.

## FIGURE 3: SEPP STRUCTURE PLAN




DEPARTMENT OF URBAN AFFAIRS AND PLANNING
ENVIRONMENTAL PLANNING & ASSESSMENT ACT, 1979
SYDNEY REGIONAL ENVIRONMENTAL PLAN No. 11
(PENRITH LAKES)
AMENDMENT No. 4

| | | | |
|---|---|---|---|
| L.G.A. PARISH OF | PENRITH CASTLEREAGH | LOCALITY COUNTY OF | CASTLEREAGH CUMBERLAND |
| DRAWN BY | S. MANTELLA-GALLI DATE 8 JULY 1998 | NOTATIONS | |
| CHECKED BY | MANAGER CARTOGRAPHIC | Amendment No. 4 | |
| | PLANNING OFFICER | This map is a reduced scale interpretation of the map referred to in the S.R.E.P. No.11 (Penrith Lakes) | |
| DEPARTMENT FILE No. | P97/00236 Pt 1 | | |
| GOVERNMENT GAZETTE OF | | CATALOGUE No | 0 5 0 9 9 9 8 4 2 4 2 |

# 3.0 PROPOSED DEVELOPMENT

The development application seeks Council consent pursuant to S83B of the *Environmental Planning and & Assessment Act, 1979,* to the staged subdivision of the subject site.

The first stage of subdivision seeks to provide twenty three (23) lots that reflect both the SEPP (Penrith Lakes) 1989 Structure Plan and lands to be dedicated under the Deed of Agreement with the NSW Government. A representation of the proposed plan of subdivision is provided at Figure 4.

This development is a procedural subdivision only and is not likely to generate additional development of the site. Indeed the development rationalises an existing lot fragmentation that provides 211 lots each with their own development potential to 23 lots of which only 12 will have further residential or rural-residential development potential.

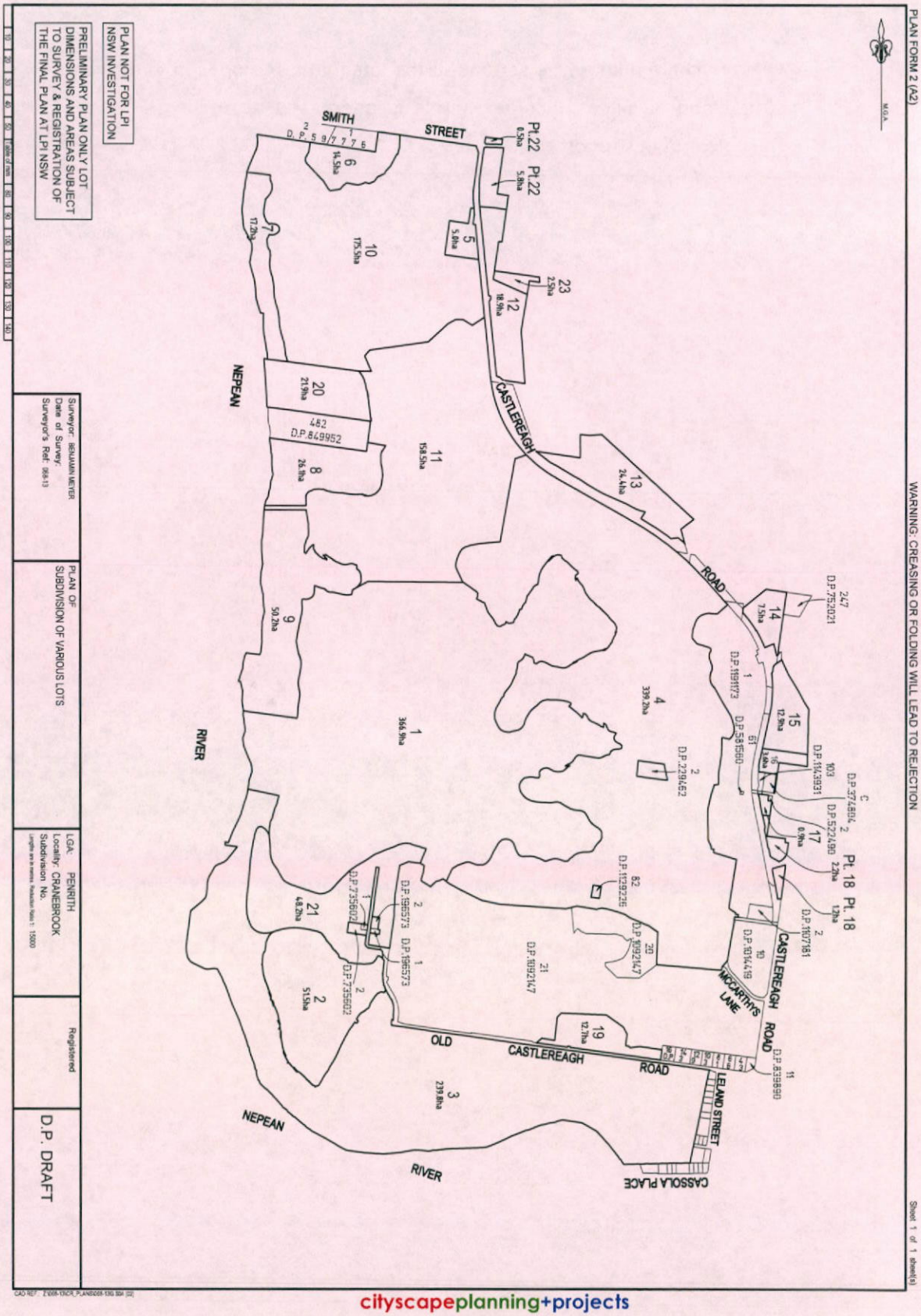
Rather, subsequent stages of development will seek to subdivide identified lots future urban development, and will be accompanied by bushfire assessment reports at that time.

Nevertheless, regardless of that future planning and development process, the subject site has a rural zoning and therefore identified lots could be lawfully used for rural residential purposes and therefore

requires the *NSW Rural Fire Service* to issue a bushfire authority pursuant to S110B of the *Rural Fires Act 1977.*

No bushfire authority is sought for the lots that are proposed to deliver parkland or lakes outcomes. This is addressed at Section 4.1 and Table 1 of this report.

## FIGURE 4: PROPOSED SUBDIVISION



# 4.0 SITE ASSESSMENT

## 4.1 THE COUNCIL BUSHFIRE MAP

The subject site is identified as bushfire prone on the relevant bushfire prone land map held at the Penrith City Council offices.

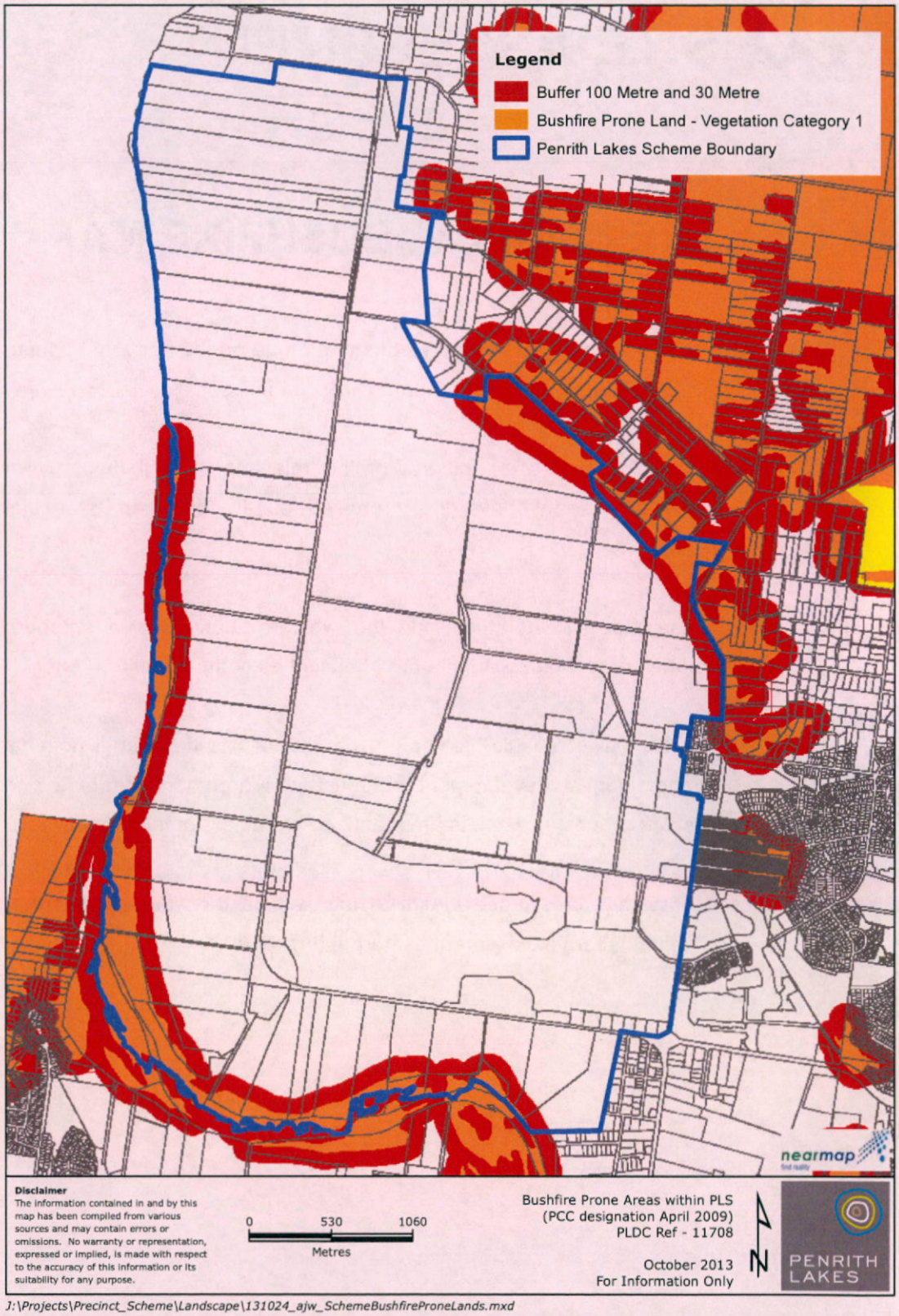
Figure 5 provides an excerpt of the relevant Council map, whilst Figure 6 also overlays the proposed subdivision plan over that bushfire map.

These maps reveal that only the western, eastern and southern perimeters of the subject site are identified as being bushfire prone.

The plan also reveals that only a handful of lots have both nominal rural/residential development potential and are identified as being bushfire prone. These lots are identified at Table 2 of this report.

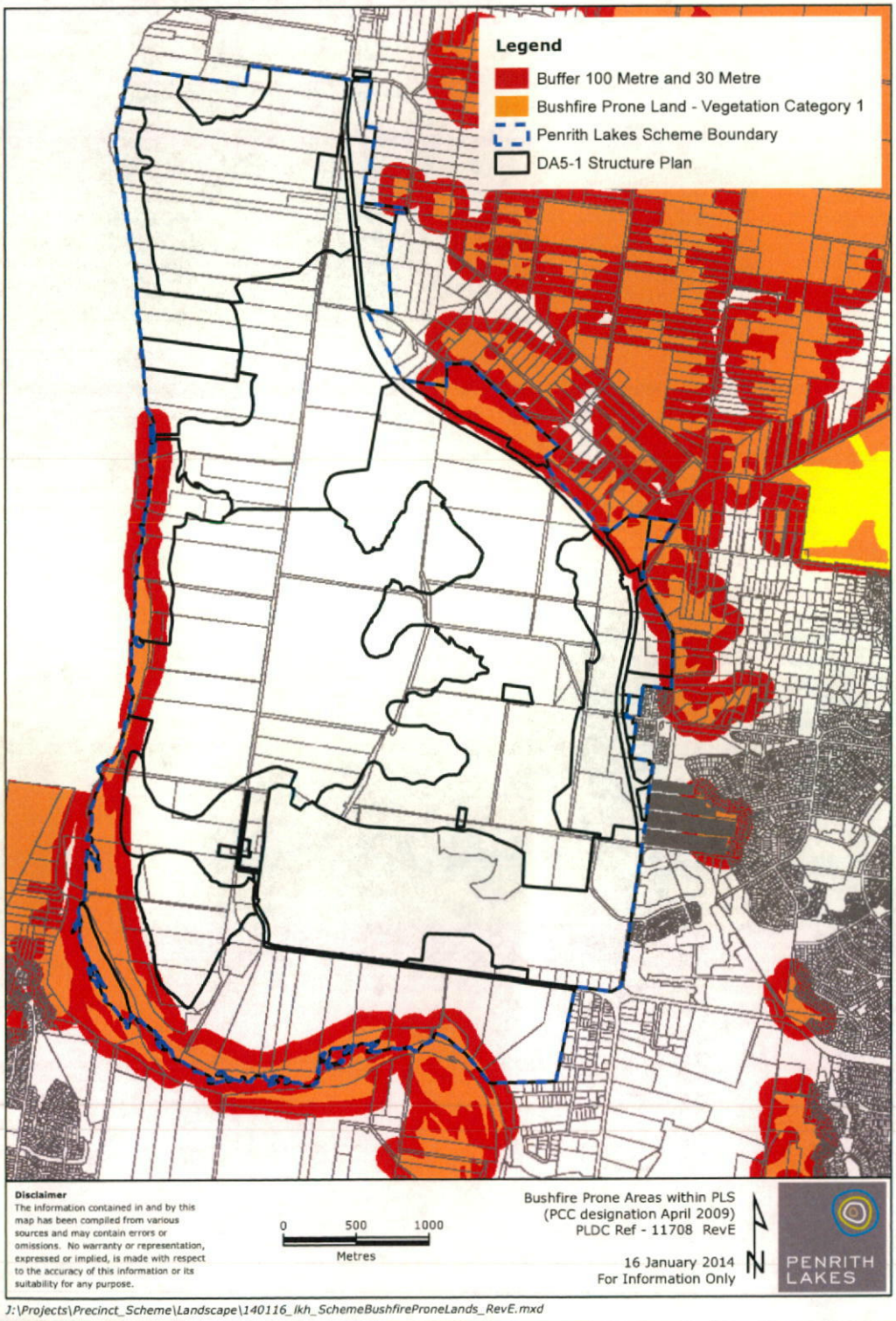
Accordingly, only these identified lots will be the subject of further bushfire hazard assessment as part of this report.

FIG 5: **COUNCIL BUSHFIRE MAP**




*J:\Projects\Precinct_Scheme\Landscape\131024_ajw_SchemeBushfireProneLands.mxd*

FIG 6: **COUNCIL BUSHFIRE MAP WITH PROPOSED SUBDIVISION OVERLAY**




*J:\Projects\Precinct_Scheme\Landscape\140116_lkh_SchemeBushfireProneLands_RevE.mxd*

TABLE 1: Bushfire Prone Land

| Proposed Lot | Area ($m^2$) | Bushfire Prone | Proposed Future Use of Lot | Bushfire Assessment Required |
|---|---|---|---|---|
| lot 1 | 363ha | Yes | Lake A | No |
| lot 2 | 51ha | Yes | Quarantine Lake | No |
| Lot 3 | 255ha | Yes | Urban | Yes |
| lot 4 | 332ha | No | Urban | No |
| lot 5 | 5ha | No | Landers Inn – Heritage House | No |
| lot 6 | 14ha | No | Urban | No |
| Lot 7 | 19ha | No | Parkland | No |
| Lot 8 | 25ha | Yes | Parkland | No |
| Lot 9 | 39ha | Yes | Parkland | No |
| Lot 10 | 176ha | No | Wildlife Lake | No |
| Lot 11 | 158ha | No | Lake B | No |
| Lot 12 | 19ha | No | Urban | No |
| Lot 13 | 24ha | Yes | Urban | Yes |
| Lot 14 | 8ha | Yes | Urban | Yes |
| Lot 15 | 13ha | Yes | Lake | No |
| Lot 16 | 3.6ha | Yes | Urban | Yes |
| Lot 17 | 1ha | No | Urban | No |
| Lot 18 | 3.4ha | No | Stilling Basin | No |
| Lot 19 | 13ha | No | Urban | No |
| Lot 20 | 22ha | No | Hadley Park – Heritage | No |
| Lot 21 | 51ha | Yes | Urban | Yes |
| Lot 22 | 6ha | No | Urban | No |
| Lot 23 | 2.5ha | Yes | Urban | Yes |

# 4.2 VEGETATION

## 4.2.1 VEGETATION TYPES

The broader site has been highly modified by quarrying activities and other forms of development over many decades. Nevertheless, the western, southern and eastern perimeters of the site do accommodate larger contiguous vegetation units.

Study of the site by *Biosis Research* in 2007 has identified these perimeter areas containing two native plant communities. i.e. Cumberland Plain Woodland and River-flat Eucalypt Forest. A copy of that report is provided at Annexure A.

The study stated that the River-flat Eucalypt Forest was restricted to the banks of the Nepean River and was in poor condition, with weed species dominating each structural layer and the canopy reduced to scattered trees in many areas.

Cumberland Plain Woodland was recorded in the escarpment area and a few scattered locations across the study area. The Cumberland Plain Woodland along the escarpment area was considered to be in moderate condition, with a relatively intact tree canopy and weed management reducing the dominance of exotic species.

This study is consistent with mapping undertaken by NSW National Parks and Wildlife Service in 2001. An extract of that mapping is provided at Figure 7. Photos of these vegetation units are provided at Figure 8-9.

## FIG 7: NPWS VEGETATION MAP

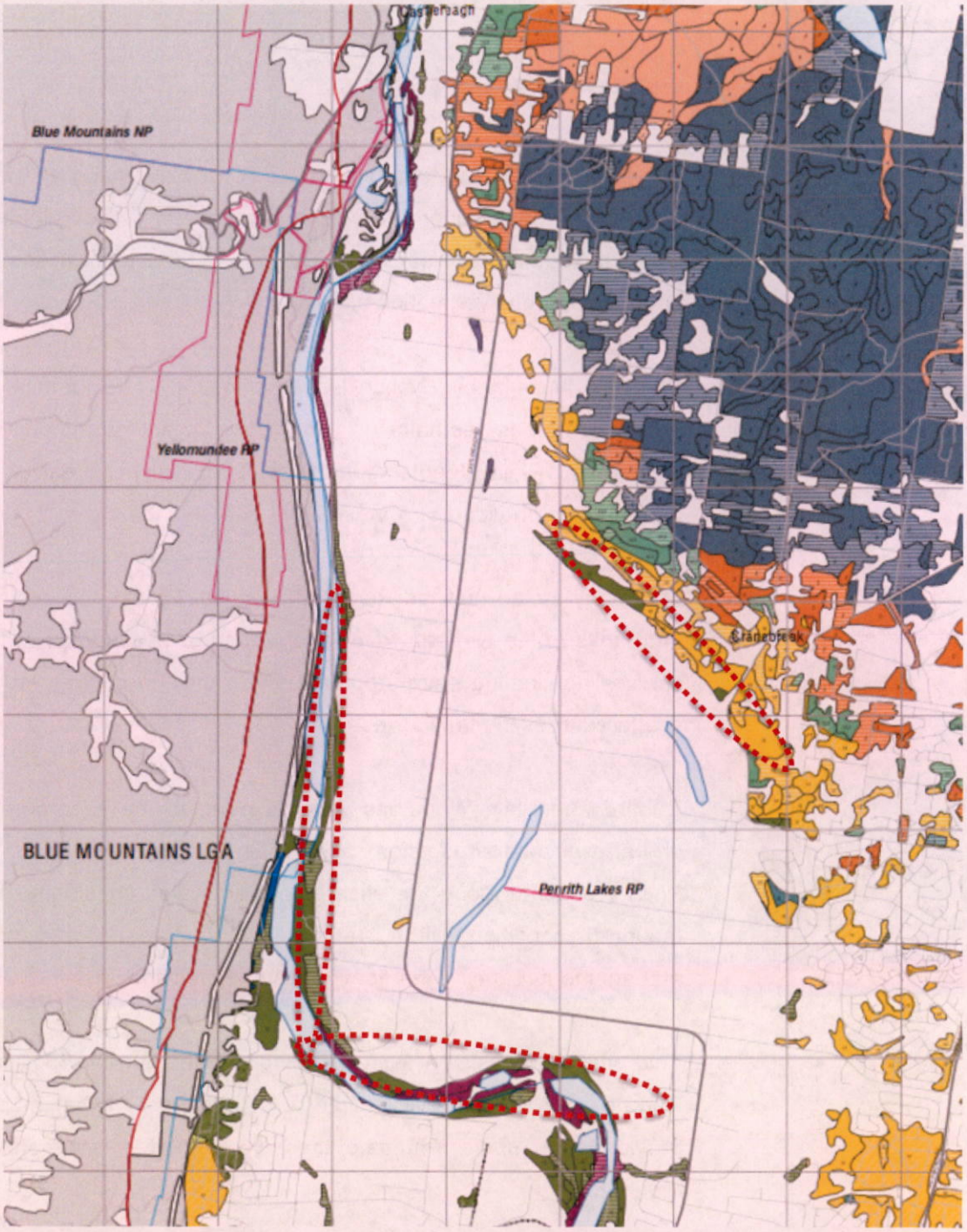


**FIG 8:** VEGETATION ON EASTERN ESCARPMENT

**FIG 9:** VEGETATION ON NEPEAN RIVER BANK CORRIDOR

## 4.2.2 VEGETATION DISTANCES

*Planning for Bushfire Protection 2006* requires that an assessment be made of the different vegetation communities within 140m of the subject site. Many of the sites are large and constrained by flood and threatened vegetation units so unconstrained building envelope areas are identified for each of the relevant bushfire prone lots identified at Table 1.

The 140m radius is therefore plotted around that building envelope area on the aerial photo as demonstrated at Figures 20-25.

With hot summer winds from the north and west likely to be the precursor to bushfire conditions, it is from these directions that the path of future bushfire attack is most likely to emerge. This path is also plotted at Figures 20-25.

## 4.2.3 VEGETATION CLASSIFICATION

**EASTERN ESCARPMENT**

Analysis of this vegetation reveals that the eastern escarpment area provides an open layer (>30% foliage cover) of eucalypt trees typically 15-35m high together with diverse ground covers and a sparsely distributed shrub layer.

Pursuant to the classifications provides as part of *Planning for Bushfire Protection 2006* this vegetation can be classified as Grassy Woodlands (woodlands), which has an assessed fuel load of 20-25 tonnes per ha.

For the purposes of this assessment this vegetation type is identified as the predominant class for those relevant lots.

**NEPEAN RIVER BANK**

Analysis of the vegetation adjacent to the Nepean River at the southern and eastern sections of the site reveals that it provides occasional tall trees and shrubs and heavy weed cover. The *Biosis Research* study states that this vegetation presents the structure of River-flat Eucalypt forest, albeit high degraded.

However, rehabilitation and restoration work to be undertaken in the future by PLDC is likely to see this vegetation re-established at this location. Accordingly, for the purposes of this assessment this vegetation type is identified as the predominant class for those relevant lots.

Pursuant to the classifications provides as part of *Planning For Bushfire Protection 2006* this vegetation can be classified as *Open Forest* .

## 4.3 SLOPE

The broader site provides a floodplain type environment that has limited relief, however the areas that accommodate the bushfire lands are typically associated with steeper river-bank and escarpment lands.

Slope profiles of each of the relevant development lots are provided at Figures 10-15 and demonstrate the 'effective slope' for each site.

The effective slope is that slope within the hazard, which most significantly affects fire behaviour of the site having regard to the vegetation class found.

Detailed analysis of the sites effective slopes is also provided at the Table to Figures 20-25.

## 4.4 FIRE WEATHER AREA

The site is located within the Penrith LGA and therefore is determined as having a Fire Danger Index of 100.

## 4.5 REQUIRED ASSET PROTECTION ZONES

When this vegetation classification is considered in conjunction with the identified slope and FDI rating then Table A2.4 to *Planning for Bushfire Protection* identifies the relevant minimum Asset Protection Zone (APZ) in all directions. This is analysed and the required APZ for each of the relevant lot is identified at the tables to Figure 20-25.

FIGURE 10: **PROPOSED LOT 3 - SLOPE + TOPOGRAPHY ANALYSIS**

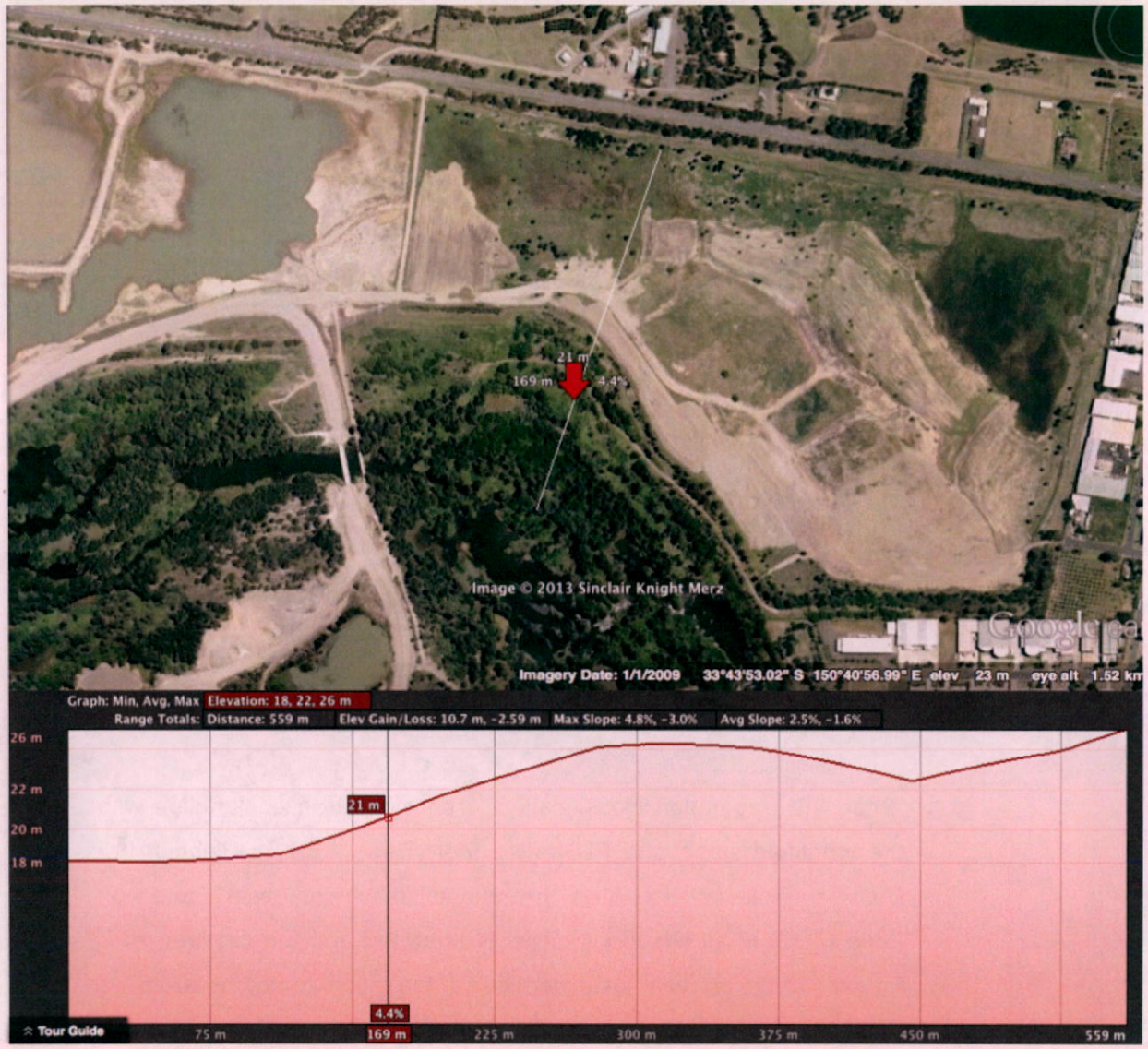


FIGURE 11: **PROPOSED LOT 13 - SLOPE + TOPOGRAPHY ANALYSIS**

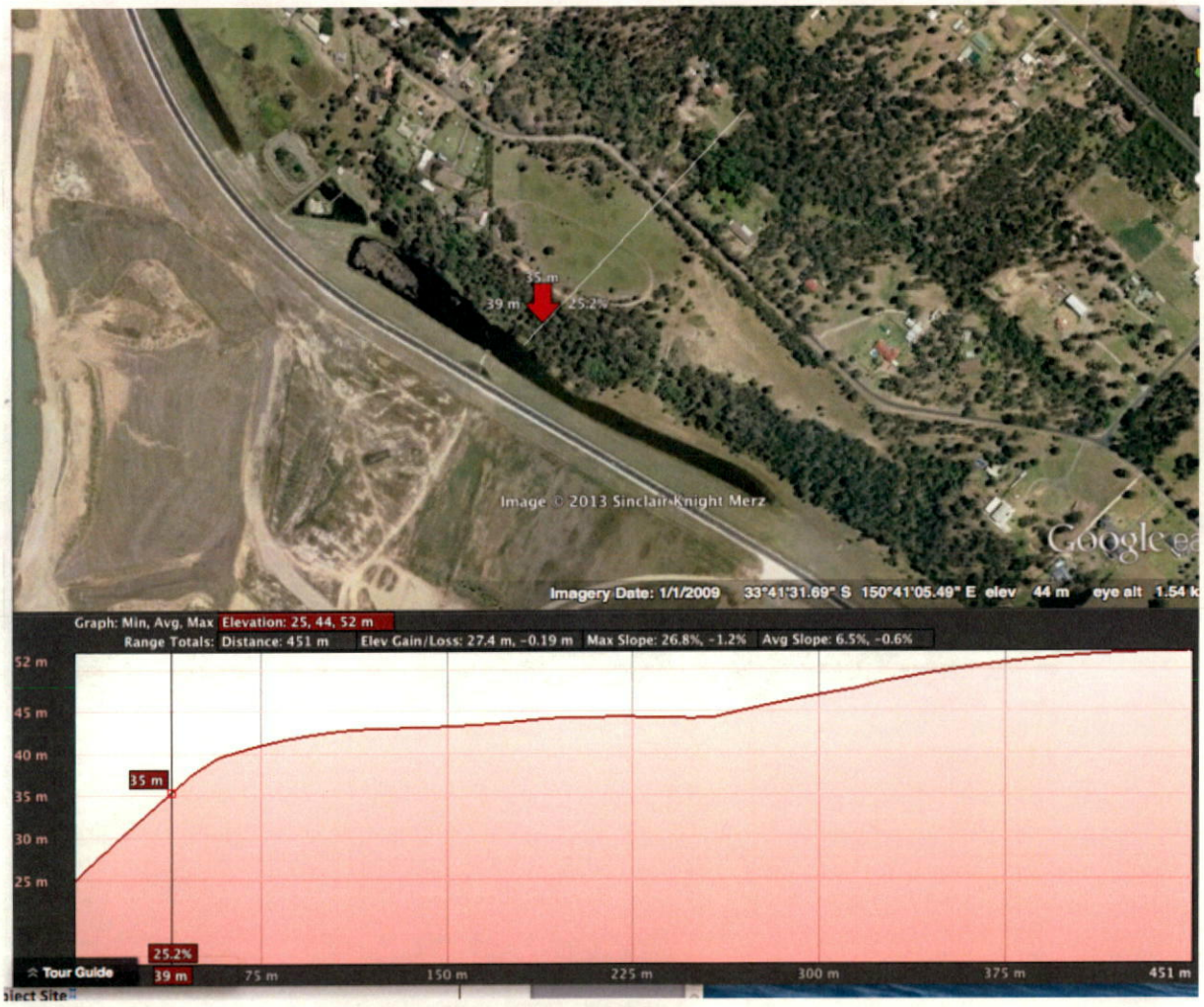


FIGURE 12: **PROPOSED LOT 14 - SLOPE + TOPOGRAPHY ANALYSIS**

FIGURE 13: **PROPOSED LOT 16 - SLOPE + TOPOGRAPHY ANALYSIS**

FIGURE 14: **PROPOSED LOT 21 - SLOPE + TOPOGRAPHY ANALYSIS**

FIGURE 15: **PROPOSED LOT 23 - SLOPE + TOPOGRAPHY ANALYSIS**

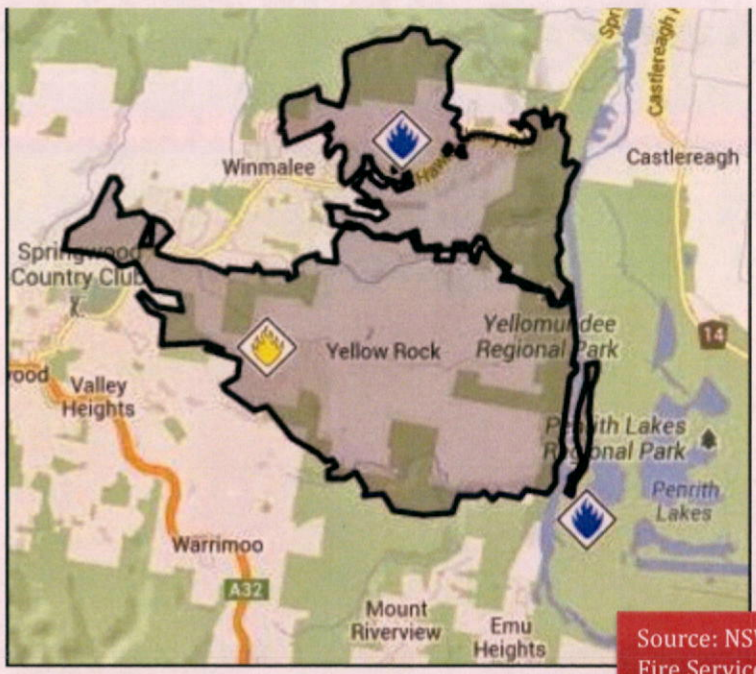
# 6.0 RECENT FIRE EVENT

The Penrith lakes Scheme was impacted upon by recent fire events in Western Sydney and The Blue Mountains and this provides further relevant contextual information to the subject development.

On 17, October 2013 a bushfire event that initiated in the Linksview Rd, Springwood, travelled east through Winmalee and Yellow Rock, before moving down the eastern escarpment of the Blue Mountains and ultimately jumping across the Nepean River and burning vegetation on the eastern bank of the Nepean River, within the Penrith Lakes Scheme. The extent of that fire is evident at Figures 16-17.

It is estimated approximately 35ha of the Lakes Scheme site was impacted by this fire event. The area impacted is shown at Figure 16-17 with photos of the area impacted provided at Figures 18-19. Importantly, this fire event is over 2.5km from any of the new bushfire prone building envelopes identified as part of this assessment.

FIGURE 16: **NSW RFS MAP OF RECENT FIRE EVENT**




Source: NSW Rural Fire Service

FIGURE 17: **AREA IMPACTED BY RECENT FIRE EVENT**

FIGURE 18: **PHOTOS OF AREA IMPACTED BY RECENT FIRE EVENT**

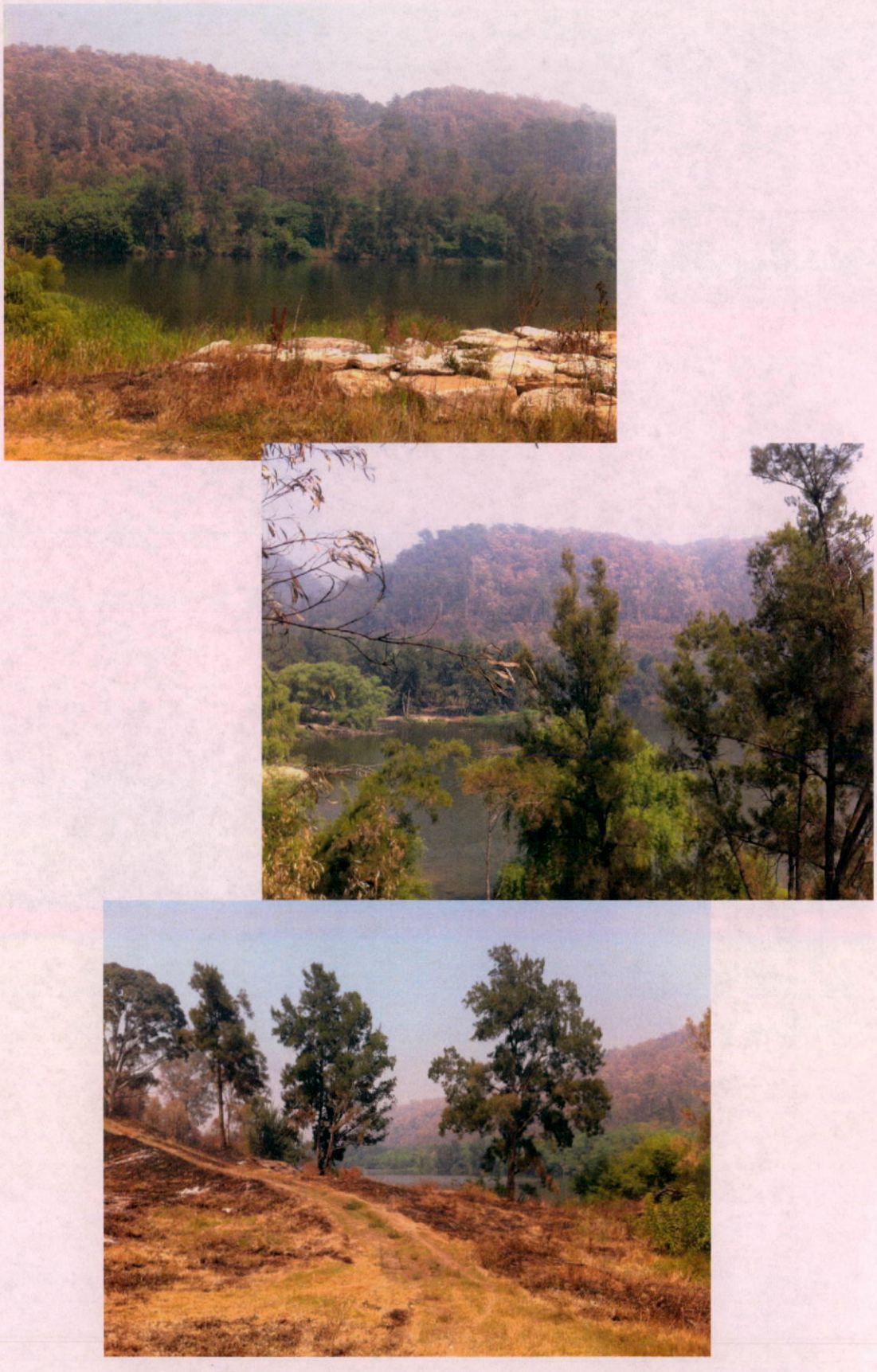


FIGURE 19: **AREA IMPACTED BY RECENT FIRE EVENT**

# 7.0 INDIVIDUAL LOT ASSESSMENT

# 7.1 PROPOSED LOT 3

FIGURE 20: **AERIAL PHOTO OF SITE & SURROUNDS**

| Aspect | Vegetation | | Effective Slope | | | REQUIRED APZ |
|---|---|---|---|---|---|---|
| | Type | Distance (m) | Angle | | Slope | |
| **South** | Managed properties | 0-140 | 2.5% | $1.4^0$ | Upslope | **Nil** |
| **West** | Managed properties | 0-140 | 2% | $1.1^0$ | Upslope | **Nil** |
| **North** | Managed properties | 0-140 | 3% | $1.7^0$ | Upslope | **Nil** |
| **East** | Managed properties | 0-140 | 1.5% | $0.9^0$ | Downslope | **Nil** |
| | | **Proposed Building Envelope** | | | | |
| | | **140 metre radius of proposed dwelling** | | | | |
| | | **Prevailing winds in typical bushfire Conditions** | | | | |

# 7.2 PROPOSED LOT 13

FIGURE 21: **AERIAL PHOTO OF SITE & SURROUNDS**

| Aspect | Vegetation | | Effective Slope | | | REQUIRED APZ |
|---|---|---|---|---|---|---|
| | Type | Distance (m) | Angle | | Slope | |
| South | Managed properties | 0-110 | 1.8% | $1^0$ | Downslope | Nil |
| South | Woodland | 110-140 | 9.5% | $5.4^0$ | Downslope | 15m |
| West | Managed properties | 0-140 | 3.2% | $1.8^0$ | Upslope | Nil |
| North | Managed properties | 0-140 | 6.5% | $3.7^0$ | Upslope | Nil |
| East | Managed properties | 0-140 | 1.5% | $0.9^0$ | Upslope | Nil |
| | | **Subject Site** | | | | |
| | | **140 metre radius of proposed dwelling** | | | | |
| | | **Prevailing winds in typical bushfire Conditions** | | | | |

# 7.3 PROPOSED LOT 14

FIGURE 22: **AERIAL PHOTO OF SITE & SURROUNDS**

| Aspect | Vegetation | Effective Slope | | | | REQUIRED APZ |
|---|---|---|---|---|---|---|
| | Type | Distance (m) | Angle | | Slope | |
| South | Managed properties | 0-50 | 1% | $0.6^0$ | Upslope | Nil |
| South | Woodland | 50-110 | 9% | $5.1^0$ | Upslope | 20m |
| South | Woodland | 110-140 | 23% | $12.9^0$ | Downslope | 25m |
| West | Managed properties | 0-140 | 10% | $5.7^0$ | Upslope | Nil |
| North | Woodland | 0-140 | 6.5% | $3.7^0$ | Upslope | 10m |
| East | Managed properties | 0-40 | 12% | $6.8^0$ | Downslope | Nil |
| East | Woodland | 40-140 | 8.5% | $4.9^0$ | Downslope | 15m |
| | | **Subject Site** | | | | |
| | | **140 metre radius of proposed dwelling** | | | | |
| | | **Prevailing winds in typical bushfire Conditions** | | | | |

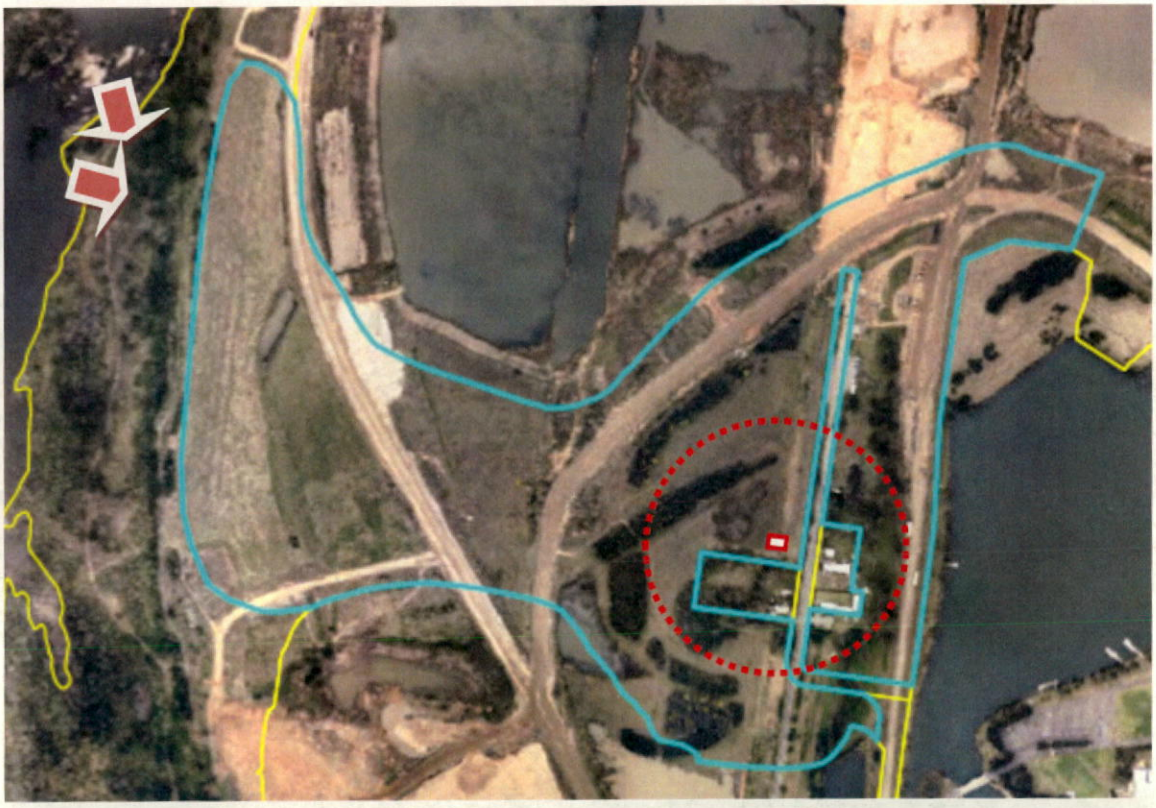
# 7.4 PROPOSED LOT 16

FIGURE 23: **AERIAL PHOTO OF SITE & SURROUNDS**

| Aspect | Vegetation | | Effective Slope | | | REQUIRED APZ |
|---|---|---|---|---|---|---|
| | Type | Distance (m) | Angle | | Slope | |
| South | Woodland | 0-75 | 0.3% | $0.2^0$ | Downslope | 15m |
| South | Managed properties | 75-140 | 2.5% | $1.4^0$ | Downslope | Nil |
| West | Managed properties | 0-140 | 3.5% | $2^0$ | Downslope | Nil |
| North | Managed properties | 0-140 | 2.8% | $1.6^0$ | Downslope | NIl |
| East | Managed properties | 0-40 | 10% | $5.7^0$ | Upslope | Nil |
| East | Woodland | 40-100 | 8.5% | $4.9^0$ | Upslope | 10m |
| | | **Subject Site** | | | | |
| | | **140 metre radius of proposed dwelling** | | | | |
| | | **Prevailing winds in typical bushfire Conditions** | | | | |

# 7.5 PROPOSED LOT 21

FIGURE 24: **AERIAL PHOTO OF SITE & SURROUNDS**



| Aspect | Vegetation | Effective Slope | | | | REQUIRED APZ |
|---|---|---|---|---|---|---|
| | Type | Distance (m) | Angle | | Slope | |
| **South** | Managed properties | 0-140 | 2.5% | $1.4^0$ | Upslope | **Nil** |
| **West** | Managed properties | 0-140 | 6.4% | $3.6^0$ | Upslope | **Nil** |
| **North** | Managed properties | 0-140 | 1.5% | $0.9^0$ | Upslope | **Nil** |
| **East** | Managed properties | 0-140 | 1.4% | $0.8^0$ | Downslope | **Nil** |
| | | **Subject Site** | | | | |
| | | **140 metre radius of proposed dwelling** | | | | |
| | | **Prevailing winds in typical bushfire Conditions** | | | | |

# 7.6 PROPOSED LOT 23

FIGURE 25: **AERIAL PHOTO OF SITE & SURROUNDS**


| Aspect | Vegetation | | Effective Slope | | | REQUIRED APZ |
|---|---|---|---|---|---|---|
| | Type | Distance (m) | Angle | | Slope | |
| **South** | Managed properties | 0-140 | 4.8% | $2.7^0$ | Downslope | **Nil** |
| **West** | Managed properties | 0-140 | 7.5% | $4.3^0$ | Downslope | **Nil** |
| **North** | Managed properties | 0-140 | 5.8% | $3.3^0$ | Upslope | **NIl** |
| **East** | Managed properties | 0-140 | 7.5% | $4.3^0$ | Upslope | **Nil** |
| | | **Subject Site** | | | | |
| | | **140 metre radius of proposed dwelling** | | | | |
| | | **Prevailing winds in typical bushfire Conditions** | | | | |

# 8.0 PERFORMANCE BASED CONTROLS

The following assessment is undertaken against Performance Based Controls identified in chapter 4 of *Planning for Bushfire Protection 2006.*

## 8.1 ASSET PROTECTION ZONES (APZ)

***• radiant heat levels at any point on a proposed building will not exceed 29 kW/m2***
***• APZs are managed and maintained to prevent the spread of a fire towards the building.***
***• APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is negated***

Only proposed lots 13,14, and 16 require any APZ to be provided. Each of these lots can all provide a future dwelling opportunity that will readily achieve the required APZ's as identified at the tables to Figures 20-25. The APZ's are demonstrated at Figures 26-29.

This APZ's will:

- Limit the opportunity for a crown fire to impact upon any future dwelling
- Provide a suitably scaled defendable space to prevent the spread of the fire towards the building

- Ensure any future dwelling will be able to achieve a BAL 29 rating under *AS AS3959, 2009 – Construction of Buildings in Bushfire Prone Areas.*

## 8.2 ACCESS

***•firefighters are provided with safe all weather access to structures (thus allowing more efficient use of firefighting resources)***
***•public road widths and design that allow safe access for firefighters while residents are evacuating an area.***
***•the capacity of road surfaces and bridges is sufficient to carry fully loaded firefighting vehicles.***
***•roads that are clearly sign- posted (with easily distinguishable names) and buildings/properties that are clearly numbered.***
***•there is clear access to reticulated water supply***
***•parking does not obstruct the minimum paved width***

The development does not provide any new public roads but instead will rely upon vehicular access from existing roads. In all but one instance these roads are fully sealed. An unsealed road that is represented as the southern extension of Vane St will access only proposed lot 14.

Nevertheless, each road ensures suitable and appropriate vehicular access is provided for vehicles to the proposed lot in the manner as stipulated in the design criteria.

This includes the availability of access for fully loaded fire fighting vehicles and other fire fighting appliances.

FIGURE 26: **PROPOSED LOT 3 APZ**

FIGURE 27: **PROPOSED LOT 13 APZ**

FIGURE 28: **PROPOSED LOT 14 APZ**

FIGURE 29: **PROPOSED LOT 16 APZ**

There are no bridges, slope, curve or other slope access constraints in the vicinity of the site and the roads have a wide verge that allows for easy passing of heavy vehicles road side parking. These roads also provides for emergency egress in the event of a bushfire.

## 8.3 ACCESS (2) – PROPERTY ACCESS

***• access to properties is provided in recognition of the risk to fire fighters and/ or evacuating occupants.***
***• the capacity of road surfaces and bridges is sufficient to carry fully loaded firefighting vehicles.***
***• all weather access is provided.***
***• road widths and design enable safe access for vehicles***

The new lots will enjoy direct vehicular access to existing roads. Any future dwelling will not be located more than 200m from those existing roads and Rd therefore alternative access requirements are not applicable.

## 8.4 ACCESS (3) – FIRE TRAILS

Not relevant as no fire trails are proposed or required as part of the development.

## 8.5 AVAILABILITY OF SERVICES

***Reticulated water supplies***
***• water supplies are easily accessible and located at regular intervals***

Each of the sites enjoys access to reticulated water supply by Sydney Water.

Table 4.2 of *Planning for Bushfire Protection 2006* should be used for determining dedicated static water supply requirements.

This table requires the provision of a 20,000 litre water supply for each of the dwellings. This can be readily provided for all lots as part of any future application for a dwelling.

***Non-reticulated water supply areas***

***• for rural-residential and rural developments ( or settlements) in bush fire prone areas, a water supply reserve dedicated to firefighting purposes is installed and maintained. The supply of water can be an amalgam of minimum quantities for each lot in the subdivision (community titled subdivisions), or held individually on each lot.***

Not relevant.

***Electricity Services***

***• location of electricity services limits the possibility of ignition of surrounding bushland or the fabric of buildings***

***• regular inspection of lines is undertaken to ensure they are not fouled by branches.***

***Gas services***

***• location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings***

Electrical and other energy utility services can be provided from the roadway in accordance with the requirements of *Planning for Bushfire Protection 2006* as part of the service delivery of any approved subdivision.

# 9.0 CONCLUSION

The Subject site is a large landholding located at the western edge of the Sydney basin, at the foot of the Blue Mountains and on the eastern floodplain of the Nepean River.

The first stage of subdivision seeks to provide twenty three (23) lots that reflect both the SEPP (Penrith Lakes) 1989 Structure Plan and lands to be dedicated under the Deed. This development is a procedural subdivision only and is not likely to generate additional development of the site.

Rather, subsequent stages of development will seek to subdivide lots identified lots future urban development, and will be accompanied by bushfire assessment reports at that time.

Nevertheless, regardless of that future planning and development process, the subject site has a rural zoning and therefore identified lots could be lawfully used for rural residential purposes and therefore requires the *NSW Rural Fire Service* to issue a bushfire authority pursuant to S110B of the *Rural Fires Act 1977.*

The analysis undertaken in this report demonstrates that future development of the identified lots will be able to provide the required

Asset Protection Zone, good vehicle access is already readily available and all services are able to be provided in a suitable manner.

As such it is considered that the proposed development is considered to be consistent with *Planning for Bushfire Protection 2006.*