

**MODIFICATION REQUEST:
Cobaki Estate Residential Community
Development
Cobaki Lakes, Tweed Heads**

**08_0200 MOD 2 – Winning of Fill from
Precincts 9 and 11 to be utilised in the
Central Open Space area**



Director-General's
Environmental Assessment Report
Section 75W of the
Environmental Planning and Assessment Act 1979

April 2014

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1. BACKGROUND

This report is an assessment of a request to modify Major Project 08_0200 pursuant to section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The modification relates to a residential community development, referred to as 'the Cobaki Estate' at Cobaki in the Tweed local government area.

Minister's Approvals

On 6 December 2010 the then Minister for Planning approved a concept plan for the Cobaki Lakes Residential Community Development (MP 06_0316). Approval was granted for the following:

- residential development to cater for approximately 5,500 dwellings;
- town centre and neighbourhood centre for future retail and commercial uses;
- community facilities and school sites;
- open space;
- wildlife corridors;
- protection and rehabilitation of environmentally sensitive land;
- road corridors and utility services infrastructure;
- water management areas; and
- roads and pedestrian and bicycle networks.

On 15 November 2010 the Director-General approved the Cobaki Estate Development Code, a site specific exempt and complying development code applicable to the Cobaki residential community development. The Code's exempt and complying development provisions were given effect through a Ministerial Order pursuant to s75P(2)(d) of the EP&A Act, which was declared at the same time the then Minister approved the concept plan on 6 December 2010.

On 28 February 2011 the then Deputy Director-General, as delegate for the Minister for Planning, granted project approval (MP 08_0200) for the carrying out of the following:

- subdivision of the entire Cobaki estate into 7 lots (including residue lot for future urban development – Lot 807);
- staged bulk earthworks to create the central open space (COS) area, riparian corridor, structured open space, and future stormwater drainage area;
- road forming works and culverts crossing the central open space (including Lot 802);
- road forming works across saltmarsh areas, including culverts and trunk sewer and water services (Lot 804);
- revegetation and rehabilitation of environmental protection areas for coastal saltmarsh (Lots 805 and 806); and
- establishment of freshwater wetland and fauna corridors (Lots 801 and 803).

The site location is shown in **Figure 1**. The approved concept plan layout is shown in **Figure 2**. **Figure 3** illustrates the general layout of the COS area.



Figure 1: Site Location – Cobaki Lakes



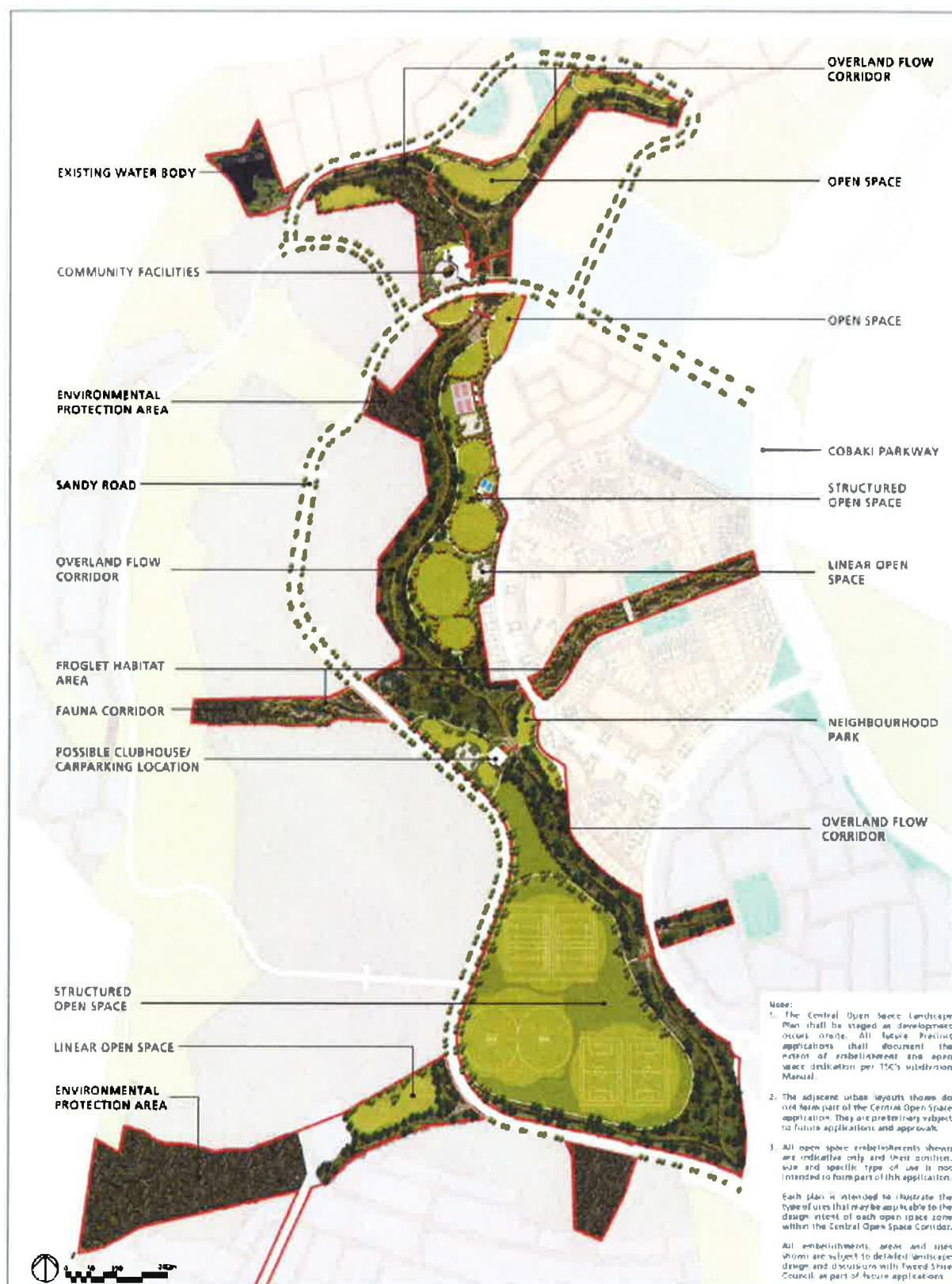


Figure 3: Approved Landscaping in Central Open Space (MP 08_0200)

History of Council Approved Development Consents and Construction Certificates

Prior to the concept plan approval in 2010, several development consents were granted by Tweed Shire Council (council) over the subject site between 1993 and 2002 for bulk earthworks and residential subdivision. A summary of existing consents is outlined in the table below. The majority of these consents have been enacted upon by the proponent and extensive bulk earthworks activities across the site have commenced.

Table 1: Summary of Existing Development Consents

Consent No.	Description	Date of Consent
D92/315	Boyd Street Extensions	5 January 1993
D94/438	Bulk Earthworks	27 January 1995
S94/194	730 Lot Urban Subdivision Parcels 1 to 5 and 13 Englobo Parcels (The Entrance, The Sand Ridge)	19 September 1995
D96/271	Bridge over Cobaki Creek	8 April 1997
S97/54	430 lot residential subdivision – parcel 7 to 10 (The Knoll, Piggabeen)	21 October 1997
K99/1124	560 Lot Urban Subdivision (The Foothills, The Plateau, Valley East, Valley West, East Ridge)	21 July 2000
1162/2001DA	8 Management Lots and Bulk Earthworks (town centre)	8 October 2002

A number of Construction Certificates have also been issued for bulk earthworks and other civil engineering works including construction of Cobaki Parkway. **Figures 4 and 5** illustrate the extent of the existing subdivision and earthworks approved by council across the site. The approved concept plan layout that reflects approved DAs and the project application is shown in **Figure 6**.

Unauthorised Works

On 8 February 2013, Planning and Infrastructure (the agency) issued an Order under section 121B of the EP&A Act for breaches of the Cobaki Central Open Space (COS) project approval (MP 08_0200). Two fines were issued as a result of observations made during an inspection conducted by the agency on 4 October 2012. The fines were issued for earthworks which had been conducted on the proposed Cobaki Parkway, south of Dunn's Drain (referred to as 'the missing link') prior to a number of conditions of the project approval having been met, namely, failure to obtain a Construction Certificate and failing to appoint a Principal Certifying Authority (PCA).

Unauthorised works have also been carried out more recently, including the placement of approximately 17,510m³ of fill material from Precinct 9 into the COS area. The project approval allows the placement of fill in COS area to be derived from Precincts 1 & 2 only. At the time of writing this report, the agency was considering appropriate compliance action to take in regards to the breach. This modification request seeks to address this issue through obtaining an approval to also extract fill material from Precincts 9 & 11 for placement into the COS area.

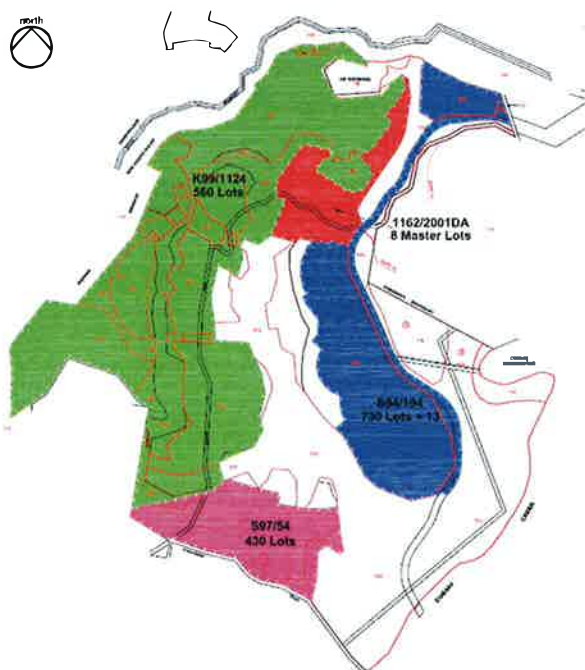
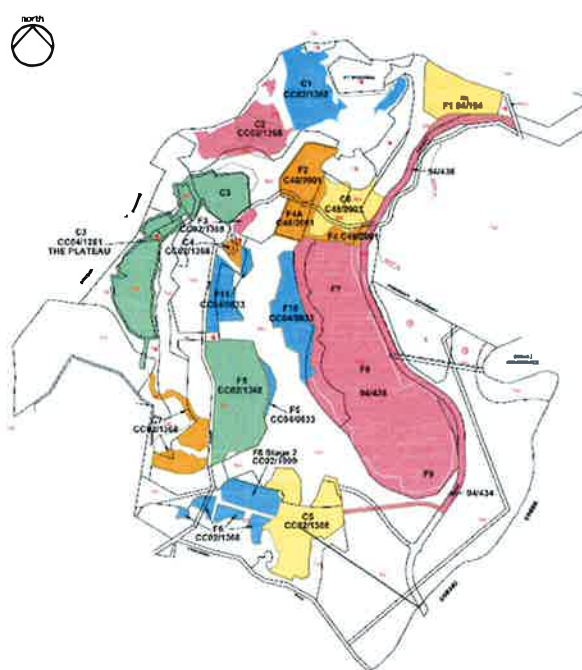


Figure 4: Council Approved Development Consents



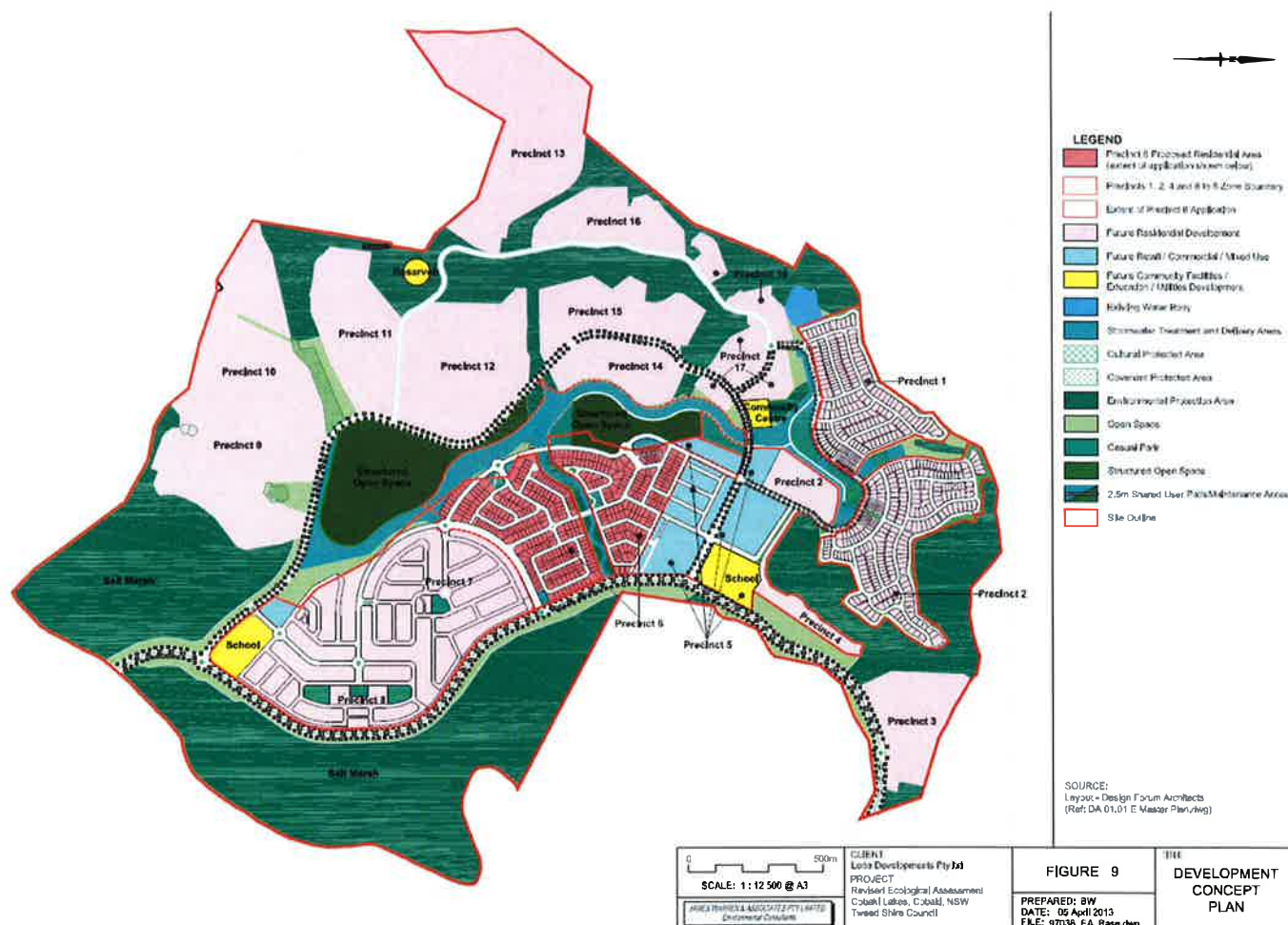


Figure 6: Approved concept plan layout showing detail of approved DAs and project application (Source: Revised Ecological Assessment, April 2013)

Project Modifications

The project approval has been modified on one occasion. On 29 May 2013, the then Director – Metropolitan and Regional Projects North approved MOD 1 involving:

- amendments to proposed offsetting arrangements for Freshwater Wetlands and Wallum Froglet, including subsequent changes to the relevant management plans; and
- approval for the wining of fill from Precincts 1 & 2 to be used for the formation of the COS area.

2. PROPOSED MODIFICATION

2.1 Modification Description

On 19 December 2013, Darryl Anderson Consulting Pty Ltd on behalf of Leda Manorstead Pty Ltd (the proponent) submitted a Section 75W modification request to MP 08_0200.

The modification involves the winning of 600,000m³ of fill from Precincts 9 & 11. A total of 500,000m³ is proposed to be extracted from Precinct 9 to complete Stage 1 earthworks within the COS area. A further 100,000m³ is proposed to be extracted from Precinct 11 to complete Stages 2 & 3 earthworks within the COS area.

Figure 7 shows the location of the COS area in context to the site, including the location of proposed borrow areas at Precincts 9 & 11. The borrow areas approved as part of MOD 1 (within Precincts 1 & 2) are also show at **Figure 7**.

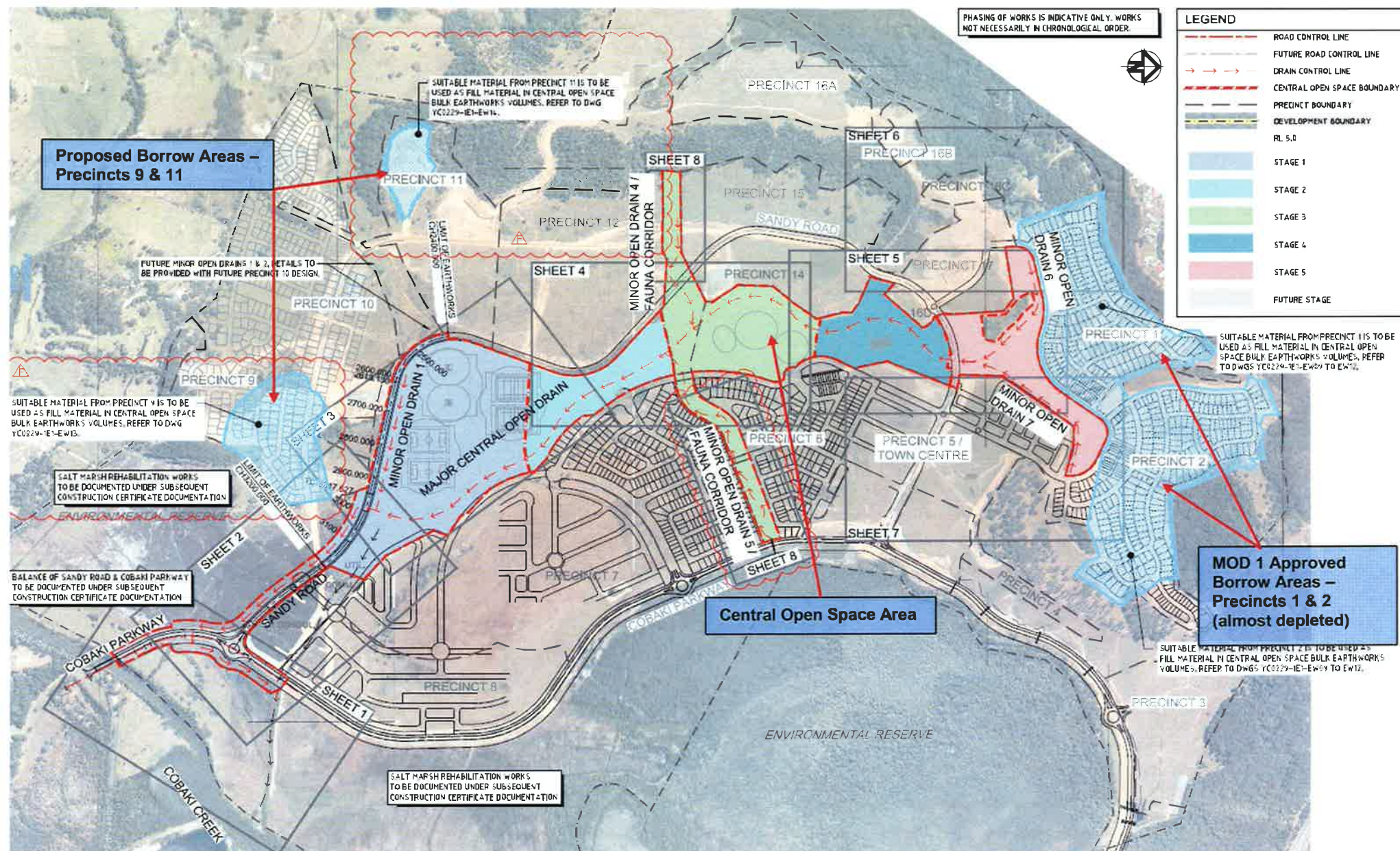


Figure 7: Scope of Works Plan – Central Open Space Area

2.2 Modification Justification

The approved COS component of the Cobaki Estate encompasses an area of 184.7ha and runs approximately north-south through the centre of the estate, as illustrated in **Figure 6** above. Bulk earthworks were granted approval to be carried out across five stages and are required to shape the landform upon which future roads, structured and casual open space sites, and environmental enhancement works will be carried out. The majority of earthworks activities required to be carried out within the COS consist of filling operations. The proponent has obtained the relevant Construction Certificate, and works on the creation of the COS area have since commenced.

Condition 41 of the project approval initially restricted any bulk earthworks to occur outside of the COS area. The condition was modified as part of MOD 1 to provide approval for the winning of fill from Precincts 1 & 2 to be placed in the COS area. Condition 41 currently reads as follows:

41. Earthworks – Limits of Approval

- a. *No bulk earthworks are to be undertaken outside of the central open space area (as defined in Schedule 1 Part C of this approval)*
- b. *Notwithstanding a.) above, bulk earthworks may also be carried out in Precincts 1 and 2 for the sole purpose of the winning of fill to be placed in the central open space area.*
- c. *Fill material required for the central open space area sourced from elsewhere on/or the site requires separate development approval.*
- d. *Retaining walls and fire trail profiles identified on bulk earthworks drawings YCO229-1E1-ES04 (Rev D), YCO229-1E1-ES05 (Rev A), YCO229-1E1-ES06 (Rev A), YCO229-1E1-ES07 (Rev A) are not approved.*

Note: Retaining wall heights and fire trail profiles within Precincts 1 and 2 shall be submitted to council for approval in accordance with the conditions of development approval DA10/0800.

As stipulated by Condition 41, no bulk earthworks may undertaken outside of the COS area other than within Precincts 1 & 2, for the sole purpose of the winning of fill to be placed in the COS area. Clause (c) of Condition 41 requires separate approval for the winning of fill sourced from elsewhere on the site. In order to comply with the requirements of Condition 41(c), the proponent has submitted this section 75W modification request. The relevant detailed bulk earthworks drawings (survey drawings, cut and fill plans, erosion and sediment control plan) and environmental impact assessment reports have been submitted to support the application.

The proponent considers that the importation of the same quantity of fill material from an external source is not a feasible option both on economic and environmental grounds, and therefore seeks to formally include Precincts 9 & 11 as approved borrow areas to complete filling works within the COS area.

Figure 8 below shows the general location of the proposed borrow areas within Precincts 9 & 11.

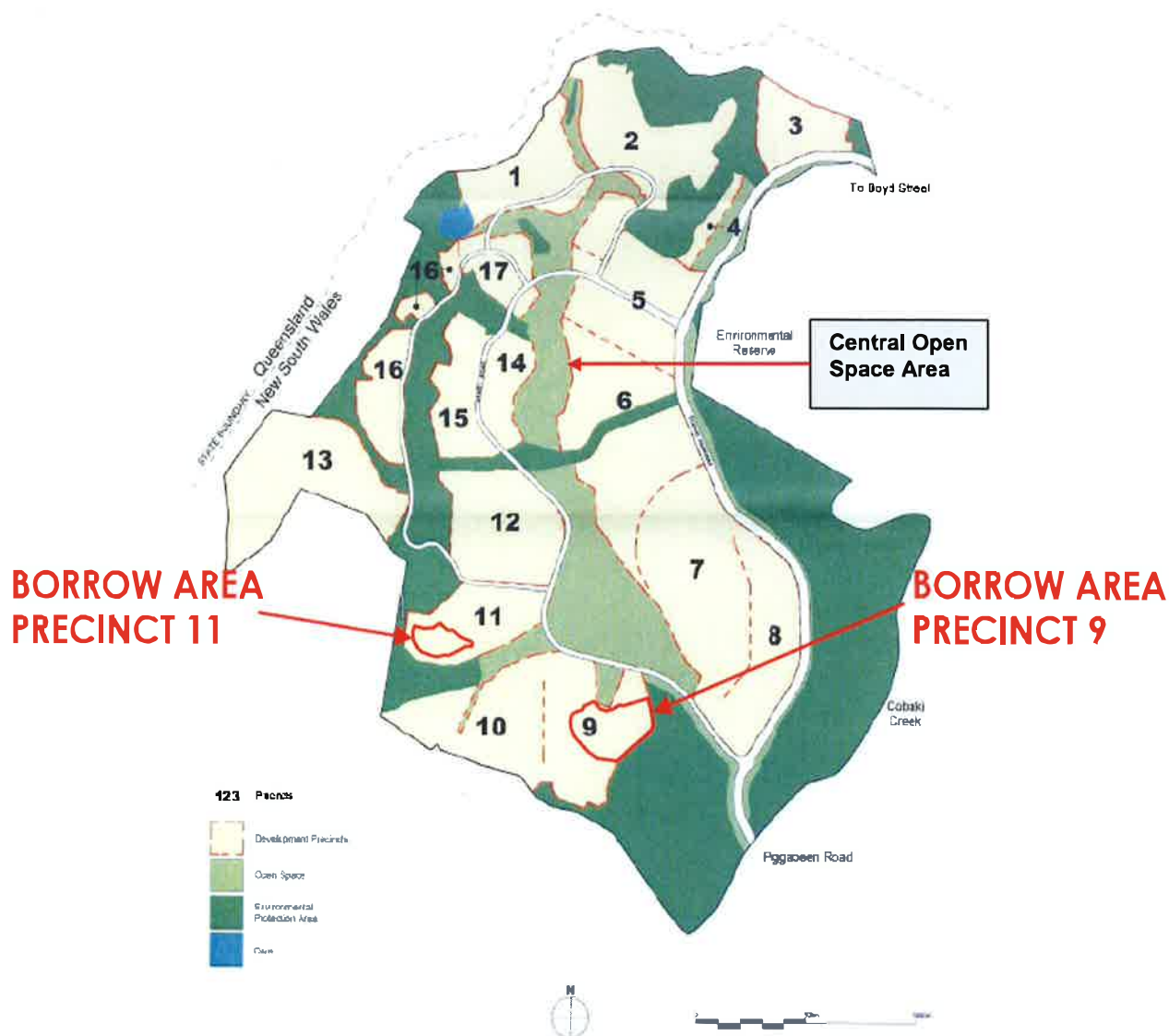


Figure 8: Proposed Location of Borrow Areas within Precincts 9 and 11

3. STATUTORY CONTEXT

3.1 Modification of the Minister's Approval

Approval of 08_0200 was granted in accordance with Part 3A under section 75J of the EP&A Act. Section 75W of the EP&A Act provides for the modification of the Minister's approval.

Pursuant to Section 75W(2) of the EP&A Act, the proponent may request the Minister to modify approval of a project. Any request is to be lodged with the Director-General. A copy of the proponent's modification request is included at **Appendix B**.

Section 75W(3) of the EP&A Act provides that the Director-General may notify the proponent of environmental assessment requirements (DGRs) with respect to the proposed modification. Following an assessment of the modification request, it was considered that DGRs were not required.

Under Section 75W(4) of the EP&A Act, the Minister may modify the approval (with or without conditions) or disapprove the modification.

The following report describes the agency's assessment of the modification request and supporting documentation provided by the proponent.

3.2 Delegated Authority

Under the Instrument of Delegation dated 14 September 2011, the Minister for Planning and Infrastructure has delegated his functions to determine section 75W modification requests to the Director – Industry, Key Sites & Social Projects, whereby:

- the relevant local council has not made an objection to the proposal;
- a political disclosure statement has not been made; and
- there are less than 10 public submissions in the nature of objections.

Council has not objected to the proposal, a political disclosure statement has not been made and no submissions in the nature of objections were received. The Director – Industry, Key Sites & Social Projects may therefore determine the modification request under delegation.

4. CONSULTATION AND SUBMISSIONS

4.1 Exhibition

Under section 75W of the EP&A Act, it is at the agency's discretion as to whether a modification request is publicly exhibited. Given the nature of the modification involving no significant environment, social or economic impacts, public exhibition was not undertaken. Notwithstanding, under section 75X(2)(f) of the EP&A Act, the Director-General is to make publicly available requests for modifications of approvals given by the Minister. In accordance with clause 8G of the Environmental Planning and Assessment Regulation 2000, the request for modification was made publicly available on the agency's website.

4.2 Public Authority Submissions

The modification request was referred to Tweed Shire Council (council), the Office of Environment & Heritage (OEH), the Department of Primary Industries (DPI), and the Environment Protection Authority (EPA) inviting any issues or requirements to be provided. The public authority submissions are summarised below and a copy of each submission is included at **Appendix C**.

Tweed Shire Council raised the following issues:

- there is a lack of detail regarding the amount of fill to be placed in the COS area, and any approval should be restricted to the minimum extent required to achieve the required cut volume;
- the removal of Grey-headed Flying Fox habitat is not permitted until a Biodiversity Offset Strategy is approved;
- it is unclear whether a buffer is proposed to Vegetation Rehabilitation Areas 6 or 9;
- a Site Regeneration and Revegetation Management Plan has not been submitted. Such a plan is required to outline works within the Rehabilitation and Management Precincts impacted upon by works approved under the project;
- a buffer should be applied to the existing Raptor nest on the site;
- council's interpretation of the conditions of approval is that blasting activities are not endorsed. If it is determined that rock blasting is permitted, a copy of any approved blasting plan is requested for council records; and
- a number of anomalies on the submitted plans require amendments.

Office of Environment & Heritage (OEH) made note of two small areas of native vegetation proposed to be cleared. OEH acknowledged that whilst these areas will ultimately be cleared as part of the future stages of the development, avoiding the clearing of these areas as part of the modification should be considered to retain biodiversity values for as long as possible. Should this not be possible, OEH requested suitable biodiversity offsets be considered to compensate the loss of biodiversity values.

Department of Primary Industries (DPI) incorporates the NSW Office of Water, Fisheries NSW, and NSW Trade & Investment.

The NSW Office of Water provided the following comments:

- if groundwater is intercepted during works, the Office of Water must be contacted and appropriate licences obtained;
- should works occur within 40m of a watercourse, the Guidelines for Controlled Activities on Waterfront Land (2012) should be adhered to; and
- appropriate erosion and sediment control measures must be put in place during the works and until the site is rehabilitated and stabilised.

Fisheries NSW and NSW Trade & Investment (Mineral Resources Branch) advised that there were no issues in regards to the modification application.

Environment Protection Authority (EPA) advised that council is the appropriate regulatory authority for air, noise, and water pollution issues at the site. As the EPA has no regulatory role in respect to the project, a formal submission was not provided.

5. ASSESSMENT

The agency's assessment of potential impacts associated with the extraction of fill from Precincts 9 & 11 is based on the following activities that will be required to be carried out in each precinct:

- bulk earthworks;
- site establishment including installation of exclusion fencing;
- vegetation clearing;
- temporary erosion, sediment and water quality control measures;
- topsoil stripping and management; and
- drainage construction.

The agency identified the following key issues associated with the proposed activities:

- impacts on native fauna species and habitat (**Section 5.1**);
- impacts on native vegetation, threatened flora species, and endangered ecological communities (EECs) (**Section 5.2**);
- impacts associated with construction noise and vibration (**Section 5.3**);
- the maximum exposed area for bulk earthworks across the site (**Section 5.4**); and
- other environmental issues including air quality and dust emissions, geotechnical considerations, groundwater and acid sulfate soils, and cultural heritage (**Section 5.4**).

The agency's considerations and recommendations in respect to the above issues are detailed below.

5.1 Impacts on Native Fauna Species and Habitat

Eleven threatened fauna species listed under the NSW *Threatened Species Conservation Act 1995* (TSC Act) have been recorded within or adjacent to Precincts 9 & 11. Two of the species (Koala and Grey-headed Flying Fox) are also listed as endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The species were located during previous fauna surveys undertaken as part of the assessment of the concept plan application (MP 06_0316).

The proponent's Environmental Assessment Report (EAR) notes that the earthworks proposed within Precincts 9 & 11 have the potential to indirectly affect threatened fauna through:

- mortality and loss of breeding/foraging habitat due to changes in land use; and
- habitat degradation due to altered natural hydrological regimes and increased pollutants.

Table 2 lists the potentially affected threatened fauna species and provides SMEC's (the proponent's ecological consultant) conclusions on the overall level of impact likely to occur as a result of the proposed works in Precincts 9 & 11.

Table 2: Potentially Affected Threatened Fauna Species – Proposed Earthworks Activities at Precincts 9 & 11

Species	Habitat Loss or Impact	Level of Impact (SMEC, December 2013)
Koala	0.08ha	<ul style="list-style-type: none"> • No evidence of a resident Koala population exists, however, evidence in the form of faecal pellets and low density tree scratches indicates the species utilises the site when commuting between areas of primary habitat. • Impacts on transient Koalas may include death or injury from vehicle strike. Fauna management measures have been recommended to reduce such risks.
Powerful Owl Masked Owl	0.08ha	<ul style="list-style-type: none"> • Approximately 70ha of suitable forage habitat occurs on the site. It is considered highly unlikely the proposed development will result in the local extinction of the species.

Black-necked stork	No loss of habitat.	<ul style="list-style-type: none"> Approximately 142ha of potential forage habitat exists within the eastern and south-eastern portions of the site. Proposed sediment and erosion control works in the vicinity of an existing dam may impact on existing foraging habitat. Given the high mobility of the species, impacts are not considered significant in relation to the regional distribution of existing habitat.
Osprey	No loss of habitat.	<ul style="list-style-type: none"> Three Ospreys and a stick nest have been identified approximately 1km south-east of Precinct 9. Human disturbance near the nest is not expected. The proposal is considered highly unlikely to result in significant impacts on the species.
Grey-headed flying fox	0.08ha	<ul style="list-style-type: none"> Approximately 72ha of potential forage habitat occurs on the site. Given the high mobility of the species, this loss of habitat is not considered significant. Clearing works are unlikely to affect the species.
Little bent-wing bat Common bent-wing bat	0.08ha	<ul style="list-style-type: none"> Approximately 72ha of potential forage habitat occurs on the site. Given the high mobility of the species, this loss of habitat is not considered significant. Any loss of roost sites will be mitigated through the installation of nest-boxes within retained vegetation.
Eastern free-tail bat Yellow-bellied sheath-tail bat Greater broad-nosed bat	0.08ha	<ul style="list-style-type: none"> Approximately 72ha of potential forage habitat occurs on the site. Given the high mobility of the species, this loss of habitat is not considered significant. There may be potential loss of roost sites, however, the installation of bat boxes within retained vegetation (in accordance with the Fauna Management Plan) will increase roosting opportunities.

The proponent also engaged SMEC to prepare a Construction Environmental Management Plan (CEMP), prepared in order to satisfy Term C4(2) of the concept plan approval which requires all future applications to include stage-specific CEMPs to address the impacts of construction. As part of the CEMP, a Fauna Management Plan (FMP) is included which provides recommended mitigation and monitoring requirements to manage the potential impacts of works on existing fauna species. Recommended measures outlined in the FMP include:

- the installation of fauna-friendly fencing;
- visual inspections for Koalas in trees prior to removal;
- no works within 100m of Raptor nests to occur;
- the relocation of any tree hollows;
- maintenance and monitoring of nest boxes;
- threatened species inductions for all contracted staff; and
- annual fauna monitoring.

A copy of the FMP outlining all proposed fauna management and mitigation measures is provided at **Appendix B**.

Agency's Consideration – Impacts on Native Fauna Species and Habitat

Detailed ecological assessments of the site have been undertaken as part of previous applications including both the concept plan application (MP 06_0316) and the COS project application (MP 08_0200). The agency has previously acknowledged as part of the assessment of these applications that the development is likely to impact on a number of threatened fauna species that have been recorded on or adjacent to the site. The agency has consequently conditioned several requirements as part of both the approvals to mitigate such impacts, including habitat enhancement works and implementation of habitat rehabilitation and fauna management plans. Where impacts cannot be mitigated, the proponent has committed to the provision of off-site biodiversity offsetting as part of the Statement of Commitments.

OEH did not make comment in its submission on the potential impacts on threatened fauna species.

Council made note in its submission that the proposed removal of 0.8ha of forage habitat for the Grey-headed Flying Fox is not permitted to occur until such time that the Commonwealth Minister for the Environment has approved a Biodiversity Offset Strategy. Approval of the Biodiversity Offset Strategy is a Federal government requirement following an assessment of a controlled action under the EPBC Act. Approval of the controlled action was issued on 13 October 2011 by the Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC). The agency is of the view that it is the proponent's responsibility to ensure compliance the conditions of any separate approvals, and that DSEWPaC should be consulted in regards to this issue.

Council also made note of a former Raptor nest located in the vicinity of Precinct 9 and requested a 100m buffer to the nesting site be applied. The EAR made note of a pair of Wedge-tailed eagles identified nesting in a tree stag on the boundary of Precinct 9 in the 2011 breeding season. However, the fauna baseline study carried out by SMEC for the EAR found that the nest is no longer in existence. Nonetheless, to address council's concerns, the agency recommends the insertion of new Condition 38B which requires the proponent's Environmental Officer to determine whether the existing nesting site is currently in use by any Raptor species. If so, no works within a 100m radius of the nesting site will be permitted to occur. In addition, new Condition 39A requires the establishment of a 5m buffer in the form of high visibility netting/fencing to preserve the former nesting tree should the species wish to return during future breeding seasons.

The agency is satisfied that potential impacts on existing threatened fauna can be appropriately managed through the successful implementation of mitigation measures outlined in the FMP submitted as part of the CEMP. The agency considers the works proposed within Precincts 9 & 11 will not significantly impact on threatened fauna beyond a level that has already been assessed as part of previous applications. Both precincts 9 & 11 have been identified within the approved concept plan as areas to contain future residential development, with bulk earthworks ultimately required to achieve a profile that is consistent with what is required to create future residential lots. The agency therefore supports the proposed works within Precinct 9 & 11, subject to the successful implementation of mitigation measures outlined in the FMP.

5.2 Impacts on Native Vegetation

Works proposed within Precincts 9 & 11 involve the removal of a small amount of native vegetation. The proposed works also have the potential to indirectly impact on existing adjacent vegetation through the introduction of weeds, increased sediment flow, and alteration of hydrological regimes.

A total of 22 vegetation communities have been mapped across the site, of which six are recorded within Precincts 9 & 11. The proposed earthworks will involve some clearing of two of the vegetation communities located within Precincts 9 & 11, as outlined in **Table 3** below. The table lists the total area to be cleared (approved as part of previous applications), as well as the area proposed to be cleared as part of the modification request. It is noted that the area proposed to be cleared as part of the modification is not in addition to what has previously been approved, rather a portion of the vegetation that has previously been granted approval to be removed as part of the concept plan.

Table 3: Existing Vegetation Communities – Precincts 9 & 11, Cobaki Estate (source: SMEC, December 2013)

Vegetation Community	Precinct	Area to be removed from entire Site	Area proposed to be removed from Precinct 9 & 11 borrow areas	Conservation Status
Community 1a – very tall open/closed sclerophyll forest	9 & 11	3.08 ha	0.08 ha	High
Community 10 – Low closed grassland with scattered trees	9 & 11	215 ha	1.51 ha	Low

Two listed threatened flora species under the TSC Act have been identified in the vicinity of Precincts 9 & 11 including a single Fine-leaved Tuckeroo (located during a 2008 flora survey), and a single Brush Cassia (detected during a 2013 rehabilitation assessment). **Figure 9** shows the location of the two species in context to the proposed earthworks borrow areas.

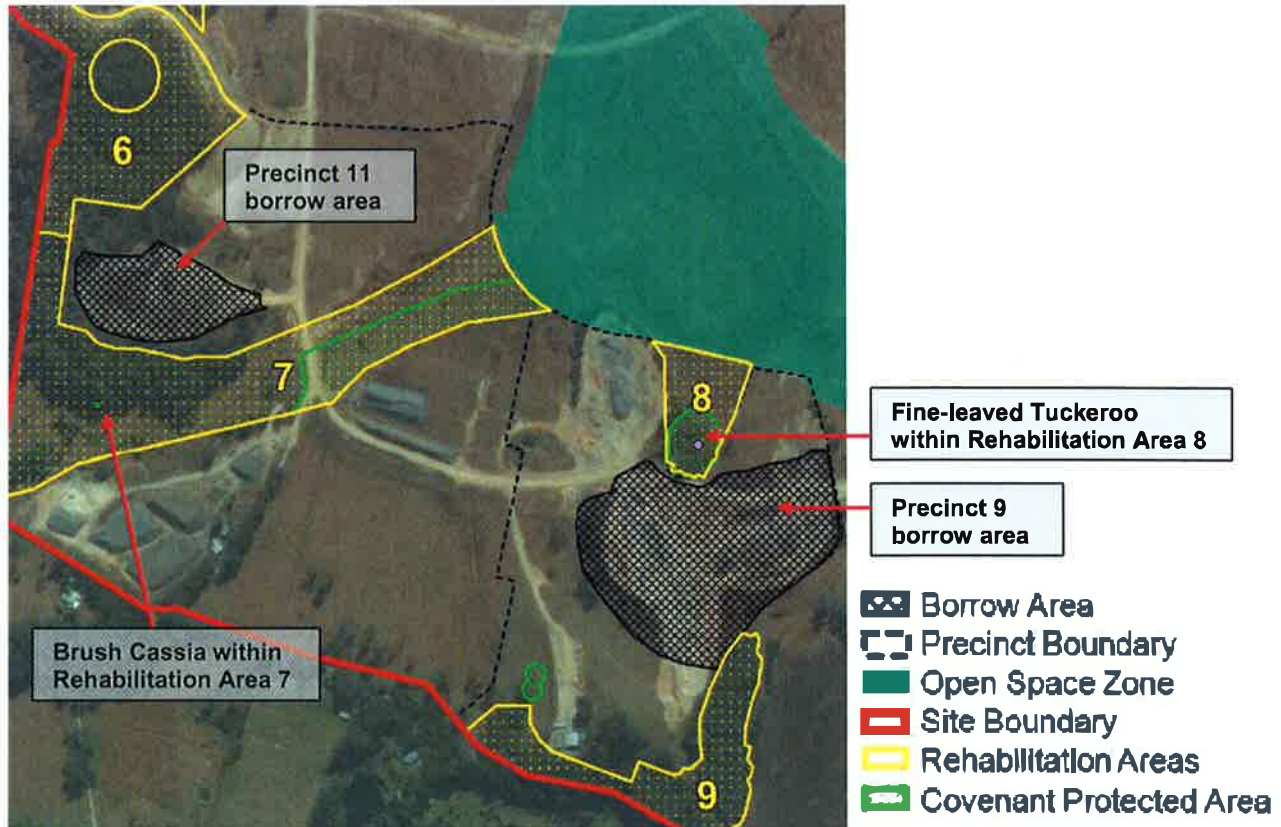


Figure 9: Location of Threatened Flora Species – Precincts 9 & 11

Both threatened flora species are located outside of the extent of proposed borrow area earthworks, and are within approved rehabilitation and management areas 7 and 8. Vegetation within approved rehabilitation areas is to be retained, restored and protected from the impacts of future development. Both species will also be afforded additional protection in the form of a 5m buffer given their threatened species status, as required through the Statement of Commitments.

Six EECs have been recorded on the site, two of which occur in the vicinity of Precincts 9 & 11 (Lowland rainforest on floodplain and Freshwater wetlands). No area of EEC is proposed to be cleared or impacted upon as part of the modification.

OEH acknowledged in its submission that that the vegetation proposed to be cleared as part of the modification will ultimately be cleared for the development of future stages. However, it requested that the option to avoid the clearance of these small areas be considered in order to retain biodiversity values for as long as possible. Should avoidance not be possible, OEH suggested the commencement of rehabilitation works in the vicinity of Precincts 9 & 11 be expedited to provide an increase in biodiversity values and to offset the proposed vegetation loss.

The proponent considered OEH's request to bring forward rehabilitation works in the vicinity of Precincts 9 & 11 would not be a practical outcome for the site, based on the fact that:

- small sections of rehabilitation works in an area of ongoing construction would be difficult to manage from an ecological perspective;
- the vegetation to be removed is not identified as EEC and there are other significant areas of vegetated land on the site;
- it would be inconsistent with the Statement of Commitments which specify offsetting to occur at Subdivision Certificate stage; and
- unreasonable delays would be experienced due to the need to prepare site-specific Regeneration and Rehabilitation Plans, which would then need to be approved by the agency.

The proponent considered it more practical to undertake the required rehabilitation works in conjunction with the future development of Precincts 9 & 11 subdivision works. A detailed copy of the proponent's response to OEH's submission is included at **Appendix D**.

In order to protect native vegetation and EECs during construction works, the proponent has submitted a Vegetation Management Plan (VMP) as part of CEMP. The VMP incorporates several environmental control and mitigation measures, including the requirement to undertake pre-clearing surveys, temporary erection of protective fencing around significant flora, weed management and control measures, relocation of roosting/nesting hollows from felled trees, and erosion and sediment control measures. A copy of the VMP which details all proposed vegetation management measures is provided at **Appendix B**.

Agency's Consideration – Impacts on Native Vegetation

The agency notes that the proposed borrow areas within Precincts 9 & 11 are both designated areas for future residential development under the approved concept plan. Consequently, these areas will ultimately be cleared to facilitate the construction of future residential development. Whilst the agency concurs with OEH that the preservation of biodiversity values for as long as possible would be the optimal outcome for the site, it is also acknowledged that the majority of vegetation proposed to be cleared (1.51ha or 95% of the total vegetation proposed to be cleared as part of this modification) consists of a vegetation community that is of low conservation value. Furthermore, extensive bulk earthworks have been carried out under separate development consents, contributing to the loss and fragmentation of vegetated land across the site, and particularly in the vicinity of Precinct 9.

No impacts are anticipated on the nearby threatened flora species, and no clearance of EEC area is proposed as part of the modification. The agency does, however, recommend the introduction of new Condition 39A requiring the proponent to provide appropriate high visibility barriers/fencing around environmentally sensitive areas in both Precincts 9 & 11 prior to the commencement of any earthworks.

The agency is satisfied that existing threatened flora and EECs will be protected through the successful implementation of the VMP prepared for the site and the bulk earthworks fencing plan, both submitted as part of the modification.

5.3 Impacts of Noise and Vibration

The proponent engaged CRG Acoustics Pty Ltd (CRG) to prepare an Environmental Noise Impact Report (ENIR) for earthworks and construction activities proposed as part of the modification.

Construction noise has been assessed in accordance with OEH's Interim Construction Noise Guideline. The results of an ambient noise survey carried out by CRG predicted noise impacts at the nearest sensitive receiver as a result of the proposed earthworks at Precincts 9 & 11 to be within 2 dB above the adopted external noise criteria of 48 dB(A). The ENIR states that a person cannot typically detect a 3 dB variation in sound pressure level, and thus the predicted 2 dB increase is considered acceptable. Nonetheless, the ENIR recommends a number of acoustic management controls and treatments to be applied during earthworks activities within Precincts 9 & 11 to minimise the impact of noise emissions.

The report also makes note of blasting activities required to be carried out within Precinct 9 due to the presence of very hard Greywacke rock. The location and amount of blasting activities at this stage is unknown. The ENIR therefore recommends a specialist blast overpressure and vibration consultant be engaged to prepare a Blasting Plan once the location, extent, type and frequency of blasting requirements is determined. A copy of the ENIR is provided at **Appendix B**.

Council raised concern in its submission that proposed blasting is not incorporated as part of the CEMP. The proponent has advised that once the specific blasting requirements have been determined, an amendment to the CEMP may be sought in consultation with the PCA.

Agency's Consideration – Impacts of Noise and Vibration

The agency considers the predicted increase of 2 dB above the adopted external noise criteria is acceptable on the basis that a 3 dB variation in sound pressure is undetectable.

In order to address council's concerns in regards to potential blasting activities required at the site, the agency recommends the introduction of new Condition 51A requiring the proponent to prepare a Blasting Plan for approval of the PCA (should blasting be required). The new condition requires the proponent to firstly notify council if blasting activities are required, and for a copy of any approved Blasting Plan to be provided for council's records. The proponent must also notify council of the location and timing of any blasting activities at least 48 hours prior to any blasting being carried out.

Provided the recommendations outlined in the ENIR are successfully implemented during the proposed construction works, the agency is satisfied that an acceptable level of acoustic amenity to the nearest sensitive receivers will be maintained.

5.4 Maximum Exposed Area

Clause (b) of Condition 21A – *Bulk Earthworks* outlines a requirement for any bulk earthworks to be limited to a maximum exposed area (that has not been permanently vegetated) not exceeding 5ha at any time, unless otherwise approved by the Director-General. The 5ha limit is a requirement to reduce the impact of dust emissions on nearby residents. Council raised concern in regards to the proponent's ability to satisfactorily comply with Condition 21A(b) should the proposed earthworks within Precincts 9 & 11 be granted approval.

Should the proposed modification be approved, earthworks activities will involve the exposure of cut areas in the order of 4.82ha for Precinct 9 and 2.49ha for Precinct 11, resulting in a total exposed area of 7.31ha. This does not include the additional exposed land where the extracted material will be placed, or the existing areas on the site which are currently exposed (the proponent's estimate is that an additional 3.65ha of exposed land exists on the site).

This modification would allow the extraction of material from both Precincts 9 & 11, however, any approval would be subject to the limitations of Condition 21A(b) which limits the maximum exposed area to 5ha. The proponent has provided a separate request in accordance with Condition 21A(b) seeking the Director-General's approval to undertake earthworks in Precincts 9 & 11 concurrently, as this will allow for the orderly and efficient extraction of material. It will also assist in reducing the duration of construction works. The Director-General's approval would allow for an exposed area of greater than 5ha, and therefore earthworks could be carried out concurrently in Precincts 9 & 11. **Appendix E** contains a copy of the proponent's request.

The agency will formally respond to the proponent's request pending the determination outcome of this modification.

5.5 Preloading of the Missing Link Roadway

During the final stages of the assessment of this modification request, a further issue was raised by council regarding the use of existing stockpiled material on the site (referred to as stockpiles 8, 9, and 10) as a source of fill for placement in the COS area. The existing stockpiles consist of material derived from the Cobaki Parkway, as shown on **Figure 10** below.

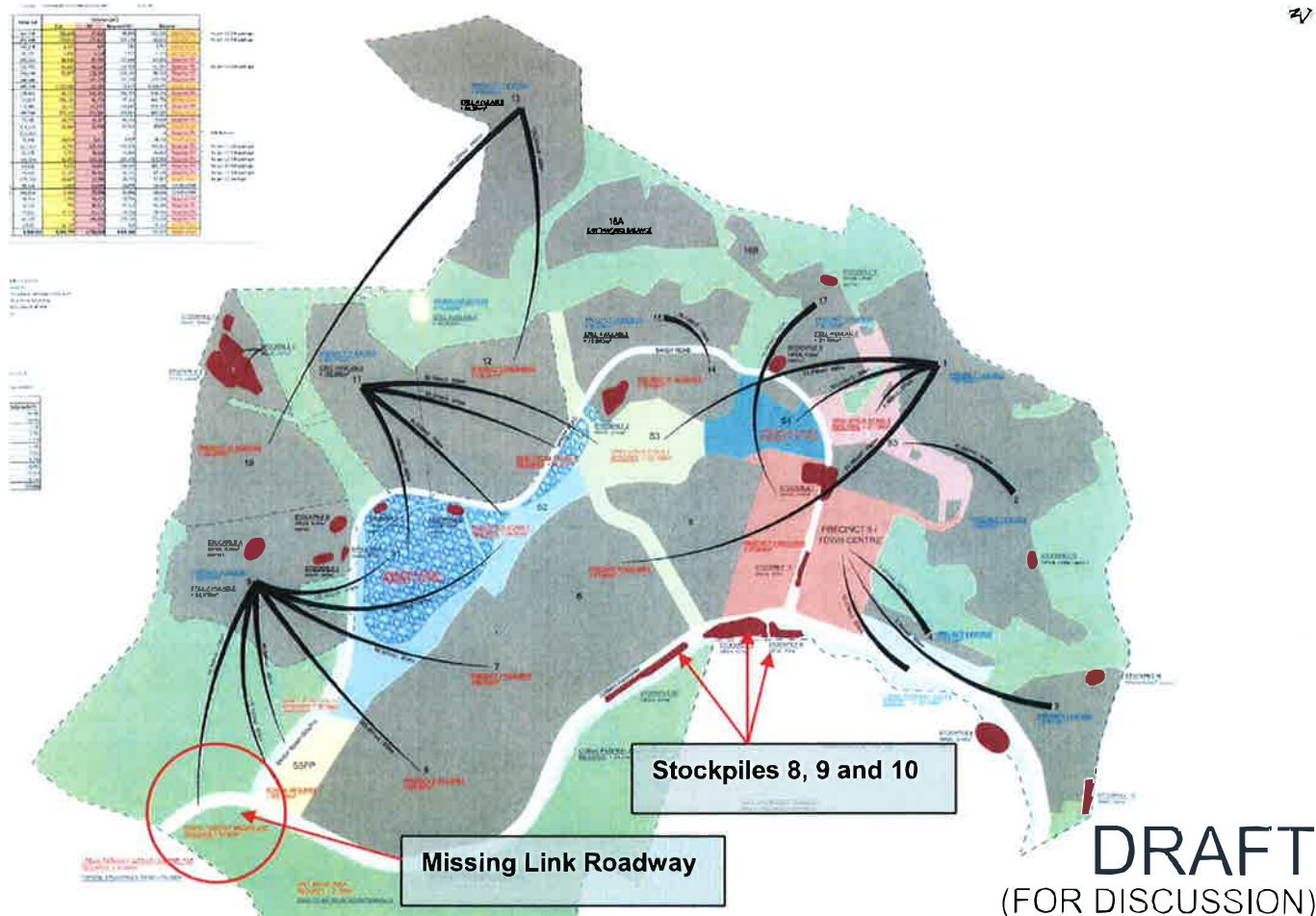


Figure 10: Location of Stockpiles 8, 9 and 10 to be placed on the Missing Link Roadway

Clause (c) of Condition 41 – *Earthworks – Limits of Approval* currently states that:

- c. *Fill material required for the central open space area sourced from elsewhere on/or the site requires separate development approval.*

The proponent has not requested approval for the stockpiled material to be placed in the COS area as part of this modification. The agency has, therefore, not considered this issue as part of its assessment.

The Principal Certifying Authority has advised that there are no concerns regarding the use material from stockpiles 8, 9, and 10 within the COS area. However, Condition 41(c) clearly outlines the requirement for separate development approval. The intent of Condition 41(c) was to ensure that any further extraction of material on the site (outside of the COS) for placement of material in the COS would be subject to an appropriate level of assessment. It did not necessarily contemplate the movement of existing stockpiled material on the site into the COS.

The agency considers that the physical movement of this stockpiled material can be suitably managed via the existing conditions of approval regarding dust and sediment and erosion control, and does not warrant further development approval.

In order to facilitate the movement of this material for construction of the COS, the agency therefore recommends Condition 41(c) be amended as part of this modification to include the words "*or as otherwise approved by the Director-General*". This will essentially allow the proponent to separately request the agency's approval for the placement of stockpiled material into the COS area. In considering any such request, the agency will require the proponent to provide detailed information on where the stockpiled material was derived from, what the material consists of, and the amount of material proposed to be placed in the COS area.

5.6 Other Environmental Issues

The agency's assessment of other issues, including air quality and dust emissions, geotechnical, groundwater, acid sulfate soils, and cultural heritage is provided in **Table 4**.

Table 4: Assessment of other Issues

Issue	Consideration	Recommendation
Air Quality and Dust Emissions	<ul style="list-style-type: none"> Construction activities within Precincts 9 & 11 may contribute to increased dust emissions and impacts on air quality. 	<ul style="list-style-type: none"> The EAR includes recommended air management and dust control measures including topsoil stripping and rehabilitation of disturbed areas as soon as practicable after the completion of earthworks.
Geotechnical	<ul style="list-style-type: none"> Geotechnical investigations identified that excavated materials from Precincts 9 & 11 will comprise gravelly sandy clays and weathered metasandstone/metasilstone. Weathered rock strata will be the predominant source of fill. 	<ul style="list-style-type: none"> With the exception of the topsoil strata, all are considered suitable materials for structural filling within the COS area.
Groundwater and Acid Sulfate Soils	<ul style="list-style-type: none"> The interception of groundwater and acid sulfate soils is considered highly unlikely due to the proposed extraction of material at higher elevations. 	<ul style="list-style-type: none"> An Acid Sulfate Soil Management Plan and Groundwater Management and Monitoring Plan required under the conditions of project approval will address any issues should the interception of groundwater and/or acid sulfate soils occur during construction.
Cultural Heritage	<ul style="list-style-type: none"> Advice from Everick Heritage Consultants state that the works associated with the modification request has minimal potential to impact on Aboriginal cultural heritage. The EAR states that Precincts 9 & 11 are highly disturbed areas, and that the likelihood of construction works impacting on Aboriginal cultural heritage objects is considered low. 	<ul style="list-style-type: none"> A Cultural Heritage Management Plan (CHMP) approved as part of the concept plan is in place for the site. The CHMP outlines no specific cultural heritage impact mitigation works within the proposed Precinct 9 & 11 borrow areas.

6. CONCLUSION AND RECOMMENDATIONS

The agency has assessed the merits of the project, including the proponent's modification report, EAR and CEMP, and has considered all issues raised by State agencies and council. The agency has considered the key environmental issues in relation to the proponent's modification request and is satisfied that the potential impacts can be addressed.

The agency therefore recommends modifications to the following conditions of approval:

- **Condition 3 – Project in Accordance with Plans** – modified to include reference to Precinct 9 & 11 borrow area earthworks plans and erosion & sediment control plans;
- **Condition 4 – Project in Accordance with Documents** – modified to include reference to documentation submitted as part of the modification request, including the EAR and CEMP;
- **Condition 21A – Bulk Earthworks** – modified to incorporate Precincts 9 & 11 as approved borrow area locations for the placement of fill in the COS area;
- **New Condition 39A – Fencing of Environmentally Sensitive Areas – Precincts 9 and 11 Earthworks** – inserted to ensure the boundaries of rehabilitation and covenant protected areas are appropriately surveyed and marked with high visibility fencing prior to the commencement of any works, and to ensure a 5m fenced buffer to the existing Raptor nesting tree is established.
- **New Condition 39B – Earthworks Buffer to Raptor Nesting Site** – inserted to ensure a 100m buffer to the existing Raptor nest is established should it be determined by the proponent's environmental officer that the nesting site is in use.

- **Condition 41 – Limits of Approval** – modified to clarify that the winning of fill for placement in the COS area may also be extracted from Precincts 9 & 11, and to allow fill material sourced from elsewhere on the site for placement in the COS area to be approved by the Director-General; and
- **New Condition 51A – Blasting Plan** – inserted to ensure a Blasting Plan is submitted for approval by the PCA (should blasting activities be required), and for council to be notified 48 hours prior to any blasting activities being carried out on the site.

The proposed modification is generally consistent with the approved concept plan for the site and existing environmental planning instruments. The agency is satisfied that the proposed amendments to the project approval are adequately justified in this report, and that any environmental implications on the site or surrounding locality can be appropriately mitigated through the implementation of management plans submitted as part of the CEMP, including the:

- Fauna Management Plan;
- Vegetation Management Plan;
- Cultural Heritage Management Plan; and
- Noise Environmental Impact Assessment.

It is therefore recommended that the Director – Industry, Key Sites & Social Projects, as delegate of the Minister, approve the proposed modification under section 75W of the EP&A Act by signing the Instrument of Approval included at **Appendix A**.

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