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2 July, 2013

Our ref: 10/14

Your ref: SC1643:13/29299

The General Manager
Kiama Municipal Council
PO BOX 75
KIAMA NSW 2533

Attention: Kim Bray

Dear Sir

RE: CONCEPT PLANNING PROPOSAL – ZONING BOUNDARY ANOMALY LOT 20 DP 1151501, CALIOPE ROAD, KIAMA

I refer to Council's letter dated 21st June 2013 in connection with the above matter.

In response to Council's letter, please find attached a revised "Concept Planning Proposal" report prepared by our firm for this matter. The report has been modified by:

- Referring to the property as 15 Caliope Road; and
- Amending reference throughout the document to the zoning anomaly associated with both the southern and eastern boundaries of the site and seeking to ensure that the entire Lot 20 DP 1151501 is subject to this Planning Proposal process.

As outlined in Council's letter, the other issues raised in Council's letter are matters that would normally be subject to consideration at a future development application stage.

The attached modified report is supplied to Council to enable the continued processing of this matter.

If you require any further information or clarification in connection with this matter please do not hesitate to contact me.

Yours faithfully

Stephen Richardson.

Stephen Richardson
COWMAN STODDART PTY LTD

CONCEPT PLANNING PROPOSAL REPORT

CONCEPT PLANNING PROPOSAL REPORT

ZONING BOUNDARY ANOMALY

LOT 20 DP 1151501
15 CALIOPE ROAD
(FORMERLY KNOWN AS 43 OLD SADDLEBACK ROAD)
KIAMA

Prepared for

Weriton Properties Pty Ltd

July 2013

Prepared by:

COWMAN STODDART PTY LTD

Town Planning, Agricultural & Environmental Consultants

CONCEPT PLANNING PROPOSAL REPORT

ZONING BOUNDARY ANOMALY

LOT 20 DP 1151501
15 CALIOPE ROAD
(FORMERLY KNOWN AS 43 OLD SADDLEBACK ROAD)
KIAMA

Ref. 10/14

Town Planning, Agricultural & Environmental Consultants

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Cowman Stoddart Pty Ltd

COWMAN STODDART PTY LTD

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Annexure 1	Letter from Kiama Municipal Council dated 18th February 2013
Annexure 2	Flora and Fauna Impact Assessment prepared by Southeast Engineering and Environmental
Annexure 3	Aboriginal Heritage Assessment prepared by Myall Coast Archaeological Services
Annexure 4	Contamination Assessment prepared by Strategic Environmental & Engineering Consulting

1.0 INTRODUCTION

This Concept Planning Proposal Report (CPPR) supports a Planning Proposal submitted on behalf of Weriton Properties Pty Ltd concerning 15 Caliope Road, Kiama (Lot 20 DP 1151501).

This CPPR has been prepared by Cowman Stoddart Pty Ltd, Town Planning, Environmental and Agricultural Consultants based in Nowra. The CPPR is supported by the following expert assessments:

- Flora & Fauna Impact Assessment carried out by Southeast Engineering and Environmental.
- Aboriginal Heritage Assessment carried out by Myall Coast Archaeological Services.
- Stage 1 Contamination Assessment carried out by Strategic Environmental & Engineering Consulting.

The purpose of the Planning Proposal is to seek an amendment to the mapping that supports the Kiama Local Environmental Plan (KLEP) 2011. In particular the Planning Proposal seeks to correct a zoning boundary anomaly that affects the subject site. The R2 Low Density Residential zone that applies to the majority of the site is slightly offset from the southern and eastern boundaries of the site and does not follow the cadastral boundary. The Planning Proposal therefore seeks that the mapping that applies to the subject site be amended so that the R2 zone applies to the whole of the subject site. In doing so the Planning Proposal also seeks to rectify similar anomalies in the: minimum lot size; building height; and floor space ratio mapping that also applies to the subject site. The CPPR details the environmental investigations and consultation that has been undertaken in support of this proposal.

2.0 THE SUBJECT LAND AND SURROUNDS

2.1 THE LOCALITY

The subject site is located on the south west edge of the Kiama urban area and is approximately 200 m west of the Princes Highway. The site is situated within the Kiama Local Government Area.

The locality reflects its position at the urban edge of Kiama and is characterised by the developed residential areas of Kiama to the north, west and east (beyond the highway); and rural and agricultural properties located to the south and south west.

Figure 1 identifies the site in its regional context.

2.2 THE SUBJECT LAND

The land associated with this Planning Proposal is Lot 20 DP 1151501, 15 Caliope Road, Kiama and is an irregular shaped allotment comprising 1.1 hectares in area and includes cleared pasture land.

The subject land includes an existing dwelling located along the southern boundary of the site (refer **Plate 1**). The curtilage of this dwelling includes several mature trees.

Plate 1: View of existing dwelling that is located on subject land.
This dwelling encroaches into the 'sliver' of land associated with this planning proposal.

There are no watercourses within the subject land. The nearest watercourse is the Willow Gully Creek riparian corridor located to the immediate north of the site. There is also a creek line located to the south east of the subject site.

Most of the subject land is cleared (refer **Plate 2**). The land is currently used primarily for residential purposes.

Plate 2: View from north of site looking south. Site is mostly cleared. The dwelling is located within the trees shown in this photograph

The Caliope Road Reserve formerly ran along the southern boundary of the subject land. This road reserve has now been closed except for a short section that, once constructed, will provide access to the subject land off Old Saddleback Road.

Figure 2 is a site locality plan.

2.3 THE LAND ASSOCIATED WITH THIS CONCEPT PLANNING PROPOSAL

This CPPR relates specifically to a triangular sliver of land situated along the southern boundary as well as a thin slither along the eastern boundary of Lot 20. The land along the southern boundary has a maximum width along its western boundary of 11.34 metres and extends to an apex at its eastern boundary. This land has an area of only 1420.6 m^2. The slither along the eastern boundary comprises a width of only 0.8 metres, and an area of only 26.4 m^2.

There is nothing that distinguishes these slivers of land from the remainder of Lot 20. The dwelling house and its curtilage extend into the sliver of land from the remainder of Lot 20.

2.4 EXISTING CHARACTER AND CONTEXT

As outlined in Section 2.1 the locality is one that reflects the site's position at the urban edge of Kiama:

- Adjoining land to the north east of the site, between the site and Danube Street, comprises five residential allotments for which subdivision has been completed and development has begun (**Plate 3**).

Plate 3: View of residential development to north and east of subject site.

- Adjoining land to the west of the site is currently being developed for Medium Density Residential development (refer **Plate 4**).

Plate 4: View of medium residential development to west of subject site.

- Land to the north of Danube Street and to the west of Old Saddleback Road comprises Medium Density Residential Development.
- Adjoining land to the east of the site comprises cleared agricultural land (see **Figure 2**) as far as the Princes Highway.

  East of the highway, land comprises residential development within the urban area of Kiama.
- Approval has been given by Kiama Council to a large two storey shed with living quarters on the land adjoining the eastern boundary of the subject property (see DA 10.2012.235.1).
- Adjoining land to the south of the subject land comprises agricultural land.

Figure 1: Regional context.

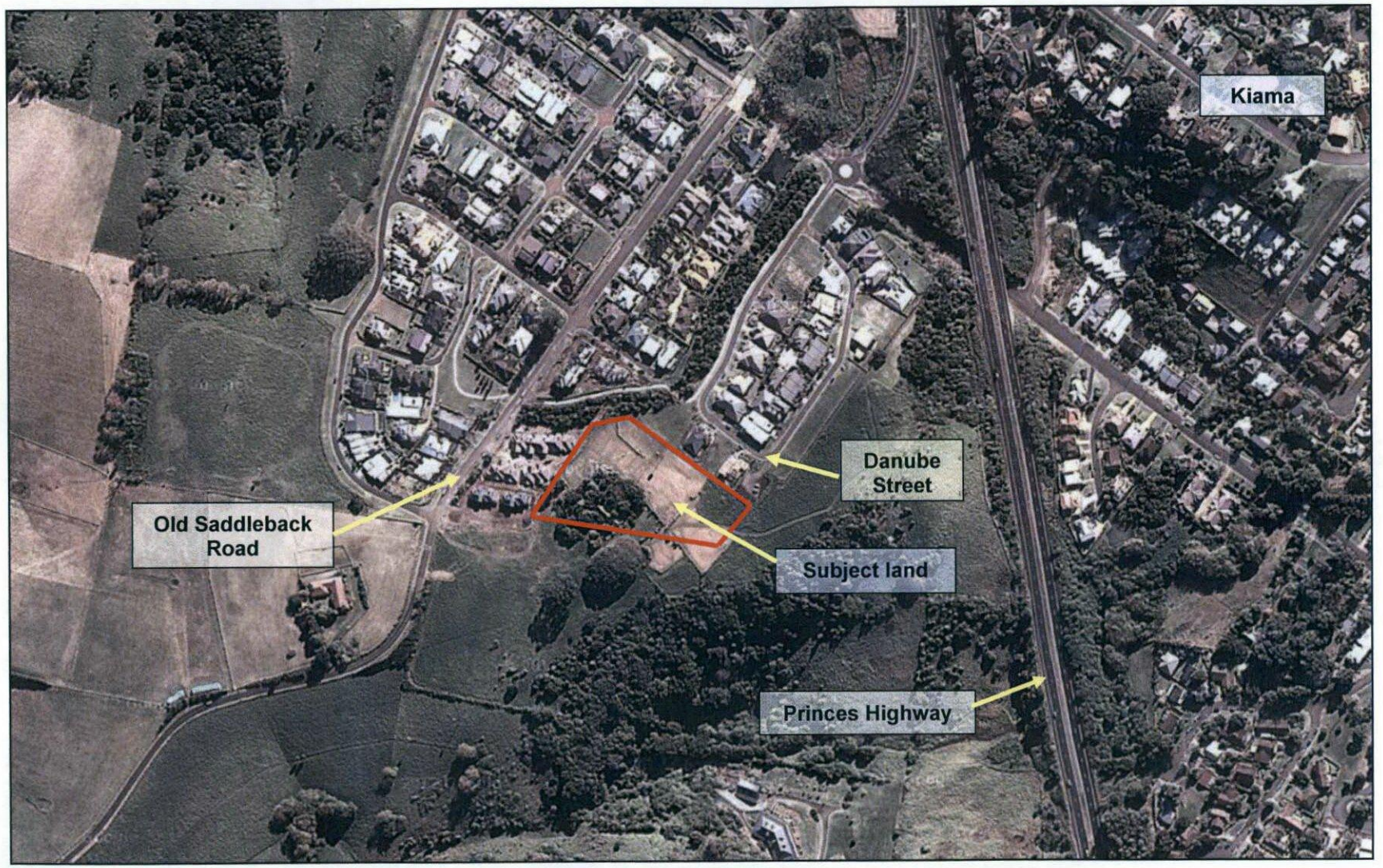


Figure 2: Site locality plan.

3.0 BACKGROUND

3.1 PLANNING HISTORY

The subject site is predominantly zoned R2 Low Density Residential under the KLEP 2011. However, the R2 zone is slightly offset along the southern and eastern boundaries of the site and does not follow the cadastral boundary with the adjoining Lot 2 DP 1165344. This results in thin slivers of land which are zoned RU2 Rural landscape affecting the subject site (refer **Figure 3**).

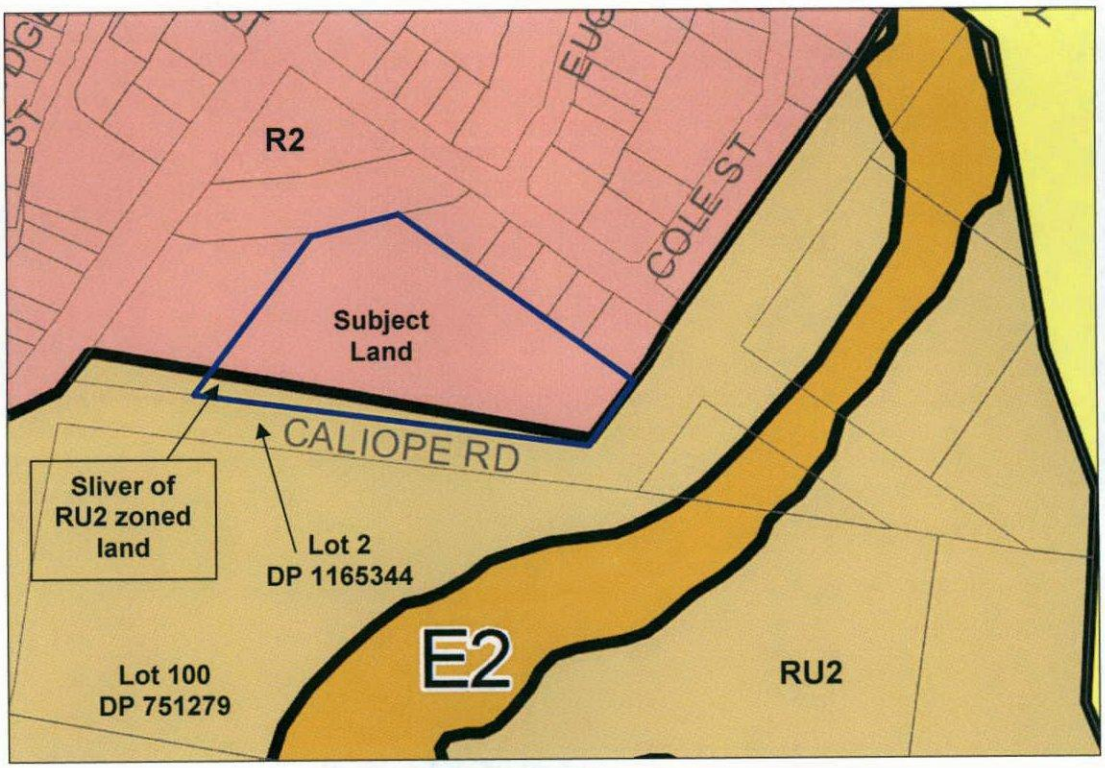


Figure 3: Zoning Plan applying to site (KLEP 2011).

In addition, the R2 zone does not quite correlate with the eastern boundary of the subject site (see **Figure 3A**). This also results in a thin slither of RU2 zoned land affecting land along the eastern boundary of the subject site.

The subject site was identified in the *Kiama Urban Strategy* as a small urban release site (Site 16 Kiama) to be zoned R2 Low Density Residential (refer **Figure 4**). It is understood that the land was originally included in the West Kiama urban release area as proposed in the original exhibited Draft KLEP 1994. It was omitted at the time at the request of the then land owner. The West Kiama urban release area was designed however in a manner that enabled this land to be included in the future once the ownership of the land changed hands or the owners changed their mind. Ownership of the land changed subsequently and as a result the land was identified in the Kiama Urban Strategy as a urban release

area. The land was subsequently zoned R2 in the Kiama LEP 2011 based upon the recommendations of the Kiama Urban Strategy. There is nothing in the Kiama Urban Strategy that would suggest that the slivers of land along the southern and eastern boundaries of the site should be zoned RU2.

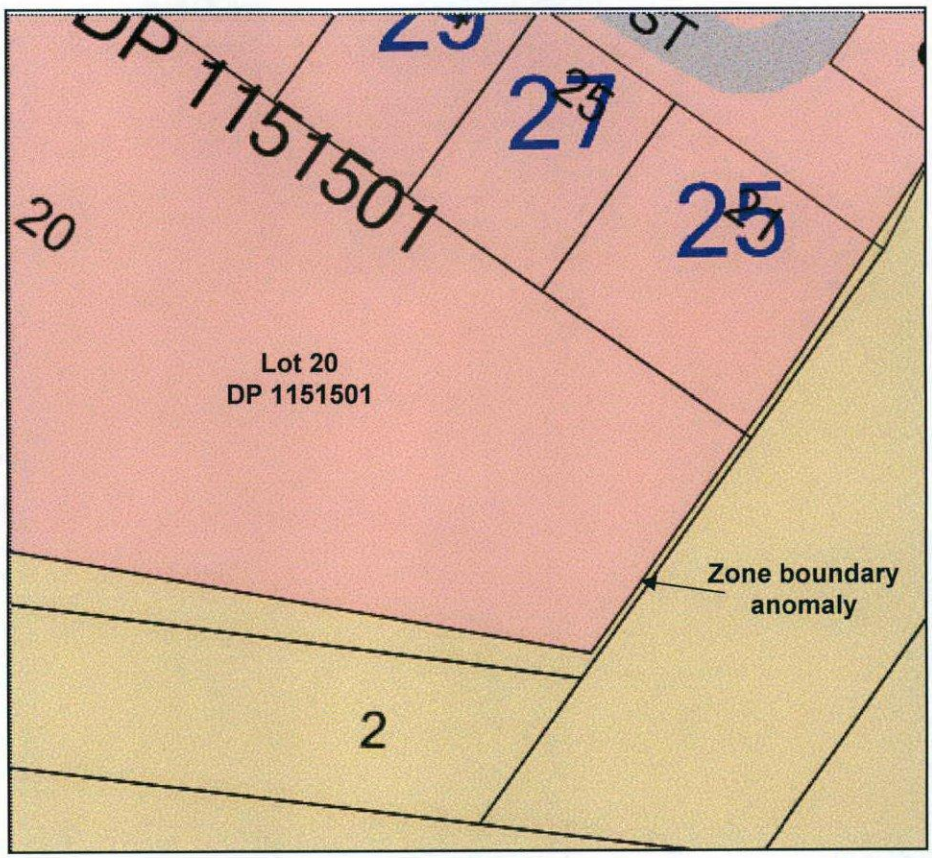


Figure 3A: Detailed zoning plan showing eastern boundary of subject site and thin sliver of land zoned RU2.

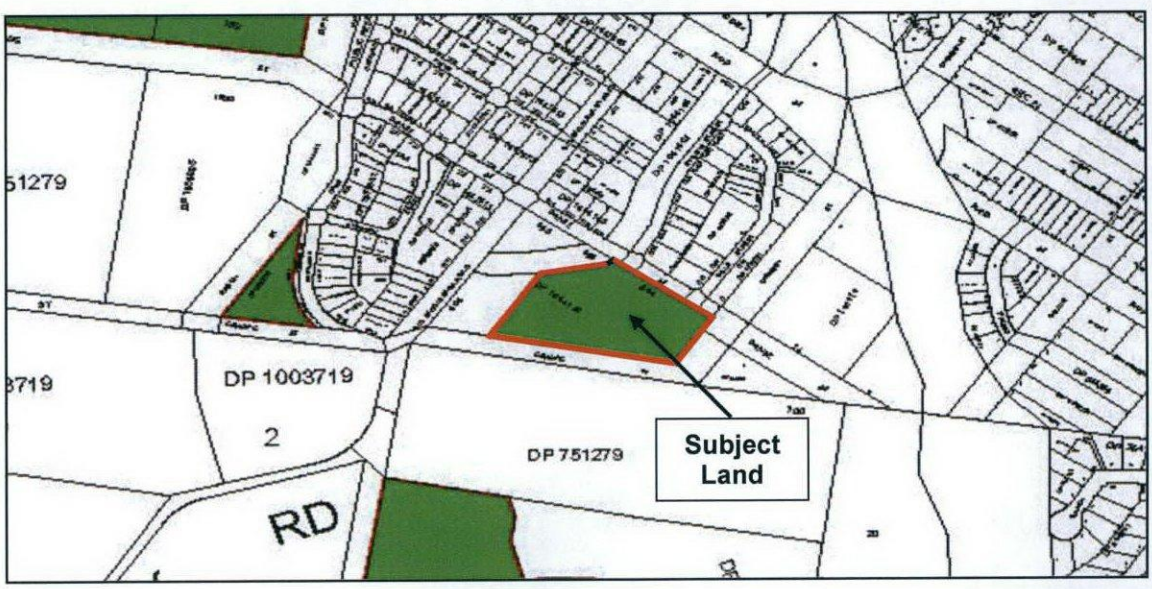


Figure 4: Extract from Kiama Urban Strategy – Kiama South Sites Considered

A review of the mapping of the past planning instruments that have affected this land (and for which we have records) is provided below.

- Local Environmental Plan No. 5 – This LEP clearly identifies the subject land, and those that surround, as zoned Rural "A" (refer **Figure 5**).

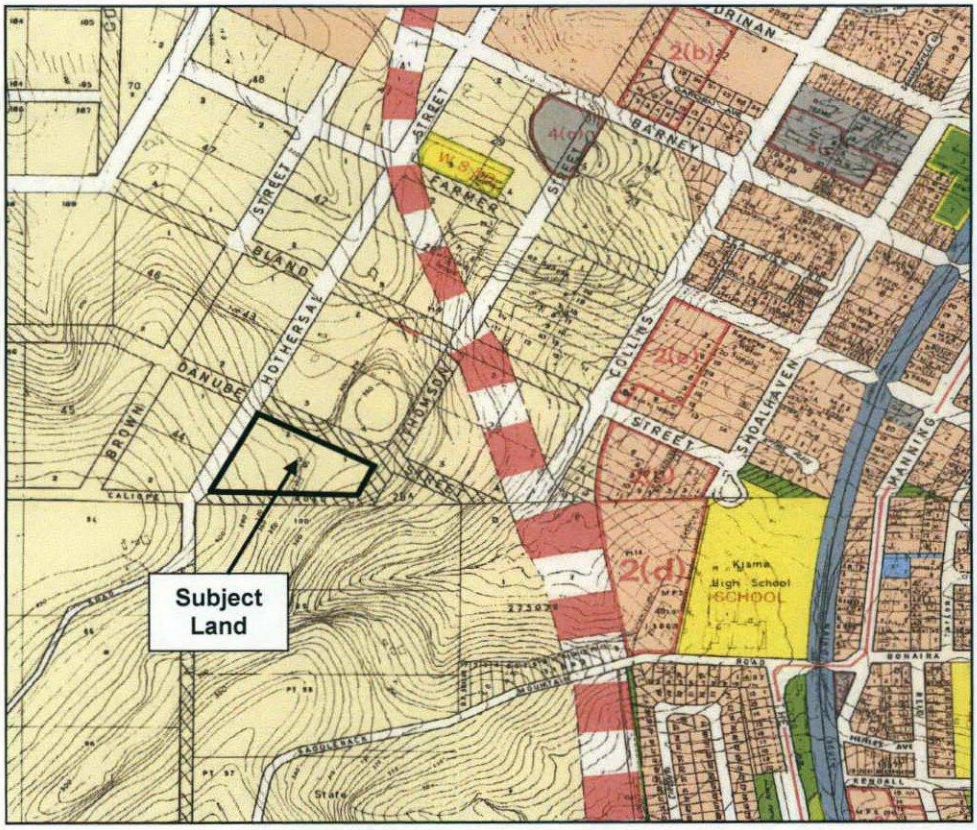


Figure 5: Extract from Local Environmental Plan No. 5 Map.

- Local Environmental Plan 1996 (signed by the General Manager of Council on the 22nd December 1995) shows the subject land as a "Deferred Matter". This plan however clearly shows a 7(e) zone along the southern and eastern boundary cadastral of the subject land (refer **Figure 6**).

- A review of the KLEP 1996 taken from Council's web site clearly shows the subject land zoned partially 2(a) Residential along the Danube Street frontage and Rural 1(a) for the remainder of the site, with the Rural 1(a) zone boundary correlating with the southern and eastern boundaries of the subject site (refer **Figure 7**). This plan states that it is based upon cadastral detail dated 7th October 2010 and incorporates amendments made after 19th December 2006.

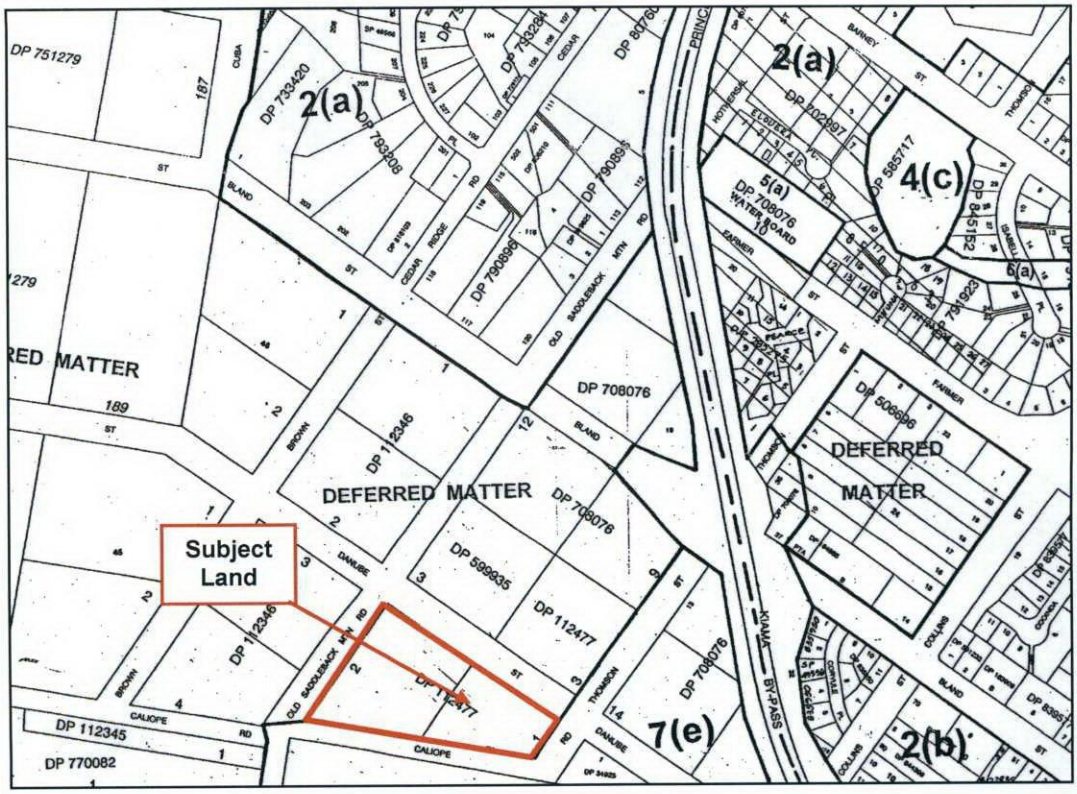


Figure 6: Extract from Local Environmental Plan 1996
(signed by the General Manager of Kiama Municipal Council on the 22nd December 1995).

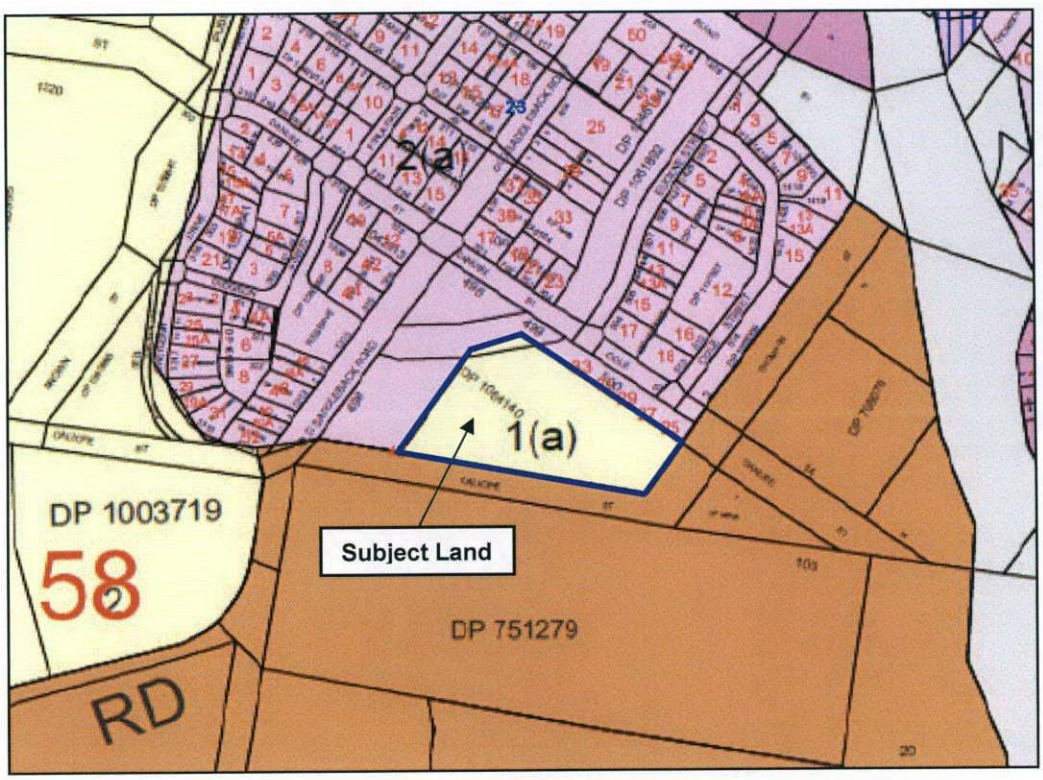


Figure 7: Extract from Kiama Local Environmental Plan 1996
(based upon cadastral detail dated 7th October 2010).

- The first occurrence of the "split zone" applying to the land appears in a plan titled *Kiama Local Environmental Plan 1996 (Amendment 61)* and which outlines that it is based upon cadastral detail dated 3rd February 2012 (refer **Figure 8**).
- It would appear that the mapping supporting the current KLEP 2011 is simply based upon and reinforces the zone boundary anomaly picked up in the mapping shown in **Figure 8**. A copy of an extract of the current zoning plan as it applies to the subject site is shown in **Figure 3** above.

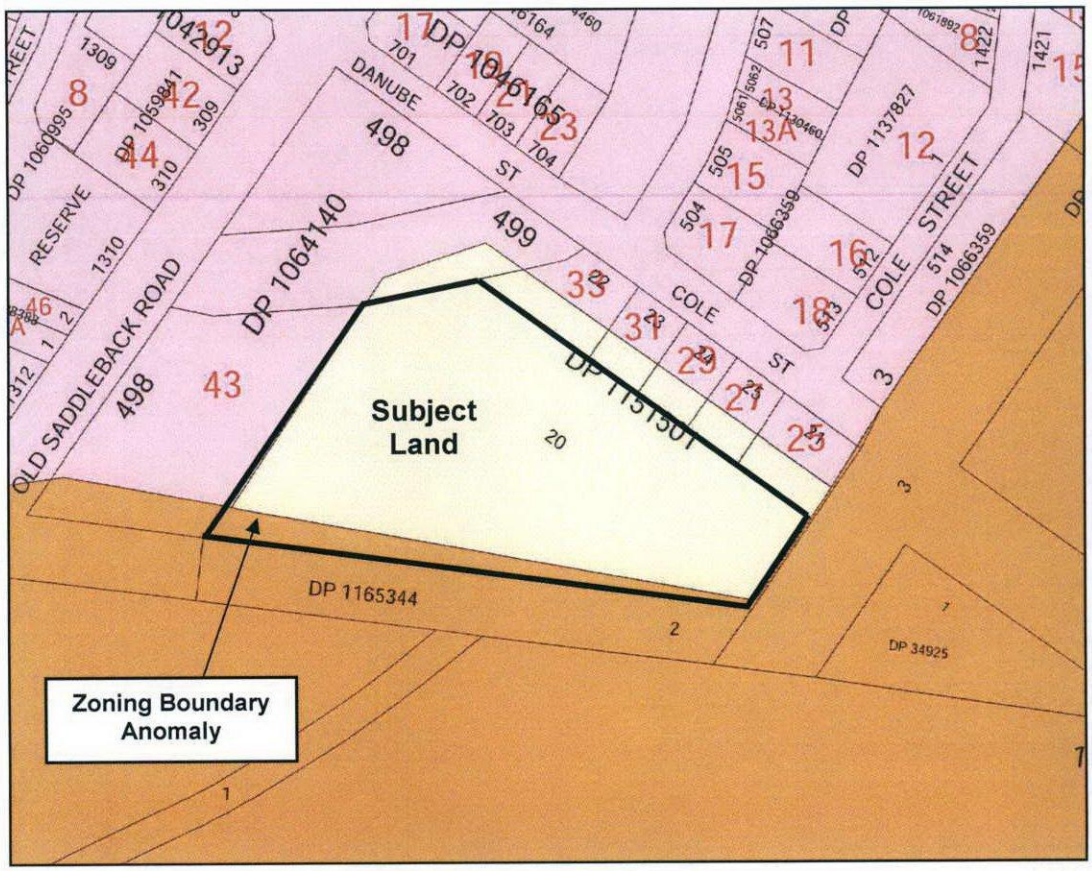


Figure 8: Extract from Kiama Local Environmental Plan 1996
(based upon cadastral detail dated 3rd February 2012).

It is unclear why the zone boundary that applies to the subject site has shifted from along the southern and eastern boundaries of the site (as outlined in the earlier zoning maps applying to the site) to its present position just off the southern and eastern boundaries of the site and hence creating thin slivers of RU2 zoned land within the subject site. Furthermore, following consultation with Council, Council staff have been unable to justify a basis for this zoning boundary anomaly.

Indeed it is evident that this zoning anomaly extends over the western boundary of the subject site onto the adjoining property upon which a medium density residential development comprising 19 townhouses and villas has been constructed (refer **Plate 5**). As a result of this anomaly several townhouses in that adjoining development have now been constructed on land which was previously zoned residential but which has subsequently been zoned rural as a consequence of this zoning anomaly.

Plate 5: View of medium density residential development that has been constructed to the west of site which is also affected by zoning anomaly.

There is no town planning purpose in our view for such a "split zone" as it applies to the subject site. This zone boundary does not follow or identify any specific change in development potential of the land due to topography, environmental values or land constraints. Furthermore such a boundary is at odds with the Kiama Urban Strategy which identified the whole of the land as being suitable for residential development.

Indeed these slivers of land merely reduce the overall development potential of the land by removing that portion of the site zoned RU2 from being able to be subdivided and developed for residential purposes consistent with the R2 zone that applies to the majority of the site. Given there is no apparent environmental justification for the present location of this zone boundary, in our view its continued effect of frustrating and reducing the development potential of this overall parcel of land is contrary to the objects of the

Environmental Planning & Assessment Act and in particular the promotion and co-ordination of the orderly and economic use and development of land.

3.2 CONSULTATION

A meeting was held on 31 January 2013 with Kiama Municipal Council staff (Ms Kim Bray) and Stephen Richardson (Cowman Stoddart Pty Ltd) and Mr Graham Werry (Weriton Properties Pty Ltd) to discuss this zoning boundary anomaly. Following this meeting, Council staff advised in a letter dated 18th February 2013 (**Annexure 1**) that a Concept Planning Proposal report be prepared seeking to rectify this zoning boundary anomaly. The letter indicated that following consultation with staff from the NSW Department of Planning that such a report should be supported by expert assessments with respect to:

1. Aboriginal Cultural Heritage.
2. Flora and Fauna Assessment; and
3. Phase 1 Contamination Assessment.

This report has been prepared in support of the Concept Planning Proposal for the subject site. The report is supported by expert assessments in terms of Aboriginal cultural heritage; flora and fauna; and site contamination. Furthermore the report has been prepared having regard to the Department of Planning's "*A Guide to Preparing Planning Proposals*" dated 2009.

4.0 THE CONCEPT PLANNING PROPOSAL

4.1 ZONING ANOMALY

This Concept Planning Proposal report relates to thin slivers of land located along the southern and eastern boundaries of 15 Caliope Road, Kiama (Lot 20 DP 1151501). No other land is associated with this proposal.

This Concept Planning Proposal seeks to rectify this zoning anomaly that affects the subject site. Specifically, the R2 Low Density Residential zone that applies to the majority of the site is slightly offset from the southern and eastern boundaries of the site and does not follow the cadastral boundary between Lot 20 and the adjoining land to the south, Lot 2 DP 1165344.

This Concept Planning Proposal report will justify and seek to modify the zone boundary in order to ensure that the R2 zone applies to the whole of Lot 20 DP 1151501 and correlates with the southern and eastern boundaries of the site.

The Concept Planning Proposal report will also seek to ensure that similar boundary anomalies repeated in the: minimum lot size; building height; and floor space ratio mapping that support the KLEP 2011 are also rectified

Figure 9 outlines the proposed changes to the zone boundary that applies to the subject site.

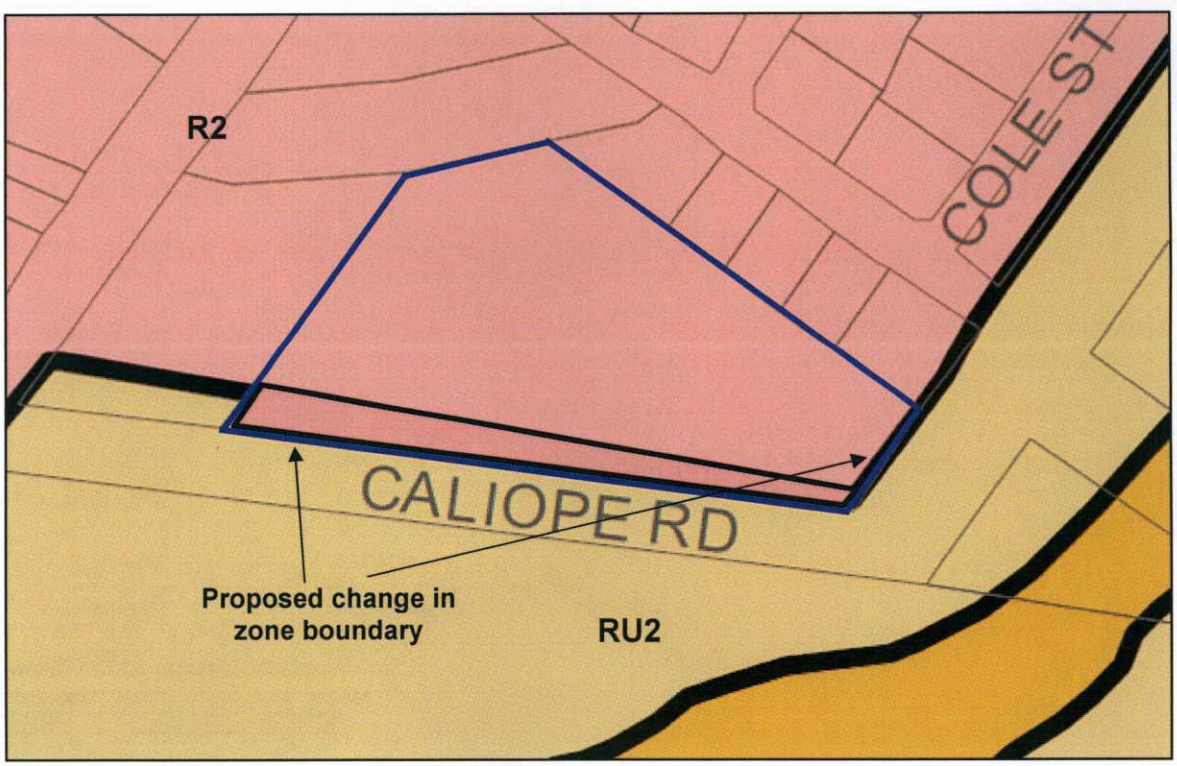


Figure 9: Proposed changes to zone boundary.

The Concept Planning Proposal therefore also seeks modification of the following maps that accompany the KLEP 2011 and exhibit the same mapping anomaly as the zoning map:

- Minimum Lot Size Map; and
- Height of Buildings Map; and
- Floor Space Ratio Map.

4.2 MINIMUM LOT SIZE MAP

The Minimum Lot Size Map specifies a minimum lot size of 450 m^2 for the majority of the site except for the slivers of land (refer **Figure 10**).

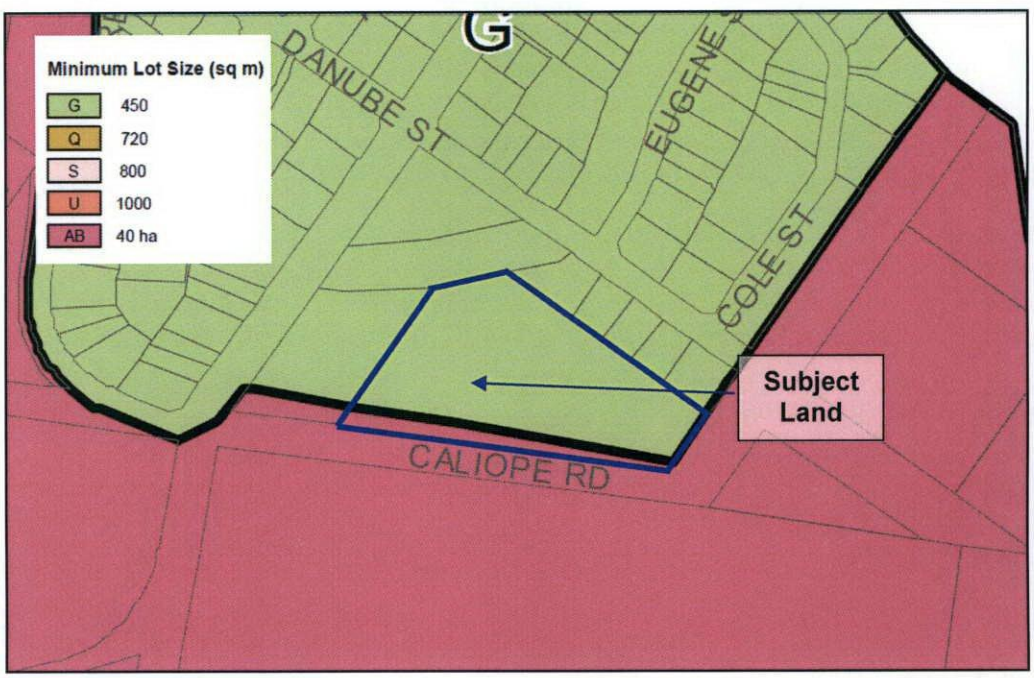


Figure 10: Extract from Minimum Lot Size Map (KLEP 2011)

The Minimum Lot Size Map exhibits the same mapping anomaly as the zoning map in that the minimum lot size of 450 m^2 that applies to the majority of the site is slightly offset from the southern and eastern boundaries and does not follow the cadastral boundary. The slivers of land along the southern and eastern boundaries of the site have a specified minimum lot size of 40 ha.

This Concept Planning Proposal report therefore seeks to amend the Minimum Lot Size Map to ensure the minimum lot size of 450 m^2 applies to the whole of Lot 20 DP 1151501 and correlates with the southern and eastern boundaries of the site and hence across the whole of the site. **Figure 11** outlines the proposed change to the Minimum Lot Size Map that applies to the site.

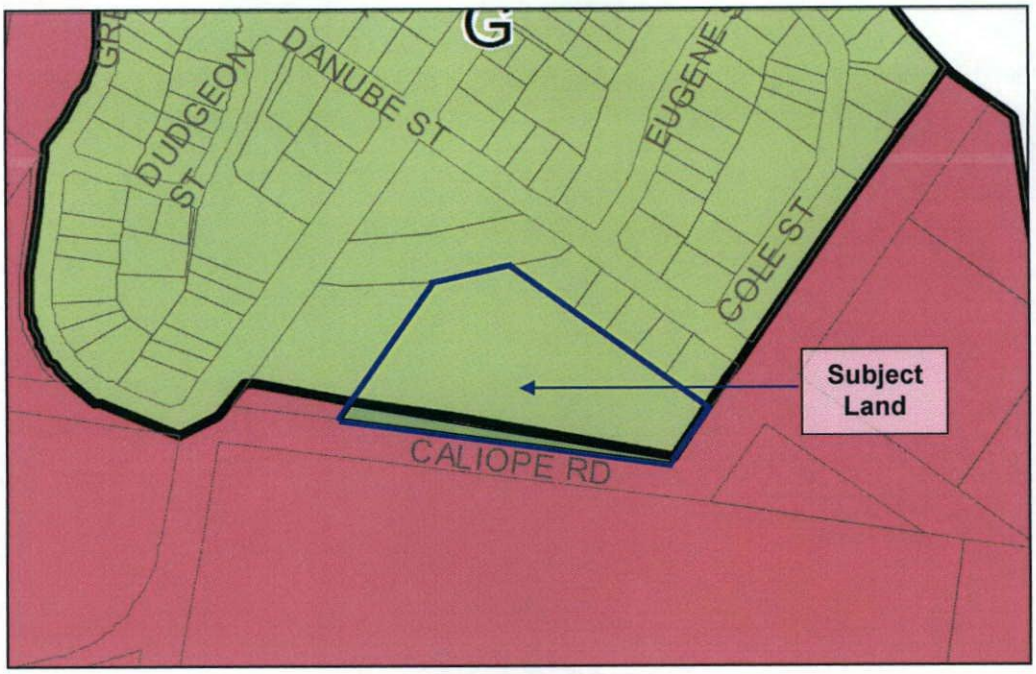


Figure 11: Proposed changes to Minimum Lot Size Map.

4.3 HEIGHT OF BUILDINGS MAP

The Height of Buildings Map specifies a maximum building height for the majority of the subject land of 8.5 metres except for the slivers of land along the southern and eastern boundaries (refer **Figure 12**).

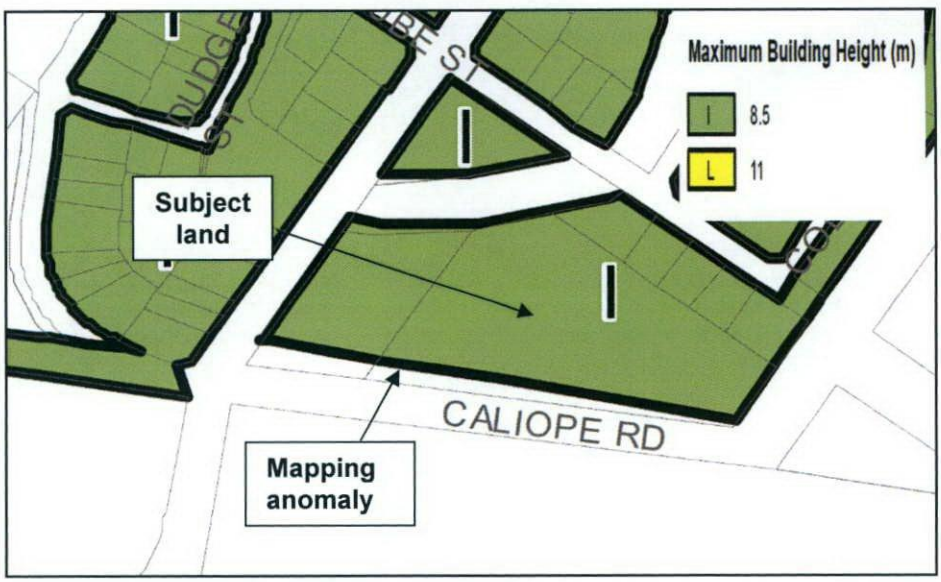


Figure 12: Extract from Height of Buildings Map (KLEP 2011).

The Height of Buildings Map exhibits the same mapping anomaly as the zoning map in that the maximum building height that applies to the majority of the site is slightly offset

from the southern and eastern boundaries and does not follow the cadastral boundary. The slivers of land along the southern and eastern boundaries of the site do not have any specified maximum building height.

This Concept Planning Proposal therefore seeks to amend the Height of Buildings Map in order to ensure that a consistent 8.5 m maximum building height correlates with the southern and eastern boundaries of the site and hence extends across the whole of the Lot 20 DP 1151501. **Figure 13** outlines the proposed changes to the Height of Buildings map that applies to the site.

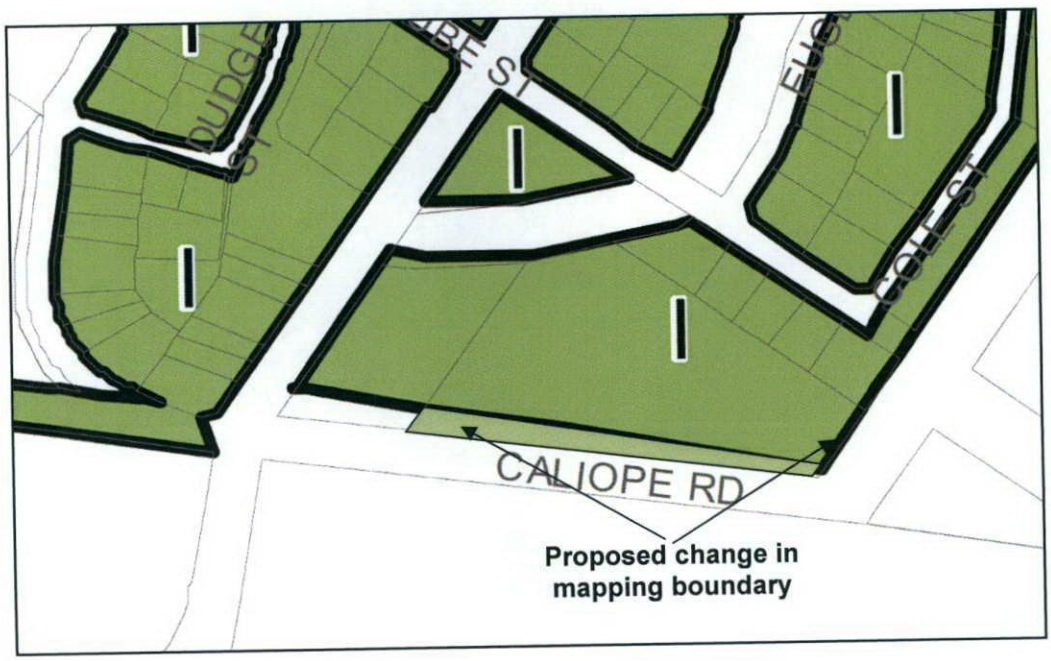


Figure 13: Proposed changes to Height of Buildings Map

4.4 FLOOR SPACE RATIO MAP

The Floor Space Ratio map specifies a maximum floor space ratio of 0.45:1 for the majority of the subject land except again for the slivers of land along the southern and eastern boundaries of the site (refer **Figure 14**).

As with the Minimum Lot Size and Height of Buildings Maps, the Floor Space Ratio Map exhibits the same mapping anomaly as the zoning map in that the floor space ratio that applies to the majority of the site is slightly offset from the southern and eastern boundaries and does not follow the cadastral boundary. The slivers of land along the southern and eastern boundaries of the site do not have any specified floor space ratio.

This Concept Planning Proposal seeks to amend the floor space ratio map in order to ensure that a consistent 0.45:1 floor space ratio correlates with the southern and eastern boundaries

of the site and hence extends across the whole of Lot 20 DP 1151501. **Figure 15** outlines the proposed changes to the Floor Space Ratio map that applies to the site.

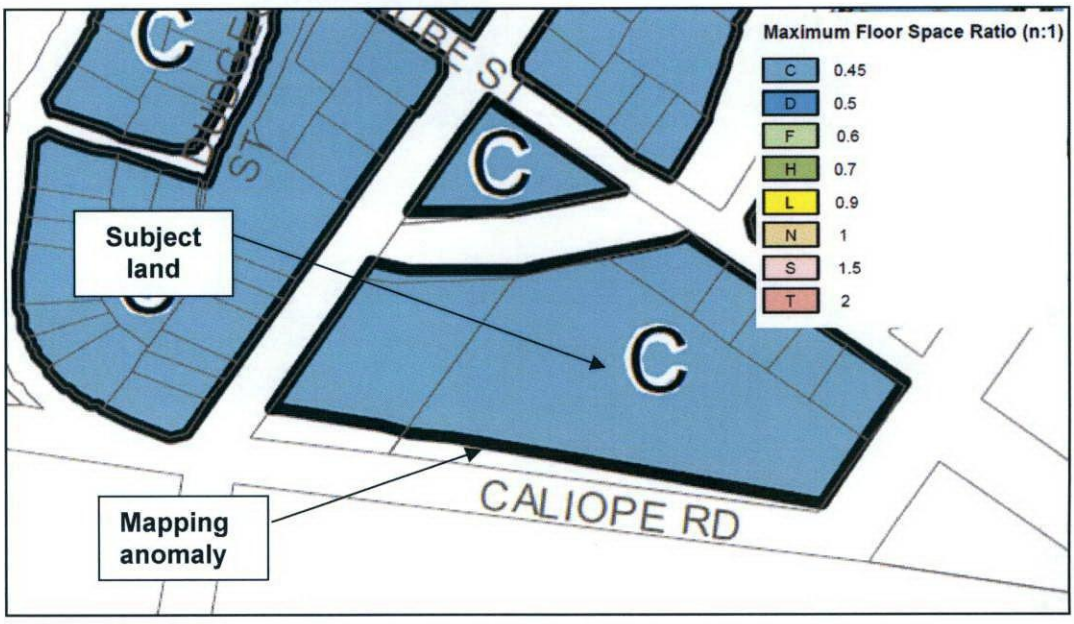


Figure 14: Extract from Floor Space Ratio Map (KLEP 2011).

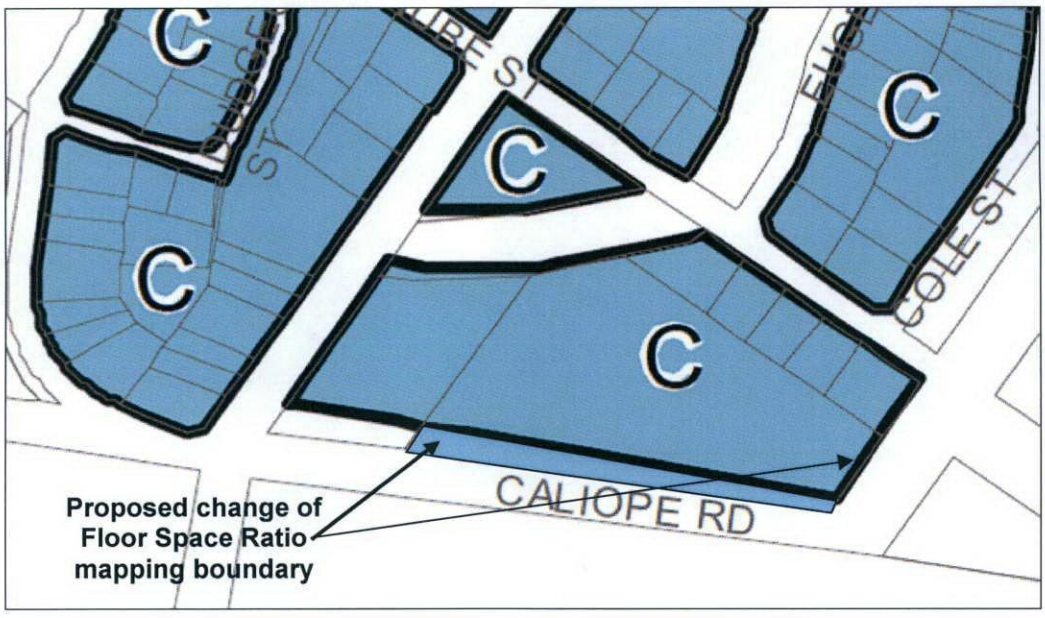


Figure 15: Proposed changes to Floor Space Ratio Map

5.0 STRATEGIC AND STATUTORY SITUATION

5.1 COMMONWEALTH ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATON (EPBC) ACT 1999

The Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* specifies that approval is required from the Commonwealth Minister for the Environment for actions that have, will have or are likely to have a significant impact on a matter of *"national environmental significance"*, including:

(i) declared World Heritage Areas;

(ii) declared Ramsar wetlands;

(iii) listed threatened species and ecological communities;

(iv) listed migratory species;

(v) nuclear actions; and

(vi) the environment of Commonwealth marine areas.

Actions on or outside Commonwealth land that have, will have or are likely to have a significant impact on the environment on or outside Commonwealth land must also be referred to the Commonwealth Minister for assessment and approval.

The Department of Environment and Heritage (2005) has published guidelines to assist in determining whether an action will have or is likely to have a significant impact on a matter of national environmental significance and, hence, whether a referral should be submitted to the Department for a decision by the Minister on whether assessment and approval is required under the EPBC Act.

The proposed change in zone boundary is supported by a Flora and Fauna Assessment prepared by Southeast Engineering and Environmental (**Annexure 2**) which in part addresses the requirements of this legislation.

The Flora and Fauna Assessment includes an assessment of significance under the EPBC Act on species considered likely to occur at the site. According to Southeast Engineering and Environmental it is unlikely that the planning proposal would significantly impact on those threatened species assessed and that a referral to the Commonwealth Minister is not recommended.

5.2 THREATENEDSPECIES CONSERVATION ACT

Section 5A of the *Environmental Planning and Assessment Act 1979* requires that an assessment be undertaken to determine whether a proposed action is likely to have a significant effect on threatened species, populations and communities listed on the *TSC Act*.

This legislation was introduced with the objectives of conserving threatened species, populations and ecological communities of animals and plants. The Act amends the Environmental Planning & Assessment Act and the National Parks & Wildlife Act. With respect to this proposal, the legislation introduces the need for a proposal to address certain matters in respect of threatened species and their habitats.

The seven part test is the informal title for the process set out in Section 5A of the *Threatened Species Conservation Act* 1995. It details how to determine where there is likely to be a 'significant effect' on threatened species, endangered populations or communities or their habitats. If a 'significant effect' is forecast, a more specific Species Impact Statement report will be required.

The Flora and Fauna Assessment prepared by Southeast Engineering & Environmental (**Annexure 2**) includes an assessment of significance under Section 5A of the EPA Act on species considered likely to occur at the site. According to Southeast Engineering and Environmental the outcome of the assessment determined that the planning proposal is '*unlikely*' to have a '*significant effect*' on the Eastern Freetail-bat, Grey-headed Flying-fox or Yellow-bellied Sheathtail Bat. Further, Southeast Engineering and Environmental state that:

> "*The change in zoning of the small sliver of Lot 20 DP 1151501 will not alter future impacts to threatened species or communities due to any potential change of land use. Therefore, this matter will not require referral to the NSW Director General*".

5.3 RURAL FIRES ACT

Under the provisions of section 100B of the Rural Fires Act, 1997, authorisation is required with respect to bushfire safety for subdivision of land that could lawfully be used for residential or rural residential purposes or development of land for special fire protection purposes.

The land associated with this Concept Planning Proposal is not mapped by Kiama Municipal Council as being bushfire prone (refer **Figure 16**). The provisions of this legislation therefore do not apply to this proposal.

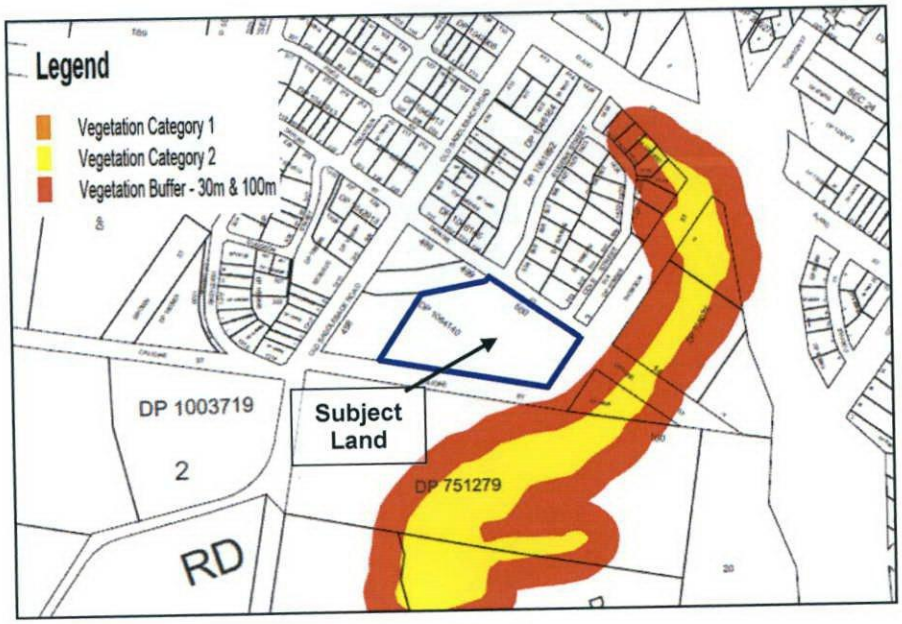


Figure 16: Bushfire prone land as mapped by Kiama Municipal Council

5.4 WATER MANAGEMENT ACT 2000

The Water Management Act (WMA) is the main piece of water legislation for NSW ensuring that water is provided for the environment and more secure access to water users. A controlled activity approval under the WMA is required for certain types of developments and activities that are carried out in or near a river, lake or estuary. The WMA replaces the Rivers and Foreshores Improvements Act.

Section 91 of the WMA specifies that:

> *"(1) There are two kinds of activity approvals, namely, controlled activity approvals and aquifer interference approvals.*
>
> *(2) A controlled activity approval confers a right on its holder to carry out a specified controlled activity at a specified location in, on or under waterfront land."*

Under the WMA, a controlled activity is defined as:

> *"(a) the erection of a building or the carrying out of a work (within the meaning of the Environmental Planning and Assessment Act 1979), or*
>
> *(b) the removal of material (whether or not extractive material) or vegetation from land, whether by way of excavation or otherwise, or*
>
> *(c) the deposition of material (whether or not extractive material) on land, whether by way of landfill operations or otherwise, or*
>
> *(d) the carrying out of any other activity that affects the quantity or flow of water in a water source."*

For the purposes of the WMA, *"waterfront land"* means:

(a) the bed of any river, together with any land lying between the bed of the river and a line drawn parallel to, and the prescribed distance inland of, the highest bank of the river, or

(a1) the bed of any lake, together with any land lying between the bed of the lake and a line drawn parallel to, and the prescribed distance inland of, the shore of the lake, or

(a2) the bed of any estuary, together with any land lying between the bed of the estuary and a line drawn parallel to, and the prescribed distance inland of, the mean high water mark of the estuary, or

(b) if the regulations so provide, the bed of the coastal waters of the State, and any land lying between the shoreline of the coastal waters and a line drawn parallel to, and the prescribed distance inland of, the mean high water mark of the coastal waters,

The WMA outlines that a "river" includes:

(a) any watercourse, whether perennial or intermittent and whether comprising a natural channel or a natural channel artificially improved, and

(b) any tributary, branch or other watercourse into or from which a watercourse referred to in paragraph (a) flows, and

(c) anything declared by the regulations to be a river,

whether or not it also forms part of a lake or estuary, but does not include anything declared by the regulations not to be a river.

There are a series of intermittent watercourses that flow within the proximity of the subject land.

However the land associated with this proposal is not within close proximity of these watercourses. The nearest watercourses are located approximately 80 m to the north-west and 70 metres to the south-east of the subject land.

Under these circumstances this proposal will not require a controlled activity under this legislation.

5.5 NATIVE VEGETATION CONSERVATION ACT

The objectives of the Native Vegetation Conservation Act essentially relate to the conservation and management of native vegetation.

The definition of "native vegetation" under the Act is quite broad, it includes; trees, understorey plants, groundcovers and plants occurring in a wetland. To be considered native, indigenous species must cover more than 50% of the area.

The slivers of land associated with this proposal sit within an existing clearing with established gardens.

The proposal therefore will not involve any tree or native vegetation disturbance. Under these circumstances the proposal will not require to obtain an approval under this legislation.

5.6 NATIONAL PARKS AND WILDLIFE ACT 1974

The National Parks and Wildlife (NPW) Act 1974 is the primary legislation for the protection of some aspects of Aboriginal cultural heritage in NSW. Section 86 of that act has been amended and deals with harming and desecrating Aboriginal Objects.

> *"Aboriginal object means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains."*

Under Section 86 of the NPW Act, it is an offence to 'harm' an Aboriginal object. 'Harm' means any act or omission that:

- destroys, defaces, damages or desecrates the object;
- moves the object from the land on which it had been situated; or
- causes or permits the object to be harmed.

The NPW Act provides several defences to prosecution for an offence. Where a person either knows or does not know they are harming an Aboriginal object, a person has a defence under section 87 where:

- The harm or desecration concerned was authorised by an Aboriginal heritage impact permit, and the conditions to which that Aborigine heritage impact permit was subject were not contravened.
- Due diligence was undertaken and it was reasonably determined that no Aboriginal object would be harmed.
- Was work on land that has been disturbed for maintenance of existing roads, fire and other trails and tracks, maintenance of existing utilities and other similar services.
- Land is disturbed if it has been the subject of human activity that has changed the land's surface, being changes that remain clear and observable.

Harm does not include something that is trivial or negligible.

The Concept Planning Proposal report is supported by an Aboriginal Heritage Assessment prepared by Myall Coast Archaeological Services (refer **Annexure 3**).

This issue is further addressed in Section 8.3.4 of this report.

5.7 CONTAMINATED LAND MANAGEMENT ACT 1997

This legislation relates to the investigation and remediation of contaminated land. It sets out powers for the Office of Environment and Heritage; and provisions relating to the investigation and remediation of contaminated land.

This Concept Planning Proposal Report is supported by a Phase 1 Site Contamination Assessment prepared by Strategic Environmental Engineering Consulting (refer **Annexure 4**).

This issue is further addressed in Section 8.3.3 of this report.

5.8 KIAMA LOCAL ENVIRONMENTAL PLAN 2011

Zone and Zone Objectives

The subject land is predominantly zoned R2 Low Density Residential under the Kiama Local Environmental Plan 2011 (KLEP 2011) (see **Figure 3** in Section 3.0). As described above, the R2 zone is slightly offset along the southern and eastern boundaries of the subject site and does not follow the cadastral boundary with the adjoining Lot 2 DP 1165344. This results in thin slivers of the subject land which are zoned RU2 Rural Landscape.

The objectives of the R2 Low Density Residential zone are:

- *To provide for the housing needs of the community within a low density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To increase the supply of secondary dwellings for affordable rental housing stock.*
- *To provide economic and employment opportunities for people who conduct business activities from their homes where these will not adversely affect the amenity of neighbours or the neighbourhood.*

The objectives of the RU2 Rural landscape zone are:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To maintain the rural landscape character of the land.*

- *To provide for a range of compatible land uses, including extensive agriculture.*
- *To protect agricultural land for long term agricultural production.*
- *To provide opportunities for employment-generating development that adds value to local agricultural production through food and beverage processing and integrates with tourism.*

This Concept Planning Proposal involves that part of the site which is currently zoned RU2. No change is proposed to that part of the site which is zoned R2.

As described above, the slivers of RU2 zoned land that result from the zoning boundary anomaly conflict with the identification of the land for residential development as put forward by the Kiama Urban Strategy. The current change in zone boundary does not correlate with any specific change in development potential of the land due to topography, different environmental values or land constraints. The continued effect of the zone boundary anomaly is to frustrate the development potential of this overall parcel of land and inhibit the achievement of the objectives of R2 zoned land.

As outlined in Section 3.1, it is evident also that this zoning anomaly extends over the western boundary of the subject site and across onto the adjoining property. A medium density residential development comprising 19 townhouses and villas has been constructed on this adjoining property. As a result of this zoning anomaly several townhouses within that adjoining development have now been constructed on land which was previously zoned residential but which has subsequently been zoned rural as a consequence of this zoning anomaly. The extent to which this zoning anomaly affects this adjoining land and development is apparent on **Figures 9** and **12**. The existence of this development; and the extent to which it is affected by this 'split zone' demonstrates how ludicrous this zoning anomaly is.

Local Provisions

The KLEP 2011 also has a number of specific local provisions that will apply to the land. The implications that these provisions have in relation to this Concept Planning Proposal are discussed in **Table 1** below.

Table 1

Kiama LEP 2011 Provisions

KLEP 2011 Clause	***Provisions***	***Comments***
Clause 4.3 *Height of Buildings*	*(1) The objectives of this clause are as follows:* *(a) to ensure future development is in keeping with the desired scale and character of the street and local area,* *(b) to allow reasonable daylight access to all developments and the public domain.* *(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.*	The Height of Buildings Map specifies a maximum building height for the majority of the subject land of 8.5 metres (refer **Figure 10** of Section 4). This Concept Planning Proposal also seeks to amend the Height of Buildings Map in order to ensure that the 8.5 m maximum building height mapping correlates with the southern and eastern boundaries of the site and hence extends across the whole of the subject land. See Section 4.0 of this report.
Clause 4.4 *Floor space ratio*	*(1) The objectives of this clause are as follows:* *(a) to ensure that development is in keeping with the optimum capacity of the site and the local area,* *(b) to define allowable development density for generic building types.* *(2) The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.*	The Floor Space Ratio map specifies a maximum floor space ratio of 0.45:1 for the majority of the subject land (refer **Figure 11** of Section 4.0). This Concept Planning Proposal also seeks to amend the floor space ratio map in order to ensure that the 0.45:1 floor space ratio mapping correlates with the southern and eastern boundaries of the site and hence extends across the whole of the subject land. See Section 4.o of this report.
Clause 5.9 *Preservation of trees or vegetation*	*(1) The objective of this clause is to preserve the amenity of the area, including biodiversity values, through the preservation of trees and other vegetation.* *(2) This clause applies to species or kinds of trees or other vegetation that are prescribed for the purposes of this clause by a development control plan made by the Council.* *Note. A development control plan may prescribe the trees or other vegetation to which this clause applies by reference to species, size, location or other manner.* *(3) A person must not ringbark, cut down, top, lop, remove, injure or wilfully destroy any tree or other vegetation to which any such development control plan applies without the authority conferred by:* *(a) development consent, or* *(b) a permit granted by the Council.*	No Development Control Plans are known to have been formulated in response to this Clause. In the absence of any such DCPs, a review of the existing DCPs that apply to the site have not identified any trees or vegetation prescribed for the purposes of this clause. The Concept Planning Proposal is supported by a Flora and Fauna Assessment (**Annexure 2**) which confirms that the planning proposal will not have any significant impacts on biodiversity values associated with the subject land.

Table 1 (continued)

KLEP 2011 Clause	Provisions	Comments
5.9 *continued*	*(4) The refusal by the Council to grant a permit to a person who has duly applied for the grant of the permit is taken for the purposes of the Act to be a refusal by the Council to grant consent for the carrying out of the activity for which a permit was sought.* *(5) This clause does not apply to a tree or other vegetation that the Council is satisfied is dying or dead and is not required as the habitat of native fauna.* *(6) This clause does not apply to a tree or other vegetation that the Council is satisfied is a risk to human life or property.* *(7) A permit under this clause cannot allow any ringbarking, cutting down, topping, lopping, removal, injuring or destruction of a tree or other vegetation:* *(a that is or forms part of a heritage item or that is within a heritage conservation area, or* *(b) that is or forms part of an Aboriginal object or that is within an Aboriginal place of heritage significance, unless the Council is satisfied that the proposed activity:* *(c) is of a minor nature or is for the maintenance of the heritage item, Aboriginal object, Aboriginal place of heritage significance or heritage conservation area, and* *(d) would not adversely affect the heritage significance of the heritage item, Aboriginal object, Aboriginal place of heritage significance or heritage conservation area.* *Note. As a consequence of this subclause, the activities concerned will require development consent. The heritage provisions of clause 5.10 will be applicable to any such consent.* *(8) This clause does not apply to or in respect of:* *(a) the clearing of native vegetation:* *(i) that is authorised by a development consent or property vegetation plan under the Native Vegetation Act 2003, or* *(ii) that is otherwise permitted under Division 2 or 3 of Part 3 of that Act, or* *(b) the clearing of vegetation on State protected land (within the meaning of clause 4 of Schedule 3 to the Native Vegetation Act 2003) that is authorised by a development consent under the provisions of the Native Vegetation Conservation Act 1997 as continued in force by that clause, or* *(c) trees or other vegetation within a State forest, or land reserved from sale as a timber or forest reserve under the Forestry Act 1916, or* *(d) action required or authorised to be done by or under the Electricity Supply Act 1995, the Roads Act 1993 or the Surveying and Spatial Information Act 2002, or* *(e) plants declared to be noxious weeds under the Noxious Weeds Act 1993.*	

Table 1 (continued)

KLEP 2011 Clause	*Provisions*	*Comments*
Clause 5.10 *Heritage Conservation*	*Development consent is required for any of the following:* *(a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):* *(i) a heritage item,* *(ii) an Aboriginal object,* *(iii) a building, work, relic or tree within a heritage conservation area,* *(b) altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,* *(c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,* *(d) disturbing or excavating an Aboriginal place of heritage significance,* *(e) erecting a building on land:* *(i) on which a heritage item is located or that is within a heritage conservation area, or* *(ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,* *(f) subdividing land:* *(i) on which a heritage item is located or that is within a heritage conservation area, or* *(ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.*	Mapping supporting Kiama LEP 2011 does not identify any Heritage Items or Conservation Areas within the subject land or its immediate surrounds. The Concept Planning Proposal does not seek any alterations to this mapping. The Concept Planning Proposal is supported by an Aboriginal Heritage Assessment (**Annexure 3**) which demonstrates that the proposed correction of the zoning anomaly will not impact on Aboriginal cultural heritage values.
Clause 6.1 *Acid sulfate soils*	*(1) The objective of this clause is to ensure that development does not disturb, expose or drain acid sulfate soils and cause environmental damage.* *(2) Development consent is required for the carrying out of works described in the Table to this subclause on land shown on the Acid Sulfate Soils Map as being of the class specified for those works.*	Mapping supporting the KLEP 2011 does not identify the subject land or its surrounds as being affected by acid sulphate soils.

Table 1 (continued)

<table>
<tr><th>KLEP 2011 Clause</th><th>Provisions</th><th>Comments</th></tr>
<tr><td>6.1 Continued</td><td>
<table>
<tr><th>Class of land</th><th>Works</th></tr>
<tr><td>1</td><td>Any works.</td></tr>
<tr><td>2</td><td>Works below the natural ground surface.
Works by which the watertable is likely to be lowered.</td></tr>
<tr><td>3</td><td>Works more than 1 metre below the natural ground surface.
Works by which the watertable is likely to be lowered more than 1 metre below the natural ground surface.</td></tr>
<tr><td>4</td><td>Works more than 2 metres below the natural ground surface.
Works by which the watertable is likely to be lowered more than 2 metres below the natural ground surface.</td></tr>
<tr><td>5</td><td>Works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is below 5 metres Australian Height Datum and by which the watertable is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.</td></tr>
</table>
3) Development consent must not be granted under this clause for the carrying out of works unless an acid sulfate soils management plan has been prepared for the proposed works in accordance with the Acid Sulfate Soils Manual and has been provided to the consent authority.
(4) Despite subclause (2), development consent is not required under this clause for the carrying out of works if:
(a) a preliminary assessment of the proposed works prepared in accordance with the Acid Sulfate Soils Manual indicates that an acid sulfate soils management plan is not required for the works, and
(b) the preliminary assessment has been provided to the consent authority and the consent authority has confirmed the assessment by notice in writing to the person proposing to carry out the works.
(5) Despite subclause (2), development consent is not required under this clause for the carrying out of any of the following works by a public authority (including ancillary work such as excavation, construction of access ways or the supply of power):
(a) emergency work, being the repair or replacement of the works of the public authority required to be carried out urgently because the works have been damaged, have ceased to function or pose a risk to the environment or to public health and safety,
</td><td></td></tr>
</table>

Table 1 (continued)

KLEP 2011 Clause	Provisions	Comments
6.1 continued	*(b) routine maintenance work, being the periodic inspection, cleaning, repair or replacement of the works of the public authority (other than work that involves the disturbance of more than 1 tonne of soil),* *(c) minor work, being work that costs less than $20,000 (other than drainage work).* *(6) Despite subclause (2), development consent is not required under this clause to carry out any works if:* *(a) the works involve the disturbance of less than 1 tonne of soil, such as occurs in carrying out agriculture, the construction or maintenance of drains, extractive industries, dredging, the construction of artificial water bodies (including canals, dams and detention basins), foundations or flood mitigation works, or* *(b) the works are not likely to lower the watertable.*	
Clause 6.3 Flood Planning	*(1) The objectives of this clause are as follows:* *(a) to minimise the flood risk to life and property associated with the use of land,* *(b) to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change,* *(c) to avoid significant adverse impacts on flood behaviour and the environment.* *(2) This clause applies to land at or below the flood planning level.* *(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development:* *(a) is compatible with the flood hazard of the land, and* *(b) is not likely to significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties, and* *(c) incorporates appropriate measures to manage risk to life from flood, and* *(d) is not likely to significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, and* *(e) is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.* *(4) A word or expression used in this clause has the same meaning as it has in the Floodplain Development Manual (ISBN 0 7347 5476 0), published in 2005 by the NSW Government, unless it is otherwise defined in this clause.* *(5) In this clause: flood planning level means the level of a 1:100 ARI (average recurrent interval) flood event plus 0.5 metre freeboard.*	The subject land is not at or below the flood planning level.

Table 1 (continued)

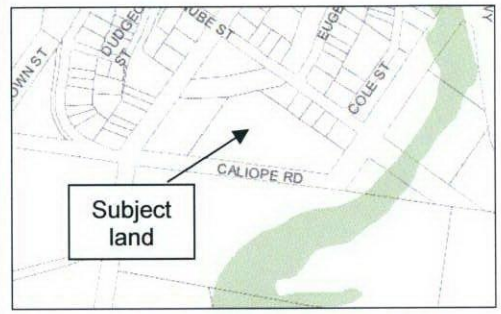
KLEP 2011 Clause	Provisions	Comments
Clause 6.4 *Terrestrial Biodiversity*	*(1) The objective of this clause is to maintain terrestrial biodiversity by:* *(a) protecting native fauna and flora, and* *(b) protecting the ecological processes necessary for their continued existence, and* *(c) encouraging the conservation and recovery of native fauna and flora and their habitats.* *(2) This clause applies to land identified as "Biodiversity land" on the Terrestrial Biodiversity Map.* *(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider whether or not the development:* *(a) is likely to have any adverse impact on the condition, ecological value and significance of the fauna and flora on the land,* *(b) is likely to have any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna,* *(c) has any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and* *(d) is likely to have any adverse impact on the habitat elements providing connectivity on the land.* *(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:* *(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or* *(b) if that impact cannot be reasonably avoided the development is designed, sited and will be managed to minimise that impact, or* *(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.*	Mapping supporting the KLEP 2011 does not identify any parts of the site as having '*biodiversity land*'. Refer **Figure 17**.  **Figure 17:** Extract from Terrestrial Biodiversity Map. The Concept Planning Proposal does not seek to make any alterations to this mapping. The Concept Planning Proposal is supported by a Flora and Fauna Assessment (**Annexure 2**) which confirms that the planning proposal will not have any significant impacts on threatened flora and fauna features.
Clause 6.5 *Riparian land and watercourses*	*(1) The objective of this clause is to protect and maintain the following:* *(a) water quality within watercourses,* *(b) the stability of the bed and banks of watercourses,* *(c) aquatic riparian habitats,* *(d) ecological processes within watercourses and riparian areas.* *(2) This clause applies to:* *(a) land identified as "Category 1 watercourse", "Category 2 watercourse" or "Category 3 watercourse" on the Riparian Land and Watercourses Map, or*	Mapping supporting the KLEP 2011 identifies a Category 2 watercourse adjoining the north west corner of the subject land. Refer to **Figure 18**. This watercourse is the Willow Gully Creek Riparian Watercourse and can also be seen in **Figure 2** (Section 2.0).

Table 1 (continued)

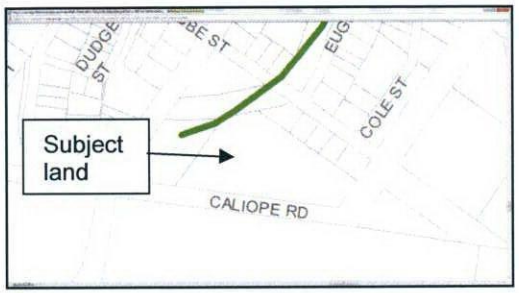
KLEP 2011 Clause	Provisions	Comments
6.5 continued	(b) land that is within: (i) 40 metres from the top of the bank of a Category 1 watercourse, or (ii) 20 metres from the top of the bank of a Category 2 watercourse, or (iii) 10 metres from the top of the bank of a Category 3 watercourse. (3) Before determining a development application to carry out development on land to which this clause applies, the consent authority must consider whether or not the development: (a) is likely to have any adverse impact on the following: (i) the water quality and flows within the watercourse, (ii) aquatic and riparian species, habitats and ecosystems of the watercourse, (iii) the stability of the bed and banks of the watercourse, (iv) the free passage of fish and other aquatic organisms within or along the watercourse, (v) any future rehabilitation of the water-course and its riparian areas, and (b) is likely to increase water extraction from the watercourse. (4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that: (a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or (b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or (c) if that impact cannot be minimised—the development will be managed to mitigate that impact.	 **Figure 18: Extract from Riparian Land and Watercourses Map.** The Concept Planning Proposal does not seek any alterations to this mapping. The Concept Planning Proposal involves correction of a zoning anomaly that affects the southern and eastern boundaries of the site. The proposal will have no impacts on the Category 2 Watercourse located to the north east of the subject land.
Clause 6.7 Foreshore Building Line	(1) The objective of this clause is to ensure that development in the foreshore area will not impact on natural foreshore processes or affect the significance and amenity of the area. (2) Development consent must not be granted for development on land in the foreshore area except for the following: (a) the extension, alteration or rebuilding of an existing building wholly or partly in the foreshore area, (b) the erection of a building in the foreshore area, if the levels, depth or other exceptional features of the site make it appropriate to do so,	There are no Foreshore Building Lines that apply to the subject land.

Table 1 (continued)

KLEP 2011 Clause	Provisions	Comments
6.7 *continued*	*(c) development for the purposes of boat sheds, sea retaining walls, wharves, slipways, jetties, waterway access stairs, swimming pools, fences, cycleways, walking trails, picnic facilities or other recreation facilities (outdoors).* *(3) Development consent must not be granted under subclause (2) unless the consent authority is satisfied that:* *(a) the development will contribute to achieving the objectives for the zone in which the land is located, and* *(b) the appearance of any proposed structure, from both the waterway and adjacent foreshore areas, will be compatible with the surrounding area, and* *(c) the development will not cause environmental harm such as:* *(i) pollution or siltation of the waterway, or* *(ii) an adverse effect on surrounding uses, marine habitat, wetland areas, fauna and flora habitats, or* *(iii) an adverse effect on drainage patterns, and* *(d) the development will not cause congestion of, or generate conflicts between, people using open space areas or the waterway, and* *(e) opportunities to provide continuous public access along the foreshore and to the waterway will not be compromised, and* *(f) any historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance of the land on which the development is to be carried out and of surrounding land will be maintained, and* *(g) In the case of development for the alteration or rebuilding of an existing building wholly or partly in the foreshore area, the alteration or rebuilding will not have an adverse impact on the amenity or aesthetic appearance of the foreshore, and* *(h) the development will not be impacted by sea level rise or change of flooding patterns as a result of climate change.*	

6.0 OBJECTIVES AND INTENDED OUTCOMES

The purpose of this section of the Concept Planning Proposal is to provide a concise statement setting out the objectives or intended outcomes of the planning proposal. It is a statement of what is planned to be achieved, not how it is to be achieved.

The objectives or intended outcome of this Concept Planning Proposal are to:

- *Ensure that the Low Density Residential RS zoning boundary as identified by mapping supporting the KLEP 2011 that applies to the subject site correlate with the southern and eastern cadastral boundaries of the site.*
- *Enable the development potential of the whole of subject land for residential purposes consistent with the R2 Low Density Residential zone that currently applies to the majority of the site.*
- *To modify the Minimum Lot Size mapping that supports the KLEP 2011 to ensure the 450 m^2 minimum lot size which applies to the majority of the subject land will correlate with the southern and eastern cadastral boundaries of the site.*
- *To modify the Height of Building mapping that supports the KLEP 2011 to ensure that the 8.5 metre maximum building height which applies to the majority of the subject land will also correlate with the southern and eastern cadastral boundaries of the site.*
- *To modify the Floor Space Ratio mapping that supports the KLEP 2011 to ensure that the 0.45:1 floor space ratio requirement that applies to the majority of the subject land will also correlate with the southern and eastern cadastral boundaries of the site.*

7.0 EXPLANATION OF PROVISIONS

The purpose of this section of the Concept Planning Proposal is to provide a statement of how the objectives or intended outcomes outlined in Section 6.0 above are to be achieved by means of amending the existing KLEP 2011.

As outlined in Section 4 the majority of the subject land is currently zoned R2 Low Density Residential. However, the Land Zone mapping that accompanies the KLEP 2011 shows the R2 zone as slightly offset from the southern and eastern boundaries of the subject site and does not follow the cadastral boundary.

There is no topographical distinction associated with the subject land that would justify the position of this zoning boundary offset from the southern and eastern boundaries of the site.

The following modifications are required in order to progress this Concept Planning Proposal:

- Modification of the Land Zoning Map that applies to the site under the Kiama LEP 2011 (LZN 012) in order to extend the R2 zone so that it correlates with the southern and eastern boundaries of the subject site.
- Modification of the Minimum Lot Size Map that applies to the site under the Kiama LEP 2011 (LSZ-012) in order to extend the specified minimum lot size (450 m^2) for the subject so that it correlates with the southern and eastern boundaries of the site.
- Modification of the Height of Buildings Map that applies to the site under the Kiama LEP 2011 (HOB 012) in order to extend the specified maximum building height (8.5 m) for the subject site so that it correlates with the southern and eastern boundaries of the site.
- Modification of the Floor Space Ratio Map that applies to the site under the Kiama LEP 2011 (FSR 012) in order to extend the specified maximum floor space ratio of 0.45:1 for the subject site so that it correlates with the southern and eastern boundaries of the site.

Figure 9, 11, 13 and **15** outline the proposed modifications to the Land Zoning Map, Minimum Lot Size, Height of Buildings Map and Floor Space Ratio Map respectively as they apply to the subject site.

8.0 JUSTIFICATION

8.1 NEED FOR THE CONCEPT PLANNING PROPOSAL

Is the Concept Planning Proposal a result of any strategic study or report?

The Concept Planning Proposal is not the result of any strategic study or report.

As outlined in Section 3.1 of this report however the whole of the subject site was identified as a small urban release (Site 16 Kiama) under the Kiama Urban Strategy (KUS); and proposed to be zoned R2 Low Density Residential. Whilst the majority of the subject land has been zoned R2, consistent with the recommendations of the KUS, the slivers of land associated with this Concept Planning Proposal were omitted. This Concept Planning Proposal therefore seeks to rectify this anomaly.

Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The Concept Planning Proposal seeks to modify the land zone boundary that applies to the site in order to ensure that it correlates with the southern and eastern boundaries of the site. In doing so the Concept Planning Proposal also seeks to ensure similar anomalies in the Minimum Lot Size, Height of Building, and Floor Space Ratio mapping are also rectified in a similar manner. The existing mapping anomalies are hindering the development of the subject site for residential purposes in a manner that would be consistent with the R2 zone that currently applies to the majority of the site.

There are no suitable alternative means of achieving the objectives or intended outcomes of this Concept Planning Proposal since it is a mapping anomaly that is proposed to be addressed.

8.2 RELATIONSHIP TO STRATEGIC PLANNING FRAMEWORK

8.2.1 Regional and Sub-Regional Strategies

Illawarra Regional Strategy

The primary purpose of the Illawarra Regional Strategy 2006-2031 is to ensure that adequate land is available and appropriately located to sustainably accommodate projected housing and employment needs for the Illawarra Region for the next 25 years.

In summary the aims of the strategy include:

- *Ensure an adequate supply of land strategically located to support economic growth and the capacity for an additional 30 000 new jobs by*

building on the current strengths in the existing manufacturing sector and the export opportunities presented by the Port of Kembla.

- *Ensure that existing and proposed transport corridors are protected to support freight transport and improve network efficiencies.*
- *Strengthen Wollongong City Centre as part of the Cities Taskforce project by enabling medium and high density living opportunities and revitalisation to bring economic growth, employment-generating opportunities, a strong urban form and improved liveability.*
- *Provide 38 000 new dwellings by 2031 to accommodate the additional 47 600 people expected in the Region over the next 25 years.*
- *Ensure that 50% of new dwellings are provided in the form of detached housing, achieved through existing land release areas and the delivery of the West Dapto release area.*
- *Increase densities and revitalise areas around major centres and towns to provide housing choice in accessible locations, and to support economic growth.*
- *Provide for an additional new release area at Calderwood if demand for additional housing supply arises because growth in the Region is beyond projections and the ability of identified developments to satisfy housing demand.*
- *Consideration of new release areas outside those identified on the Regional Strategy map will only be given to those proposals that can demonstrate compliance with the Sustainability Criteria (Appendix 1).*
- *Protect high value environments including coastal lakes, estuaries, aquifers, threatened species, vegetation communities and habitat corridors by ensuring that new urban development minimises impacts on these important areas and their catchments.*
- *Limit development in places constrained by coastal processes, flooding and wetlands, or which are important primary industry resources or significant scenic/cultural landscapes.*
- *Promote the economic feed and fibre production and community values of existing agricultural lands.*
- *Protect the cultural, European and Aboriginal heritage values and visual character of rural and coastal towns and villages, and surrounding landscapes.*
- *Where development or rezoning increases the need for State infrastructure, the Minister for Planning may require a contribution to the provision of such infrastructure having regard to the State Infrastructure Strategy and equity considerations.*
- *According to this Regional Strategy, an additional 38,000 dwellings will be required within the Illawarra over the next 25 years.*
- *Specific actions detailed within the "Housing and Settlement" section of the Regional Strategy and that have relevance to this project include:*

- *Encourage greater utilisation of available infrastructure through higher densities and an appropriate housing mix around major regional centres, major towns and towns (such as Warrawong, Shellharbour City Centre, Dapto, Corrimal, Fairy Meadow, Figtree, Unanderra, Albion Park, Warilla, Kiama, Helensburgh, Thirroul, Woonona and Oak Flats). The scale of density and development will be appropriate for the individual areas taking into account factors such as capacities, character and level of service.*

According to this Regional Strategy, an additional 38,000 dwellings will be required within the Illawarra over the next 25 years.

Table 2 outlines and comments on the various elements and respective stated actions of this Regional Strategy that have relevance to this Planning Proposal.

Table 2

The Illawarra Regional Strategy Actions and this Planning Proposal

Relevant Section of Illawarra Regional Strategy	*Comments*
Natural Environment	
• Local environmental plans are to maximise protection of 'Significant Native Vegetation", "indicative DEC Regional Habitat Corridors" and "other Indicative Habitat Corridors" shown on Map 2. The location of Significant Native Vegetation and Indicative Habitat corridors will be verified by council's in consultation with the Department of Environment and Conservation. Development proposals in these areas will protect biodiversity values including the retention of native vegetation and rehabilitation of disturbed areas.	The Concept Planning Proposal Report is supported by a Flora and Fauna Assessment (**Annexure 2**) which demonstrates that the proposal will not significantly adversely impact on the biodiversity values of the land. This issue is further discussed in Section 8.3.1 of this Concept Planning Proposal.
• Development proposals affecting riparian lands will be required to suitably protect the values of riparian lands by methods such as maximising the retention of native vegetation, especially in riparian corridors and rehabilitating disturbed areas.	The Concept Planning Proposal will not affect riparian lands. This matter is further discussed in Section 8.3.2 of this Concept Planning Proposal.
Natural Hazards	
• Local environmental plans will ensure that areas subject to high hazard are zoned to reflect the limitations of land.	This Concept Planning Proposal is supported by a site Contamination Assessment (**Annexure 4**). This matter is further discussed in Section 8.3.3 of this Concept Planning Proposal. The subject site is not at or below the flood planning level. The subject site is not identified as bushfire prone by Kiama Municipal Council (refer Section 5.3).
Rural Landscape and Rural Communities	
• New residential (other than those identified in Chapter 6 Housing and Settlement) or rural residential zones will only be supported where they meet the Sustainability Criteria (Appendix 1). Limited areas for additional rural residential development will be located on existing cleared land that is unsuitable for agricultural use or urban uses and be agreed to by the Department of Planning as part of an endorsed growth management strategy or structure plan.	The Concept Planning Proposal has taken into consideration the sustainability criteria (refer **Table 3** below).

Table 2 (continued)

Relevant Section of Illawarra Regional Strategy	*Comments*
• Local environmental plans will include provisions to limit dwellings in rural and environmental zones. The scale of new development within and adjacent to existing villages and rural towns will support the role of the town / village in servicing surrounding communities and preserve the character, scale and cultural heritage and social values.	The subject site is predominantly zoned R2 Low Density Residential under the KLEP 2011. The zone is however slightly offset from the southern and eastern boundaries of the site and this results in thin slivers of land being zoned RU2 Rural landscape. The zone boundary does not follow or identify any specific change in development potential of the land due to topography, different environmental values or land constraints. Furthermore such is at odds with the Kiama Urban Strategy which identified the whole of the land as being suitable for residential development. Hence it is proposed to modify the zone boundary that affects the site and slightly extend the R2 zone such that it correlates with the southern and eastern cadastral boundaries of the site.
Cultural Heritage • Councils are to ensure that Aboriginal cultural; and community values are considered in the future planning and management of the local government area. In undertaking this process, any recent Aboriginal heritage studies, including the Illawarra Aboriginal heritage study Murri Dhungang, Jirrar: Living in the Illawarra completed by the Department of Environment & Conservation in 2005 will be considered.	The Concept Planning Proposal is supported by an Aboriginal Heritage Assessment (**Annexure 3**), which demonstrates that the proposed modification will not have any adverse Aboriginal cultural heritage impacts. This matter is further discussed in Section 8.3.4 of this Planning Report.

Table 3
Sustainability Criteria (Appendix 1 – Illawarra Regional Strategy)

Criteria	*Explanation*	*Comments*
1. Infrastructure Provisions Mechanisms in place to ensure utilities, transport, open space and communication are provided in a timely and efficient way.	• Development is consistent with the Illawarra Regional Strategy, any subregional strategy, the State Infrastructure Strategy and relevant section 117 direction. • The provision of infrastructure (utilities, transport, open space, and communications) is costed and economically feasible based on government methodology for determining infrastructure development contributions. • Preparedness to enter into development agreement.	• As outlined in **Table 2** above, it is our view that this Concept Planning Proposal is consistent with both the Illawarra Regional Strategy and the Kiama Urban Strategy. • As will be dealt with in Section 8.4 it is not anticipated that the Concept Planning Proposal would significantly impact upon infrastructure provision in this locality.
2. Access Accessible transport options for efficient and sustainable travel between homes, jobs, services and recreation to be existing or provided.	• Accessibility of the area by public transport and/or appropriate road access in terms of: > Location/land use – to existing networks and related activity centres. > Network – the area's potential to be serviced by economically efficient transport services. > Catchment – the area's ability to contain, or form part of the larger urban area which contains adequate transport services. Capacity for land use/transport patterns to make a positive contribution to achievement of travel and vehicle use goals. • No net negative impact on performance of existing subregional road, bus, rail, ferry and freight network.	• As outlined in Section 2.0, construction of the Caliope Road reserve to the west of the site will provide access to the subject land off Old Saddleback Road. • The proposal involves rectifying a minor zoning boundary anomaly only. The area of land involved comprises only 1432 m^2. The remainder of the subject site is already zoned R2. It is not expected that any subsequent development of the land would have a negative impact on the performance of the subregional road network.
3. Housing Density Provide a range of housing choices to ensure a broad population can be housed.	• Contributes to the geographic market spread of housing supply, including any government targets established for aged, disabled or affordable housing.	• The Concept Planning Proposal will enable development of low density residential housing within the subject land, which will provide diversity to the housing mix within the region and will enable utilisation of available infrastructure associated with the town of Kiama and its surrounds.

Table 3 (continued)

Criteria	*Explanation*	*Comments*
		• The existing zoning boundary frustrates and reduces the development potential of this overall parcel of land. The Concept Planning Proposal will therefore promote and better co-ordinate the orderly and economic use of this land. • The Concept Planning Proposal is consistent with the Illawarra Regional Strategy and the Kiama Urban Strategy.
4. Employment Lands Provide regional/local employment opportunities to support the Illawarra's expanding role in the wider regional and NSW economies.	• Maintain or improve the existing level of subregional employment self-containment. • Meets subregional employment projections. > Employment-related land is provided in appropriately zoned areas.	• The Concept Planning Proposal does not involve Employment Land. This matter is not relevant to this Concept Planning Proposal.
5. Avoidance of Risk Land use conflicts, and risk to human health and life, avoided.	• No residential development within 1:100 floodplain. • Avoidance of physically constrained land, e.g. > High slope. > Highly erodible. • Avoidance of land use conflicts with adjacent existing or future land use as planned under relevant subregional or regional strategy. • Where relevant available safe evacuation route (flood and bushfire).	• The subject site is not at or below the flood planning level. • The subject land does not comprise any areas that have a high slope or that are highly erodible. • The Concept Planning Proposal is consistent with the Illawarra Regional Strategy and the Kiama Urban Strategy. • The subject site is not identified as bushfire prone by Kiama Municipal Council (refer Section 5.3).
6. Natural Resources Natural resource limits not exceeded/environmental footprint minimised.	• Demand for water within infrastructure capacity to supply water and does not place unacceptable pressure on environmental flows.	• The area of land associated with this Planning Proposal comprises thin slivers of land (1406 m^2 and 26 m^2 respectively). The extension of the R2 zone boundary to the cadastral boundary will not place an unacceptable pressure on water or energy supplies. The site is adjacent to existing residential development and would have access to existing town water, sewer and electricity supplies.

Table 3 (continued)

Criteria	*Explanation*	*Comments*
	• Demonstrates most efficient / suitable use of land: > Avoids identified significant agricultural land. > Avoids productive resource lands – extractive industries, mining and fishing. • Demand for energy does not place unacceptable pressure on infrastructure capacity to supply energy – requires demonstration of efficient and sustainable supply solution.	• The issue of the impact of the proposal on agricultural lands is discussed in **Table 4**.
7. Environmental Protection Protect and enhance biodiversity, air quality, heritage and waterway health.	• Consistent with government-approved Regional Conservation Plan (if available). • *Maintains or improves areas of regionally significant terrestrial and* aquatic biodiversity (as mapped and agreed by DEC). This includes regionally significant vegetation communities, critical habitat, *threatened species, populations, ecological communities and their* habitats. • Maintain or improve existing environmental condition for air quality. • Maintain or improve existing environmental condition for water quality: > Consistent with community water quality objectives for recreational water use and river health (DEC and CMA). > Consistent with catchment and stormwater management planning (CMA and council).	• *The Concept Planning Proposal is supported by a Flora* and Fauna Assessment (**Annexure 2**) which demonstrates that the Concept Planning Proposal will not *have a significant adverse ecological impact. This matter* is further discussed in Section 8.3.1 of this report. • It is not anticipated that this Concept Planning proposal will have any impacts on air quality of the locality. • The Concept Planning Proposal will not have any adverse impacts on local water quality. The planning proposal involves modification of a zoning anomaly that affects the southern and eastern boundaries of the site. The Concept Planning Proposal will have no direct impacts on riparian land located to the north east of the subject land and on the creek line to the south east of the subject land. Potential indirect impacts include weed infestation, erosion and sedimentation from any potential future development of the site. However, these potential impacts would need to be assessed at that future time and in any case the proposed change in zoning will not have a significant effect on the potential for development on the subject land given that the majority of the lot is already zoned R2.

Table 3 (continued)

Criteria	*Explanation*	*Comments*
	• Protects areas of Aboriginal cultural heritage value (as agreed by DEC).	• The Concept Planning Proposal is supported by an Aboriginal Heritage Assessment (**Annexure 3**) which demonstrates that the proposal will not have any adverse Aboriginal cultural heritage impacts. This matter is further addressed in Section 8.3.4 of this proposal.
8. Quality and Equity in Services	• Available and accessible services: > Do adequate services exist? > Are they at capacity or is some capacity available? > Has Government planned and budgeted for further service provision? > Developer funding for required service upgrade / access is available.	• The subject site has access to reticulated water, sewerage, road, power, and telephone services.

Kiama Urban Strategy

The Kiama Urban Strategy (KUS) was adopted by Kiama Municipal Council on the 20th September 2011. The Strategy considers both urban infill and urban expansion opportunities and options and makes recommendations as to an appropriate approach for the Kiama Local Government Area.

The KUS identifies the whole of the subject site as a Greenfield Urban Expansion Option (Site 16 Kiama). The assessment of Greenfield Urban Expansion Option concludes that the subject land be zoned Residential R2 and that this re-zoning should be included in the draft LEP 2011. Following the adoption of the KUS, the Kiama LEP 2011 has been commenced and has "re-zoned" the subject land as R2 Low Density Residential, albeit that the R2 zone boundary does not correlate accurately with the southern and eastern cadastral boundaries of the site.

This Concept Planning Proposal seeks to modify this R2 zone boundary anomaly so that the R2 zone boundary correlates with the southern and eastern boundaries of the site; to ensure that the R2 zone applies to the whole of Lot 20 DP 1151501; and hence will enable to site to be developed in accordance with the R2 zone objectives. Under these circumstances the proposal is consistent with the KUS.

8.2.2 State Environmental Planning Policies

Table 4 below provides a review of the Concept Planning Proposal in relation to current State Environmental Planning Policies.

Table 4

Checklist of State Environmental Planning Policies

State Environmental Planning Policy		***Compliance***	***Comments***
SEPP No. 1	Development Standard	N/A	
SEPP No. 4	Development Without Consent and miscellaneous Exempt and Complying Development	N/A	
SEPP No. 6	Number of Storeys in a Building	N/A	
SEPP No. 10	Retention of Low-Cost Rental Accommodation	N/A	
SEPP No. 14	Coastal Wetlands	N/A	
SEPP No. 15	Rural Land Sharing Communities	N/A	
SEPP No. 19	Bushland in Urban Areas	N/A	Does not apply to Kiama LGA
SEPP No. 21	Caravan Parks	N/A	
SEPP No. 22	Shops and Commercial Premises	N/A	
SEPP No. 26	Littoral Rainforests	N/A	No littoral rainforests within the subject site or surrounding area.
SEPP No.29	Western Sydney Recreational Area	N/A	Does not apply to Kiama LGA
SEPP No. 30	Intensive Agriculture	N/A	

Table 4 (continued)

State Environmental Planning Policy		***Compliance***	***Comments***
SEPP No. 33	Hazardous and Offensive Development	N/A	
SEPP No. 36	Manufactured Home Estates	N/A	
SEPP No. 38	Olympic Games and Related Projects	N/A	
SEPP No. 39	Spit Island Bird Habitat	N/A	Does not apply to Kiama LGA
SEPP No. 41	Casino/Entertainment Complex	N/A	Does not apply to Kiama LGA
SEPP No. 44	Koala Habitat Protection	Yes	This SEPP requires a judgement to be made about whether the subject land is potential and/or core koala habitat based on the proportion of trees present that are listed as Koala Feed Tree Species in Schedule 2 of the policy and/or the presence of koalas. These listed feed trees must constitute at least 15% of the total number of trees in the upper or lower strata of the tree component for the vegetation to be classified as potential koala habitat. Core koala habitat is land where there is a resident population of koalas including breeding females. This Concept Planning Proposal is supported by Flora and Fauna Assessment prepared by Southeast Engineering and Environmental (**Annexure 2**) which in part addresses the assessment requirements of this SEPP. The Flora and Fauna Assessment report identifies that the Kiama LGA is not listed on Schedule 1 of SEPP 44 and as such an assessment of Koala habitat is not required.
SEPP No. 47	Moore Park Showground	N/A	Does not apply to Kiama LGA

Table 4 (continued)

State Environmental Planning Policy		***Compliance***	***Comments***
SEPP No. 50	Canal Estate Development	N/A	
SEPP No. 52	Farm Dams, Drought Relief and Other Works	N/A	
SEPP No. 53	Metropolitan Residential Development	N/A	Does not apply to Kiama LGA
SEPP No. 55	Remediation of Land	Yes	The Planning proposal is supported by a Phase 1 Contamination Assessment prepared by Strategic Environmental & Engineering Consulting (**Annexure 4**). This matter is further addressed in Section 8.3.3 of this Planning Report.
SEPP No. 56	Sydney Harbour Foreshores and Tributaries	N/A	Does not apply to Kiama LGA
SEPP No. 59	Central Western Sydney Economic and Employment Area	N/A	Does not apply to Kiama LGA
SEPP No. 60	Exempt and Complying Development	N/A	
SEPP No. 62	Sustainable Aquaculture	N/A	
SEPP No. 64	Advertising and Signage	N/A	
SEPP No. 65	Design quality of residential flat development	N/A	
SEPP No.70	Affordable Housing (revised schemes	N/A	

Table 4 (continued)

State Environmental Planning Policy		***Compliance***	***Comments***
SEPP No. 71	Coastal Protection	N/A	
SEPP	Housing for Seniors or People with a Disability 2004	N/A	
SEPP	Building Sustainability Index: BASIX 2004	N/A	
SEPP	Major Projects 2005	N/A	
SEPP	Development on Kurnell Peninsular 2005	N/A	Does not apply to Kiama LGA
SEPP	Sydney Region Growth Centres 2006	N/A	Does not apply to Kiama LGA
SEPP	Mining, Petroleum Production and Extractive Industries 2007	N/A	
SEPP	Infrastructure 2007	N/A	
SEPP	Temporary Structures 2007	N/A	
SEPP	Kosciuszko National Park – Alpine Resorts	N/A	Does not apply to Kiama LGA.
SEPP	Rural Lands 2008	Yes	Clause 7 of this SEPP outlines the Rural Planning Principles as follows with comments in connection with this Concept Planning Proposal: *(a) the promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas,*

Table 4 (continued)

State Environmental Planning Policy		***Compliance***	***Comments***
SEPP	Rural Lands *continued*		Comment The subject land has been mapped as Class 4 agricultural land by NSW Agricultural mapping, which is "*land not suitable for cultivation on a regular basis*". Furthermore the affected slivers of land comprise an area of only 0.143 ha and in combination with their narrow configuration do not permit agricultural use of these portions of land at any significant scale. The subject land is surrounded by residential development to the north, west and east (beyond the highway). Adjoining land to the south and east comprises agricultural land but does not comprise intensive agricultural land uses. Under these circumstances it is not envisaged that this Concept Planning Proposal will undermine potential productive and sustainable economic activities within this locality. *(b) recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State,* Comment It is not envisaged that this Concept Planning Proposal will undermine the importance of rural lands and agriculture. As outlined above the majority of the subject site is zoned R2 low density residential and is also surrounded by residential development to the immediate north and west. This reflects the site's position on the urban fringe of Kiama. The land does not adjoin existing intensive agricultural land uses. Furthermore the suitability of the subject land for residential development has been identified by the Kiama Urban Strategy. *(c) recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development,* Comment As outlined above this Concept Planning proposal will not undermine the social and economic benefits of rural lands. The majority of the subject land is currently zoned R2 Low Density Residential and the entire site has been identified as suitable for residential development by the KUS. The proposal will enable development potential of the site in accordance with R2 zoning objectives and thereby provide low density housing that will enable utilisation of available infrastructure associated with the town of Kiama and its surrounds.

Table 4 (continued)

State Environmental Planning Policy		***Compliance***	***Comments***
SEPP	Rural Lands *continued*		*(d) in planning for rural lands, to balance the social, economic and environmental interests of the community,* Comment The slivers of land within the subject site associated with this Concept Planning Proposal have minimal agricultural capacity as has the surrounding locality. The Concept Planning Proposal will enable the development of low density housing which will provide diversity to the housing mix within the region and will contribute to the social, economic and environmental interests of the community. *(e) the identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land,* Comment The Concept Planning Proposal is supported by a Flora and Fauna Assessment (**Annexure 2**) which confirms that the planning proposal will not have any significant impacts on biodiversity values associated with the subject land. This is further discussed in Section 8.3.1 of this report. The Concept Planning Proposal is supported by a Phase 1 Site Contamination Assessment undertaken by Strategic Environmental & Engineering Consulting (**Annexure 4**), which confirms that the risk of contamination associated with the proposal is very low and the issue of contamination would not preclude rezoning. This matter is further addressed in Section 8.3.3 of this Planning Report. The nearest water resources to the subject land are Willow Gully Creek to the north and a creek-line to the south east of the subject site. The Concept Planning Proposal will not affect these water resources. Under these circumstances it is our view that the Concept Planning Proposal will protect natural resources, biodiversity, constrained land and water resources.

Table 4 (continued)

State Environmental Planning Policy		***Compliance***	***Comments***
SEPP	Rural Lands *continued*		*(f) the provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities,* Comment The objective of this Concept Planning Proposal is to modify the R2 zone boundary that currently applies to the majority of the subject land such that will correlate with the southern and eastern cadastral boundaries of the site. This will in turn enable the development potential of the subject land for residential purposes consistent with the R2 zone. Such will provide low density housing that will enable utilisation of available infrastructure associated with the town of Kiama and its surrounds. *(g) the consideration of impacts on services and infrastructure and appropriate location when providing for rural housing,* Comment As will be discussed in Section 8.4 of this Concept Planning Proposal, it is not envisaged that the proposal will have any adverse impacts on local services and infrastructure. *(h) ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General.* Comment As outlined in Section 8.2.1 above, it is our view that the Concept Planning Proposal is consistent with the Illawarra Regional Strategy and the Kiama Urban Strategy.
SEPP	Affordable Rental Housing 2009	N/A	
SEPP	Western Sydney Employment Lands 2009	N/A	Does not apply to Kiama LGA
SEPP	Exempt and Complying Development Codes 2008	N/A	
SEPP	Western Sydney Parklands 2009	N/A	Does not apply to Kiama LGA

Table 4 (continued)

State Environmental Planning Policy		*Compliance*	*Comments*
Deemed SEPPS (Former Regional Plans)			
Illawarra REP 1		Yes	The subject site is located within the area affected by the provisions of the Illawarra Regional Environmental Plan No. 1 (IREP), the aims of which are to maximise the opportunities for the people of the region and the State to meet their individual and community economic and social needs by: *(a) identifying regional planning issues and provisions applicable or potentially applicable:* *(i) to actual development which may be carried out on land within the region, and* *(ii) to the overall planning of the region consistent with the policies for draft local environmental plan preparation specified in Part 2–16,* *(b) advising Government, public authorities and other persons in determining the way in which they may:* *(i) manage their land resources,* *(ii) exercise their functions,* *(iii) order their priorities and allocation of their funds in relation to the planning of the region, having regard to the principles specified in Parts 2–16, and* *(c) establishing parameters and controls relating to development, particularly as they relate to the environmental quality and social well-being of residents of the region.* A series or maps support the IREP and these have been examined. The subject land is within an area of land identified as having landscape or environmental attributes. The *"Illawarra Region Landscape and Environment Study"* supports the Regional Plan and provides recommendations in terms of these attributes. The subject land is located within *Unit 2: North Coast*, which is identified for its scenic quality. Within this Unit, the subject land is within subunit *IVa (Development Control)*, the recommendations for which are: *Areas which provide a visual backdrop to the coastal scenery. They should be protected from development unsympathetic to their scenic amenity. In most cases, the appropriate zoning would be one which preserved strict crop or pastoral landuse.*

Table 4 (continued)

State Environmental Planning Policy		***Compliance***	***Comments***
IREP 1 *continued*			The subject land is predominantly zoned Residential R2 (low density) under the Kiama LEP 2011. The proposal to modify the zone boundary such that it correlates with the southern and eastern boundaries of the site is not considered to affect scenic amenity given that it is thin slivers of land that would be affected by the proposal and that the existing zoning anomaly appears to be the result of an unexplained mapping anomaly (see Section 3). Further, the identification of the entire site as R2 zoned land has been identified by the adopted Kiama Urban Strategy. Under these circumstances the Concept Planning Proposal is not considered to be inconsistent with the IREP.
Illawarra REP 2	Jamberoo	N/A	Does not apply to subject land.
REP	Sustaining the catchments	N/A	
Greater Metropolitan REP No.2	Georges River catchment	N/A	Does not apply to Kiama LGA

8.2.3 S.117 Ministerial Directions

The Minister for Planning, under section 117(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) issues directions that relevant planning authorities such as local councils must follow when preparing planning proposals for new LEPs. The directions cover the following broad categories:

1. employment and resources;
2. environment and heritage;
3. housing, infrastructure and urban development;
4. hazard and risk;
5. regional planning;
6. local plan making.

Table 5 is a list of Directions issued by the Minister for Planning to relevant planning authorities under section 117(2) of the *Environmental Planning and Assessment Act 1979*. These directions apply to planning proposals lodged with the Department of Planning on or after the date the particular direction was issued.

Table 6 which follows **Table 5** provides comments in relation to those specific Directions that have relevance to this Planning Proposal.

Table 5

S.117 Directions and their Applicability to this Concept Planning Proposal

	Direction	***Issue date/ date effective***	***Applicable (yes / No)***
1.	**Employment and resources**	1 July 2009	
1.1	Business and Industrial zones		No
1.2	Rural zones		Yes
1.3	Mining, Petroleum Production and Extractive Industries		No
1.4	Oyster Aquaculture		No
1.5	Rural Lands		Yes
2.	**Environment and heritage**	1 July 2009	
2.1	Environment Protection zones		No
2.2	Coastal Protection		No
2.3	Heritage Conservation		Yes
2.4	Recreation Vehicle Areas		No

Table 5 (continued)

Direction		*Issue date/ date effective*	*Applicable (yes / No)*
3.	**Housing, infrastructure and urban development**	1 July 2009 (except for new direction 3.6 – effective 16 February 2011)	
3.1	Residential zones		Yes
3.2	Caravan Parks and Manufactured Home Estates		No
3.3	Home Occupations		No
3.4	Integrating Land Use and Transport		No
3.5	Development near licensed aerodromes		No
3.6	Shooting ranges		No
4.	**Hazard and risk**	1 July 2009	
4.1	Acid Sulfate Soils		No
4.2	Mine Subsidence and Unstable Land		No
4.3	Flood Prone Land		No
4.4	Planning for Bushfire Protection		No
5.	**Regional planning**	1 July 2009 (except for new direction 5.4 effective 29 November 2009 & direction 5.2 effective 3 March 2011)	
5.1	Implementation of Regional Strategies		Yes
5.2	Sydney Drinking water catchments		No
5.3	Farmland of state and regional significance on the NSW far north coast		No
5.4	Commercial and retail development along the Pacific Highway, north coast		No
5.5	Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA) (revoked 18 June 2010)		No
5.6	Sydney to Canberra corridor (revoked 10 July 2008. See Amended direction 5.1)		No
5.7	Central coast (revoked 10 July 2008. See Amended Direction 5.1)		No
5.8	Second Sydney airport: Badgerys Creek		No
6.	**Local plan making**	1 July 2009	
6.1	Approval and referral requirements		Yes
6.2	Reserving land for public purposes		No
6.3	Site specific provisions		Yes
7.	**Metropolitan planning**	1 February 2010	
7.1	Implementation of the metropolitan plan for Sydney 2036		No

Table 6

Relevant S.117 Directions to this Planning Proposal

Relevant Direction	*Comments*
1.2 Rural Zones ***What a relevant planning authority must do if this direction applies*** *(4) A planning proposal must:* *(a) not rezone land from a rural zone to a residential, business, industrial, village or tourist zone.*	The subject land is predominantly zoned R2 Low Density Residential however thin slivers of land along the southern and eastern boundaries of the site are zoned RU2 Rural Landscape. The Concept Planning Proposal seeks to "rezone" these slivers of land along the southern and eastern boundaries of the site as R2 and hence this proposal is inconsistent with this particular ministerial direction. However, this Concept Planning Proposal is justified given: • The whole of the land was identified in the Kiama Urban Strategy as a small urban release site (Site 16 Kiama) to be zoned R2 Low Density Residential. • There is nothing in the Kiama Urban Strategy that would suggest that slivers of land along the southern and eastern boundaries of the site should be zoned RU2. • The existing zone boundary does not follow or identify any specific physical attribute due to topography, different environmental values or land constraints, that would justify such a "split zone". • Based on a review of recent planning instruments that affect the subject land, it would appear that the mapping supporting the current KLEP 2011 is simply based on a zone boundary anomaly first shown in mapping associated with the *Kiama Local Environmental Plan 1996 (Amendment 61)*. Prior to this, planning instrument mapping does not exhibit any zone boundary anomaly (see Section 3.0). • The Concept Planning Proposal seeks to modify the zone boundary (and minimum lot size; building height; and floor space ratio mapping) such that the R2 zone and its relevant provisions applies across the whole of the site such that it is consistent with the KUS. • The proposed modification of the land zone boundary that affects the subject site will not have any significant adverse environmental or social impacts (see Section 8.3). • Finally, the area and configuration of the affected land does not permit meaningful agricultural use of the land. Under these circumstances it would not be possible to use these slivers of land in a manner consistent with the current RU2 zone objectives and provisions that apply to the land.

Table 6 (continued)

Relevant Direction	*Comments*
(b) not contain provisions that will increase the permissible density of land within a rural zone (other than land within an existing town or village).	The proposal does not seek to increase the permissible density of development within a rural zone.
1.5 Rural Lands ***When this direction applies*** *(3) This direction applies when:* *(a) a relevant planning authority prepares a planning proposal that will affect land within an existing or proposed rural or environment protection zone (including the alteration of any existing rural or environment protection zone boundary) or* *(b) a relevant planning authority prepares a planning proposal that changes the existing minimum lot size on land within a rural or environment protection zone.* ***What a relevant planning authority must do if this direction applies*** *(4) A planning proposal to which clauses 3(a) or 3(b) apply must be consistent with the Rural Planning Principles listed in State Environmental Planning Policy (Rural Lands) 2008.* *(5) A planning proposal to which clause 3(b) applies must be consistent with the Rural Subdivision Principles listed in State Environmental Planning Policy (Rural Lands) 2008.* ***Note**: State Environmental Planning Policy (Rural Lands) 2008 does not require a relevant planning authority to review or change its minimum lot size(s) in an existing LEP. A relevant planning authority can transfer the existing minimum lot size(s) into a new LEP. However, where a relevant planning authority seeks to vary an existing minimum lot size in an LEP, it must do so in accordance with the Rural Subdivision Principles listed in State Environmental Planning Policy (Rural Lands) 2008.*	The Concept Planning Proposal concerns slivers of land zoned RU2 located along the southern and eastern boundaries of the site. The Concept Planning Proposal does seek to change the minimum lot size map as it applies to the site to ensure consistency with the intended change to the land size map. **Table 4** of this Concept Planning Proposal Report demonstrates that this proposal is consistent with the Rural Planning Principles listed in SEPP (Rural Lands) 2008. **Table 4** of this Concept Planning Proposal report demonstrates that the proposal is consistent with the Rural Subdivision Principles listed in the SEPP (Rural Lands) 2008.
2.1 Environmental Protection zones ***What a relevant planning authority must do if this direction applies*** *(4) A planning proposal must include provisions that facilitate the protection and conservation of environmentally sensitive areas.*	The Concept Planning Proposal is supported by a Flora and Fauna Assessment prepared by Southeast Engineering & Environmental (**Annexure 2**). This issue is further addressed in Section 8.3.1 of this Planning Report.

Table 6 (continued)

Relevant Direction	*Comments*
(5) A planning proposal that applies to land within an environment protection zone or land otherwise identified for environment protection purposes in a LEP must not reduce the environmental protection standards that apply to the land (including by modifying development standards that apply to the land). This requirement does not apply to a change to a development standard for minimum lot size for a dwelling in accordance with clause (5) of Direction 1.5 "Rural Lands".	The land is not presently identified within an environmental protection zone or land otherwise identified for environmental protection purposes. The Concept Planning Proposal seeks to rezone slivers of land along the southern and eastern boundaries of the site from RU2 to R2. The justification for this proposal is provided at the beginning of this Table in the section that addresses Rural Zones.
2.3 Heritage Conservation ***What a relevant planning authority must do if this direction applies*** *(4) A planning proposal must contain provisions that facilitate the conservation of:* *(a) items, places, buildings, works, relics, moveable objects or precincts of environmental heritage significance to an area, in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item, area, object or place, identified in a study of the environmental heritage of the area,* *(b) Aboriginal objects or Aboriginal places that are protected under the National Parks and Wildlife Act 1974, and* *(c) Aboriginal areas, Aboriginal objects, Aboriginal places or landscapes identified by an Aboriginal heritage survey prepared by or on behalf of an Aboriginal Land Council, Aboriginal body or public authority and provided to the relevant planning authority, which identifies the area, object, place or landscape as being of heritage significance to Aboriginal culture and people.*	No items of environmental heritage have been identified on the subject land. The Concept Planning Proposal is supported by an Aboriginal Heritage Assessment (**Annexure 3**). This assessment concludes that the proposal will not result in adverse impacts on items of Aboriginal heritage. This matter is addressed in Section 8.3.4 of this Concept Planning Proposal.
3.1 Residential Zones ***When this direction applies*** *(3) This direction applies when a relevant planning authority prepares a planning proposal that will affect land within:* *(a) an existing or proposed residential zone (including the alteration of any existing residential zone boundary),* *(b) any other zone in which significant residential development is permitted or proposed to be permitted.*	The subject site of this Concept Planning Proposal is predominantly zoned R2 Low Density residential, with the remaining slivers of land along the southern and eastern boundaries of the site zoned RU2 Rural Landscape.

Table 6 (continued)

Relevant Direction	*Comments*
What a relevant planning authority must do if this direction applies *(4) A planning proposal must include provisions that encourage the provision of housing that will:* *(a) broaden the choice of building types and locations available in the housing market, and* *(b) make more efficient use of existing infrastructure and services, and* *(c) reduce the consumption of land for housing and associated urban development on the urban fringe, and* *(d) be of good design.*	The Concept Planning Proposal does not affect the existing area of R2 zoned land within the subject site, but proposes to modify the zone boundary such that the R2 zone extends across the whole of the subject site. The entire subject site was identified in the Kiama Urban Strategy as a small urban release site (Site 16 Kiama) to be zoned R2 Low Density Residential. The proposal will enable future development consistent with the R2 zone objectives which will provide low density housing that will enable utilisation of available infrastructure associated with the town of Kiama and its surrounds.
(5) A planning proposal must, in relation to land to which this direction applies: *(a) contain a requirement that residential development is not permitted until land is adequately serviced (or arrangements satisfactory to the council, or other appropriate authority, have been made to service it), and* *(b) not contain provisions which will reduce the permissible residential density of land.*	Future development of the site will not be permitted until land is adequately serviced. The Concept Planning Proposal will not reduce the permissible residential density of land.
5.1 Implementation of Regional Strategies ***When this direction applies*** *(3) This direction applies when a relevant planning authority prepares a planning proposal.* ***What a relevant planning authority must do if this direction applies*** *(4) Planning proposals must be consistent with a regional strategy released by the Minister for Planning.*	The Concept Planning Proposal is consistent with the Illawarra Regional Strategy. This is discussed in Section 8.2.1 of this Planning Report.
6.1 Approval & referral requirements ***When this direction applies*** *(3) This direction applies when a relevant planning authority prepares a planning proposal.* ***What a relevant planning authority must do if this direction applies*** *(4) A planning proposal must:* *(a) minimise the inclusion of provisions that require the concurrence, consultation or referral of development applications to a Minister or public authority, and*	This Concept Planning Proposal does not seek to introduce concurrence or additional consultation provisions to any public authority.

Table 6 (continued)

Relevant Direction	*Comments*
(b) not contain provisions requiring concurrence, consultation or referral of a Minister or public authority unless the relevant planning authority has obtained the approval of: *(i) the appropriate Minister or public authority, and* *(ii) the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General),* *prior to undertaking community consultation in satisfaction of section 57 of the Act, and*	
(c) not identify development as designated development unless the relevant planning authority: *(i) can satisfy the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General) that the class of development is likely to have a significant impact on the environment, and* *(ii) has obtained the approval of the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General) prior to undertaking community consultation in satisfaction of section 57 of the Act*	This Concept Planning Proposal does not seek to identify development as designated development.
6.3 Site Specific Provisions ***When this direction applies*** *(3) This direction applies when a relevant planning authority prepares a planning proposal that will allow a particular development to be carried out.* ***What a relevant planning authority must do if this direction applies*** *(4) A planning proposal that will amend another environmental planning instrument in order to allow a particular development proposal to be carried out must either:* *(a) allow that land use to be carried out in the zone the land is situated on, or*	The Concept Planning Proposal seeks to modify the R2 zone boundary that applies to the whole of the site. The Concept Planning Proposal does not seek to modify the permissible uses for the overall land in order to allow a particular development proposal to be carried out.

Table 6 (continued)

Relevant Direction	*Comments*
(b) rezone the site to an existing zone already applying in the environmental planning instrument that allows that land use without imposing any development standards or requirements in addition to those already contained in that zone, or *(c) allow that land use on the relevant land without imposing any development standards or requirements in addition to those already contained in the principal environmental planning instrument being amended.* *(5) A planning proposal must not contain or refer to drawings that show details of the development proposal.*	The proposed change in zone boundary that affects the southern and eastern parts of the site is discussed at the beginning of this Table in the section that addresses Rural Zones.

8.3 ENVIRONMENTAL, SOCIAL AND ECONOMIC IMPACT

8.3.1 Ecological Issues

The Concept Planning Proposal is supported by a Flora and Fauna Assessment prepared by Southeast Engineering & Environmental (SE&E) (**Annexure 2**). The following section of this proposal is based upon the findings and recommendation of the Flora and Fauna Assessment within **Annexure 2** of this report.

Flora

The slivers of land which are the subject of this planning proposal comprise of highly modified vegetation in the form of exotic pasture and a garden dominated by non-native trees. No parts of these slivers of land can be classified as native vegetation.

According to SE&E no threatened flora species listed on the Threatened Species Conservation Act or the EPBC Act were recorded within the subject land. Two endangered flora species, *Cynanchum elegans* and *Zieria granulata* were found adjacent to the subject site along the creek-line to the south east of the site.

No endangered ecological communities (EECs) were recorded by SE&E on the site. The EEC *Illawarra Subtropical Rainforest in the Sydney Basin Bioregion* is found adjacent to the site along the creek line located to the south east of the site.

Fauna

No threatened fauna species were recorded by SE&E within the subject site.

The following threatened species were considered likely to occur on the site:

- Grey-headed Flying-fox;
- East Coast Freetail Bat; and
- Yellow-bellied Sheathtail-bat.

These species are all listed as threatened under the Threatened Species Conservation Act. Additionally the Grey-headed Flying-fox is listed as Vulnerable under the EPBC Act.

No hollow-bearing trees were recorded nor any feed trees for gliders or Glossy-black Cockatoos nor were there any winter flowering tree species. No primary browse trees for Koala were recorded on site.

Impact assessment

According to SE&E the environmental values on the site are not inconsistent with the proposed new zoning of R2. The adjacent property to the west has a new low density residential development being constructed. The major environmental values are currently incorporated as part of the existing dwellings garden or occur along the creek line adjacent to the site.

There are some potential indirect impacts including weed infestation, erosion and sedimentation to the environmental values along the creek line from any potential future development of the site. However, these potential impacts would need to be assessed at that future time and in any case the change in zoning proposed within this assessment will not alter the potential for development on the subject lot due to the current majority R2 zoning.

Conclusion

The Flora and Fauna Assessment prepared by SE&E concludes:

> ***Threatened flora species and populations***
>
> *Conclusion: Based on desktop searches, species evaluations, field studies and significance assessments under TSC Act and EPBC Act legislation this assessment has determined that there were no threatened flora species found or likely to occur within the subject land.*
>
> *Two endangered flora species, Cynanchum elegans and Zieria granulata were found adjacent to the site along the creek line. The proposed action (involving the rezoning of less than 5% of the subject Lot) will have no impact on these species. Any future development applications on this land need to take these individuals of these species into consideration.*

Recommendation: This matter will not require referral to the NSW Director General or the Commonwealth Minster in regards to threatened flora species.

Endangered ecological communities

Conclusion: No EECs occur within the subject land. The EEC Illawarra Subtropical Rainforest in the Sydney Basin Bioregion is found adjacent to the site along the creek line. The proposed action (involving the rezoning of less than 5% of the subject Lot) will have no impact on this EEC. Any future development applications on this land need to take this community into consideration.

Recommendation: This matter will not require referral to the NSW Director General or the Commonwealth Minster in regards to EECs.

Threatened fauna species

Conclusion: Based on desktop searches, species evaluations, field studies and significance assessments under TSC Act and EPBC Act legislation, this assessment has determined that there are no threatened fauna species issues in relation to the proposed activity.

Recommendation: This matter will not require referral to the NSW Director General or the Commonwealth Minster in regards to threatened fauna species.

8.3.2 Water Quality

Mapping supporting Kiama LEP 2011 identifies riparian land adjoining the subject site as shown in **Figure 18** (Section 5.3). Additionally there is a creek line located to the south east of the subject site (see **Annexure 2**).

The Concept Planning Proposal will have no direct impacts on riparian land located to the north east of the subject land and on the creek line to the south east of the subject land. Potential indirect impacts include weed infestation, erosion and sedimentation from any potential future development of the site. These potential impacts would need to be assessed with future development proposals affecting the whole of the land. In any case the proposed change in zoning will not have a significant effect on the potential for development on the subject land given that the majority of the lot is already zoned R2.

8.3.3 Site Contamination

This Concept Planning Proposal is supported by a Contamination Assessment of the subject land carried out by Strategic Environmental & Engineering Consulting (**Annexure 4**).

The Contamination Assessment Report concludes that:

"There are no signs of past or present potentially contaminating activities on the subject land. We conclude the risk of contamination is very low and the issue of contamination would not preclude re-zoning. However, there is a risk that the under-floor area of the dwelling has been sprayed for termites. When the home is demolished we recommend the exposed under-floor area is tested for Organochlorine and Organophosphate pesticides at the surface and at a depth of 300 mm. If pesticides are present a remedial action plan would be required to address remediation or removal of the contaminated soil. There is a septic tank on the land that would require decommissioning and removal before any future residential development".

8.3.4 Aboriginal Cultural Heritage

This Concept Planning Proposal is supported by an Aboriginal Heritage Assessment of the subject land carried out by Myall Coast Archaeological Services (MCAS) (**Annexure 3**).

The Aboriginal Heritage Assessment undertaken by MCAS has been carried out in accordance with the Department of Environment and Heritage generic code that provides one process for satisfying due diligence requirements under the National Parks and Wildlife Act 1974.

The purpose of due diligence is to identify whether Aboriginal objects are present in an area, and to determine whether a proposed activity will have impacts on Aboriginal objects. Therefore it is essential to identify and understand all the expected impacts of the proposed activity. There are two categories of activity used for assessing impacts:

- Activities involving no additional surface disturbance;
- Activities causing additional surface disturbance.

For activities causing additional surface disturbance, it is necessary to determine whether an activity is proposed for:

a) A developed area or a previously disturbed area; or

b) An undisturbed area.

For activities in previously developed or disturbed areas, it is then necessary to determine whether the new activity will create significant additional surface disturbance. If it will, then the process for undisturbed areas will apply.

Disturbed land has been defined in the OEH due diligence process as Land that has been previously subjected to any activity that has resulted in clear and observable changes to the land's surface.

OEH will not approve or certify a person's compliance with their due diligence requirements carried out under this or any other code. It is the responsibility of the individual or proponent to ensure that they have undertaken due diligence.

According to the OEH Due diligence Code of practice at 7.7 it states that:

> *"You can follow your own due diligence process and manage your own risk. Due diligence amounts to taking reasonable and practicable steps to protect Aboriginal objects. This generic code provides one process for satisfying the due diligence requirements of the NPW Act.*
>
> *It is not mandatory to follow this code. An individual or corporation can take other measures, provided that such measures are objectively reasonable and practicable and meet the ordinary meaning of exercising due diligence."*

The following section of this Concept Planning Proposal is based upon the findings and recommendation of the Aboriginal Heritage Assessment carried out by MCAS and which forms **Annexure 3** of this report.

The slivers of land that are the subject of this planning proposal has been disturbed by settlement and agricultural practices over many decades particularly since the 1930s with the property being used for grazing cattle. The greatest evidence of disturbance is the house situated within the study area and by the reduction in natural vegetation.

According to MCAS, the site can be regarded as 'disturbed land' under the definition of disturbed land provided by the *National Parks and Wildlife Act* in that it has undergone activity that has resulted in clear and observable changes to the land's surface, ie. it has been used for residential purposes associated with agricultural use of the land.

The landscape context of the study area also suggests, according to MCAS, that it would be unlikely to have been used intensively by the Aboriginal people. The landscape also suggests that the study area is not conducive to retaining Aboriginal objects, but rather any Aboriginal objects originating on site would have been removed by natural processes to depositional areas lower down.

Given the disturbed nature of the study area, its lack of depositional qualities and infrequent occupation, MCAS consider it is highly unlikely that Aboriginal objects exist on or below the land.

Impact assessment

MCAS conclude with respect to this Concept Planning Proposal that Aboriginal objects will not be harmed by existing activities or by the proposed planning proposal and subsequent activity.

Further, MCAS indicate that assessment from an Aboriginal heritage and Archaeological perspective is NOT required as the study area is *disturbed land* under the NPW Act.

Future possible land use, ie. subdivision and construction may introduce the potential for impact upon Aboriginal heritage if unknown objects exist within the study area. However

that is a matter for future consideration when and if any potential is realised. However, according to MCAS the potential for harm is negligible as the study area is considered disturbed land.

Recommendations

The Aboriginal Heritage Assessment prepared by MCAS makes the following recommendations in relation to this proposal:

> *"1. That further assessment from an Aboriginal heritage and Archaeological perspective is NOT required as it is disturbed land under the NPW Act (1974) as amended.*
>
> *2. That the proponent be advised that under the NPW Act 1974, it is the responsibility of all persons to ensure that harm does not occur to an Aboriginal object. Whilst undertaking works, if an Aboriginal object is found, work must stop and DECCW notified. An application for an AHIP may also be required. Some works may not be able to resume until an AHIP has been granted. Further investigation may be required depending on the type of Aboriginal object that is found. If human skeletal remains are found during the activity, work must stop immediately, the area secured to prevent unauthorised access and the NSW Police and OEH contacted. The NPW Act requires that, if a person finds an Aboriginal object on land and the object is not already recorded on AHIMS, they are legally bound under s.89A of the NPW Act to notify OEH as soon as possible of the object's location. This requirement applies to all people and to all situations."*

8.3.5 Social and Economic Effects

There is no social infrastructure that would be affected by the Concept Planning Proposal.

8.4 STATE AND COMMONWEALTH INTEREST

8.4.1 Public Infrastructure

The Department of Planning's "*A Guide to Preparing Planning Proposals*" (2009) advises that consideration should be given to whether there is adequate public infrastructure for the Concept Planning Proposal. The guidance states that this question typically applies to planning proposals that involve:

- residential subdivisions of 150 lots;
- substantial urban renewal; and
- infill development.

The Concept Planning Proposal does not involve any of the above scenarios.

The Concept Planning Proposal seeks to rectify a zone boundary anomaly that applies to the R2 Low Density Residential zone boundary that currently applies to the majority of the site. This zone boundary is currently slightly offset from the southern and eastern boundaries of the site and does not correlate with the cadastral boundary. This zoning anomaly affects a thin sliver of land (1406 m^2) along the southern boundary and a thin sliver of land (26 m^2) along the eastern boundary of the subject site. The Concept Planning Proposal involves modification of the zone boundary to extend the R2 zone so that it will correlate with the southern and eastern boundaries of the site and in so doing apply the R2 zone to the whole of Lot 20 DP 1151501. The Concept Planning Proposal also seeks a similar rectification to other mapping that supports the LEP 2011 in relation to minimum lot size, height of building and floor space ratios as they apply to this land. The scale and nature of the Concept Planning Proposal is such it will not affect public infrastructure requirements.

8.4.2 Views of Government Agencies

It is anticipated that Council will consult with arrange of Government agencies as part of any review of this Concept Planning Proposal such as:

- The Office of Environment & Heritage;
- Rural Fire Service;
- Roads and Maritime Services;
- EPA.

And any other government agencies nominated by the Department of Planning & Infrastructure.

This process would be undertaken as part of the exhibition of the Planning Proposal following receipt of Gateway Determination from the Department of Planning & Infrastructure.

9.0 CONSULTATION

As outlined in Section 3.0, consultation has been undertaken with staff from Council in relation to this Concept Planning Proposal. Council in a letter dated 18 February 2013 (**Annexure 1**) (and following consultation between Council staff and staff from the NSW Department of Planning) advised that a Concept Planning Proposal report be prepared, and should be supported by expert assessments with respect to:

1. Aboriginal Cultural Heritage.
2. Flora and Fauna Assessment; and
3. Phase 1 Contamination Assessment.

This Concept Planning Proposal Report has been in accordance with Council's advice; and is supported by expert assessments as recommended by Council.

10.0 CONCLUSION

This Concept Planning Proposal seeks an amendment to the mapping that supports the Kiama Local Environmental Plan 2011. In particular the Concept Planning Proposal seeks to modify the boundary of the R2 Low Density Residential zone that currently applies to the majority of the site. This zone boundary is currently slightly offset from the southern and eastern boundaries of the site and does not correlate with the cadastral boundary. This zoning anomaly affects thin slivers of land along the southern and eastern boundaries of the site. The Concept Planning Proposal involves modification of the zone boundary to extend the R2 zone so that it will correlate with the southern and eastern boundaries of the site, so that the R2 zone will apply to the whole of Lot 20 DP 1151501.

This same boundary anomaly also affects the:

- Minimum Lot Size Map;
- Height of Building Map; and
- Floor Space Ratio Map

This Concept Planning Proposal therefore also seeks to rectify these maps to ensure consistency with the proposed modified zoning boundary.

The Concept Planning Proposal is supported by expert assessments including:

- Flora & Fauna Impact Assessment carried out by Southeast Engineering and Environmental;
- Aboriginal Heritage Assessment carried out by Myall Coast Archaeological Services; and
- Phase 1 Site Contamination Assessment carried out by Strategic Environmental & Engineering Consulting.

Based upon the findings of the above expert assessments, this Planning Report identifies that the proposed modification of the land zone boundary that affects the subject site will not have any significant adverse environmental or social impacts.

The proposed modification will enable the development potential of the subject land for residential purposes consistent with the R2 zone that currently applies to the majority of the site. The development of the site for such purposes is also consistent with the Kiama Urban Strategy (2010) which identifies the subject site as a small urban release site.

Council's support for this Concept Planning Proposal is therefore sought.

Stephen Richardson.

STEPHEN RICHARDSON
TOWN PLANNER CPP MPIA

ANNEXURE 1

Letter from Kiama Municipal Council

dated

18th February 2013

ANNEXURE 1

KIAMA MUNICIPAL COUNCIL

Phone Enquiries:

Ms Kim Bray
4232 0444
Reference:

(KB:DB– PR.12644 & T43.016.000)

18 February 2013

Stephen Richardson
Cowman Stoddart
PO Box 738
NOWRA NSW 2541

Dear Sir

Possible Planning Proposal to Correct Zoning Anomaly
Lot 20 DP 1151501

Further to our meeting held on 31 January, 2013, I have contacted the Department of Planning and Infrastructure (DopI) to discuss how a planning proposal for this type of proposal would need to be addressed.

Advice received from Graham Towers of DoPI has indicated that all of the maters that would normally be addressed in instances of requesting a change of zone from non-residential to residential land would need to be addressed. The level of detail may range from, the matter being addressed in the planning report, to a full study of the area. Information regarding past use, adjoining use etc would also need to be included.

Due to the nature of the proposed zone change, some matters are still flagged as requiring studies due to the potential risk associated. These would include, potential site contamination, Aboriginal Cultural Heritage and Flora and Fauna. It is to be noted that this may not be an exhaustive list and other matters may arise in the course of investigations that would require studies to be undertaken.

Council will need to ensure that a merit assessment of the proposal considering all due diligence matters can be undertaken.

Due to the nature of the proposal, I have assessed that it can be considered under Step 1 of the Planning Proposal Policy, that is, that a concept planning proposal may be prepared.

Please do not hesitate to call if you have any other issues arising.

Yours faithfully

Kim Bray
Manager Strategic Planning

ALL CORRESPONDENCE

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ANNEXURE 2

Flora & Fauna Assessment

prepared by

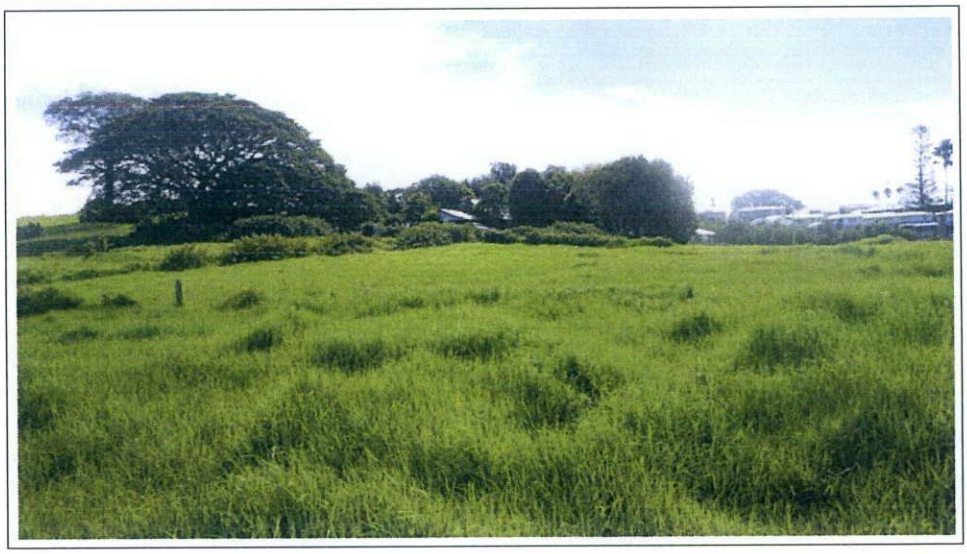
Southeast Engineering and Environmental

ANNEXURE 2

Flora and Fauna Impact Assessment:

43 Old Saddleback Road, Kiama (Lot 20 DP 1151501)

Planning proposal to correct zoning anomaly



Report prepared for
Cowman Stoddart P/L
PO Box 738 NOWRA NSW 2541

8 April 2013

Prepared by

southeast
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Document Verification

Document title: Flora and Fauna Impact Assessment: 43 Old Saddleback Road, Kiama (Lot 20 DP 1151501) - Planning proposal to correct zoning anomaly.

Client Contact: Stephen Richardson (Cowman Stoddart P/L)

Project number: 167

Prepare by: Mark Harris and David Bain

Issue and date: Final v2 (corrected address) 08/04/2013

Issue to: Stephen Richardson

Document history: Draft 1 26/03/2013, Final 03/04/2013

Commercial in Confidence

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Contents

1.0 Introduction

1.1 Site location and proposed activities covered by this impact assessment

The subject site is located within 43 Old Saddleback Road, Kiama (Figure 1-1). This impact assessment covers the proposed correction of a zoning anomaly within Lot 20 DP 1151501 by rezoning a small parcel of land (heron referred to as 'the sliver') (1420sqm), from RU2 Rural Landscape to R2 Low Density Residential to rationalise the zoning and make the sliver consistent with the rest of the majority of the Lot.

The broader study area, which takes in adjacent areas with potential to be impacted, is shown in Figure 1-2.

Figure 1-1 Site location. Dashed red outline = subject property; Yellow outline = zoning anomaly (image source NSW LPI SIX Mapper)

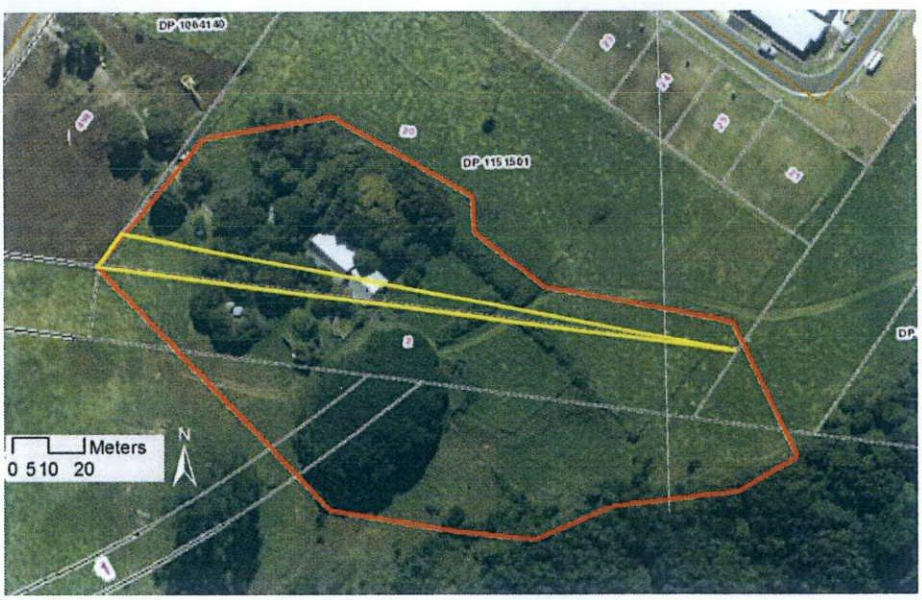

Figure 1-2 Study area covered by this assessment. Red outline = study area; yellow outline = zoning anomaly (image source NSW LPI SIX Mapper)

1.2 Aims of this study

The aims of this study are to provide:

- A list of legislation/approvals pertinent to threatened flora and fauna.
- A list of the flora and fauna species recorded during the field survey.
- Details of the vegetation communities and fauna habitats present, including information regarding disturbance, the surrounding matrix and potential fauna movement corridors.
- An evaluation of the likelihood of occurrence for threatened flora and fauna species, migratory fauna species and endangered fauna populations based on the presence of habitat, proximity to nearest records and the mobility of species.
- Assessments of the likely impacts associated with the proposed activity pursuant to the NSW Threatened Species Conservation Act 1995 (TSC Act) and the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

2.0 Planning context

2.1 Threatened Species Conservation Act 1995

The Threatened Species Conservation Act 1995 (TSC Act) specifies seven factors which must be considered by decision-makers regarding the effect of a proposed development or activity on threatened species, populations or ecological communities, or their habitats (DECC 2007). These factors form part of the threatened species assessment process under the Environmental Planning and Assessment Act 1979 (EP&A Act) and are formally named the Assessment of Significance (informally known as the 'Seven-part Test') (DECC 2007).

Consent authorities have a statutory obligation, under Part 4 of the EP&A Act, to consider whether a proposal is likely to significantly affect threatened species, populations or ecological communities, or their habitats by applying the Seven-part Test. If the determination is made that there is likely to be a significant effect then either;

- A Species Impact Statement (SIS) must be prepared and the concurrence of the Director-General of the Department of Environment, Climate Change and Water (DECCW) obtained prior to the consent authority making a determination, or
- The proposal may be modified such that a significant effect on threatened species, populations or ecological communities, or their habitats is unlikely (DEC 2004).

This report applies the Seven-part Test to threatened entities which may potentially be impacted by the proposal in order to determine the significance of the potential impact.

2.2 Environment Protection & Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) enables the Australian Government to join with the states and territories in providing a national scheme of environment and heritage protection and biodiversity conservation.

Under the EPBC Act, actions that have, or are likely to have a significant impact on a matter of National Environmental Significance (NES) require approval from the Australian Government Minister for the Environment, Heritage and the Arts (DEWHA 2009).

The seven matters of NES that are protected under the EPBC Act are:

- World heritage properties
- National heritage places
- Wetlands of international importance
- Listed threatened species and ecological communities
- Migratory species protection under international agreements
- Commonwealth marine areas
- Nuclear actions including uranium mines.

This report provides an assessment of relevant NES matters to ascertain where the proposed activity will require referral to the Commonwealth.

2.3 Native Vegetation Act 2003

The sliver of land subject to this assessment is currently zoned RU2 Rural Landscape. Therefore, it is subject to the NV Act.

However, this study has shown that the sliver is comprised of highly modified vegetation in the form of exotic pasture and a garden dominated by non-native trees. Based on the definition of native vegetation under the NV Act (below), no parts of sliver of land can be classified as native vegetation. Furthermore, the vegetation does not match any of the Biometric vegetation types, as used for native vegetation planning in NSW.

Native vegetation definition

A simplified definition of native vegetation, in accordance with the NV Act, is where:

- Groundcover comprises greater than 50% live indigenous species, and 10% or more of the area has some form of vegetative cover whether dead or alive, OR
- Indigenous species overstorey percent-cover is at least 25% of the corresponding vegetation class benchmark.

2.4 State Environmental Planning Policy No 44 - Koala Habitat Assessment

The Kiama LGA is not listed on Schedule 1 of SEPP 44. As such, assessment of Koala Habitat is not required.

3.0 Methods

Given the time of year of assessment and the nature of the activity (rezoning), the existing land use and the focus of this report, extended comprehensive surveys were not undertaken. The following sections detail the survey methods applied.

3.1 Database and Literature Review

Databases and other sources that were interrogated to generate a list of species that have been recorded within 5km of the study area include:

- The BioNet Atlas of NSW Wildlife – searched on the 7th March 2013
- The EPBC Act Protected Matters Search Tool – searched on the 7th March 2013

Threatened and migratory species, threatened populations and Endangered Ecological Communities (EECs) that have been recorded within the locality have been assessed for their likelihood to occur within the study area (Appendix 1). All listed species and EECs considered likely to occur within the subject site, or to be affected by the proposal, require consideration pursuant to Section 5A of the (EPA Act) and the EPBC Act where applicable.

3.2 Flora Surveys

A general flora random meander transect around the impact area of the site was undertaken over 3.0 person hours on the 8th March 2013 by Senior Ecologist Dr David Bain. All flora species encountered along the length of the random meander traverse were identified to the genus and species level where practicable. Some species were sampled in the field and identified later using various references. The vegetation community was also described and compared with existing mapping and community descriptions (Mills 2006 and the Biometric vegetation types database).

From database searches, several threatened flora species were known from along the creekline nearby the site. As a result a small search for threatened species and a survey of dominant flora species was also undertaken along the creek margin adjacent to the site.

Limitations

The floristic audit undertaken recorded as many species as possible and provides a comprehensive but not definitive species list. More species would probably be recorded during a longer survey over various seasons.

Nevertheless, the techniques used in this investigation are considered adequate to gather the data necessary to assess the impacts of the proposal on the flora species and vegetation communities found in the study area.

3.3 Fauna Surveys

Only limited fauna surveys have been undertaken due to the small size and projected level of disturbance on the site. As a result, all threatened species not surveyed for but considered potential to occur on the site have been assumed to be present for the assessment of significance of impact from the proposal.

Spotlighting

Spotlighting was undertaken for a total of 0.5 person hours on one night (8th March 2013) for nocturnal species, primarily mammals. This method involved a random meander traverse across the site concentrating on those areas of potential impact.

Call playback
Call playback was used to survey for the following owl species; Powerful Owl, Masked Owl, Barking Owl and Sooty Owl; and the Green and Golden Bell Frog. Call playback was undertaken on one night (8th March 2013) and involved playing calls for two minutes followed by a five minute listening period, repeated twice.

Anabat
Microchiropteran bats were surveyed using an Anabat echolocation device. It was hand held for a total of 0.5 person hours on one night (8th March 2013) during a random meander traverse across the site concentrating on those areas of potential impact. Recorded Anabat files were analysed by Steve Sass of Envirokey P/L, using the software package AnalookW.

Opportunistic
Opportunistic records of fauna were recorded during the site visit, this predominately included diurnal birds and reptiles. Some emphasis was placed on searches for scats, tracks, burrows, diggings and scratching.

Limitations
The results of fauna surveys can be optimised by conducting investigations over a long period to compensate for the effect of unfavourable weather, seasonal changes and climatic variation. In general, the longer the survey the more species will be detected. Results can also be improved by using a wide range of techniques, since some species are more likely to be detected by a particular method.

However, surveys are subject to constraints that determine the amount of time allocated, the methods used and the timing of the work. Thus, the results should be viewed in the light of these limitations. The fauna detected in current survey work are a guide to the native fauna present, but are by no means a definitive list of the species occurring in the study area.

Nevertheless, the techniques used in this investigation are considered adequate to gather the data necessary to assess the impacts of the proposal on the fauna species and habitats found in the study area.

3.3.1 Habitat Surveys

During all surveys of the site habitat features were recorded where observed. Specific searches were conducted for habitats or resources of relevance for those threatened fauna species known from the general region, or species, which might be anticipated to occur given the vegetation communities and habitats present. A description of the fauna habitats in the study area was prepared because the type of habitat in an area influences which animals occur there, as well as diversity and abundance. This habitat assessment also has an important role in predicting threatened fauna likely to occur in an area. Habitat features that were surveyed included:

- forage resources (i.e. koala primary browse trees, sap feed trees, flowering trees and shrubs and feed trees for Glossy Black-cockatoos);
- connectivity across the landscape;
- presence of hollow bearing trees;
- presence of standing or flowing water bodies; and
- disturbance history.

4.0 Results

4.1 Database and Literature Review

Appendix 1 and Appendix 2 provide lists of threatened flora and fauna species that have been recorded from data base searches within a 5km radius of the study area. In these tables the habitat characteristics of these species have been evaluated to determine their likelihood to occur within the study area. Those species identified from the field survey or considered likely to occur form part of the assessment according to Section 5A of the EPA Act and the assessment of significance of matters of National Environmental Significance under the EPBC Act.

4.2 Flora Surveys

4.2.1 Species

A total of 73 flora species were recorded within the study area during the field survey, approximately half of which were not native to the area (Table 4-1).

Table 4-1 Flora species inventory for the study area per vegetation zone (see vegetation map). # Only the dominant species and species of interest were recorded from the creek area.
^^ = listed threatened species; ** = Australian species not native to the area;

Scientific Name	Common Name	Grass	House	Creek#
NATIVE				
Acacia implexa	Hickory Wattle		x	
Acacia longifolia var. *longifolia*				x
Acmena smithii	Lilly Pilly		x	
Anisopogon avenaceus	Oat Speargrass		x	
Baloghia inophylla	Brush Bloodwood		x	
Banksia integrifolia	Coast Banksia		x	
Banksia paludosa	Swamp Banksia		x	
Brachychiton acerifolius	Illawarra Flame Tree		x	
Breynia oblongifolia	Coffee Bush		x	
Callistemon citrinus	Crimson Bottlebrush		x	
Callistemon subulatus			x	
Ceratopetalum apetalum	Coachwood		x	
Ceratopetalum gummiferum	Christmas Bush		x	
Citriobatus pauciflorus	Orange Thorn		x	
Cynanchum elegans^^	White-flowered Wax Plant			x
Cynodon dactylon	Common Couch	x	x	
Eucalyptus botryoides	Bangalay		x	
Eucalyptus fibrosa	Red Ironbark		x	
Ficus macrophylla			x	
Geitonoplesium cymosum	Scrambling Lily			x
Geranium homeanum		x	x	
Glochidion ferdinandi	Cheese Tree		x	
Hibbertia scandens	Climbing Guinea Flower		x	x
Leucopogon juniperinus	Prickly Beard-heath			x
Marsdenia rostrata	Common Milk Vine		x	
Melaleuca ericifolia	Swamp Paperbark		x	
Melaleuca quinquenervia	Broad-leaved Paperbark		x	
Melia azedarach	White Cedar		x	

Scientific Name	Common Name	Grass	House	Creek[#]
Myrsine howittiana	Brush Muttonwood		x	
Omalanthus populifolius	Bleeding Heart, Native Poplar	x		
Pandorea pandorana	Wonga Wonga Vine		x	
Panicum simile	Two-colour Panic		x	
Pittosporum undulatum	Sweet Pittosporum		x	x
Pteridium esculentum	Bracken			x
Rubus rosifolius var. *rosifolius*	Native Raspberry		x	
Rumex brownii	Swamp Dock		x	
Toona ciliata	Red Cedar		x	
Urtica incisa	Stinging Nettle		x	
*Zieria granulata^^*	Illawarra Zieria			x
EXOTIC				
Acer pseudoplatanus	Sycamore Maple		x	
Aegopodium sp.		x		
Agapanthus praecox	Agapanthus		x	
*Agonis flexuosa***			x	
Bidens pilosa	Cobbler's Pegs		x	
Camellia japonica	Camellia		x	
Canna x generalis			x	
Cinnamomum camphora	Camphor Laurel		x	x
Cirsium vulgare	Spear Thistle		x	
Convolvulus arvensis			x	
Conyza bonariensis	Flaxleaf Fleabane	x	x	x
Delairea odorata	Cape Ivy		x	x
Gamolepis chrysanthemoides			x	
Gleditsia triacanthos	Honey Locust		x	
*Grevillea robusta***	Silky Oak		x	
Hedychium gardneranum			x	
Jacaranda mimosifolia	Jacaranda		x	
Lantana camara	Lantana	x	x	x
Ligustrum lucidum	Large-leaved Privet			x
Melaleuca sp.**	Horticultural variety		x	
Olea europaea	Common Olive		x	x
Paspalum dilatatum	Paspalum	x	x	x
Pennisetum clandestinum	Kikuyu Grass	x	x	x
Phytolacca octandra	Inkweed		x	x
Rubus ulmifolius	Blackberry			x
*Schefflera actinophylla***	Umbrella Tree		x	x
Schinus molle	Pepper Tree		x	
Senecio madagascariensis	Fireweed	x	x	x
Sida rhombifolia	Paddy's Lucerne	x	x	
Solanum chenopodinum			x	
Solanum mauritianum	Wild Tobacco Bush		x	
Sonchus oleraceus	Common Sowthistle	x	x	x
Tecoma capensis	Cape Honeysuckle		x	x
Tradescantia fluminensis	Wandering Jew		x	

4.2.2 Vegetation communities

The vegetation across the site is highly disturbed, with the majority previously cleared and dominated by introduced species (e.g. site photograph in Figure 4-1). Three vegetation zones were mapped within the study area: grass, house, and creek vegetation (Figure 4-2).

The grass area was highly disturbed and represented previously cleared native vegetation. This vegetation zone was almost solely comprised of introduced species and dominated by *Pennisetum clandestinum* and *Paspalum dilatatum*.

The vegetation surrounding the house can be considered a disturbed variant of Complex Subtropical Rainforest (COM-SRF) from Mills (2006). This vegetation zone contained some of the species associated with this rainforest vegetation community such as *Baloghia inophylla*, *Brachychiton acerifolius*, *Ficus macrophylla* and *Toona ciliata*. However, the zone is highly disturbed with weeds such as *Lantana camara* and *Tecoma capensis* along the fence lines and much of the vegetation modified as the domestic garden for the house. The understorey is largely horticultural garden species such as *Agapanthus praecox* and *Hedychium gardneranum*. Some of the canopy species like *Acer pseudoplatanus* are also evidence of the domestic nature of the vegetation. Much of the vegetation surrounding the house is likely historically part of the EEC Illawarra Subtropical Rainforest in the Sydney Basin Bioregion, although now due to the high level of disturbance and cultivation the vegetation no longer represents this EEC.

The creek area adjacent to the site is mapped as Complex Subtropical Rainforest (COM-SRF) in Mills (2006) which is consistent with the EEC Illawarra Subtropical Rainforest in the Sydney Basin Bioregion. This creekline vegetation is also highly disturbed and modified, being dominated by *Acacia longifolia var. longifolia*, *Pittosporum undulatum* and the introduced *Lantana camara* and *Ligustrum lucidum*. Importantly, two threatened flora species were identified within this community.

4.2.3 Threatened flora species

No threatened flora species, listed on the TSC Act or the EPBC Act, were recorded within the subject land.

Two endangered flora species, *Cynanchum elegans* and *Zieria granulata* were found adjacent to the site along the creekline (Figure 4-2). The proposed action involves the rezoning of a sliver of land only and does not involve any physical actions that could impact on these species. Any future development applications on this land need to take these individuals of these species into consideration.

Refer to the likelihood of occurrence table (Appendix 1) for further detail regarding threatened flora species known or predicted to occur in the locality.

4.2.4 EEC determination

No EECs were recorded on site. The vegetation around the house was likely historically part of the EEC *Illawarra Subtropical Rainforest in the Sydney Basin Bioregion*, although now due to the high level of disturbance and domestic garden cultivation the community no longer represents this EEC. The adjacent creekline vegetation is mapped as the EEC *Illawarra Subtropical Rainforest in the Sydney Basin Bioregion*. As this vegetation is not actually on the site it is discussed in terms of potential impact but not formally assessed within this report.

Figure 4-1 Showing exotic pasture and garden vegetation surrounding the house.

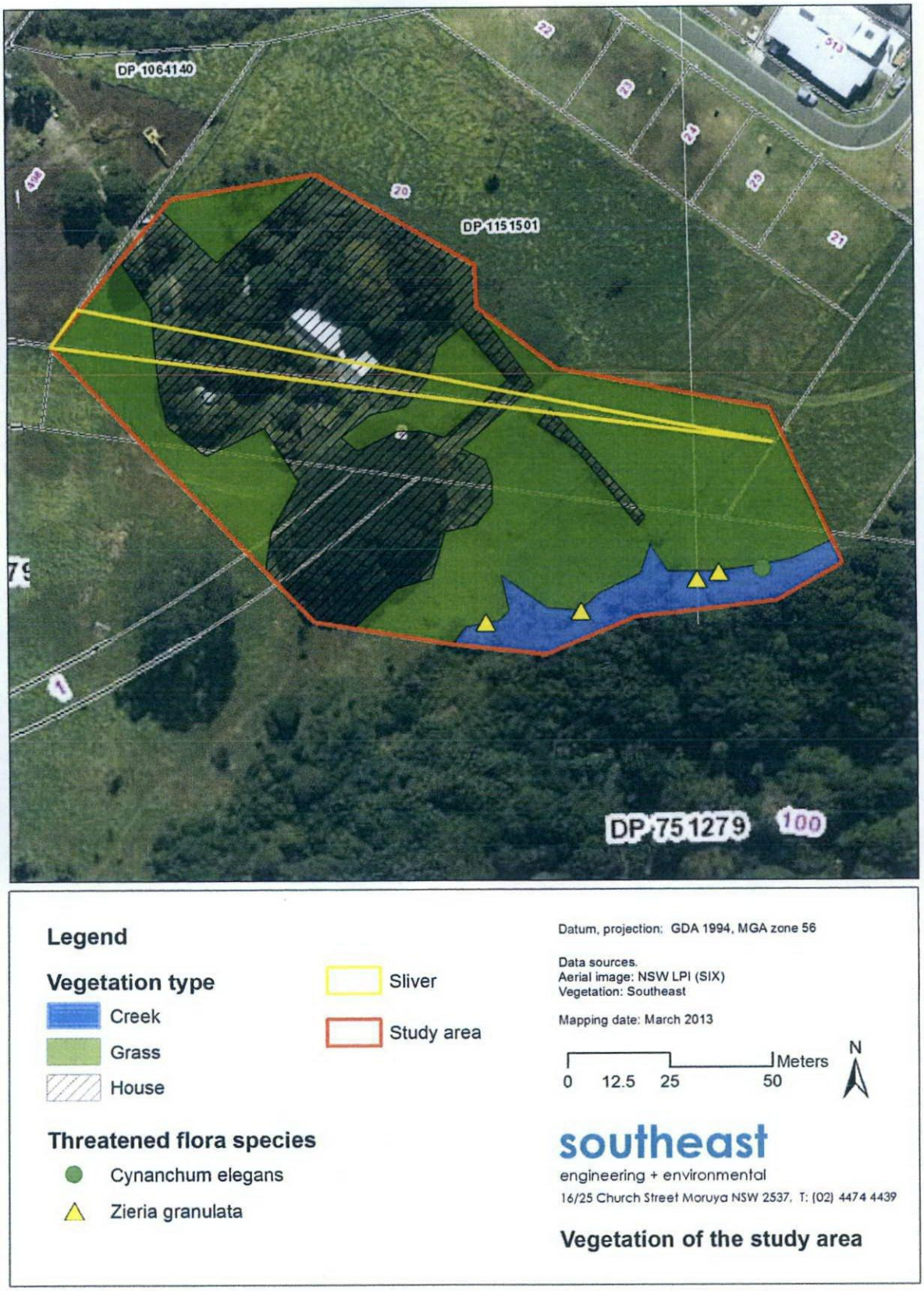

Figure 4-2 Vegetation map

4.3 Fauna Surveys

As described in the methods, comprehensive fauna surveys were not undertaken. A total of six birds, one mammal, two microchiropteran bats ('microbats') and one reptile were recorded (Table 4-2), including two introduced species. No threatened fauna species were recorded. There was no significant indirect evidence of fauna activity around the site.

The two microbat records were derived from a total of 11 Anabat files recorded during the survey. During analysis of the Anabat data, all files were identified as 'definite' species identifications (rather than 'probable' or possible').

Table 4-2 Fauna species recorded on site. * = introduced species

Scientific Name	Common Name
BIRDS	
Eopsaltria australis	Eastern Yellow Robin
Malurus cyaneus	Superb Fairy-wren
Meliphaga lewinii	Lewin's Honeyeater
Neochmia temporalis	Red-browed Finch
Phylidonyris novaehollandiae	New Holland Honeyeater
Streptopelia chinensis*	Spotted Turtle-Dove
MICROBATS	
Austronomus australis	White-striped Freetail Bat
Chalinolobus gouldii	Gould's Wattled Bat
MAMMALS	
Rattus rattus*	Black Rat
REPTILES	
Eulamprus quoyii	Eastern Water-skink

4.3.1 Habitat surveys

The site is highly disturbed and the majority of the site comprises the garden for the house and the cleared grass area surrounding the house. The vegetation surrounding the house is isolated within the cleared grassed are and not directly connected to any other remnants.

The major habitat resource for potential threatened species on the site was the large *Ficus macrophylla* which would supply a valuable food resource for the Grey-headed Flying-fox. Other threatened rainforest species that have the potential to utilise the resource such as the fruit-doves are considered unlikely to do so due to the isolation from nearby rainforest remnants.

No hollow-bearing trees were recorded nor any feed trees for gliders, Glossy-black Cockatoos or were there any winter flowering tree species. No primary browse trees for Koala were recorded on site.

5.0 Impact assessment

The proposal comprises the rezoning of a sliver of land (1420sqm) on the southern edge of Lot 20 DP1151501 from RU2 Rural Landscape to R2 Low Density Residential to rationalise the zoning and make the sliver consistent with the rest of the majority of the lot. Zone RU2 allows for primary industry, maintaining rural landscape and dwelling houses amongst other uses. Zone R2 allows low density housing and dwelling houses amongst other uses.

This change in zoning of the sliver of land will not have a significant effect on the permissible uses for the overall lot as the majority of the land is already zoned R2. A significant proportion of the RU2 zoned sliver of land proposed for rezoning already incorporates part of the existing dwelling.

The environmental values on the site are not inconsistent with the proposed new zoning of R2. The adjacent property to the west has a new low density residential development being constructed. The major environmental values are currently incorporated as part of the existing dwellings garden or occur along the creek line adjacent to the site.

There are some potential indirect impacts including weed infestation, erosion and sedimentation to the environmental values along the creek line from any potential future development of the site. However, these potential impacts would need to be assessed at that future time and in any case the change in zoning proposed with this assessment will not have a significant effect on the potential for development on the subject land given the majority of the lot is already zoned R2.

The following species in Table 5-1 were considered likely to occur on the site (see likelihood of occurrence tables in Appendix 1) and the potential impact of the proposal on these species has been assessed under relevant legislation. The conclusions of these assessments are provided below under Heading 5.1.1 and Heading 5.1.2).

Table 5-1 Species requiring an assessment of significance

Scientific Name	Common Name	TSC Act	EPBC Act	Occurrence
Mormopterus norfolkensis	East Coast Freetail Bat	V	—	Predicted
Pteropus poliocephalus	Grey-headed Flying-Fox	V	V	Predicted
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	V	—	Predicted

E = Endangered, V = Vulnerable, M = Migratory

5.1.1 Conclusion of Seven-Part Test

An Assessment of Significance under Section 5A of the EPA Act was undertaken (Appendix 2) on those species or considered likely to occur on the site. The outcome of this assessment has determined that the proposed action is *'unlikely'* to have a *'significant effect'* on the Eastern Freetail-bat, Grey-headed Flying-fox or Yellow-bellied Sheathtail Bat.

The change in zoning of the small sliver of Lot 20 DP1151501 will not alter future impacts to threatened species or communities due to any potential change of land use. Therefore, this matter will not require referral to the NSW Director General.

5.1.2 Conclusion of EPBC Assessment

An assessment of significance under the EPBC Act was undertaken (Appendix 2) on those species considered likely to occur on the site. The outcome of this assessment has determined that it is unlikely that the action would significantly impact on those threatened species assessed. Therefore, referral to the Commonwealth Minister is not recommended.

5.1.3 SEPP 44 Koala Habitat Assessment

The Kiama LGA is not listed on Schedule 1 of SEPP 44. As such, assessment of koala habitat is not required.

6.0 Conclusion

Threatened flora species and populations

Conclusion: Based on desktop searches, species evaluations, field studies and significance assessments under TSC Act and EPBC Act legislation this assessment has determined that there were no threatened flora species found or likely to occur within the subject land.

Two endangered flora species, *Cynanchum elegans* and *Zieria granulata* were found adjacent to the site along the creek line. The proposed action (involving the rezoning of less than 5% of the subject Lot) will have no impact on these species. Any development applications where there is a potential for indirect impacts to occur need to take these individuals of these species into consideration.

Recommendation: This matter will not require referral to the NSW Director General or the Commonwealth Minster in regards to threatened flora species.

Endangered ecological communities

Conclusion: No EECs occur within the subject land. The EEC *Illawarra Subtropical Rainforest in the Sydney Basin Bioregion* is found adjacent to the site along the creek line. The proposed action (involving the rezoning of less than 5% of the subject Lot) will have no impact on this EEC. Any development applications where there is a potential for indirect impacts to occur need to take the local occurrence of this EEC into consideration.

Recommendation: This matter will not require referral to the NSW Director General or the Commonwealth Minster in regards to EECs.

Threatened fauna species

Conclusion: Based on desktop searches, species evaluations, field studies and significance assessments under TSC Act and EPBC Act legislation, this assessment has determined that there are no threatened fauna species issues in relation to the proposed activity.

Recommendation: This matter will not require referral to the NSW Director General or the Commonwealth Minster in regards to threatened fauna species.

7.0 References

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Appendix 1 – Likelihood of occurrence assessment tables (flora and fauna)

Flora likelihood of occurrence table

Summary of initial assessment to determine the likelihood of occurrence of threatened species, populations and ecological communities in the proposal site.

An assessment of likelihood of occurrence was made for threatened and migratory species identified from the database search. Five terms for the likelihood of occurrence of species are used in this report. This assessment was based on database or other records, presence or absence of suitable habitat, features of the proposal site, results of the field survey and professional judgement. The terms for likelihood of occurrence are defined below:

- "yes" = the species was or has been observed on the site
- "likely" = a medium to high probability that a species uses the site
- "potential" = suitable habitat for a species occurs on the site, but there is insufficient information to categorise the species as likely to occur, or unlikely to occur
- "unlikely" = a very low to low probability that a species uses the site
- "no" = habitat on site and in the vicinity is unsuitable for the species.

Disclaimer: Data extracted from the Atlas of NSW Wildlife are only indicative and cannot be considered a comprehensive inventory. E = Endangered; E2 = Endangered Population; V = Vulnerable

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Acacia baueri ssp. *aspera*				Associated with heath and dry eucalypt forest and woodland on sandy soils (Smith and Smith 1995).	No. Unsuitable habitat and not recorded
Arthropteris palisotii		E		The Lesser Creeping Fern grows on trees. North-eastern NSW and also in Queensland. Occurs in rainforest, mainly on tree trunks.	No. Unsuitable habitat and not recorded
Callistemon linearifolius	Netted Bottlebrush	V	—	Grows in dry sclerophyll forest on the coast and adjacent ranges (DECC 2007). *C. linearifolius* has been recorded from the Georges River to Hawkesbury River in the Sydney area, and north to the Nelson Bay area of NSW. For the Sydney area, recent records are limited to the Hornsby Plateau area near the Hawkesbury River (DECC 2007).	No. Unsuitable habitat and not recorded
Chamaesyce psammogeton	Sand Spurge	E	—	*C. psammogeton* is a prostrate perennial herb, which grows on foredunes and exposed sites on headlands often with Spinifex (DECC 2007). Flowers in Summer.	No. Unsuitable habitat and not recorded

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Chorizema parviflorum		EP		Erect or ascending shrub to 50 cm high, with a stout rootstock. Leaves are alternate, narrow, 1 to 4 cm long, 1 to 4 mm wide, with a conspicuous midrib. Pea-flowers are yellow with a red centre, borne in loose clusters at the ends of branches (DECC 2005). This endangered population has been recorded from between Austinmer and Albion Park in the LGA's of Wollongong and Shellharbour (DECC 2005). All known sites (excluding the site at Austinmer) occupy woodland or forest dominated by Forest Red Gum (Eucalyptus tereticornis) and/or Woollybutt (E. longifolia). Flowering period is August to January, with seeds maturing from November (DECC 2005). The species is difficult to locate when not in flower, as it is often tangled amongst (and partially concealed by) a grassy understorey (DECC 2005).	No. Unsuitable habitat and not recorded
Cryptostylis hunteriana	*Leafless Tongue Orchid*	V	V	It is known from a range of vegetation communities including swamp-heath and woodland (DECC 2007). The larger populations typically occur in woodland dominated by Scribbly Gum (*Eucalyptus sclerophylla*), Silvertop Ash (*E. sieberi*), Red Bloodwood (*Corymbia gummifera*) and Black Sheoak (*Allocasuarina littoralis*); where it appears to prefer open areas in the understorey of this community and is often found in association with the Large Tongue Orchid (*C. subulata*) and the Tartan Tongue Orchid (*C. erecta*) (DECC 2007). Bell (2001) has identified Coastal Plains Scribbly Gum Woodland and Coastal Plains Smoothed-barked Apple Woodland as potential habitat on the Central Coast. Flowers between November and February, although may not flower regularly (DECC 2007; Bell 2001).	No. Unsuitable habitat and not recorded
Cynanchum elegans		E	E	**Climber or twiner with a variable form (DECC 2007). It occurs in dry rainforest gullies, scrub and scree slopes (NPWS 1997). It prefers the ecotone between dry subtropical rainforest and sclerophyll woodland/forest. However has been found in littoral rainforest; *Leptospermum laevigatum – Banksia integrifolia* subsp *integrifolia* coastal scrub; *Eucalyptus tereticornis* aligned open forest/ woodland; *E. maculata* aligned open forest/woodland; and *Melaleuca armillaris* scrub to open scrub (DECC 2007). Flowers between August and May, peaking in November (DECC 2007). Seeds are unlikely to persist in the seedbank (DECC 2007).**	**Subject Lot unsuitable due to highly modified and disturbed habitat.** **Found along nearby creek**
Daphnandra johnsonii			E	A medium sized rainforest tree that grows to 20 metres and is capable of prolific suckering. The longevity of the species is not known although, given its clonal nature and the large size of some individuals, it is believed to be a long-lived species (DECC 2005) flowers briefly in September and early October although not all populations or individuals appear to flower each year (DECC 2005).	No Not observed and rainforest not found on site

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Daphnandra sp. C Illawarra		E	E	Rainforest tree to 20 metres tall. Restricted to the Illawarra region where it has been recorded from the local government areas of Shoalhaven, Kiama, Shellharbour and Wollongong (DECC 2005). Occupies the rocky hillsides and gullies of the Illawarra lowlands, occasionally extending onto the upper escarpment slopes (DECC 2005). Associated vegetation includes rainforest and moist eucalypt forest. Associated soils are loams and clay loams derived from volcanic and fertile sedimentary rocks (DECC 2005). Flowers briefly in September and early October with fruits taking 10 to 12 months to mature (DECC 2005).	No Not observed and rainforest not found on site
Distichlis distichophylla	Australia Salt-grass	E		Australian Salt-grass is a spreading perennial grass, in the form of a loose, somewhat prickly clump of spreading underground stems (rhizomes). In its limited NSW range it grows only in coastal situations, except for one existing population at Lake Cargellico. Scattered records are from the areas of Jervis Bay, Bermagui, Wonboyn, Narooma, Bodalla and Nadgee Nature Reserve. It is a coloniser of damp saline soils; found at the edges of salt marshes and on low dunes. Flowers and sets seed in late spring and summer	No. Unsuitable habitat and not recorded
Eucalyptus langleyi	Albatross Mallee	V	V	Poor sandy sites west and south west of Nowra (Brooker and Kleinig 1999); mallee shrubland on poorly drained shallow sand on sandstone (Harden 1994).	No. Unsuitable habitat and not recorded
Genoplesium baueri	Bauer's Midge Orchid	V	-	The species has been recorded from locations between Nowra and Pittwater and may occur as far north as Port Stephens. About half the records were made before 1960 with most of the older records being from Sydney suburbs including Asquith, Cowan, Gladesville, Longueville and Wahroonga. No collections have been made from those sites in recent years. The species has been recorded at locations now likely to be within the following conservation reserves: Berowra Valley Regional Park, Royal National Park and Lane Cove National Park. May occur in the Woronora, O'Hares, Metropolitan and Warragamba Catchments. Grows in sparse sclerophyll forest and moss gardens over sandstone. Flowers Dec to Mar.	No. Unsuitable habitat and not recorded
Haloragis exalata subsp.exalata		V		Square Raspwort occurs in 4 widely scattered localities in eastern NSW. It is disjunctly distributed in the central coast, south coast and north-western slopes botanical subdivisions of NSW. Damp places near watercourses (Harden 1994).	No. Not observed, gully edge highly disturbed

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Irenepharsus trypherus		E		Gullies on the coastal escarpment between Wollongong and the Shoalhaven (Harden 1994).	No. Not observed, gully edge highly disturbed
Lastreopsis hispida	Bristly Shield Fern	E		Is rare in NSW with the only recent confirmed records from Mt Wilson in the Blue Mountains. Also occurs in southern Victoria and Tasmania, and is common in New Zealand. Grows in moist humus-rich soils in wet forest and rainforest gullies. At Mt Wilson, associated species include *Ceratopetalum apetalum, Elaeocarpus holopetalus, Fieldia australis, Cyathea australis, Blechnum nudum, B. patersonii* and *Leptopteris fraseri.*	No. Not observed, gully edge highly disturbed
Melaleuca biconvexa	Biconvex Paperbark	V	V	Associated with damp habitats, such as Coastal Narrabeen Moist Forest, Riparian Melaleuca Swamp Woodland (LMCC 2001). This species may occur in dense stands forming a narrow strip adjacent to watercourses, in association with other *Melaleuca* species or as an understorey species in wet forest (NSW Scientific Committee 1998). Flowering occurs over just 3-4 weeks in September and October (DECC 2007).	No. Unsuitable habitat and not recorded
Persoonia bargoensis		E		Associated with woodland to dry sclerophyll forest, on sandstone and clayey laterite on heavier, well-drained, loamy, gravelly soils of the Hawkesbury Sandstone and Wianamatta Shale in the catchments of the Cataract, Cordeaux and Bargo Rivers (NSW Scientific Committee 2000). No suitable habitat present.	No. Unsuitable habitat and not recorded
Phaius australis	Swamp Orchid	E	E	Swampy grassland or swampy forest including rainforest, eucalypt or paperbark forest, mostly in coastal areas (DECC 2007).	Unlikely. Not observed and highly disturbed habitat
Pimelea curviflora var curviflora		V		Associated with the Duffys Forest Community, shale lenses on ridges in Hawkesbury sandstone geology (Pittwater Council 2000).	No. Unsuitable habitat and not recorded
Pimelea spicata		E	E	In western Sydney, it occurs on an undulating topography of well structured clay soils, derived from Wianamatta shale (DEC 2004). It is associated with Cumberland Plains Woodland (CPW), in open woodland and grassland often in moist depressions or near creek lines (*Ibid.*). Has been located in disturbed areas that would have previously supported CPW (*Ibid.*).	No. Unsuitable habitat and not recorded
Pomaderris adnata	Sublime Point Pomaderris	E		Known only from one site at Sublime Point, north of Wollongong. Occurs near the edge of the plateau behind the Illawarra escarpment. Associated vegetation is *Eucalyptus sieberi* (Silver-top Ash) - *Corymbia gummifera* (Red Bloodwood) forest with occasional *Hakea salicifolia* (Willow-leaved Hakea). Soil is a sandy loam over sandstone.	No. Unsuitable habitat and not recorded

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Pterostylis gibbosa	Illawarra Greenhood	E	E	Associated with seasonally hard setting clay soils with approximately 1000mm of rainfall (NPWS 1997). All known populations grow in open forest or woodland, on flat or gently sloping land with poor drainage. In the Illawarra region, the species grows in woodland dominated by Forest Red Gum *Eucalyptus tereticornis*, Wollybutt *E. longifolia* and White Feather Honey-myrtle *Melaleuca decora*. Near Nowra, the species grows in an open forest of Spotted Gum *Corymbia maculata*, Forest Red Gum and Grey Ironbark *E. paniculata*. In the Hunter region, the species grows in open woodland dominated by Narrow-leaved Ironbark *E. crebra*, Forest Red Gum and Black Cypress Pine *Callitris endlicheri*. The Illawarra Greenhood is a deciduous orchid that is only visible above the ground between late summer and spring, and only when soil moisture levels can sustain its growth. The leaf rosette grows from an underground tuber in late summer, followed by the flower stem in winter and flowers in spring.	No. Unsuitable habitat and not recorded
Pterostylis pulchella	Pretty Greenhood		V	Grows on escarpments close to waterfalls and on moist, sheltered ridges; chiefly from Blue Mtns to Fitzroy Falls. The Waterfall Greenhood is found on cliff faces close to waterfalls and creek banks and mossy rocks alongside running water. Flowers appear from February to May.	No. Unsuitable habitat and not recorded
Pultenaea aristata		V	V	Associated with scrub and heath on sandstone ridge tops and upper slopes of large upland swamps on shallow sandy loams (Keith 1994).	No. Unsuitable habitat and not recorded
Pultenaea baeuerlenii		V		Associated with swamp heath on sandstone (Harden 1994).	No. Unsuitable habitat and not recorded
Pultenaea campbellii	New England Bush-pea	-	V	Restricted to the New England district on the Northern Tablelands. Grows in sclerophyll forests, mainly at medium to high altitudes, on light gravelly sandy stony soils derived from granite.	No. Unsuitable habitat and not recorded
Senna acclinis	Rainforest Cassia	E	—	Grows in or on the edges of subtropical and dry rainforest (DECC 2007).	No. Not observed, gully edge highly disturbed
Solanum celatum	Solanum celatum	E	-	Restricted to an area from Wollongong to just south of Nowra, and west to Bungonia. Majority of records are prior to 1960 and the majority of populations are likely to have been lost to clearing. Grows in rainforest clearings, or in wet sclerophyll forests.	No. Not observed, gully edge highly disturbed

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Streblus pendulinus	Siah's Backbone	—	E	Subsequently, the mainland species *S. brunonianus* has been included with *S. pendulinus*. Siah's Backbone occurs from Cape York Peninsula to Milton, south-east New South Wales (NSW), as well as Norfolk Island. On the Australian mainland, Siah's Backbone is found in warmer rainforests, chiefly along watercourses. The altitudinal range is from near sea level to 800 m above sea level. The species grows in well developed rainforest, gallery forest and drier, more seasonal rainforest	No. Not observed, gully edge highly disturbed
Syzygium paniculatum	Magenta Lillypilly	V	V	This species occupies a narrow coastal area between Bulahdelah and Conjola State Forests in NSW. On the Central Coast, it occurs on Quaternary gravels, sands, silts and clays, in riparian gallery rainforests and remnant littoral rainforest communities (Payne 1997). In the Ourimbah Creek valley, *S. paniculatum* occurs within gallery rainforest with *Alphitonia excelsa, Acmena smithii, Cryptocarya glaucescens, Toona ciliata, Syzygium oleosum* with emergent *Eucalyptus saligna*. At Wyrrabalong NP, *S. paniculatum* occurs in littoral rainforest as a co-dominant *with Ficus fraseri, Syzygium oleosum, Acmena smithii, Cassine australe*, and *Endiandra sieberi*. Payne (1991) reports that the species appears absent from Terrigal formation shales, on which the gully rainforests occur. *S. paniculatum* is summer flowering (November-February), with the fruits maturing in May (DECC 2007).	No. Not observed, gully edge highly disturbed
Triplarina nowraensis	Nowra Heath Myrtle	E	E	There are five known populations of Nowra Heath Myrtle. Three of these form a cluster to the immediate west of Nowra. A fourth, much smaller population is found 18km south-west of Nowra in the Boolijong Creek Valley. The fifth population is located north of the Shoalhaven River on the plateau above Bundanon. Nowra Heath Myrtle occurs on poorly drained, gently sloping sandstone shelves or along creek lines underlain by Nowra Sandstone. The sites are often either treeless or have a very open tree canopy due to the impeded drainage.	No. Unsuitable habitat and not recorded
Wilsonia backhousei		V		Grows in coastal saltmarshes in the Sydney Region and Jervis Bay (Harden 1990)	No. Unsuitable habitat and not recorded
Wilsonia rotundifolia	Round-leaf Wilsonia	E		Round-leafed Wilsonia is a hairy, prostrate, perennial plant with succulent leaves and woody stems. Round-leafed Wilsonia is known from several sites in the Jervis Bay area, Royal National Park, near Deniliquin and in Lake George and Lake Bathurst. The Lake George population appears to be locally extensive. Also found Western Australia, South Australia and Victoria. Grows in mud in coastal salt marsh and inland saline lakes. Flowers mainly in spring and summer.	No. Unsuitable habitat and not recorded
Zieria baeuerlenii	Bomadary Zieria	E	E	The species occurs in only one location north-west of Nowra. The population occurs in a total of 43 colonies in six discrete clusters. These clusters are confined within a 0.5 km x 1.0 km area of the bushland, and are found on both sides of Bomaderry Creek. Bomaderry Zieria occurs on skeletal sandy loam overlaying sandstone, on a rocky plateau amongst sandstone boulders in either shrubby open forest, shrubby woodland or closed scrub.	No. Unsuitable habitat and not recorded

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Zieria granulata	Illawarra Zieria	E	E	Restricted to the Illawarra region where it is recorded from a number of sites. The species primarily occupies the coastal lowlands between Oak Flats and Toolijooa, in the local government areas of Shellharbour and Kiama. This is a range of approximately 22 kilometres. The typical habitat is dry ridge tops and rocky outcrops on shallow volcanic soils, usually on Bumbo Latite. Less frequently found on the moist slopes of the Illawarra escarpment and in low-lying areas on Quaternary sediments. Associated vegetation includes Bracelet Honey-myrtle *Melaleuca armillaris* scrub, Forest Red Gum *Eucalyptus tereticornis* woodland and rainforest margins, although the species has been recorded from a number of other vegetation types. Much of the natural habitat for the species has been removed and many sites now occupy road verges and paddock edges	Subject Lot unsuitable due to highly modified and disturbed habitat. Found along nearby creek
Zieria tuberculata	Warty Zieria	V		Warty Zieria grows in the Mt Dromedary and Tilba Tilba area. The population in the Cambewarra Mountain area near Nowra is now referable to a separate taxon. The Warty Zieria grows in heath amongst rocky outcrops on rain forest edges and in tall forest and shrubland. The flowers appear from late winter to spring	No. Unsuitable habitat and not recorded
Disclaimer: Data extracted from the Atlas of NSW Wildlife and EPBC Act Protected Matters Report are only indicative and cannot be considered a comprehensive inventory.					

Fauna likelihood of occurrence table

E = Endangered; E2 = Endangered Population; V = Vulnerable; M = Migratory.

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Heleioporus australiacus	Giant Burrowing Frog	V	V	Forages in woodlands, wet heath, dry and wet sclerophyll forest (Ehmann 1997). Associated with semi-permanent to ephemeral sand or rock based streams (Ehmann 1997), where the soil is soft and sandy so that burrows can be constructed (Environment Australia 2000).	No. Unsuitable habitat
Litoria aurea	Green and Golden Bell Frog	E	V	This species has been observed utilising a variety of natural and man-made waterbodies (Pyke & White 1996) such as coastal swamps, marshes, dune swales, lagoons, lakes, other estuary wetlands, riverine floodplain wetlands and billabongs, stormwater detention basins, farm dams, bunded areas, drains, ditches and any other structure capable of storing water (DECC 2007). Fast flowing streams are not utilised for breeding purposes by this species (Mahony 1999). Preferable habitat for this species includes attributes such as shallow, still or slow flowing, permanent and/or widely fluctuating water bodies that are unpolluted and without heavy shading (DECC 2007). Large permanent swamps and ponds exhibiting well-established fringing vegetation (especially bulrushes–Typha sp. and spikerushes–Eleocharis sp.) adjacent to open grassland areas for foraging are preferable (Ehmann 1997; Robinson 1993). Ponds that are typically inhabited tend to be free from predatory fish such as Mosquito Fish (*Gambusia holbrooki*) (DECC 2007).	No. Poor habitat and not recorded in surveys
Mixophyes balbus	Stuttering Frog	E	V	A variety of forest habitats from rainforest through wet and moist sclerophyll forest to riparian habitat in dry sclerophyll forest (DECC 2007) that are generally characterised by deep leaf litter or thick cover from understorey vegetation (Ehmann 1997). Breeding habitats are streams and occasionally springs. Not known from streams disturbed by humans (Ehmann 1997) or still water environments (NSW Scientific Committee 2002).	No. Unsuitable habitat
Litoria littlejohni	Littlejohn's Tree Frog, Heath Frog		V	Littlejohn's Tree Frog has a distribution that includes the plateaus and eastern slopes of the Great Dividing Range from Watagan State Forest (90 km north of Sydney) south to Buchan in Victoria (DECC 2007). It occurs along permanent rocky streams with thick fringing vegetation associated with eucalypt woodlands and heaths among sandstone outcrops. It hunts either in shrubs or on the ground. Breeding is triggered by heavy rain and can occur from late winter to autumn, but is most likely to occur in spring when conditions are favourable. Males call from low vegetation close to slow flowing pools. Eggs and tadpoles are mostly found in slow flowing pools that receive extended exposure to sunlight, but will also use temporary isolated pools (DECC 2007).	No. Unsuitable habitat
Pseudophryne australis	Red-crowned Toadlet	V	—	Red-crowned Toadlets are found in steep escarpment areas and plateaus, as well as low undulating ranges with benched outcroppings on Triassic sandstones of the Sydney Basin (DECC 2007). Within these geological formations, this species mainly occupies the upper parts of ridges, usually being restricted to within about 100 metres of the ridgetop. However they may also occur on plateaus or more level rock platforms along the ridgetop (DECC 2007). Associated with open forest to coastal heath (Ehmann 1997). Utilises small ephemeral drainage lines which feed water from the top of the ridge to the perennial creeks below for breeding, and are not usually found in the vicinity of permanent water (Ehmann 1997). Breeding sites are often characterised by clay-derived soils and generally found below the first sandstone escarpment in the talus slope (NPWS 1997).	No. Unsuitable habitat

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
REPTILES					
Hoplocephalus bungaroides	Broad-headed Snake	E	V	Typical sites consist of exposed sandstone outcrops and benching where the vegetation is predominantly woodland, open woodland and/or heath on Triassic sandstone of the Sydney Basin (DECC 2007). They utilise rock crevices and exfoliating sheets of weathered sandstone during the cooler months and tree hollows during summer (Webb & Shine 1998b). Some of the canopy tree species found to regularly co-occur at known sites include *Corymbia eximia, C. gummifera, Eucalyptus sieberi, E. punctata* and *E. piperita* (DECC 2007).	No. Unsuitable habitat
Varanus rosenbergi	Heath Monitor	V		Associated with Sydney sandstone woodland and heath land. Rocks, hollow logs and burrows are utilised for shelter (Environment Australia 2000). Terrestrial termitaria are required for reproduction (King and Green 1999).	No. Unsuitable habitat
DIURNAL BIRDS					
Botaurus poiciloptilus	Australasian Bittern	V	E	Terrestrial wetlands with tall dense vegetation, occasionally estuarine habitats (Marchant & Higgins 1993). Reedbeds, swamps, streams, estuaries (Simpson & Day 1999).	No. Unsuitable habitat
Burhinus grallarius	Bush Stone-curlew	E	—	Associated with dry open woodland with grassy areas, dune scrubs, in savanna areas, the fringes of mangroves, golf courses and open forest / farmland (Pittwater Council 2000; Marchant & Higgins 1993). Forages in areas with fallen timber, leaf litter, little undergrowth and where the grass is short and patchy (Environment Australia 2000; Marchant & Higgins 1993). Is thought to require large tracts of habitat to support breeding, in which there is a preference for relatively undisturbed in lightly disturbed.	No. Unsuitable habitat
Callocephalon fimbriatum	Gang-gang Cockatoo	V	—	During summer in dense, tall, wet forests of mountains and gullies, alpine woodlands (Morcombe 2004). In winter they occur at lower altitudes in drier more open forests and woodlands, particularly box-ironbark assemblages (Shields & Chrome 1992). They sometimes inhabit woodland, farms and suburbs in autumn/winter (Simpson & Day 2004).	No. Unsuitable habitat
Calyptorhynchus lathami	Glossy Black-Cockatoo	V	—	Associated with a variety of forest types containing Allocasuarina species, usually reflecting the poor nutrient status of underlying soils (Environment Australia 2000; NPWS 1997; DECC 2007). Intact drier forest types with less rugged landscapes are preferred (DECC 2007). Nests in large trees with large hollows (Environment Australia 2000).	No. Unsuitable habitat
Circus assimilis	Spotted Harrier	V		The Spotted Harrier occurs throughout the Australian mainland, except in densly forested or wooded habitats of the coast, escarpment and ranges, and rarely in Tasmania. Individuals disperse widely in NSW and comprise a single population. Occurs in grassy open woodland including *Acacia* and mallee remnants, inland riparian woodland, grassland and shrub steppe. It is found most commonly in native grassland, but also occurs in agricultural land, foraging over open habitats including edges of inland wetlands.	No. Unsuitable habitat

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Daphoenositt a chrysoptera	Varied Sittella	V	-	Inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland.	No. Unsuitable habitat
Dasyornis brachypterus	Eastern Bristlebird	E	E	Habitat is characterised by dense, low vegetation including heath and open woodland with a heathy understorey; in northern NSW occurs in open forest with tussocky grass understorey; all of these vegetation types are fire prone. Age of habitat since fires (fire-age) is of paramount importance to this species; Illawarra and southern populations reach maximum densities in habitat that has not been burnt for at least 15 years; however, in the northern NSW population a lack of fire in grassy forest may be detrimental as grassy tussock nesting habitat becomes unsuitable after long periods without fire; northern NSW birds are usually found in habitats burnt five to 10 years previously.	No. Unsuitable habitat
Ephippiorhync hus asiaticus	Black-necked Stork	E	—	Associated with tropical and warm temperate terrestrial wetlands, estuarine and littoral habitats, and occasionally woodlands and grasslands floodplains (Marchant & Higgins 1993). Forages in fresh or saline waters up to 0.5m deep, mainly in open fresh waters, extensive sheets of shallow water over grasslands or sedgeland, mangroves, mudflats, shallow swamps with short emergent vegetation and permanent billabongs and pools on floodplains (Marchant & Higgins 1993; DECC 2007).	No. Unsuitable habitat
Epthianura albifrons	White-fronted Chat	V		The White-fronted Chat is found across the southern half of Australia, from southernmost Queensland to southern Tasmania, and across to Western Australia as far north as Carnarvon. Found mostly in temperate to arid climates and very rarely sub-tropical areas, it occupies foothills and lowlands up to 1000 m above sea level. In NSW, it occurs mostly in the southern half of the state, in damp open habitats along the coast, and near waterways in the western part of the state. Along the coastline, it is found predominantly in saltmarsh vegetation but also in open grasslands and sometimes in low shrubs bordering wetland areas. Gregarious species, usually found foraging on bare or grassy ground in wetland areas, singly or in pairs. They are insectivorous, feedin mainly on flies and beetles caught from or close to the ground. Have been observed breeding from late July through to early March, with 'open-cup' nests built in low vegetation. Nests in the Sydney region have also been seen in low isolated mangroves.	No. Unsuitable habitat
Esacus neglectus Esacus magnirostris	Beach Stone-curlew	CE	—	Beaches, mudflats, reefs and especially islands (Blakers et al. 1984). Open undisturbed beaches, islands, reefs, intertidal sand and mudflats, preferably with estuaries or mangroves nearby (DECC 2007).	No. Unsuitable habitat

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Glossopsitta pusilla	Little Lorikeet	V	—	In New South Wales Little Lorikeets are distributed in forests and woodlands from the coast to the western slopes of the Great Dividing Range, extending westwards to the vicinity of Albury, Parkes, Dubbo and Narrabri. Little Lorikeets mostly occur in dry, open eucalypt forests and woodlands. They have been recorded from both old-growth and logged forests in the eastern part of their range, and in remnant woodland patches and roadside vegetation on the western slopes. They feed primarily on nectar and pollen in the tree canopy, particularly on profusely-flowering eucalypts, but also on a variety of other species including melaleucas and mistletoes. On the western slopes and tablelands White Box *Eucalyptus albens* and Yellow Box *E. melliodora* are particularly important food sources for pollen and nectar respectively.	No. Unsuitable habitat
Hieraaetus morphnoides	Little Eagle	V	—	The Little Eagle is found throughout the Australian mainland excepting the most densely forested parts of the Dividing Range escarpment. Occupies open eucalypt forest, woodland or open woodland. Sheoak or acacia woodlands and riparian woodlands of interior NSW are also used. Nests in tall living rees within a remnant patch, where pairs build a large stick nest in winter. Preys on birds, reptiles and mammals, occasionally adding large insects and carrion.	No. Unsuitable habitat
Ixobrychus flavicollis	Black Bittern	V	—	Occurs in both terrestrial and estuarine wetlands generally in areas of permanent water and dense vegetation (DECC 2007). In areas with permanent water it may occur in flooded grassland, forest, woodland, rainforest and mangroves (DECC 2007)	No. Unsuitable habitat
Lathamus discolor	Swift Parrot	E	E	Breeds in Tasmania between September and January. Migrates to mainland in autumn, where it forages on profuse flowering Eucalypts (Blakers et al. 1984; Schodde and Tidemann 1986; Forshaw and Cooper 1981). Hence, in this region, autumn and winter flowering eucalypts are important for this species. Favoured feed trees include winter flowering species such as Swamp Mahogany (Eucalyptus robusta), Spotted Gum (Corymbia maculata), Red Bloodwood (C. gummifera), Mugga Ironbark (E. sideroxylon), and White Box (E. albens) (DECC 2007).	No. Unsuitable habitat
Lophoictinia isura	Square-tailed Kite	V	—	In coastal areas associated tropical and temperate forests and woodlands on fertile soils with an abundance of passerine birds (Marchant & Higgins 1993, DECC 2007). May be recorded inland along timbered watercourses (DECC 2007). In NSW it is commonly associated with ridge or gully forests dominated by Woollybutt (Eucalyptus logifloria), Spotted Gum (E. maculata), or Peppermint Gum (E. elata, E. smithii) (DECC 2007).	No. Unsuitable habitat
Neophema chrysogaster	Orange-bellied Parrot	E	E, M	Breeds only in coastal south-west Tasmania and spends the winter in coastal Victoria and South Australia. It nests in hollows in eucalypt trees which grow adjacent to its feeding plains. In early October the birds arrive in the south west and depart after the breeding season usually in March and April. It feeds on the seeds of several sedges and heath plants, including buttongrass. Its main food preferences are found in sedgelands which have not been burned for between 3-15 years. Also included in the diet are seeds of three Boronia species and the everlasting daisy *Helichrysum pumilum*. After breeding, migrating birds move gradually northwards up the west coast, through the Hunter Group and King Island in Bass Strait and on to the mainland. On the journey the birds usually feed on beach-front vegetation including salt tolerant species such as sea rocket *Cakile maritima*. They also eat various coastal native and introduced grasses.	No. Unsuitable habitat

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Neophema pulchella	Turquoise Parrot	V	—	Steep rocky ridges and gullies, rolling hills, valleys and river flats and the plains of the Great Dividing Range compromise the topography inhabited by this species (Marchant & Higgins 1993). Spends much of the time on the ground foraging on seed and grasses (DECC 2007). It is associated with coastal scrubland, open forest and timbered grassland, especially low shrub ecotones between dry hardwood forests and grasslands with high proportion of native grasses and forbs (Environment Australia 2000).	No. Unsuitable habitat
Oxyura australis	Blue-billed Duck	V	—	The Blue-billed Duck prefers deep water in large permanent wetlands and swamps with dense aquatic vegetation (DECC 2007). The species is completely aquatic, swimming low in the water along the edge of dense cover (DECC 2007). It will fly if disturbed, but prefers to dive if approached (DECC 2007). Blue-billed Ducks are partly migratory, with short-distance movements between breeding swamps and over-wintering lakes with some long-distance dispersal to breed during spring and early summer (DECC 2007). Young birds disperse in April-May from their breeding swamps in inland NSW to non-breeding areas on the Murray River system and coastal lakes (DECC 2007).	No. Unsuitable habitat
Pachycephala olivacea	Olive Whistler	V		Elevated (>500 MASL), cool temperate rainforest and moist eucalypt forest in the northern part of their range. This species appears to favour large tracts of undisturbed and densely vegetated forest (SFNSW 1995).	No. Unsuitable habitat
Pandion cristatus	Eastern Osprey	V	—	Associated with waterbodies including coastal waters, inlets, lakes, estuaries, beaches, offshore islands and sometimes along inland rivers (Schodde and Tidemann 1986; Clancy 1991; Olsen 1995). Osprey may nest on the ground, on sea cliffs or in trees (Olsen 1995). Osprey generally prefer emergent trees, often dead or partly dead with a broken off crown (Olsen 1995).	No. Unsuitable habitat
Petroica boodang	Scarlet Robin	V	-	The Scarlet Robin is primarily a resident in dry forests and woodlands, but some adults and young birds disperse to more open habitats after breeding	No. Unsuitable habitat
Petroica phoenicea	Flame Robin	V		Unlikely. Site only close to rainforest edge and highly disturbed	No. Unsuitable habitat
Petroica rodinogaster	Pink Robin	V	—	The Pink Robin is found in Tasmania and the uplands of eastern Victoria and far south-eastern NSW, almost as far north as Bombala. On the mainland, the species disperses north and west and into more open habitats in winter, regularly as far north as the ACT area, and sometimes being found as far north as the central coast of NSW. Inhabits rainforest and tall, open eucalypt forest, particularly in densely vegetated gullies. Breeds between October and January and can produce two clutches in a season.	
Pezoporus wallicus wallicus	Ground Parrot (eastern subspecies)	V	—	Predominantly restricted to coastal heath and sedgelands that provide a high density of cover and food foraging resources (Blakers et al. 1984; Simpson & Day 1999).	No. Unsuitable habitat

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Ptilinopus regina	Rose-crowned Fruit-Dove	V	—	Tall tropical and subtropical, evergreen or semi-deciduous rainforests, especially with a dense growth of vines trees (Marchant and Higgins 1999). Also located in closed wet sclerophyll forest, gallery forests or sclerophyll woodlands with abundant fruiting trees, near or next to rainforest (DECC 2007). Is thought to prefer large areas of vegetation, but has been located in patches and occasionally in parks and gardens with fruiting trees (Marchant and Higgins 1999).	Unlikely. Site only close to rainforest edge and highly disturbed
Ptilinopus superbus	Superb Fruit-Dove	V	—	Inhabits rainforest and similar closed forests where it forages high in the canopy, eating the fruits of many tree species such as figs and palms (DECC 2007). It may also forage in eucalypt or acacia woodland where there are fruit-bearing trees (*ibid.*). Part of the population is migratory or nomadic (*ibid.*). At least some of the population, particularly young birds, moves south through Sydney, especially in autumn (*ibid.*). Breeding takes place from September to January (*ibid.*). Will feed in adjacent mangroves or eucalypt forests (Blakers et al. 1984).	Unlikely. Site only close to rainforest edge and highly disturbed
Stagonopleura guttata	Diamond Firetail	V	—	Typically found in grassy eucalypt woodlands, but also occurs in open forest, mallee, Natural Temperate Grassland, and in secondary grassland derived from other communities (DECC 2007). It is often found in riparian areas and sometimes in lightly wooded farmland (DECC 2007). Appears to be sedentary, though some populations move locally, especially those in the south (DECC 2007).	No. Unsuitable habitat
Stictonetta naevosa	Freckled Duck	V	—	Associated with a variety of plankton-rich wetlands, such as heavily vegetated, large open lakes and their shores, creeks, farm dams, sewerage ponds and floodwaters (DECC 2007).	No. Unsuitable habitat
Xanthomyza phrygia *Anthochaera phrygia*	Regent Honeyeater	CE	E, M	Associated with temperate eucalypt woodland and open forest including forest edges, wooded farmland and urban areas with mature eucalypts, and riparian forests of River Oak (Casuarina cunninghamiana) (Garnett 1993). Areas containing Swamp Mahogany (Eucalyptus robusta) in coastal areas have been observed to be utilised (NPWS 1997). The Regent Honeyeater primarily feeds on nectar from box and ironbark eucalypts and occasionally from banksias and mistletoes (NPWS 1995). As such it is reliant on locally abundant nectar sources with different flowering times to provide reliable supply of nectar (Environment Australia 2000).	No. Unsuitable habitat
NOCTURNAL BIRDS					
Ninox connivens	Barking Owl	V	—	Associated with a variety of habitats such as savanna woodland, open eucalypt forests, wetland and riverine forest. The habitat is typically dominated by Eucalypts (often Redgum species), however often dominated by Melaleuca species in the tropics (DECC 2007). It usually roosts in dense foliage in large trees such as River She-oak (Allocasuarina cunninghamiana), other Casuarina and Allocasuarina, eucalypts, Angophora, Acacia and rainforest species from streamside gallery forests (NPWS 2003). It usually nests near watercourses or wetlands (NPWS 2003) in large tree hollows with entrances averaging 2-29 metres above ground, depending on the forest or woodland structure and the canopy height (Debus 1997).	No. Unsuitable habitat
Ninox strenua	Powerful Owl	V	—	Powerful Owls are associated with a wide range of wet and dry forest types with a high density of prey, such as arboreal mammals, large birds and flying foxes (Environment Australia 2000, Debus & Chafer 1994). Large trees with hollows at least 0.5m deep are required for shelter and breeding (Environment Australia 2000).	No. Unsuitable habitat

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Tyto novaehollandiae	Masked Owl	V	—	Associated with forest with sparse, open, understorey, typically dry sclerophyll forest and woodland (DECC 2007) and especially the ecotone between wet and dry forest, and non forest habitat (Environment Australia 2000). Known to utilise forest margins and isolated stands of trees within agricultural land (Hyem 1979) and heavily disturbed forest where its prey of small and medium sized mammals can be readily obtained (Kavanagh & Peake 1993).	No. Unsuitable habitat
Tyto tenebricosa	Sooty Owl	V	—	Sooty Owls are associated with tall wet old growth forest on fertile soil with a dense understorey and emergent tall Eucalyptus species (Environment Australia 2000, Debus 1994). Pairs roost in the daytime amongst dense vegetation, in tree hollows and sometimes in caves. The Sooty Owl is typically associated with an abundant and diverse supply of prey items and a selection of large tree hollows (Debus 1994, Garnett 1993, Hyem 1979).	No. Unsuitable habitat
MAMMALS (EXCLUDING BATS)					
Cercartetus nanus	Eastern Pygmy-possum	V	—	Found in wet and dry eucalypt forest, subalpine woodland, coastal banksia woodland and wet heath (Menkhorst & Knight 2004). Pygmy-Possums feed mostly on the pollen and nectar from banksias, eucalypts and understorey plants and will also eat insects, seeds and fruit (Turner & Ward 1995). The presence of Banksia sp. and Leptospermum sp. are an important habitat feature (DECC 2007). Small tree hollows are favoured as day nesting sites, but nests have also been found under bark, in old birds nests and in the branch forks of tea-trees (Turner & Ward 1995).	No. Unsuitable habitat
Dasyurus maculatus *Dasyurus maculatus maculatus*	Spotted-tailed Quoll Spotted-tailed Quoll (SE Mainland Population)	V —	— E	The Spotted-tailed Quoll inhabits a range of forest communities including wet and dry sclerophyll forests, coastal heathlands and rainforests (Mansergh 1984; DECC 2007j), more frequently recorded near the ecotones of closed and open forest. This species requires habitat features such as maternal den sites, an abundance of food (birds and small mammals) and large areas of relatively intact vegetation to forage in (DECC 2007). Maternal den sites are logs with cryptic entrances; rock outcrops; windrows; burrows (Environment Australia 2000).	No. Unsuitable habitat
Isoodon obesulus	Southern Brown Bandicoot	E	E	This species is associated with heath, coastal scrub, heathy forests (Menkhorst & Knight 2004), shrubland and woodland on well drained soils. This species is thought to display a preference for newly regenerating heathland and other areas prone to fire (Menkhorst & Seebeck 1990). They are generally only found in heath or open forest with a heathy understorey on sandy or friable soils.	No. Unsuitable habitat
Petaurus australis	Yellow-bellied Glider	V	—	This species is restricted to tall mature forests, preferring productive tall open sclerophyll forests with a mosaic of tree species including some that flower in winter (Environment Australia 2000, Braithwaite 1984, Davey 1984, Kavanagh 1984; DECC 2007). Large hollows within mature trees are required for shelter, nesting and breeding (Henry and Craig 1984; DECC 2007).	No. Unsuitable habitat
Petaurus norfolcensis	Squirrel Glider	V	—	Associated with dry hardwood forest and woodlands (Menkhorst et al. 1988; Quin 1995). Habitats typically include gum barked and high nectar producing species, including winter flower species (Menkhorst et al. 1988). The presence of hollow bearing eucalypts is a critical habitat value (Quin 1995).	No. Unsuitable habitat

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Petrogale penicillata	Brush-tailed Rock-wallaby	E	V	Rocky areas in a variety of habitats, typically north facing sites with numerous ledges, caves and crevices (Strahan 1995).	No. Unsuitable habitat
Phascolarctos cinereus	Koala	V	—	Associated with both wet and dry Eucalypt forest and woodland that contains a canopy cover of approximately 10 to 70% (Reed et al. 1990), with acceptable Eucalypt food trees. Some preferred Eucalyptus species are: Eucalyptus tereticornis, E. punctata, E. cypellocarpa, E. viminalis	No. Unsuitable habitat
Potorous tridactylus *Potorous tridactylus tridactylus*	Long-nosed Potoroo Long-nosed Potoroo (SE Mainland Population)	V —	— V	Associated with dry coastal heath and dry and wet sclerophyll forests (Strahan 1998) with dense cover for shelter and adjacent more open areas for foraging (Menkhorst & Knight 2004).	No. Unsuitable habitat
Pseudomys novaehollandiae	New Holland Mouse	-	V	The New Holland Mouse has a fragmented distribution across Tasmania, Victoria, NSW and Queensland. In NSW, the New Holland Mouse is known from: Royal National Park (NP) and the Kangaroo Valley (Posamentier & Recher 1974); Kuringai Chase NP (Prosser et al. 2007); and Port Stephens to Evans Head near the Queensland border (Prosser et al. 2007). The New Holland Mouse has been found from coastal areas and up to 100 km inland on sandstone country (Wilson & Laidlaw 2003). The species has been recorded from sea level up to around 900 m above sea level (Menkhorst et al. 2008). Soil type may be an important indicator of suitability of habitat for the New Holland Mouse, with deeper top soils and softer substrates being preferred for digging burrows. Habitats include open heathland and open woodland with a heathland understorey and vegetated sand dunes	No. Unsuitable habitat
Sminthopsis leucopus	White-footed Dunnart	V	—	The White-footed Dunnart occurs in Tasmania and along the Victorian and southern NSW coast. The Shoalhaven area is the species' northern-most limit. The White-footed Dunnart is found in a range of different habitats across its distribution, including coastal dune vegetation, coastal forest, tussock grassland and sedgeland, heathland, woodland and forest. In NSW, the species seems to favour vegetation communities with an open understorey structure. Mating occurs in late July and August. Breeding populations have been recorded in logged forest shortly after disturbance, but these usually do not persist as regeneration proceeds and a dense ground cover of vegetation establishes. The White-footed Dunnart is an opportunistic carnivore that feeds on a variety of ground-dwelling invertebrates and, occasionally, small lizards. They shelter in bark nests in hollows under standing or fallen timber, burrows in the ground, piles of logging debris, large grass clumps such as provided by Grass Trees *Xanthorrhoea sp.* and Macrozamias and rock crevices.	No. Unsuitable habitat
MAMMALS (BATS)					

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Chalinolobus dwyeri	Large-eared Pied Bat	V	V	The Large-eared Pied Bat has been recorded in a variety of habitats, including dry sclerophyll forests, woodland, sub-alpine woodland, edges of rainforests and wet sclerophyll forests (Churchill 1998; DECC 2007). This species roosts in caves, rock overhangs and disused mine shafts and as such is usually associated with rock outcrops and cliff faces (Churchill 1998; DECC 2007).	No. Unsuitable habitat
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V	—	Prefers moist habitats with trees taller than 20m (DECC 2007). Roosts in tree hollows but has also been found roosting in buildings or under loose bark (DECC 2007).	No. Unsuitable habitat
Kerivoula papuensis	Golden-tipped Bat	V	—	The most favoured habitat for this species is moist closed forests often with a rainforest influence, however, some captures have been made in dry forests some distance from any rainforest (Lunney et. al. 1986; Parnaby and Mills, 1994). It has been suggested that the amount of vines and complex tree layers allows for increased numbers of spiders and webs and such areas are sought by the Golden-tipped Bat (Schulz & Eyre 2000). This species is often caught over streams within rainforest are known to frequently roost within the pendulous nests of Yellow-throated and Large-billed Scrub Wrens and Brown Gerygone in such areas (Schulz & Eyre 2000).	No. Unsuitable habitat
Miniopterus australis	Little Bent-wing Bat	V	—	Prefers well-timbered areas including rainforest, wet and dry sclerophyll forests, Melaleuca swamps and coastal forests (Churchill 1998). This species shelter in a range of structures including culverts, drains, mines and caves (Environment Australia 2000). Relatively large areas of dense vegetation of either wet sclerophyll forest, rainforest or dense coastal banksia scrub are usually found adjacent to caves in which this species is found (DECC 2007). Breeding occurs in caves, usually in association with M. schreibersii (Environment Australia 2000, DECC 2007).	Unlikely. Majority unsuitable habitat and rainforest margin adjacent to site highly disturbed
Miniopterus schreibersii oceanensis	Eastern Bent-wing Bat	V	—	Associated with a range of habitats such as rainforest, wet and dry sclerophyll forest, monsoon forest, open woodland, paperbark forests and open grassland (Churchill 1998). It forages above and below the tree canopy on small insects (AMBS 1995, Dwyer 1995, Dwyer 1981). Will utilise caves, old mines, and stormwater channels, under bridges and occasionally buildings for shelter (Environment Australia 2000, Dwyer 1995).	Unlikely. Majority unsuitable habitat and rainforest margin adjacent to site highly disturbed
Mormopterus norfolkensis	**East Coast Freetail Bat**	V	—	**Most records of this species are from dry eucalypt forest and woodland east of the Great Dividing Range (Churchill 1998). Individuals have, however, been recorded flying low over a rocky river in rainforest and wet sclerophyll forest and foraging in clearings at forest edges (Environment Australia 2000; Allison & Hoye 1998). Primarily roosts in hollows or behind loose bark in mature eucalypts, but have been observed roosting in the roof of a hut (Environment Australia 2000; Allison & Hoye 1998).**	**Potential.** **Some suitable foraging habitat and hollows nearby off site**
Myotis macropus	Southern Myotis	V	—	The Southern Myotis is found in the coastal band from the north-west of Australia, across the top-end and south to western Victoria. It is rarely found more than 100 km inland, except along major rivers. Generally roost in groups of 10 - 15 close to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, under bridges and in dense foliage. Forage over streams and pools catching insects and small fish by raking their feet across the water surface.	No. Unsuitable habitat

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Pteropus poliocephalus	Grey-headed Flying-Fox	V	V	Inhabits a wide range of habitats including rainforest, mangroves, paperbark forests, wet and dry sclerophyll forests and cultivated areas (Churchill 1998, Eby 1998). Camps are often located in gullies, typically close to water, in vegetation with a dense canopy (Churchill 1998).	Potential. Some suitable forage trees
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	V	—	Found in almost all habitats, from wet and dry sclerophyll forest, open woodland (Churchill 1998), open country, mallee, rainforests, heathland and waterbodies (SFNSW 1995). Roosts in tree hollows; may also use caves; has also been recorded in a tree hollow in a paddock (Environment Australia 2000) and in abandoned sugar glider nests (Churchill 1998). The Yellow-bellied Sheathtail-bat is dependent on suitable hollow-bearing trees to provide roost sites, which may be a limiting factor on populations in cleared or fragmented habitats (Environment Australia 2000).	Potential. Some suitable foraging habitat and hollows nearby off site
Scoteanax rueppellii	Greater Broad-nosed Bat	V	—	Associated with moist gullies in mature coastal forest, or rainforest, east of the Great Dividing Range (Churchill, 1998), tending to be more frequently located in more productive forests (Hoye & Richards 1998). Within denser vegetation types use is made of natural and man made openings such as roads, creeks and small rivers, where it hawks backwards and forwards for prey (Hoye & Richards 1998).	Unlikely. Site only close to rainforest edge and highly disturbed
MIGRATORY TERRESTRIAL SPECIES LISTED UNDER EPBC ACT					
Apus pacificus	Fork-tailed Swift	-	M	Sometimes travels with Needletails. Varied habitat with a possible tendency to more arid areas but also over coasts and urban areas (Simpson & Day 1999).	Unlikely. Overfly only
Haliaeetus leucogaster	White-bellied Sea-Eagle	—	M	Forages over large open fresh or saline waterbodies, coastal seas and open terrestrial areas (Marchant & Higgins 1993, Simpson & Day 1999). Breeding habitat consists of tall trees, mangroves, cliffs, rocky outcrops, silts, caves and crevices and is located along the coast or major rivers. Breeding habitat is usually in or close to water, but may occur up to a kilometre away (Marchant & Higgins 1993).	Unlikely. Overfly only
Hirundapus caudacutus	White-throated Needletail	—	M	Forages aerially over a variety of habitats usually over coastal and mountain areas, most likely with a preference for wooded areas (Marchant & Higgins 1993; Simpson & Day 1999). Has been observed roosting in dense foliage of canopy trees, and may seek refuge in tree hollows in inclement weather (Marchant & Higgins 1993).	Unlikely. Overfly only
Merops ornatus	Rainbow Bee-eater	—	M	Resident in coastal and subcoastal northern Australia; regular breeding migrant in southern Australia, arriving September to October, departing February to March, some occasionally present April to May (Pizzey and Doyle 1988). Occurs in open country, chiefly at suitable breeding places in areas of sandy or loamy soil: sand-ridges, riverbanks, road-cuttings, sand-pits, occasionally coastal cliffs (*ibid*). Nest is a chamber a the end of a burrow, up to 1.6 m long, tunnelled in flat or sloping ground, sandy back or cutting (*ibid*).	No. Unsuitable habitat
Monarcha melanopsis	Black-faced Monarch	—	M	Rainforest and eucalypt forests, feeding in tangled understorey (Blakers et al. 1984).	Unlikely. Site only close to rainforest edge and highly disturbed

Scientific Name	Common Name	TSC Act	EPBC Act	Habitat Associations	Likelihood of Occurrence
Myiagra cyanoleuca	Satin Flycatcher	—	M	Associated with drier eucalypt forests, absent from rainforests (Blakers et al. 1984), open forests, often at height (Simpson & Day 1999).	No. Unsuitable habitat
Neophema chrysogaster	Orange-bellied Parrot	E	E, M	SEE DIURNAL BIRDS ABOVE	SEE DIURNAL BIRDS ABOVE
Rhipidura rufifrons	Rufous Fantail	—	M	The Rufous Fantail is a summer breeding migrant to southeastern Australia (Morcombe, 2004). The Rufous Fantail is found in rainforest, dense wet eucalypt and monsoon forests, paperbark and mangrove swamps and riverside vegetation (Morcombe, 2004). Open country may be used by the Rufous Fantail during migration (Morcombe, 2004).	No. Unsuitable habitat
Xanthomyza phrygia *Anthochaera phrygia*	Regent Honeyeater	CE	E, M	SEE DIURNAL BIRDS ABOVE	SEE DIURNAL BIRDS ABOVE
MIGRATORY WETLAND SPECIES LISTED UNDER EPBC ACT					
Ardea ibis	Cattle Egret	—	M	Cattle Egrets forage on pasture, marsh, grassy road verges, rain puddles and croplands, but not usually in the open water of streams or lakes and they avoid marine environments (McKilligan, 2005). Some individuals stay close to the natal heronry from one nesting season to the next, but the majority leave the district in autumn and return the next spring. Cattle Egrets are likely to spend the winter dispersed along the coastal plain and only a small number have been recovered west of the Great Dividing Range (McKilligan, 2005).	No. Unsuitable habitat
Gallinago hardwickii	Latham's Snipe	—	M	A variety of permanent and ephemeral wetlands, preferring open fresh water wetlands with nearby cover (Marchant and Higgins 1999). Occupies a variety of vegetation around wetlands (Marchant and Higgins 1999) including wetland grasses and open wooded swamps (Simpson and Day 1999).	No. Unsuitable habitat
Rostratula benghalensis s. lat.	Painted Snipe	—	M	Prefers fringes of swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open timber (DECC 2007). Nests on the ground amongst tall vegetation, such as grasses, tussocks or reeds (*ibid.*). Breeding is often in response to local conditions; generally occurs from September to December (DECC 2007). Roosts during the day in dense vegetation (NSW Scientific Committee 2004). Forages nocturnally on mud-flats and in shallow water (DECC 2007). Feeds on worms, molluscs, insects and some plant-matter (*ibid.*).	No. Unsuitable habitat

Disclaimer: Data extracted from the Atlas of NSW Wildlife and DEW Protected Matters Report are only indicative and cannot be considered a comprehensive inventory. 'Migratory marine species' and 'listed marine species' listed on the EPBC Act (and listed on the DEW protected matters report) have not been included in this table, since they are considered unlikely to occur within the study area due to the absence of marine habitat.

Appendix 2 – TSC Act and EPBC Act significance assessments

Assessment of Significance (TSC Act 7 part test)

The EP&A Act includes in Section 5A, seven factors which are to be considered when determining if a proposed development or activity *'is likely to have a significant effect on the threatened species, populations or ecological communities, or their habitats'*. These seven factors must be taken into account by consent or determining authorities when considering a development proposal or development application. This enables a decision to be made as to whether there is likely to be a significant effect on the species and hence if a Species Impact Statement is required (DECC 2007).

Based on the field surveys and likelihood of occurrence table, three species were known to or have the potential to occur within the study area. These were the:

- East Coast Freetail Bat
- Grey-headed Flying-Fox
- Yellow-bellied Sheathtail-bat

These entities are assessed below.

(a) in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,

Grey-headed Flying-fox

The Grey-headed Flying-fox is the largest Australian bat found within 200km of the east coast of Australia. They occur in rainforest, forests and woodlands, heaths and swamps as well as urban areas (DECCW 2010c). Roosting camps are generally located within 20km of a regular food source and are commonly found in gullies. Fidelity to roost sites is high and impacts to this species largely come about direct impacts to roost camps through disturbance (DECCW 2010c).

Grey-headed Flying-foxes were predicted to occur from time to time on the site, particularly due to the large *Ficus macrophylla* on site and the *Melaleuca quinquenervia* which are favoured flowering resources. This species travels significant distances for feeding resources and the site does not contain any roost sites.

The proposed action would rezone a small sliver of land within the lot from RU2 Rural Landscape to R2 Low Density Residential to rationalise the zoning and make the sliver consistent with the rest of the majority of the lot.

This change in zoning of the sliver of land will not have a significant effect on the permissible uses for the overall lot as the majority of the land is already zoned R2. A significant proportion of the RU2 zoned sliver of land proposed for rezoning already incorporates part of the existing

dwelling. The environmental values on the site are not inconsistent with the proposed new zoning of R2. The change in zoning of the small sliver of Lot 20 DP1151501 will not alter future impacts to threatened species or communities due to any potential change of landuse.

Grey-headed Flying-foxes are regarded as highly mobile and the foraging resources within the study area are present throughout the immediate and wider locality. As the change in zoning of the small sliver of the lot will not alter future impacts to environmental values due to any potential change of landuse, habitat potentially important to the life cycle of any local population of these species will be retained.

Considering these factors, the proposed activity is unlikely to have an adverse effect on the life cycle of these species, such that a viable local population is likely to be placed at risk of extinction.

Microbats (Eastern Freetail-bat, Yellow-bellied Sheathtail Bat)

The Eastern Freetail-bat and Yellow-bellied Sheathtail Bat, are forest dependant microbat species (Churchill 2008; DECCW 2010c). Habitat essential to the lifecycle of these species includes forest (foraging habitat) that contains HBT (roost and breeding sites).

Both of these microbat species were predicted to occur on the site as they both utilise a wide variety of areas for foraging, including disturbed forest types and some cleared areas. There were no HBTs recorded so the site represents foraging potential only.

The proposed action would rezone a small sliver of land within the lot from RU2 Rural Landscape to R2 Low Density Residential to rationalise the zoning and make the sliver consistent with the rest of the majority of the lot.

This change in zoning of the sliver of land will not have a significant effect on the permissible uses for the overall lot as the majority of the land is already zoned R2. A significant proportion of the RU2 zoned sliver of land proposed for rezoning already incorporates part of the existing dwelling. The environmental values on the site are not inconsistent with the proposed new zoning of R2. The change in zoning of the small sliver of Lot 20 DP1151501 will not alter future impacts to threatened species or communities due to any potential change of landuse.

Microbats are regarded as highly mobile and the foraging resources within the study area are present throughout the immediate and wider locality. As the change in zoning of the small sliver of the lot will not alter future impacts to environmental values due to any potential change of landuse, habitat potentially important to the life cycle of any local population of these species will be retained.

Considering these factors, the proposed activity is unlikely to have an adverse effect on the life cycle of these species, such that a viable local population is likely to be placed at risk of extinction.

(b) in the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction,

No endangered populations are known within the area.

(c) in the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:

is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,

No endangered or critically endangered ecological communities were present on the site.

(d) in relation to the habitat of a threatened species, population or ecological community:

the extent to which habitat is likely to be removed or modified as a result of the action proposed

The proposed action will rezone a small sliver of land in line with the rest of the zoning on the majority of the lot. Potential changes in landuses on the site as a result will not significantly alter any important habitat on the site.

whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action

The proposed action will not isolate or fragment other areas of habitat.

the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality

Potential changes in landuses on the site as a result of the rezoning will not significantly alter any important habitat on the site.

(e) whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly),

There is no critical habitat as listed by the TSC Act found within the Kiama LGA of relevance on this site.

(f) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan,

At the time of writing, a number of recovery plans were available for entities that are the subject of this assessment. These plans are listed and considered below.

A draft National Recovery Plan for the Grey-headed Flying-fox has been prepared (DECCW 2009) and a number of specific objectives have been listed as part of the recovery of the species. These objectives include:

- To identify and protect foraging habitat critical to the survival of Grey-headed Flying-foxes throughout their range
- To protect and increase the extent of key winter and spring foraging habitat of Grey-headed Flying-foxes
- To identify roosting habitat critical to the survival of Grey-headed Flying-foxes
- To protect and enhance roosting habitat critical to the survival of Grey-headed Flying-foxes
- To substantially reduce deliberate destruction of Grey-headed Flying-foxes in fruit crops
- To reduce negative public attitudes toward Grey-headed Flying-foxes and reduce conflict with humans
- To increase public awareness and understanding of Grey-headed Flying-foxes and the recovery program, and to involve the community in recovery actions, where appropriate, to reduce the threat of negative public attitudes and conflict with humans
- To monitor population trends in Grey-headed Flying-foxes so as to monitor the species' national distribution and status
- To assess and reduce the impact on Grey-headed Flying-foxes of electrocution on powerlines and entanglement in netting and on barbed-wire
- To improve knowledge of the demographics and population structure of Greyheaded Flying-foxes in order to increase understanding of the ecological requirements of the species
- To increase the effectiveness and efficiency of recovery initiatives for Greyheaded Flying-foxes by working cooperatively with conservation and management programs with overlapping objectives to remove or reduce the impact of threatening processes on the species
- To maintain an effective Grey-headed Flying-fox National Recovery Team to oversee the implementation of the Grey-headed Flying-fox National Recovery Plan to remove or reduce the impact of threatening processes on the species.
- To provide long-term economic benefits associated with the protection of ecosystem services, promotion of sustainable forest management, improved crop protection regimes, promotion of sustainable agricultural practices and increased viability of some commercial fruit industries.

The development is considered to be consistent with the above objectives.

(g) whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.

The rezoning action on the site does not constitute a key threatening process. There is some potential for the rezoning to establish a pathway for future development and the *clearing of native vegetation*, a listed KTP. However, these impacts need to be assessed at such a time and

are unlikely to be considered significant due to the highly disturbed and fragmented nature of the vegetation on the site.

Conclusion of 7 part test

This Assessment of Significance has determined that the proposed activity is *'unlikely'* to have a *'significant effect'* on the Eastern Freetail-bat, Grey-headed Flying-fox or Yellow-bellied Sheathtail Bat.

Therefore, the proposed activity will not require a Species Impact Statement.

EPBC Act significance assessment

The EPBC Act Administrative Guidelines on Significance set out **'Significant Impact Criteria'** that are to be used to assist in determining whether a proposed action is likely to have a significant impact on matters of national environmental significance. Matters listed under the EPBC Act as being of national environmental significance include:

- Listed threatened species and ecological communities
- Listed migratory species
- Wetlands of International Importance
- The Commonwealth marine environment
- World Heritage properties
- National Heritage places
- Nuclear actions

Specific **'Significant Impact Criteria'** are provided for each matter of national environmental significance except for threatened species and ecological communities in which case separate criteria are provided for species listed as endangered and vulnerable under the EPBC Act. Threatened and migratory species listed under the EPBC Act that are considered likely or potentially to occur within the study area are given in Appendix C of the Report. The relevant Significant Impact Criteria have been applied to these threatened and migratory species to determine the significance of impact of the project.

Matters to be addressed	**IMPACT (COMMONWEALTH LEGISLATION)**
a. any environmental impact on a World Heritage Property;	No
b. any environmental impact on Wetlands of International Importance;	The proposal will not affect any part of RAMSAR wetland.
c. any impact on Commonwealth Listed Critically Endangered or Endangered Species;	No Commonwealth listed endangered species occur within the subject Lot (*Cynanchum elegans* and *Zieria granulata* were found along the nearby creekline and would need to be assessed under any future development applications where potential impacts on that area may be likely). The significant impact criteria in terms of endangered species are discussed below: *a. lead to a long-term decrease in the size of a population* *b. reduce the area of occupancy of the species* *c. fragment an existing population into two or more populations* *d. adversely affect habitat critical to the survival of a species* *e. disrupt the breeding cycle of a population*

Matters to be addressed	IMPACT (COMMONWEALTH LEGISLATION)
	f. modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline *g. result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat* *h. introduce disease that may cause the species to decline; or* *i. interfere with the recovery of the species.*
d. any impact on Commonwealth Listed Vulnerable Species;	One Commonwealth listed vulnerable species are considered potential or likely to occur in the study area: • Grey-headed Flying-fox The significant impact criteria in terms of the vulnerable species are discussed below: *a. lead to a long-term decrease in the size of an important population of a species,* The habitat on the site does not represent an area critical for the long-term survival of the Grey-headed Flying-fox. The rezoning of a small sliver of the lot in line with the majority of the site is not considered to lead to a long-term decrease in any population size in the area. *b. reduce the area of occupancy of an important population* Only a small area of foraging habitat is present on the site and it does not support any part of an important population. The proposal will not reduce the area of occupancy for an important population of this species. *c. fragment an existing important population into two or more populations* The proposed clearing will not further increase the fragmentation of any populations. *d. adversely affect habitat critical to the survival of a species* No habitat on site is considered to be critical to the survival of the species. *e. disrupt the breeding cycle of an important population* The site does not contain breeding habitat for the Grey-headed Flying-fox. As the site is not considered to contain any important populations, this proposal will not cause any disruption to the breeding cycle of an important population. *f. modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline* The action will not isolate or fragment any valuable habitat on the site due to the highly disturbed condition of the vegetation. *g. result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat* The proposal will not increase the risk from invasive species. *h. introduce disease that may cause the species to decline* The proposal will not lead to the introduction of a disease that may cause these species to decline at the site. *i. interferes substantially with the recovery of the species.* As the proposal is not considered to decrease or fragment existing populations, the recovery of the species will not be substantially impacted
e. any environmental	No. The site is not likely to provide habitat for any listed migratory species.

Matters to be addressed	IMPACT (COMMONWEALTH LEGISLATION)
impact on Commonwealth Listed Migratory Species;	
f. does any part of the Proposal involve a Nuclear Action;	No. The project does not include a Nuclear Action.
g. any environmental impact on a Commonwealth Marine Area;	No. There are no Commonwealth Marine Areas within the study area.
h. In addition, any direct or indirect impact on Commonwealth lands	No. The project does not directly or indirectly affect Commonwealth land.

Conclusion of EPBC Act assessment

It is unlikely that the development will significantly impact on these threatened species. The site provides only a small amount of foraging habitat for the fauna assessed species (Grey-headed Flying-fox) and the level of future potential habitat removal will be negligible in the context of the condition of the habitat and available habitat in the locality.

Therefore, referral to the Commonwealth under the EPBC Act is not recommended.

ANNEXURE 3

Aboriginal Heritage Assessment

prepared by

Myall Coast Archaeological Services

ANNEXURE 3

Myall Coast Archaeological Services
"Tall Pines" Phone: 49971011 Mobile: 0403071922
Tea Gardens. 2324 Email:len@myallcoast.net.au

Aboriginal Heritage Due Diligence Assessment

Lot 20 DP 1151501 Old Saddleback Road, Kiama. NSW

Report to
Cowman Stoddart Pty Ltd
Nowra. NSW
Tuesday 9th April, 2013

By Len Roberts B.A. (Arch/Hist); Grad. Dip. Comp.; Dip. Sp. Ed.;
("Tall Pines", Tea Gardens. 2324 Ph: 49 971011)

Myall Coast Archaeological Services

Aboriginal Heritage Assessment

Table of Contents

1. Introduction

1.1 Background

This report has been prepared at the request of Cowman Stoddart Pty Ltd, NOWRA NSW; to assess the possible impact a proposed Planning Proposal (to correct a zoning boundary anomaly) may have on Aboriginal Cultural Heritage over a small portion of land at 43 Old Saddleback Road, Kiama. This portion is part of a larger area of which the majority of the site was rezoned for residential purposes in the Kiama LEP 2011.

The above mentioned portion was not included at that time.

The report has been requested in order to demonstrate due diligence by:
1. Identifying whether or not Aboriginal objects are, or are likely to be, present in an area;
2. Determining whether or not their activities are likely to harm Aboriginal objects (if present); and
3. Determining whether an Aboriginal heritage Impact Permit (AHIP) application is required.

1.2 Legislative Context

The *National Parks and Wildlife Act 1974*, administered by DECCW, is the primary legislation for the protection of some aspects of Aboriginal cultural heritage in NSW. Section 86 of that act has been amended and deals with harming and desecrating Aboriginal Objects.

'Aboriginal object means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.'

Under section 86 of the NPW Act, it is an offence to 'harm' an Aboriginal object. 'Harm' means any act or omission that:

- destroys, defaces, damages or desecrates the object
- moves the object from the land on which it had been situated, or
- causes or permits the object to be harmed.

The NPW Act provides several defences to prosecution for an offence. Where a person either knows or does not know they are harming an Aboriginal object, a person has a defence under section 87 where:

- The harm or desecration concerned was authorised by an Aboriginal heritage impact permit, and the conditions to which that Aboriginal heritage impact permit was subject were not contravened.
- Due diligence was undertaken and it was reasonably determined that no Aboriginal object would be harmed.
- Was work on land that has been disturbed for maintenance of existing roads, fire and other trails and tracks, maintenance of existing utilities and other similar services
- Land is disturbed if it has been the subject of human activity that has changed the land's surface, being changes that remain clear and observable.

Harm does not include something that is trivial or negligible.

2. The Due Diligence Process

Due diligence amounts to taking reasonable and practicable steps to protect Aboriginal objects. The Department of Environment and Heritage (OEH) has developed a generic code that provides one process for satisfying the due diligence requirements under the National Parks and Wildlife Act 1974 (as amended). It is not mandatory to follow this code. An individual or corporation can take other measures, provided that such measures are objectively reasonable and practicable and meet the ordinary meaning of exercising due diligence.

The purpose of due diligence is to identify whether Aboriginal objects are present in an area, and to determine whether a proposed activity will have impacts on Aboriginal objects. Therefore it is essential to identify and understand all the expected impacts of the proposed activity. There are two categories of activity used for assessing impacts:

- Activities involving no additional surface disturbance
- Activities causing additional surface disturbance.

For activities causing additional surface disturbance, it is necessary to determine whether an activity is proposed for:

a) A developed area or a previously disturbed area, or
b) An undisturbed area.

For activities in previously developed or disturbed areas, it is then necessary to determine whether the new activity will create significant additional surface disturbance. If it will, then the process for undisturbed areas will apply.

Disturbed land has been defined in the OEH due diligence process as Land that has been previously subjected to any activity that has resulted in clear and observable changes to the land's surface.

OEH will not approve or certify a person's compliance with their due diligence requirements carried out under this or any other code. It is the responsibility of the individual or proponent to ensure that they have undertaken due diligence.

According to the OEH Due diligence Code of practice at 7.7 it states that:

> "You can follow your own due diligence process and manage your own risk. Due diligence amounts to taking reasonable and practicable steps to protect Aboriginal objects. This generic code provides one process for satisfying the due diligence requirements of the NPW Act.
>
> It is not mandatory to follow this code. An individual or corporation can take other measures, provided that such measures are objectively reasonable and practicable and meet the ordinary meaning of exercising due diligence."

This Due Diligence Assessment follows the OEH generic due diligence code.

2.1 Assessment Personnel

The research, visual assessment and report were undertaken by Len Roberts, (BA [Arch.], Grad. Dip. Comp., Dip Sp. Ed.,) who also holds a certificate in Archaeological fieldwork, from Tel Aviv University, Israel. Len has worked on archaeological projects in Australia and overseas. Len is a member (since 1990) and was Deputy Chairperson (2007 -2011) of Karuah Local Aboriginal Land Council. He has over 20 years' experience as a local government councillor on city and regional councils. He is currently Deputy Mayor of Great Lakes Council. He was appointed, in 1977, (under S32AV of the Local government Act 1919) as a part time, non- judicial expert (having, special knowledge of and experience in law, local government administration or town planning administration) member of the Local Government Appeals Tribunal from 1977 until it was replaced by the Land and Environment Court in 1980. He has been an expert witness before the Land and Environment court on Aboriginal heritage matters. Len has also taught English and Society (Australiana) at Beifang University, Yinchuan, China as an invited lecturer in second semester 2011.

Len is currently undertaking a Masters in Indigenous Knowledge through Charles Darwin University (traditional Aboriginal law, society and practices).

Len has undertaken archaeological work for various planning and surveying companies, as well as large organizations such as AMP, Department of Public Works, RTA, Local Government Authorities, Energy Australia, Australian Rail and Track Corporation, Rio Tinto, Woolworths and numerous other clients. The projects have ranged from small aquaculture (at sea), industrial and residential projects to large rezoning proposals, as well as linear surveys for sewerage treatment upgrades, pipelines, transmission lines, wind farms, rail line upgrades and highways.

The assessments have included Due Diligence assessments, gateway determinations, as well as assessments under, Parts 3A, 4 and 5 of the EP & A Act.

Len has completed various S90 applications, as well as identifying and recording in excess of 1,000 Aboriginal objects and has authored in excess of 120 reports in the last 15 years.

3.0 The Assessment

3.1 Description of Land and Activity

The proposed development area (hereafter referred to as the study area) is located at 43 Old Saddleback Road, Kiama. The property description is known as lot 20 DP 1151501. The study area is located to the west of the Princess Highway and bordered by Caliope Road an unmade road on the south.

Figure 1 shows the regional location of the study area and figure 2 sets out the study area in approximate relation to the overall context of the property and surrounding landuse. An existing house and associated infrastructure straddles the middle of the study area. The study area has been disturbed by settlement and agricultural practices over many decades particularly since the 1930s with the property being used for grazing cattle. However, the greatest evidence of disturbance is the house situated within the study area and by the reduction in natural vegetation.

THE PROPOSED DEVELOPMENT

The proposal is to rezone the study area to correct a planning zoning anomaly. Figure 3 illustrates the extent of the anomaly and relation of study area to existing development.

EXTENT OF PROPOSED IMPACTS UPON THE STUDY AREA

As the proposal is basically changing the changing of colour on a zoning map the proposal will have absolutely no impact upon Aboriginal heritage in any way.

Future possible land use i.e. subdivision and construction may introduce the potential for impact upon Aboriginal Heritage if unknown objects exist within the study area. However that is a matter for future consideration when and if any potential is realised. However, the potential for harm is negligible as the study area is considered disturbed land.

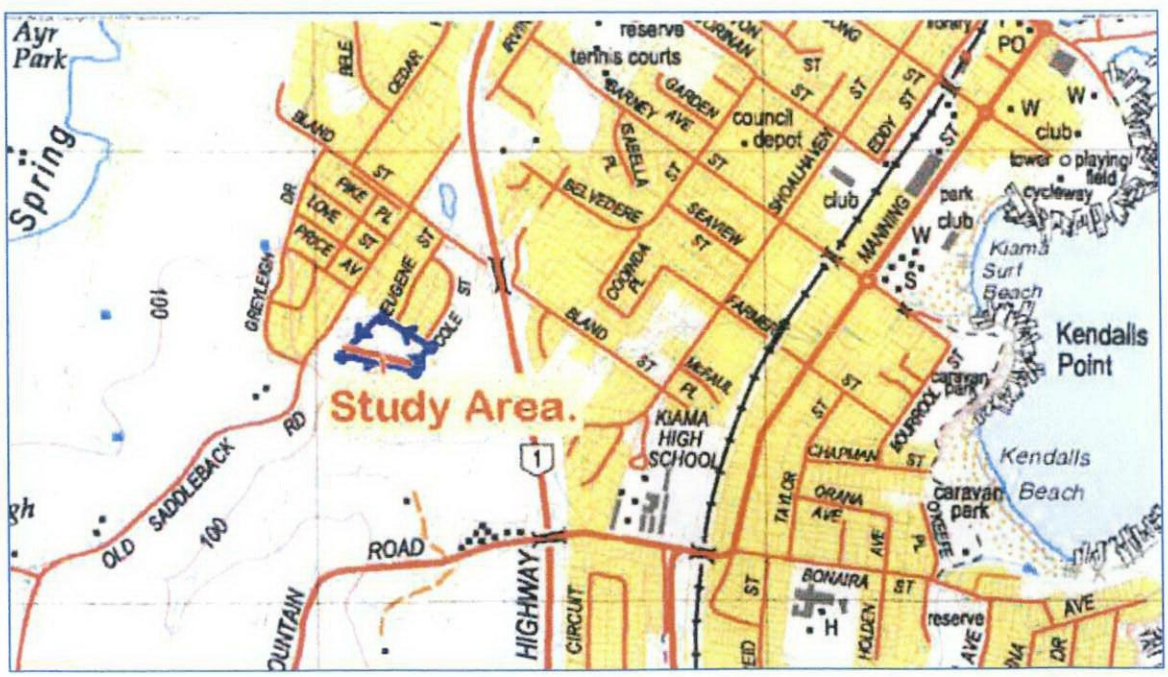


Figure 1 Location of Study Area

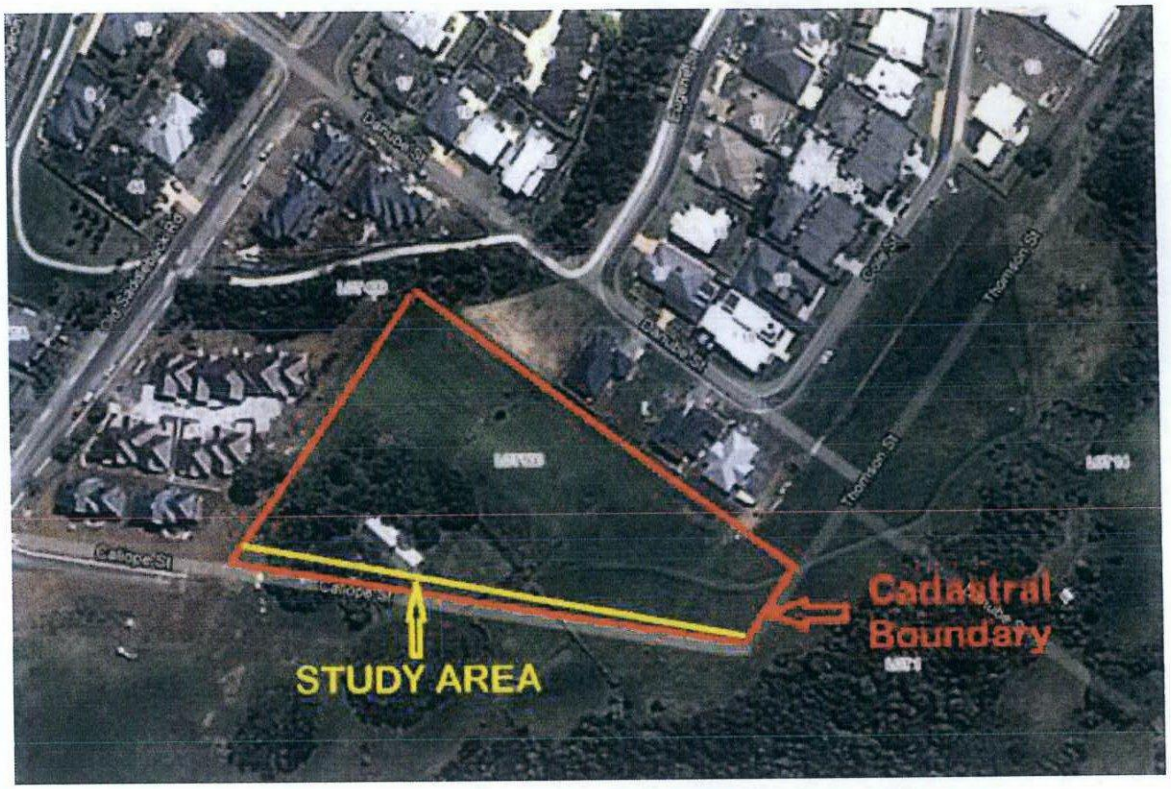


Figure 2 Study area

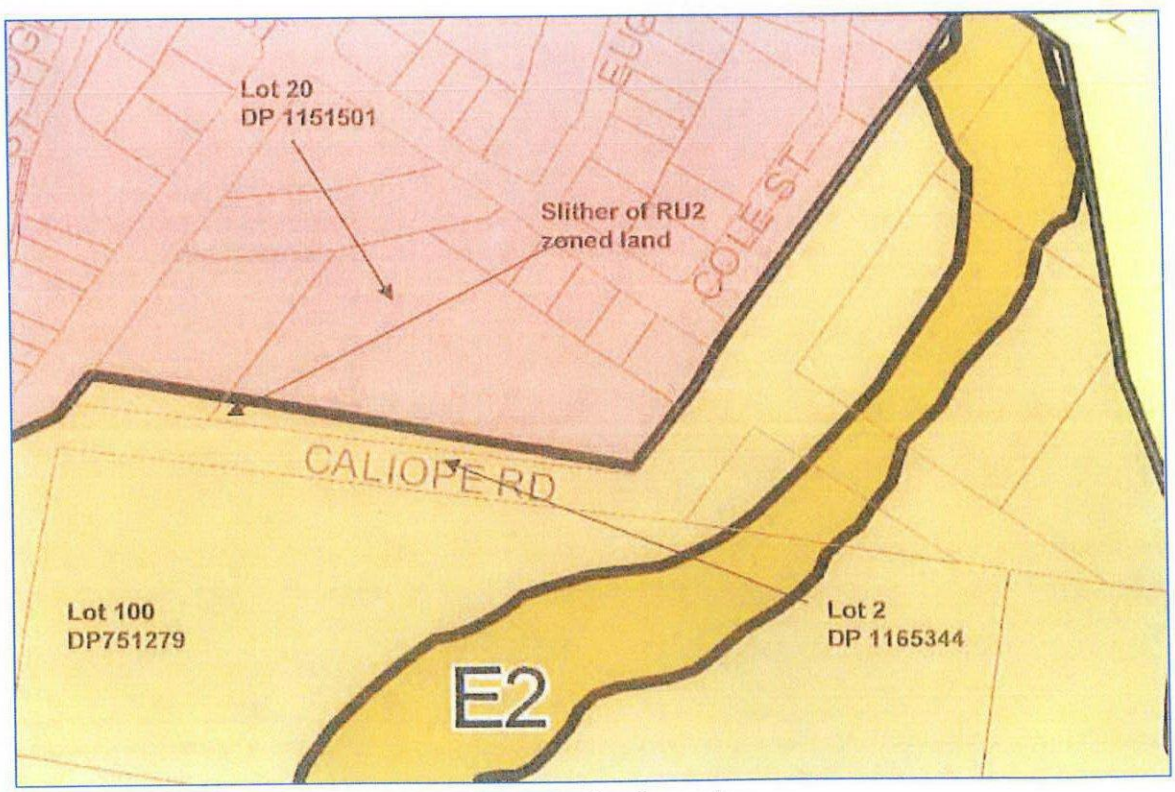


Figure 3 Zoning Anomaly

3.2 Is the Land defined as "Disturbed Land" or an exempt or complying development?

The proposal is not exempt or complying development and the land can be considered disturbed through anthropological processes associated with past land use. It can be regarded as disturbed under the definition of disturbed land under the NPW Act.

3.3 Is the activity exempt?

No

3.4 Will the activity involve harm that is trivial or negligible?

No

3.5 Is the activity in an Aboriginal Place or are you already aware of Aboriginal objects on the land?

No

3.6 Is the activity a low impact activity for which there is a defence in the regulation?

No

3.7 Will the activity disturb the ground surface?

No. Future possible land use i.e. subdivision and construction may introduce the potential for impact upon Aboriginal Heritage if unknown objects exist within the study area. However that is a matter for future consideration when and if any potential is realised. However, the potential for harm is negligible as the study area is considered disturbed land.

3.8 Does the Aboriginal Heritage Information Management System suggest potential?

No. There are no objects on the land or within 200m of the land. There is one Aboriginal Object within a 1km radius of the land. The lack of recorded objects is probably reflective of the lack of studies rather than Aboriginal occupation. Nonetheless the lack of evidence within 1km does suggest limited opportunity for observation of archaeological evidence. The AHIMS searches are attached at appendix A.

3.9 Is there archaeological potential because the proposal is:

- **within 200m of waters;**
  No
- **located within a sand dune;**
  No
- **located on a ridge top, ridge line, or headland;**
  No, but Old Saddleback Road tends to follow a ridgeline and would likely have been an Aboriginal Song Trail (Walking corridor). However, the study area would not have been of any consequence to such Song Trail.
- **located within 200m below or above a cliff face;**
  No
- **within 20m of or in a cave, rock shelter, or a cave mouth;**
  No

3.10 Can harm be avoided to the object or disturbance of the landscape feature?

Yes. There is no physical development being undertaken. Future possible land use i.e. subdivision and construction may introduce the potential for impact upon Aboriginal Heritage if unknown objects exist within the study area. However that is a matter for future consideration when and if any potential is realised. However, the potential for harm is negligible as the study area is considered disturbed land.

3.11 Is Desktop assessment and visual inspection required?

No. An additional visual assessment is not required as the study area meets the definition of disturbed land under the NPW Act

3.12 Are Further investigations and impact assessment required?

No.

4.0 Impact Assessment

The study area is part of the hills of the Kiama landscape and sits at about 80m AHD. It would have been an area that Aboriginal people would have passed through on their journeys between the coast and the Saddleback ranges. The landscape near where Old saddleback Road meets Saddleback Mountain Road, some 2-3km to the southwest of the study area, suggests probable ceremonial areas. To the east of the study area closer to the coast, intensive Aboriginal occupation occurred.

The landscape context suggests that the study area would be unlikely to have been used intensively by the Aboriginal people. It particularly lacks permanent fresh water and would not have been conducive to even short occasional camping.

The landscape also suggests that the study area is not conducive to retaining Aboriginal objects, but rather any Aboriginal Objects originating on site would have been removed by natural process to depositional areas lower down. The study area does not lend itself to subsurface deposits.

Key principles in determining Occupation Pattern
Roberts, (2009 in an *Aboriginal Heritage Assessment Newdell Junction, Ravensworth, NSW.* Report to TRANSPORT EXPRESS JV ARTC Strategic Alliance- Northern Improvement NSW, Newcastle. NSW) formulated 7 key principles to determine probable Aboriginal land use of a particular area.

Using those principles it is possible to place the study area into Aboriginal occupation context and use.

1. Proximity to water
   The nearest reliable water is s Spring Creek some 2km to the NW of the study area.

2. Food resource
   The study area does not appear to contain any unusual food resource that would not be found within the region and does not appear to have contained any particular vegetation

3. Geological features
   There is no unusual, unique and prominent geological attributes within the study area.

4. Ease of access
   Whilst the study area is easily accessible on foot for all age groups from on top of the ridgeline in a sw-ne direction it is not easily accessible directly from the south, west or east.

5. Connectivity
   The study area does appear to link other areas. There is a nearby ridgeline that Old saddleback Rod roughly follows that was probably a Song Trail that would have connected the coast to the hills.

6. Safety
   The study area is not dangerous or close to dangerous or unhealthy landscapes. There does not appear to be natural protection from harsh and extreme weather. There are views, particularly to the southwest, but not especially different from elsewhere within the overall landscape context of the area.

7. Archaeological evidence

Given the disturbed nature of the land and past landuse archaeological evidence is unlikely to be observed within the study area. Evidence or potential was not identified form the Aboriginal Heritage Management system. However no visual assessment was undertaken.

Comment

Although the majority of the study area has been disturbed, it is still possible to suggest the occupation context and landuse. The information from the above 7 principles indicate:

- The study area was probably only occupied when opportunistic occasions arose and not especially used by the Aboriginal community. Occasional food resources were available and there are no access constraints from the Song Trail. However there are no indications that any of the study area was intensively or extensively used on a permanent or regular basis. The landscape and archaeological evidence not too distant from the study area indicate more favourable areas for occasional and more intensive camping.

Irrespective of the landscape context of the study area, the study area meets the definition of disturbed land in that it has undergone activity that has resulted in clear and observable changes to the land's surface. That is it has been used for residential purposes associated with agricultural use of the land.

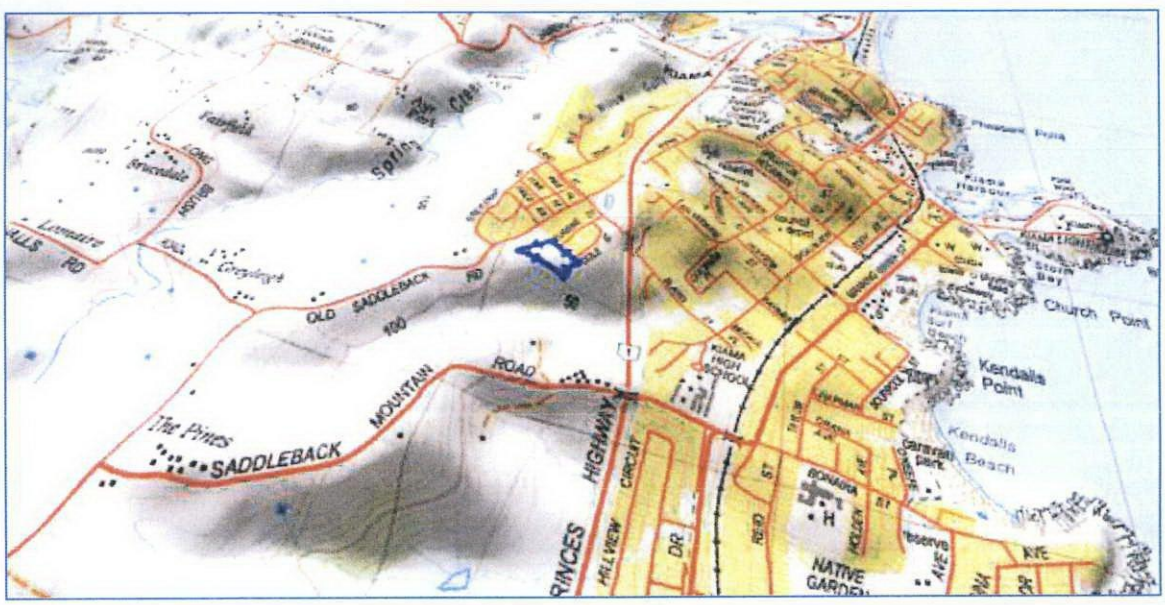


Figure 4 Topography and landscape context of the study area

Given the disturbed nature of the study area, its lack of depositional qualities and infrequent occupation it is highly unlikely that Aboriginal objects exist on or below the land.

It is therefore reasonably concluded that Aboriginal objects will not be harmed by existing activities but more importantly by the proposed planning proposal and subsequent activity.

5.0 Recommendations

1. That further assessment from an Aboriginal heritage and Archaeological perspective is NOT required as it is disturbed land under the NPW Act (1974) as amended.

2. That the proponent be advised that under the NPW Act 1974, it is the responsibility of all persons to ensure that harm does not occur to an Aboriginal object. Whilst undertaking works, if an Aboriginal object is found, work must stop and DECCW notified. An application for an AHIP may also be required. Some works may not be able to resume until an AHIP has been granted. Further investigation may be required depending on the type of Aboriginal object that is found. If human skeletal remains are found during the activity, work must stop immediately, the area secured to prevent unauthorised access and the NSW Police and OEH contacted. The NPW Act requires that, if a person finds an Aboriginal object on land and the object is not already recorded on AHIMS, they are legally bound under s.89A of the NPW Act to notify OEH as soon as possible of the object's location. This requirement applies to all people and to all situations.

6.0 Certification

This report was prepared in accordance with the brief given by Cowman Stoddart to assess the impact of the proposed development on Aboriginal heritage and was undertaken to demonstrate due diligence.

Whilst every care has been taken in compiling this report to determine the impact the proposal may have on Aboriginal Heritage and to demonstrate a due diligence process, MCAS cannot warrant that due diligence has been met. It is the responsibility of the individual or proponent to ensure that they have undertaken due diligence.

Signed

L B Robert

5/4/2013

APPENDIX

AHIMS Searches

Office of Environment & Heritage

AHIMS Web Services (AWS)
Search Result

Your Ref Number : Kiama 1

Client Service ID : 97360

Lennard Roberts

6783 Pacific Highway
Tea Gardens New South Wales 2324

Attention: Lennard Roberts

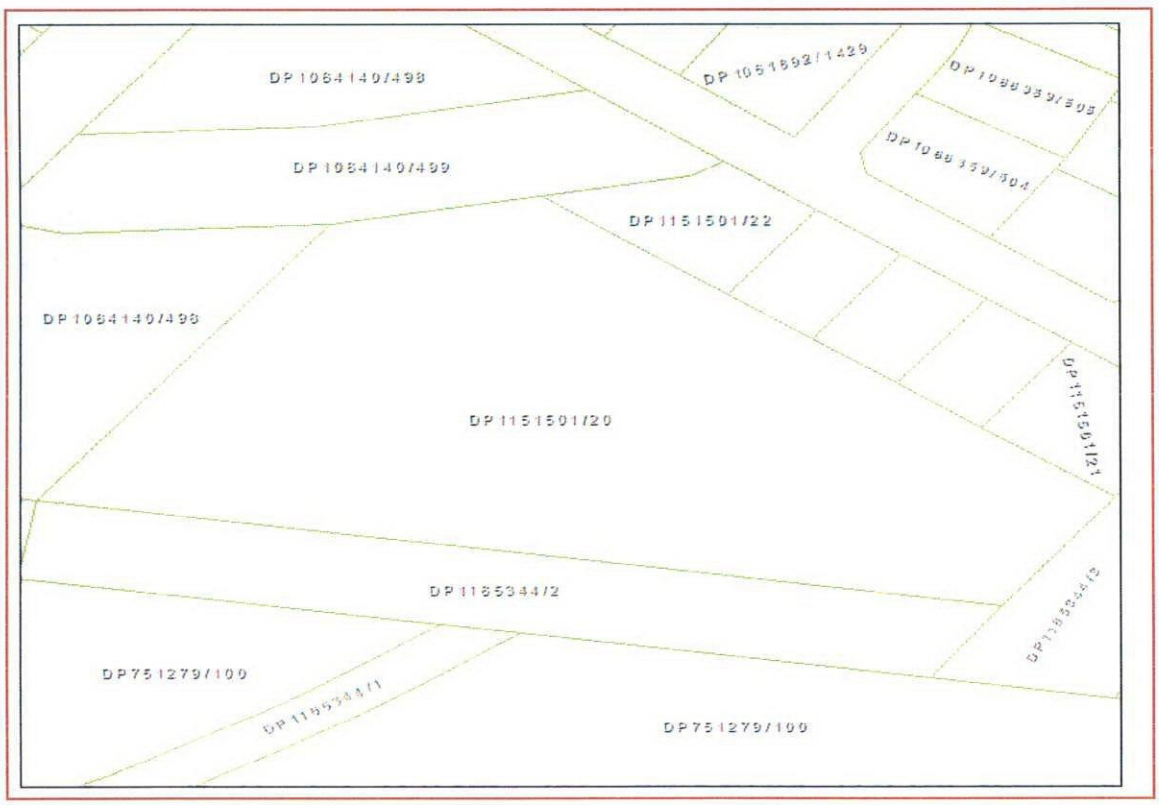
Email: len@myallcoast.net.au

Date: 10 April 2013

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 20, DP:DP1151501 with a Buffer of 0 meters, conducted by Lennard Roberts on 10 April 2013.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

PO BOX 1967 Hurstville NSW 2220
43 Bridge Street HURSTVILLE NSW 2220
Tel: (02)9585 6345 (02)9585 6471 Fax: (02)9585 6094

ABN 30 841 387 271
Email: ahims@environment.nsw.gov.au
Web: www.environment.nsw.gov.au

Office of Environment & Heritage

AHIMS Web Services (AWS)
Search Result

Your Ref Number : Kiama

Client Service ID : 97362

Date: 10 April 2013

Lennard Roberts

6783 Pacific Highway
Tea Gardens New South Wales 2324

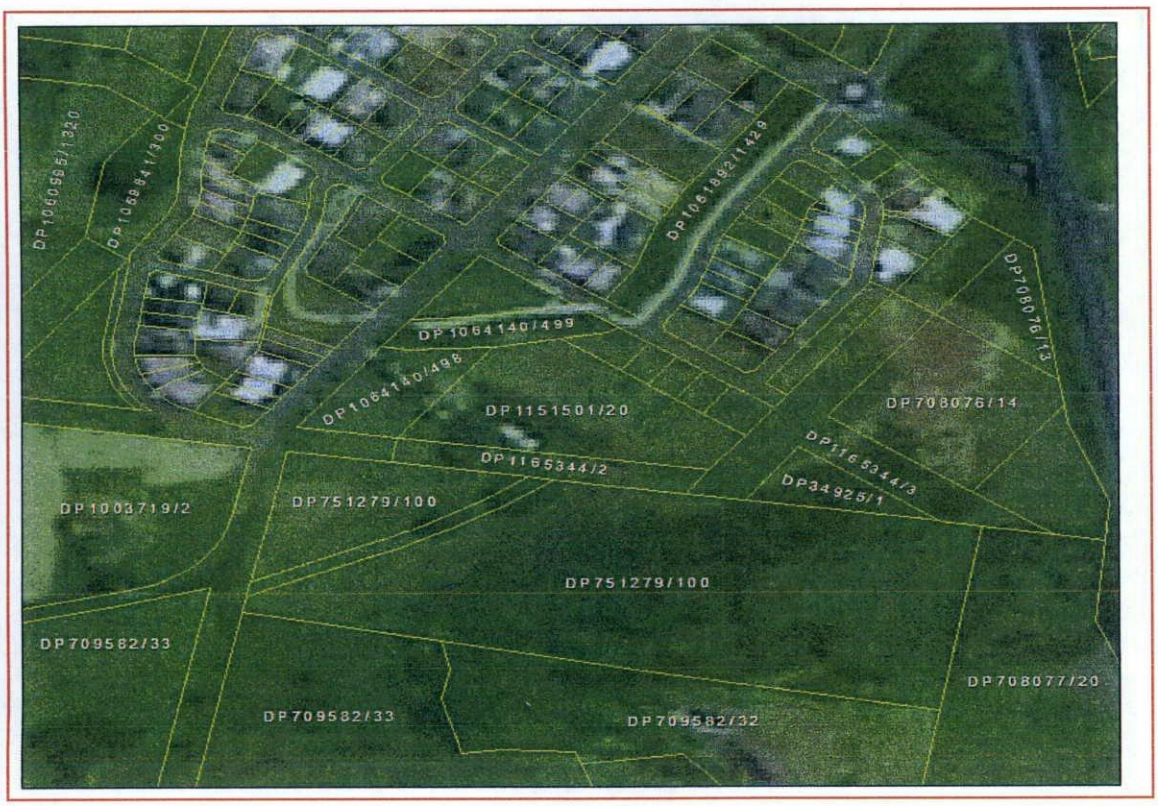
Attention: Lennard Roberts

Email: len@myallcoast.net.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 20, DP:DP1151501 with a Buffer of 200 meters, conducted by Lennard Roberts on 10 April 2013.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



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0	Aboriginal sites are recorded in or near the above location.
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ABN 30 841 387 271
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Web: www.environment.nsw.gov.au

Office of Environment & Heritage

AHIMS Web Services (AWS)
Search Result

Your Ref Number : Kiama3
Client Service ID : 97363

Date: 10 April 2013

Lennard Roberts
6783 Pacific Highway
Tea Gardens New South Wales 2324
Attention: Lennard Roberts
Email: len@myallcoast.net.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 20, DP:DP1151501 with a Buffer of 1000 meters, conducted by Lennard Roberts on 10 April 2013.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

1	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
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- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
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Web: www.environment.nsw.gov.au

ANNEXURE 4

Contamination Assessment

prepared by

Strategic Environmental & Engineering Consulting

ANNEXURE 4

SEEC

Strategic Environmental & Engineering Consulting

Stage 1: Contamination Assessment

Part Lot 20, Old Saddleback Road, Kiama NSW

Prepared by:

Mark Passfield
SEEC Reference 13000047-CA-01

Date: 5th April 2013

SEEC

Strategic Environmental and Engineering Consulting

PO Box 1098, Bowral NSW 2576
phone: (02) 4862 1633 • fax: (02) 4862 3088 • email: reception@seec.com.au

Document Certification

This report has been developed based on agreed requirements as understood by SEEC at the time of investigation. It applies only to a specific task on the nominated lands. Other interpretations should not be made, including changes in scale or application to other projects.
Any recommendations contained in this report are based on an honest appraisal of the opportunities and constraints that existed at the site at the time of investigation, subject to the limited scope and resources available. Within the confines of the above statements and to the best of my knowledge, this report does not contain any incomplete or misleading information.

Mark Passfield
Director
SEEC
5th April 2013

Document Table

Version	Author	Reviewer	Date
DRAFT	MP	AM	4th April 2013
Final	MP	Client	5th April 2013

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1 Scope of Work

Strategic Environmental and Engineering Consulting (SEEC) have been commissioned by Weriton Properties Pty Ltd (owner) to prepare this Stage 1 Preliminary Contamination Assessment. It is required to accompany an application to rezone Part of Lot 20 DP1151501, 43 Old Saddleback Road, Kiama (The 'Subject Site', Figure 1) to become zone R2 (to permit residential development).

The aim of this Stage 1 Preliminary Contamination Assessment is to:

- Identify any past and present potentially contaminating activities;
- Describe the site condition;
- Identify potential contamination types;
- Provide a preliminary assessment of site contamination; and
- Assess the need for further investigation(s).

This Assessment has been undertaken and documented following the requirements set out in *Guidelines for Consultants Reporting on Contaminated Sites* (NSW EPA, 2000).

Figure 1 - Site Location

2 Site Identification and Zoning

The subject site is identified as Part of Lot 20 DP1151501. It forms a thin triangular sliver of land in the far south of the whole property. It is zoned RU2 (Rural Landscape) but the remainder of Lot 20 is zoned R2 (low density residential). It is considered this a zoning anomaly and it is proposed to re-zone the sliver to R2 so that the whole of Lot 20 is zoned the same.

3 Site History

3.1 Sources of information

A summary of the site's history has been compiled below. This information has been sourced from:

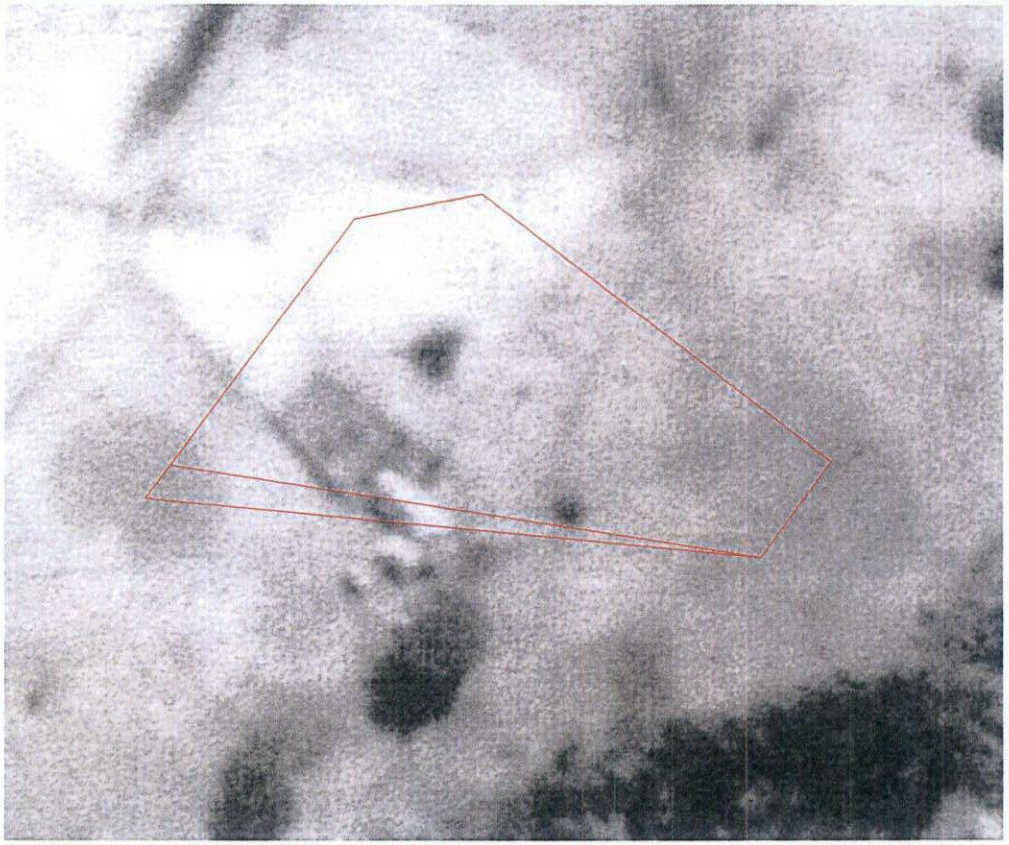
- Historical aerial photography available from the NSW Government: *Land and Property Information* (A division of the Department of Finance and Services).
- Recent aerial photography available from Department of Lands' *Six Viewer*.
- Section 149 Council Certificate.
- Verbal information from the current owner.

3.2 Documented History

A Section 149 certificate was obtained for the site. From that certificate it is determined that Council is not aware of the land being significantly contaminated and the land is not subject of a Management Order under the Contaminated Land Management Act (1997).

3.3 Aerial Photography

Figures 2 to 4 are extracts from aerial photographs taken in (1949, 1963, 1974, 1984 and 1997). The photographs were supplied by the NSW Government: *Land and Property Information* (a division of the Department of Finance and Services). Figure 1 is a recent aerial photograph of the site from 'Six Viewer' (NSW Dept. Lands).



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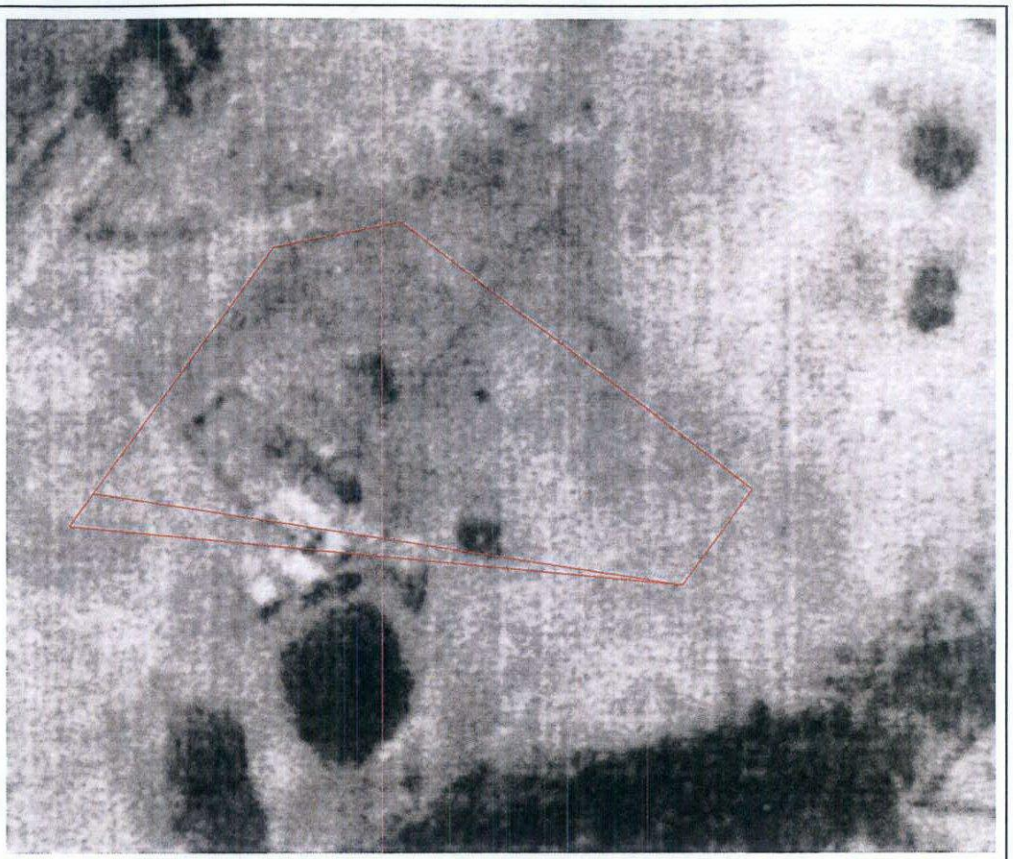

1963

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A	02/04/13	M.P.	S.C.A.	M.P.	ISSUED FOR INCLUSION IN REPORT

DRAWING STATUS

DESIGN BY	M.P.
DRAWN BY	S.C.A.
FINAL APPROVAL	M.P.
SCALE: (on A3 Original)	N.T.S.

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PROJECT TITLE: PART LOT 20 DP1151501
OLD SADDLEBACK ROAD
KIAMA NSW

DRAWING TITLE: HISTORICAL AERIAL PHOTOGRAPHY

PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
13000047	P01	FIGURE 2	B

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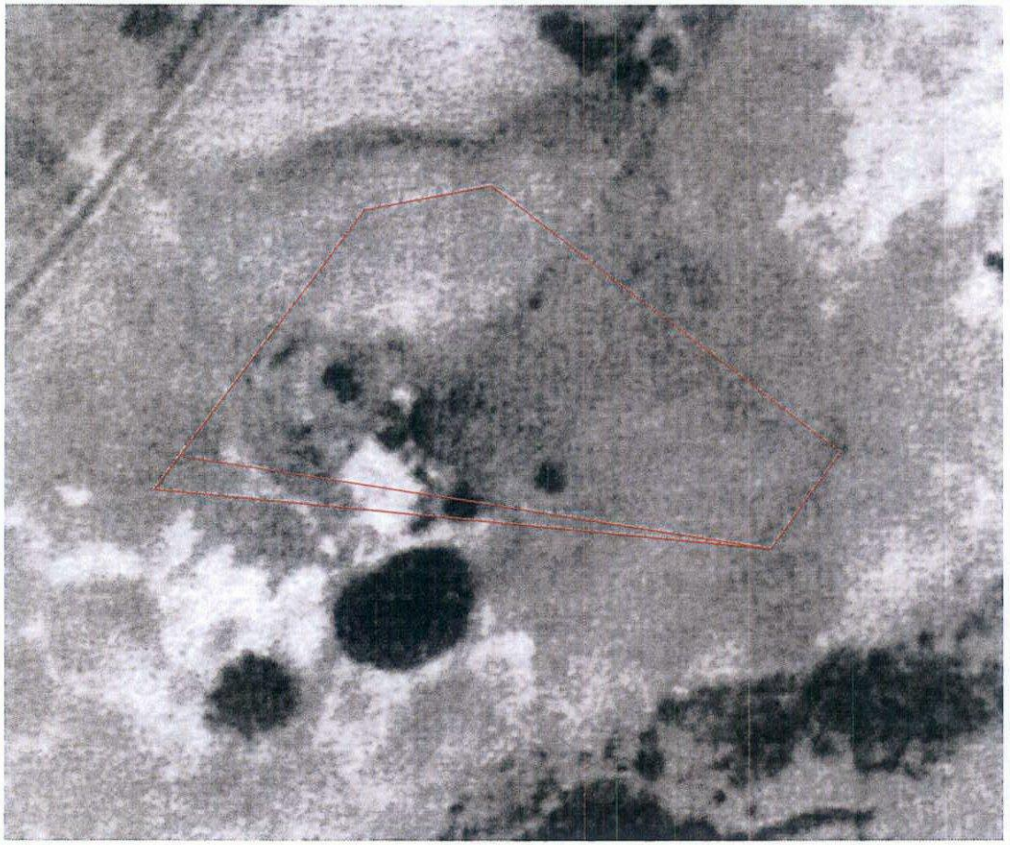
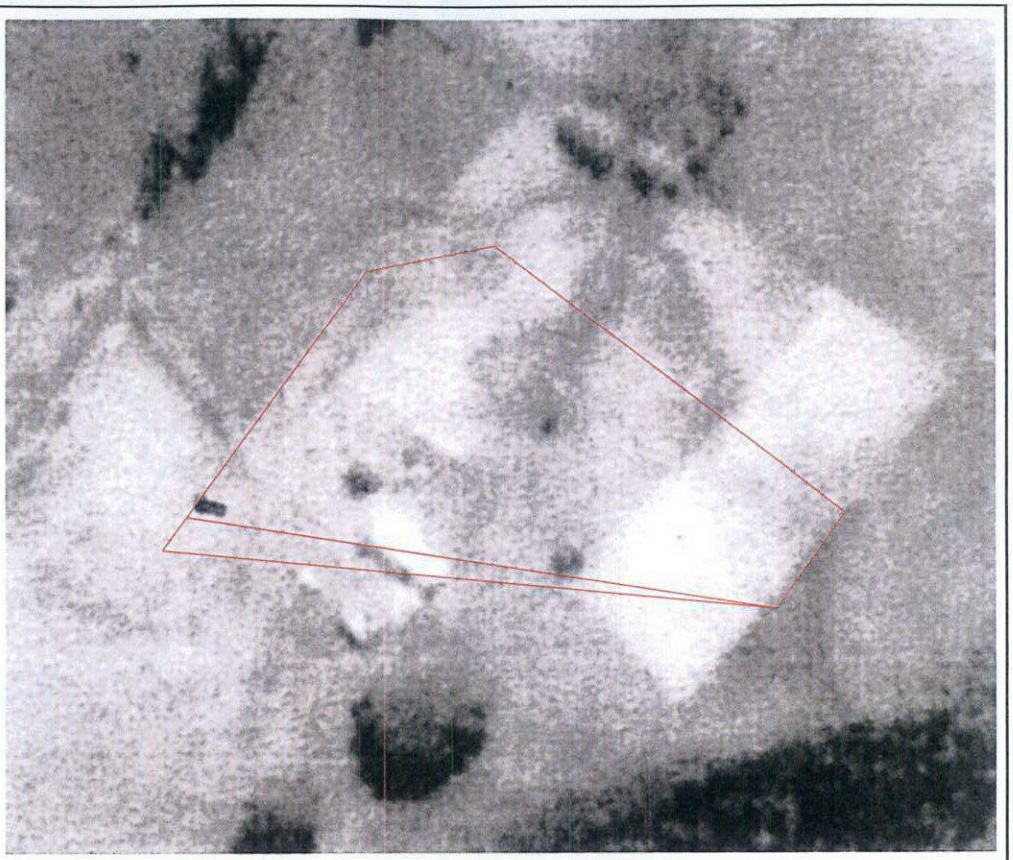


1974



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A	02/04/13	M.P.	S.C.A.	M.P.	ISSUED FOR INCLUSION IN REPORT

DRAWING STATUS

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PROJECT TITLE

PART LOT 20 DP1151501
OLD SADDLEBACK ROAD
KIAMA NSW

DRAWING TITLE

HISTORICAL AERIAL PHOTOGRAPHY

PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
13000047	P01	FIGURE 3	B

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1997

REV	DATE	DES.	DRN.	APP.	REVISION DETAILS
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A	02/04/13	M.P.	S.C.A.	M.P.	ISSUED FOR INCLUSION IN REPORT

DRAWING STATUS

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PART LOT 20 DP1151501
OLD SADDLEBACK ROAD
KIAMA NSW

DRAWING TITLE

HISTORICAL AERIAL PHOTOGRAPHY

PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
13000047	P01	FIGURE 4	B

Plot Date: Monday, 8 April 2013 12:20:03 PM CAD File Name: K:\13000047 Lot 20 No 43 Saddleback Mountain Rd Kiama\Drawings\13000047_P01_FIG_REV B.dwg

Inspection of these photographs shows:

- 1949 – A cottage on the site with two outbuildings on land immediately to the south. The land use of the subject site and the immediate surrounds appears rural.
- 1963 – The cottage and outbuildings remain and appear unchanged. The land use of the subject site and immediate surrounds appears unchanged.
- 1974 - The cottage remains but one of the outbuildings appears to have been removed. The land use of the subject site and immediate surrounds appears unchanged.
- 1984 - The cottage and the outbuilding remain. The land use of the subject site and immediate surrounds appears unchanged.
- 1997 - The cottage and the outbuilding remain. A new shed is on adjoining land immediately to the northwest. The land use of the subject site and immediate surrounds appears unchanged.
- Six viewer – (estimated ~2008). The cottage and outbuildings remain. The land use of the subject site and immediate surrounds appears unchanged, although urban development is encroaching from the north.

The aerial photographic history accords well with the verbal history obtained from the current owner.

4 Current Adjacent Land Uses

Residential land is found to the north but land to south and east is vacant rural land.

5 Site Condition and Environment

5.1 General Conditions

At the time of inspection (25th March 2012) the subject site was occupied by part of a cottage (Figures 5 and 7) and a small part of the footings of a previous cottage. It is thought (from the aerial photos) that the original cottage was demolished and used to build the new one sometime between 1963 and 1974. The septic tank serving the cottage and part of an unsealed driveway are also on the subject land (Figure 7). The remainder of the subject land is undeveloped.

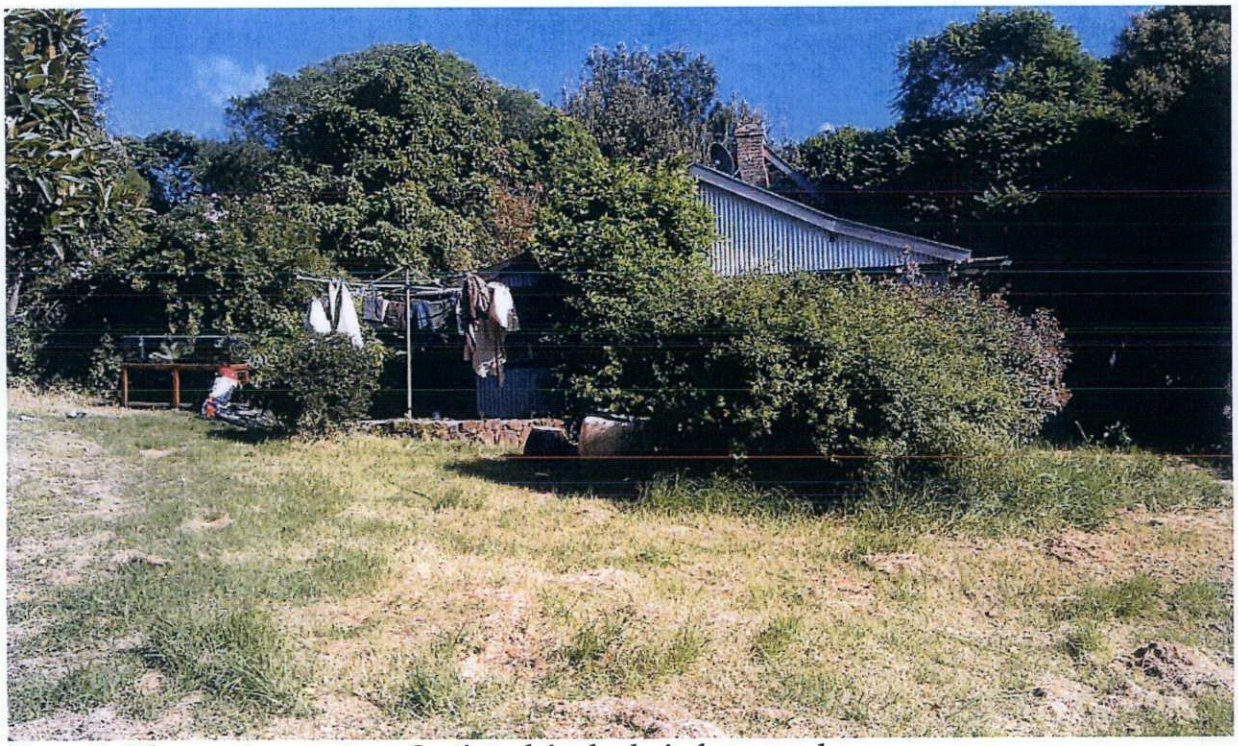

Figure 5 – View west over cottage. Septic tank in shrubs in foreground.

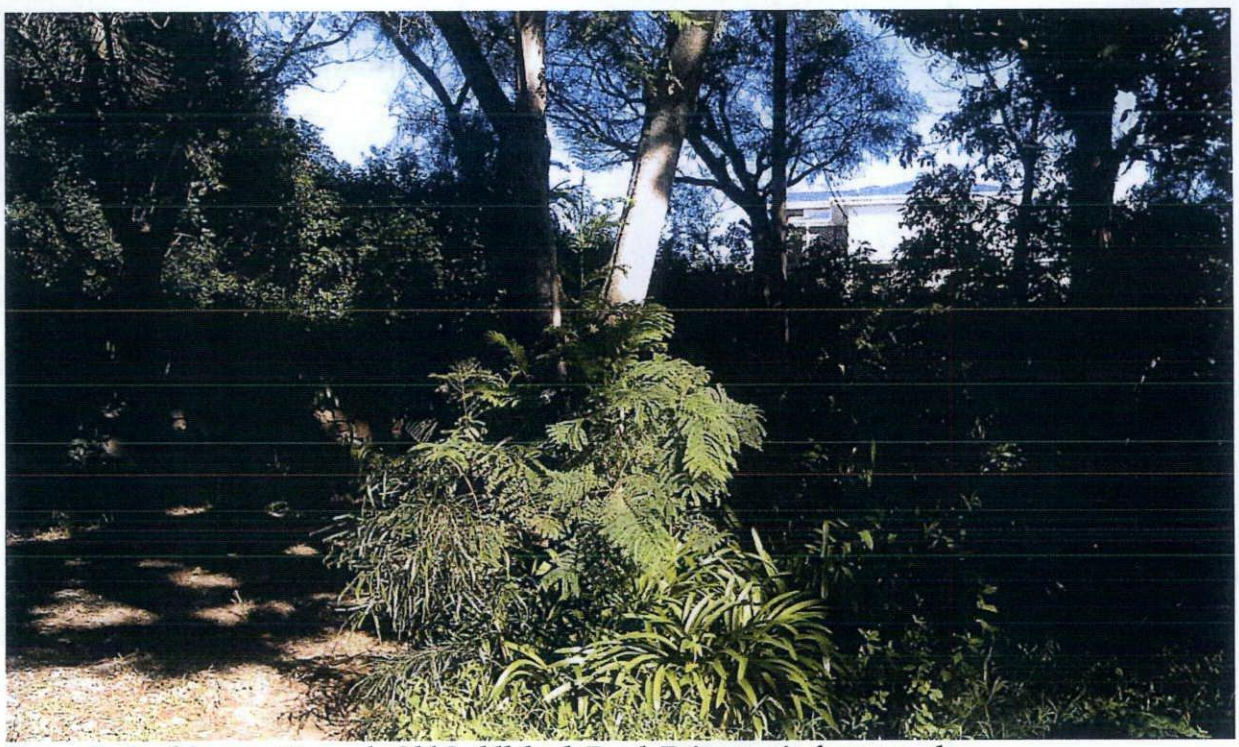

Figure 6 – Looking west towards Old Saddleback Road. Driveway in foreground.

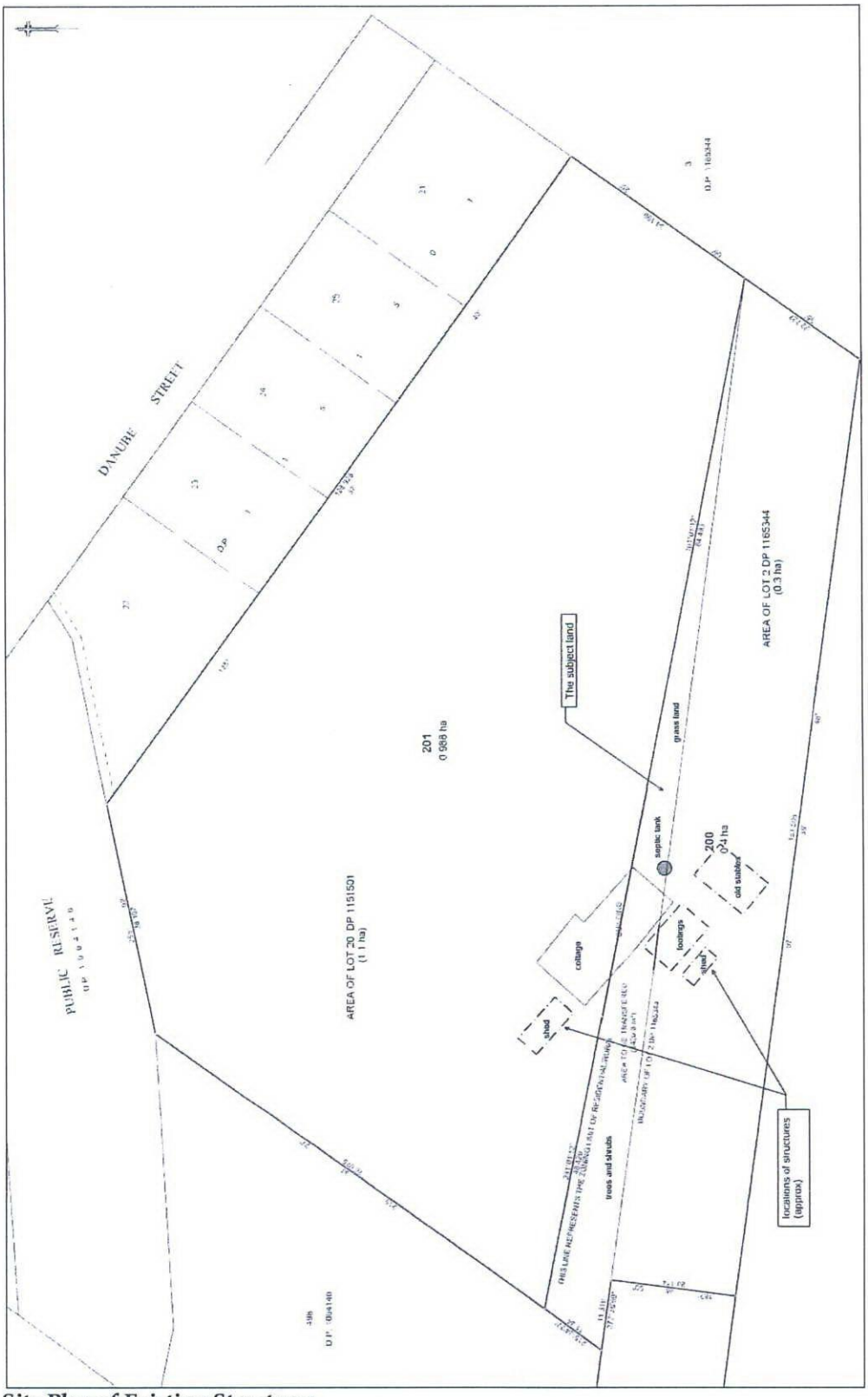

Figure 7 - Site Plan of Existing Structures

5.2 Visible Signs of Contamination

There were no obvious signs of contamination or materials that could cause contamination on the subject site.

5.3 Topography

The subject site occupies a northeast facing side slope. Site gradients are generally low, ranging from 5 to 8 percent.

5.4 Fill Materials

There were no obvious signs of fill material; although minor earthworks (e.g. to form the drive) has occurred in the past.

5.5 Odours

There were no obvious signs of foul odours.

5.6 Flood Potential

The site is unlikely to be flood affected.

6 Soils and Geology

The site is mapped on the Bombo Soil Landscape. This is a residual soil landscape formed on igneous rock (Latite).

7 Contamination Assessment

7.1 Risk Assessment

There are no indications that the subject site has had potentially contamination activities on it, although it is possible that the under floor area of the cottage could have been sprayed for termites sometime in the past.

7.2 Stage 1 Conclusion and Recommendations

The subject site has been developed with a residential cottage since before 1949. That cottage was presumably associated with rural-residential activities on the surrounding land.

The subject site now forms part of Lot 20 DP11551501 which, at the time of inspection, was being used for rural residential purposes. There are no signs of past or present potentially contaminating activities on the subject land.

We conclude the risk of contamination is very low and the issue of contamination would not preclude re-zoning. However, there is a risk that the under-floor area of the dwelling has been sprayed for termites. When the home is demolished we recommend the exposed under-floor area is tested for Organochlorine and Organophosphate pesticides at the surface and at a depth of 300 mm. If pesticides are present a remedial action plan would be required to address remediation or removal of the contaminated soil.

There is a septic tank on the land that would require decommissioning and removal before any future residential development.

8 References

- NSW Environmental Protection Authority (2000). Contaminated Sites - Guidelines for Consultants Reporting on Contaminated Sites.
- NSW Dept. Urban Affairs and Planning Environment Protection Authority (1998). *Managing Land Contamination, Planning Guidelines, SEPP55-Remediation of Land.*
- SCA/DLWC (2002) *Soil Landscapes of the Sydney Drinking Water Hydrological Catchments.*