Project Approval

Section 75J of the *Environmental Planning and Assessment Act 1979*

Under the Minister for Planning and Infrastructure's delegation of 14 September 2011, I approve the Project application referred to in Schedule 1, subject to the conditions in Schedules 2 to 5.

These conditions are required to:

- prevent and/or minimise adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the Project.

Deputy Director-General
Development Assessment & Systems Performance
Department of Planning and Infrastructure

Sydney 19 April 2012

SCHEDULE 1

Application Number:	10_0065
Proponent:	Kimbriki Environmental Enterprises
Approval Authority:	Minister for Planning & Infrastructure
Land:	Lot 4 DP 255466, Kimbriki Road, Terrey Hills
Project:	Kimbriki Resource Recovery Project

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SCHEDULE 2 - DEFINITIONS

AWT	Alternative Waste Treatment Building which is part of the RRF Facility
BCA	Building Code of Australia
Construction	Includes any activity requiring a Construction Certificate, significant excavation work, road works, demolition, and any construction related activity as described in Major Project Application 10_0065
Council	Warringah Council
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Infrastructure or its successors in title
Director-General	Director-General of the Department of Planning and Infrastructure, or delegate
EA	*Kimbriki Resource Recovery Project – Environmental Assessment, Volume 1, 2 and 3* (GHD, February 2011); *Kimbriki Resource Recovery Project - Submissions Report* (GHD, May 2011); GHD Letters dated 26 June and 2 September 2011, and revised Statement of Commitments dated 7 February 2012.
EEC CUS	The endangered ecological community (EEC) which is named as EEC Coastal Upland Swamp (CUS) and currently listed as a preliminary determination by the NSW Scientific Committee.
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPA	Environment Protection Authority
EPL	Environment Protection Licence issued under the POEO Act
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build
General Solid Waste	Putrescible or non-putrescible waste as defined in the *Waste Classification Guidelines* (DECCW)
Incident	An incident causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this approval
KEE	Kimbriki Environmental Enterprises
KRRC	Kimbriki Resource Recovery Centre
KRRP	Kimbriki Resource Recovery Project, the Project
Land	In general, the definition of land is consistent with the definition in the EP&A Act.
MRF	Materials Recycling Facility
Minister	Minister for Planning and Infrastructure, or delegate
Mitigation	Activities associated with reducing the impacts of the Project
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NOW	NSW Office of Water
OEH	Office of Environment and Heritage
Offset Strategy area	As defined by the map in Appendix A and Section 2.4 of the PPR
Operation	Includes the receipt, storage and/or processing of waste on-site (including commissioning)
POEO Act	*Protection of the Environment Operations Act, 1997*
POEO Regulation	*Protection of the Environment Operations (Waste) Regulation, 2005*
PPR	Preferred Project Report titled '*Kimbriki Environmental Enterprises, Kimbriki Resource Recovery Project, Preferred Project Report*' dated November 2011
Project	The development as described in the EA and PPR
Proponent	Kimbriki Environmental Enterprises (KEE), or its successors on title
Reasonable	Reasonable relates to the application of judgment in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements
Rehabilitation	The treatment or management of land disturbed by the Project for the purpose of establishing a safe, stable and nonpolluting environment.
Restricted Activity Area	An area where existing vegetation will be retained, but excluding future stormwater diversion works should they be required
RRF	Resource Recovery Facility comprising the AWT Building & Maturation Building
RMS	NSW Roads and Maritime Service
Site	The land at Lot 4 DP 255466
Statement of Commitments	The Proponent's Statement of Commitments dated 7 February 2012 (see Appendix B)

SCHEDULE 3 - GENERAL ADMINISTRATIVE CONDITIONS

Obligation to Minimise Harm to the Environment

1. In addition to meeting the specific performance criteria established under this approval, the Proponent must implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or decommissioning of the Project.

Terms of Approval

2. The Proponent must carry out the Project generally in accordance with the:
   a) EA;
   b) PPR;
   c) Statement of Commitments (refer to Appendix B);
   d) Project plans (refer to Appendix A); and
   e) conditions of this approval.

   Note: Appendix A includes the Site Layout Plan, Offset Strategy, Restricted Activity and Retained Vegetation Areas and Intersection Upgrade Works.

   If there is any inconsistency between the above documents, then the more recent document and conditions of this approval must prevail to the extent of the inconsistency.

3. The Proponent must comply with all reasonable requirements of the Director-General arising from the Department's assessment of:
   a) any reports, plans, strategies or correspondence that are submitted in accordance with this approval; and
   b) the implementation of any actions or measures contained in these documents.

Limits on Approval

4. Waste operations may only take place for 20 years from the commencement of site Operations.

5. The Proponent must not receive or process more than the following types of waste per year at the site:
   a) 60,000 tonnes of non-putrescible dry recyclable materials collected as part of the municipal kerbside collection services provided by Mosman, Manly, Warringah and Pittwater Councils; and
   b) 100,000 tonnes of putrescible source separated food and garden organics and mixed residual wastes.

6. Nothing in this approval will impact on Development Consent 96/371 granted by Warringah Council.

Liability to Lapse

7. This approval shall lapse if the Proponent does not physically commence the proposed development within 5 years of the date of this approval.

Structural Adequacy

8. The Proponent must ensure that any new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.
   Notes:
   - *Under Part 4A of the EP&A Act, the Proponents required to obtain construction and occupation certificates for any building works.*
   - *Part 8 of the EP&A Regulation sets out the detailed requirements for the certification of a Project.*

Statutory Requirements

9. The Proponent must ensure that all necessary licences, permits and approvals are obtained and kept up-to-date as required throughout the life of the Project. No condition of this approval removes the obligation for the Proponent to obtain, renew or comply with such licences, permits or approvals.

Protection of Public Infrastructure

10. The Proponent must:
    a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the Project; and
    b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the Project.

Utilities

11. Prior to the construction of any utility works, the Proponent must obtain relevant approvals from service providers, including Sydney Water, Council and the RMS.

Operation of Plant and Equipment

12. The Proponent must ensure that any plant and equipment used on site, or in connection with the Project is:
    a) maintained in a proper and efficient condition; and
    b) operated in a proper and efficient manner.

Staged Submission of Plans or Programs

13. With the written approval of the Director-General, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.

Dispute Resolution

14. In the event that a dispute arises between the Proponent and Council or a public authority other than the Department, in relation to a specification or requirement applicable under this approval, the matter must be referred by either party to the Director-General, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding to all parties. For the purpose of this condition, 'public authority' has the same meaning as provided under Section 4 of the Act.

SCHEDULE 4 - SPECIFIC ENVIRONMENTAL CONDITIONS

WASTE

Restrictions on Outputs of Waste

1. With the exception of outputs that are approved for use under the POEO Act (and associated Regulations), the Proponent must dispose of all outputs produced on-site to the KRRC or an appropriately licensed facility.

Waste Acceptance and Screening

2. The Proponent must:
   a) implement suitable procedures to:
      - ensure that the site does not accept wastes that are prohibited; and
      - screen incoming waste loads;
   b) install suitable signs at the entry to the site, indicating the types of waste that are permitted to be accepted and those wastes that are prohibited; and
   c) ensure that:
      - all waste sludges and wastes that are controlled under a tracking system have all the appropriate documentation prior to acceptance at the site;
      - staff receive adequate training in order to be able to recognise and handle hazardous or other unapproved wastes; and
      - procedures and training requirements are integrated into the Environmental Management Strategy for the Project (See Schedule 5 Condition 1).

3. The Proponent must:
   a) implement procedures to identify and handle asbestos waste. These procedures should be in accordance with the National Occupational Health and Commission's (Safe Work Australia's*) Code of Practice & Guidance Notes for the Management & Control of Asbestos in WorkPlaces*, relative guidelines and legislation from Workcover NSW and the POEO Regulation; and
   b) integrate these procedures into the Environmental Management Strategy for the Project (See Schedule 5 Condition 1).

Resource Recovery

4. The Proponent must implement all measures to recover resources from the waste stream that are outlined in the EA to the satisfaction of the Director-General.

Waste Management

5. The Proponent must prepare and implement a Waste and Recovery Management Plan for the Project to the satisfaction of the Director-General. This plan must:
   a) be prepared in consultation with the EPA, and submitted to the Director-General for approval prior to the commencement of Operation;
   b) identify standards and performance measures to:
      - screen incoming waste;
      - manage pests, vermin, litter and weeds;
      - manage outputs;
      - monitor resource recovery rates;
      - control composting operations; including measures to address relevant matters referred to in Section 4 and Appendix B of the EPA's *Environmental Guidelines for Composting & Related Organics Processing Facilities*;
   c) detail auditable procedures to monitor and review the identified standards and performance measures; and
   d) describe what procedures and/or contingency plans would be followed in the event of non-compliance.

BIODIVERSITY AND LANDSCAPING

6. Building works associated with the Project, with the exception of intersection upgrade works, must not extend outside of the footprint shown at Appendix A - *Site Layout Plan.*

Biodiversity Offset Strategy

7. The Proponent shall implement the biodiversity offset strategy described in the PPR, summarised in Table 1 and shown in Appendix A, to the satisfaction of the Director-General.

Table 1: Summary of the Biodiversity Offset Strategy

Biodiversity Issue	*Minimum Size (hectares)*
Total Offset Area	14.54*
Offset Ratio (total offset area/area to be cleared)	3.2:1
Revegetation of landfill areas (indicative)	6.62
Restricted Activity Areas	5.36

* Note: The breakdown of Offset Area vegetation is provided in Appendix A

Long Term Security of Offsets

8. Prior to commencement of Operation, the Proponent must enter into a Public Positive Covenant**,** to be maintained in perpetuity pursuant to Section 88E of the *Conveyancing Act 1919* with Council, to ensure the long term conservation security of the Offset Strategy area (14.54 ha) defined in Appendix A - *Offset Strategy* and in Section 2.4 of the PPR.

Biodiversity Management Plan

9. The Proponent must prepare and implement a Biodiversity Management Plan for the Project to the satisfaction of the Director-General. This plan must:
   a) be prepared by a suitably qualified and experienced expert whose appointment has been endorsed by the Director-General;
   b) be prepared in consultation with Council, the NOW and the EPA and submitted to the Director-General for approval prior to the commencement of any Construction works;
   c) be prepared in accordance with Warringah Council's Guidelines (*Guidelines for Preparing a Biodiversity Management* Plan) and provide details on how vegetation would be enhanced and maintained such as fencing and weed management;
   d) assess and map all identified vegetation cover and types including weedy areas and the EEC CUS;
   e) identify the designated Offset Strategy areas, restricted activity areas and revegetation areas as illustrated by the Offset Strategy area map in Appendix A; and as defined in Section 2.4 of the PPR;
   f) include a Vegetation Clearing Protocol (refer Condition 10); and
   g) include a detailed monitoring program to demonstrate the Offset Strategy area and vegetation communities are being either maintained or enhanced.

10. The Vegetation Clearing Protocol must:
   a) clearly identify the location and type of vegetation to be retained and to be removed from the site;
   b) detail measures that would be implemented for vegetation clearing;
   c) ensure vegetation, including trees would not be pushed or felled into any retained bushland areas during the vegetation removal process;
   d) detail procedures to manage impacts on fauna including translocation of fauna by a suitably qualified ecologist/wildlife rescuer (if appropriate); and
   e) detail the staging of construction to avoid breeding times for key species on site.

Landscaping

11. The Proponent must:
   a) utilise an ecologist to oversee the landscaping of all available areas around the RRF and MRF facilities with suitable species of local provenance;
   b) ensure that the landscaping on the site does not impede driver sight distance of vehicles entering or leaving the site;
   c) complete all landscaping prior to commencement of Operation; and
   d) maintain landscaping during the life of the Project.

12. The Proponent must progressively landscape completed landfill areas (as illustrated in the Offset Strategy and mapped in Appendix A) with suitable species of local provenance, with works to be overseen by an ecologist.

AIR QUALITY

Meteorological Monitoring

13. Prior to the commencement of Construction, the Proponent must establish a permanent meteorological station on-site to the satisfaction of the EPA. This station must provide for

continuous monitoring of meteorological conditions to enable a correlation of odour related complaints with potential source and activities occurring on-site.

Dust Management

14. The Proponent must design, construct, operate and maintain the Project in a manner that minimises or prevents the emission of dust from the site.

15. During construction and operation, the Proponent must ensure that:
    a) all trucks entering or leaving the site with loads have their loads covered;
    b) internal road surfaces are sealed and regularly cleaned;
    c) the trucks associated with the Project do not track dirt onto the public road network; and
    d) all areas are maintained in a condition to minimise the emission of wind-blown or traffic-generated dust.

Discharge Limits

16. Unless otherwise specified by the Director-General, the Proponent must comply with all monitoring requirements and pollutant discharge concentrations as specified by the EPA in the EPL(s) for the site.

Stack Discharge Design Requirements

17. The Proponent must ensure that the stack discharge design requirements comply with the EPL.

Odour

18. The Proponent must not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.

19. The Proponent must ensure that the following odour mitigation features (or features of equivalent performance) are incorporated into the design of the RRF:
    a) fully enclose all buildings so that they are capable of being maintained under negative air pressure at all times;
    b) equip all the buildings with reliable fast speed automated roller doors (with additional air curtains);
    c) install biofilters in the AWT and maturation building exhausts;
    d) connect the AWT and maturation buildings via a fully enclosed conveyor system for transferring of processed materials. The conveyor system should be connected to the buildings biofilters and negative pressure system;
    e) install drains within the AWT and maturation building floors to collect the process water for reuse in the tunnel composting process; and
    f) design the maturation building to have floor sections where aerobic conditions can be maintained at all times.

20. During Operation of the MRF and RRF facilities, the Proponent must ensure the following odour mitigation features are undertaken at all times;
    a) all waste storage and processing would be undertaken within the confines of the buildings;
    b) water sprays/deodorisers must be used when handling wastes in the receivals/delivery areas;
    c) following deposition of waste from delivery trucks, the drivers are required to use a high pressure water cleaner to ensure that the tailgate seal and the rear of the truck is clean; and
    d) unless otherwise approved by the EPA, any residual fraction being returned from the RRF maturation building to the RRF AWT building for re-shredding/composting must be transferred using a fully enclosed conveyor system.

Air Quality and Odour Management Plan

21. The Proponent must prepare and implement an Air Quality and Odour Management Plan for the Project to the satisfaction of the Director-General. This plan must:
    a) be prepared by suitably qualified expert in consultation with the EPA, and submitted to the Director-General for approval prior to the commencement of Operation;
    b) be developed in accordance with the EPA's Odour Policy to manage the potential risk or offensive odour;
    c) identify all major sources of particulate, odour and gaseous air pollutants that may be emitted as result of the Project, and measure these against the pollutant discharge concentrations criteria;
    d) identify all management measures to address these sources;
    e) include a detailed monitoring program;
    f) include protocols for regular maintenance of process equipment to minimise the potential for dust and odour emissions; and

g) detail procedures including details for a 24-hour phone number for recording odour related complaints and/or contingency measures to be undertaken if any non-compliance is detected.

Air Quality & Odour Validation

22. The Proponent must prepare and implement an Air Quality and Odour Validation Report to the satisfaction of the Director-General. The report must:
    a) be prepared in consultation with the EPA by a suitably qualified expert whose appointment has been endorsed by the Director-General;
    b) be undertaken within 90 days of the commencement of Operation and during a period in which the facility is operating under normal operating conditions;
    c) be conducted in accordance with the documents "*Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales'* and " *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*";
    d) demonstrate compliance with the EPA's criteria;
    e) use emissions from the actual performance of the facility;
    f) include:
        - a validation against the predictions made in the EA;
        - details of any exceedances or non-compliance with the limits in the EPL and approval; and if necessary,
    g) recommend and prioritise measures to either improve the air quality and odour controls on site.

    Should Air Quality and Odour Validation Report identify an exceedence or non-compliance, then the Proponent must undertake/employ additional mitigation or attenuation to the satisfaction of the EPA and Director-General within the timeframe specified by the Director-General.

Greenhouse Gas

23. The Proponent must prepare and implement an Energy Savings Action Plan for the Project to the satisfaction of the Director-General. The plan must:
    a) identify all reasonable and feasible measures to minimise energy use and greenhouse gas emission on site;
    b) be submitted to the Director-General prior to construction; and
    c) be prepared in accordance with the *Guidelines for Energy Savings Action Plans* (DEUS 2005).

NOISE

Operating Hours

24. The Proponent must comply with the hours of operation in Table 2, unless otherwise agreed to by the Director-General. Construction activities (with the exception of earthworks and building construction activities) are permitted to occur outside of these hours provided it meets the operational noise criteria as defined in Table 3.

Table 2: Site Operating Hours

Activity	*Day*	*Hours*
Construction	Monday - Friday	7 am – 6 pm
	Saturday	7am – 1pm
	Sunday & Public Holidays	Nil
Operation	Monday - Friday	6am – 6pm
	Saturday	8am – 5pm
	Public Holidays	6am – 6pm
	Sunday	Nil

Noise Limits

25. The Proponent must ensure that operational noise generated from the Project does not exceed the noise limits presented in Table 3. Noise generated by the Project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.

Table 3: Project Noise Limits

Receiver Location	***Day***	***Evening***	***Night***
	LAeq (15 minute) dB(A)	***LAeq (15 minute) dB(A)***	***LAeq (15 minute) dB(A)***
B - 1 Kimbriki Road	*40*	*35*	*35*
C & D - 4 and 5 Kimbriki Road	*38*	*35*	*35*
E - 6 Kimbriki Road	*37*	*35*	*35*

Notes:

- *For the purpose of this condition Day, Evening and Night is defined in Definitions.*
- *Noise from the premises is to be measured at the most affected point or within the residential boundary or at the most affected point within 30 metres of the dwelling (rural situations) where the dwelling is more than 30 metres from the boundary to determine compliance with the LAeq(15 minute) noise limits.*
- *Where it can be demonstrated that direct measurement of noise from the development is impractical, the Department and the EPA may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy).*
- *The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.*
- *The noise limit in Table 2 applies under all meteorological conditions except for any one of the following:*
  - *wind speed greater than 3 metres/second at 10 metres above ground level; or*
  - *temperature inversion conditions greater than 3 degreesC/100m conditions.*
- *For the purposes of Table 2;*
  - *the meteorological data to be used for determining meteorological conditions is the data recorded by the meteorological weather station to be determined in consultation with the EPA; and*
  - *stability category temperature inversion conditions are to be determined by the sigma-theta method referred to be Part E4 of Appendix E of the NSW industrial Noise Policy.*

Noise Management & Monitoring

26. The Proponent is to ensure, during Operation of the site, that:
    a) no front end loaders are to be used;
    b) the conveyor system that enables the transfer of material between the maturation and AWT buildings is fully enclosed and that the conveyor motors are located inside the AWT building or within an acoustic enclosure that provides equivalent sound attenuation;
    c) the AWT building is fitted with automatic doors that remain closed when they are not being used; and
    d) tunnel ventilation and biofilter fans are to be located inside the RRF buildings or within an acoustic enclosure that provides equivalent sound attenuation.

27. The Proponent must prepare and implement a Construction Noise & Vibration Management Plan for the Project to address Construction noise and any related impacts for the construction period. The plan must:
    a) be prepared by a suitably qualified expert in consultation with the EPA;
    b) be submitted to the Director-General for approval prior to commencement of Construction;
    c) be consistent with guidelines contained in the *Interim Construction Noise Guidelines (EPA 2009);*
    d) identify all noise sources and activities that will be carried out during Construction;
    e) identify all potentially affected sensitive receivers; and
    f) describe management methods and procedures and specific noise mitigation treatments that will be implemented to control noise emissions.

28. The Proponent must prepare and implement an Operational Noise Management & Monitoring Plan for the Project to the satisfaction of the Director-General. The Plan must:
    a) be prepared by a suitably qualified acoustical expert and submitted to the Director-General for approval prior to commencement of Operation of the Project;
    b) identify all specific activities that will be carried out during Operation and associated noise sources;
    c) identify all sensitive receivers;
    d) specify noise criteria (reflect the noise limits presented in Condition 25);
    e) describe management methods and procedures and specific noise mitigation treatments that will be implemented to control noise emissions;
    f) detail an operational noise monitoring program to be prepared by a qualified acoustic consultant and implemented to monitor the effects of the Project on the acoustic environment during operation, including road traffic noise, with details of procedures to be undertaken if any non-compliance is detected;
    g) detail procedures to receive, record and respond to complaints; and
    h) describe the contingencies that would be implemented, and the timing for implementation, should non compliances be detected.

Noise Validation

29. The Proponent must prepare and implement a Noise Validation Report to the satisfaction of the Director-General. These reports must:
    a) be prepared by a suitably qualified acoustical expert whose appointment has been endorsed by the Director-General;
    b) be undertaken within 90 days of the commencement of operation and during a period in which the facility is operating under normal operating conditions
    c) be conducted in accordance with the NSW Industrial Noise Policy;
    d) include:
        - a validation against the predictions made in the EA including the proposed noise attenuation;
        - details of any exceedances or non-compliance with the noise limits in this approval; and
        - measures to mitigate the exceedance or non-compliance.

    Should any Noise Validation Reports identify an exceedence or non-compliance, then the Proponent must undertake/employ additional mitigation or attenuation to the satisfaction of the EPA and Director-General within the timeframe specified by the Director-General and prior to any progression to the next stage.

Noise Monitoring

30. To determine compliance with the noise limits in Condition 25, attended noise monitoring must be undertaken:
    a) at each location listed in Condition 25;
    b) during each day, evening and night period for a minimum of
        - 1.5 hours during the day;
        - 30 minutes during the evening
        - 1 hour during the night; and
    c) for three consecutive days on an annual basis.

SOIL AND WATER

31. Except as may be expressly provided in an EPL for the Project, the Proponent must comply with section 120 of the *POEO Act 1997.*

32. The Proponent must ensure that during the Construction and Operation of the Project, the volume, velocity, frequency of flow and water quality entering the swamp and downstream drainage lines replicates pre-development characteristics as closely as possible.

Erosion and Sediment Control

33. The Proponent must prepare and implement an Erosion and Sediment Control Plan for the Project to the satisfaction of the Director-General. This plan must:
    a) be submitted to the Director-General prior to the commencement of Construction;
    b) be prepared in accordance with Landcom's *Managing Urban Stormwater: Soils and Construction Manual*;
    c) identify the works that could cause soil erosion and generate sediment;
    d) describe the location, function, and capacity of the erosion and sediment controls that would be implemented; and
    e) describe the measures that would be implemented to maintain these controls during the construction period.

34. All erosion and sedimentation controls required as part of this approval shall be maintained at design capacity for the duration of the construction works, and until such time as all ground disturbed by the construction works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.

Soil and Water Management

35. The Proponent must prepare and implement a Soil and Water Management Plan for the Project to the satisfaction of the Director-General. This plan must:
    b) be prepared in consultation with EPA, Council and NOW;
    c) be submitted to the Director-General for approval prior to the commencement of Construction;
    d) include:
        - a site water balance;
        - detailed drainage, stormwater and groundwater management plan (including details of stormwater treatment and detention devices);
        - details of the wastewater treatment and irrigation system;
        - details of measures to manage and monitor the project to ensure the integrity of the EEC Swamp are maintained, including:

- measures to ensure the geomorphic stability and the hydrology of the EEC Swamp are maintained;
- measures to ensure that sedimentation or erosion of the EEC, groundwater dependant ecosystems and downstream watercourses is not occurring;

- describe the contingencies that would be implemented, and the timing for implementation, should impacts or non-compliances be detected; and
- a detailed surface and groundwater monitoring program (as per Condition 38 and Tables 18.1 and 18.2 of the EA); and

e) ensure that suitable measures are implemented to minimise water use, manage stormwater, wastewater and process water, and comply with any discharge limits specified in a trade waste agreement and/or EPL.

Drainage

36. The detailed Drainage, Stormwater and Groundwater Management Plan must:
    a) be consistent with the guidance in the latest version of *Managing Urban Stormwater: Council Handbook (DEC);*
    b) include the detailed plans for the proposed stormwater and groundwater management systems; and
    c) ensure that adequate stormwater treatment devises are installed so that the volume, velocity, frequency of flow, and water quality entering the EEC Swamp and downstream drainage lines mimic pre-development characteristics as closely as possible.

Domestic and Process Wastewater

37. The wastewater treatment and irrigation system must ensure that:
    a) all domestic wastewater generated by the Project is treated and irrigated in accordance with *Environmental Guidelines: Use of Effluent by Irrigation and the Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (phase1) - 2006*; or tankered offsite to an approved wastewater treatment facility;
    b) the wastewater irrigation area is to be located so as to ensure contaminated water does not impact any watercourse;
    c) any water that comes into contact with waste must be treated as process water (leachate) and is not to be treated / irrigated;
    d) all process wastewater is kept separate from the stormwater management system and stored in a reservoir or tank engineered and designed in accordance with the requirements of the EPA's Environmental Compliance Report - *Liquid Chemical Storage, Handling and Spill Management - Part B Review of Best Practice and Regulation (2005);* and
    e) process wastewater is only to be reused as process makeup water and not for applications such as dust suppression and vehicle wash down.

Monitoring

38. The Surface and Groundwater monitoring program referred to in Condition 35 must:
    a) include preconstruction baseline data for water quality volume, velocity and frequency of flows; and
    b) monitor the impact of the proposal on the groundwater dependant EEC during construction and operation of the Project.

TRAFFIC AND ACCESS

39. The Proponent must ensure that all internal roads and parking (including driveways, grades, aisle widths, aisle lengths, turning paths, sight distance requirements and parking bay dimensions) associated with the Project are in accordance with the latest versions of the Australian Standards 2890.1:2004 and 2890.2:2002, and AUSTROADS for heavy vehicle usage.

40. The Proponent must ensure that:
    a) all parking generated by the Project is accommodated on site, and that no vehicles associated with the Project must park on the public road system at any stage;
    b) that the Project does not result in any vehicles queuing on the public road network;
    c) all vehicles would be wholly contained on site before being required to stop; and
    d) all vehicles would enter and exit the site in a forward direction.

41. The Proponent must provide a minimum of 80 parking spaces during Construction and a minimum of 65 parking spaces during Operation of the Project.

Upgrade Works

42. Prior to the commencement of Operation, the Proponent must undertake upgrade works to the intersection of Mona Vale Road and Kimbriki Road to the satisfaction of the Department and the RMS. The works must be generally in accordance with the RMS approved concept plan in the PPR and as attached as Appendix B and include:

a) extending the length of the right turn bay on Mona Vale Road by approximately 30m to total 100m;
b) provision of two westbound traffic lanes through the intersection of Mona Vale Road and Kimbriki Road;
c) extension of the existing westbound acceleration lane to 250m in length; and
d) widening of Kimbriki Road to provide a left turn lane 80 m in length and a right turn lane.

43. Detail design plans for the abovementioned intersection works must be submitted to the RMS for review and endorsement prior to the commencement of Construction. The Proponent will be required to enter into a Works Authorisation Deed (WAD) for the works. The WAD will need to be executed prior to the RMS's assessment of the detailed design plans. The Construction Certificate must not be released until such time the WAD is executed.

44. The Proponent must be responsible for all public utility adjustment/relocation works, necessitated by the above work and as required by the various public utility authorities and/or their agents.

45. All works/regulatory signposting associated with the Project are to be at no cost to the RMS.

46. The Proponent must prepare and implement a Construction Traffic Management Plan for the Project to the satisfaction of the Director-General. The Plan must:
a) be submitted to the Director-General for approval prior to the commencement of Construction;
b) be prepared in consultation with Council and the RMS; and
c) detail construction vehicle routes, the number of trucks, hours of operation, access arrangements, traffic control and advanced warning signs.

Transport Code of Conduct

47. The Proponent must prepare and implement a Transport Code of Conduct for the Project to the satisfaction of the Director-General. This Code of Conduct must:
a) be prepared in consultation with the RMS and Council, and be submitted to the Director-General for approval prior to the delivery of any waste to or project;
b) describe the measures to be implemented to minimise traffic noise (including air brakes) and litter escaping from vehicles; and
c) describe management measures to be implemented for the morning peak if the operational requirements of the Project impact on right-turn movements in and out of the site.

VISUAL AMENITY

Construction Materials

48. Where possible the Proponent must utilise building materials that will minimise the potential visibility of the Project (ie. use of non-reflective materials).

Lighting

49. The Proponent must ensure that all external lighting associated with the development:
a) does not create a nuisance to surrounding properties or roadways; and
b) complies with *AS 4282(INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting.*

Signage

50. The Proponent must not install any advertising signs on site without the written approval of the Director-General.

HERITAGE

51. If any Aboriginal cultural objects are uncovered during Construction, the Proponent must cease all works and contact a suitably qualified archaeologist and Aboriginal community representatives to determine the significance of the object(s) and appropriate management responses.

52. If human remains are located during construction, all works must cease and the NSW Police, the Aboriginal community and OEH are to be notified.

HAZARDS

53. The Proponent must:
a) implement the proposed safeguards listed in Table 4-1 of the Hazard Analysis Report, as described in Appendix M of the EA; and
b) comply with the recommended mitigation measures outlined in the bushfire constraint analysis report.

Bunding

54. The Proponent must store all chemicals, fuels and oils used on site in:
    a) bunded areas with impervious flooring and capacity to contain 110% of the largest container stored within the bund; or
    b) double skinned containers.

55. All bunds (referred to in Conditions 54) must be designed and installed in accordance with relevant Australian Standards, and EPA's Environmental Protection Manual Technical Bulletin Bunding and Spill Management.

BUSHFIRE

56. Prior to the commencement of Construction, the Proponent must incorporate appropriate asset protection zones into the site layout. The asset protection zones must;
    a) incorporate the approved site layout;
    b) be identified in consultation with the NSW Rural Fire Service and to the Satisfaction of the Department; and
    c) be consistent with the *Aims and Objectives*, and the *Acceptable Solutions* of the performance criteria, identified in Planning for Bush Fire Protection (NSW RFS 2006a and 2010).

57. The Proponent must prepare and implement a Bushfire Management Plan, prior to construction, to the satisfaction of the Director-General. The plan must be for the Construction and Operation of the facility and must provide detail on bushfire prevention measures including:
    a) work that involves a risk of ignition that would not be carried out during total fire bans;
    b) locations of bushfire suppression equipment which would be available onsite;
    c) details on the storage and maintenance of fuels and other flammable materials;
    d) emergency procedures for people located at the site during the bushfire season;
    e) details for notifying the Local Rural Fire Service Control Centre regarding dates of construction and any dates during which 'hot works' would be conducted; and
    f) other measures described in the EA (Bushfire Constraints Analysis prepared by GHD, dated October 2010).

58. Retained vegetation (outside the identified asset protection zones) and any vegetation located within the Offset Strategy areas must be managed in accordance with the Council's draft Bush Fire Risk Management Plan (Warringah Pittwater Bush Fire Management Committee 2010).

SCHEDULE 5 - ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING

ENVIRONMENTAL MANAGEMENT STRATEGY

1. The Proponent must prepare and implement an Environmental Management Strategy for the Project to the satisfaction of the Director-General. This strategy must be submitted to the Director-General prior to commencement of construction, and:
   a) provide the strategic context for environmental management of construction and operation of the Project;
   b) identify the statutory requirements that apply to the Project;
   c) describe in general how the environmental performance of the Project would be monitored and managed;
   d) describe the procedures that would be implemented to:
      - keep the local community and relevant agencies informed about the operation and environmental performance of the Project;
      - receive, handle, respond to, and record complaints;
      - resolve any disputes that may arise in relation to operations at the Project;
      - respond to any non-compliance;
      - manage cumulative impacts;
      - respond to emergencies; and
   e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the Project.

Management Plan Requirements

2. The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
   a) detailed baseline data;
   b) a description of:
      - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
      - any relevant limits or performance measures/criteria; and
      - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Project or any management measures;
   c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
   d) a program to monitor and report on the:
      - impacts and environmental performance of the Project; and
      - effectiveness of any management measures (see c above);
   e) a contingency plan to manage any unpredicted impacts and their consequences;
   f) a program to investigate and implement ways to improve the environmental performance of the Project over time;
   g) a protocol for managing and reporting any:
      - incidents;
      - complaints;
      - non-compliances with statutory requirements; and
      - exceedances of the relevant limits and/or performance measures / criteria; and
   h) a protocol for periodic review of the plan

Construction Management Plan

3. The Proponent must prepare and implement a Construction Management Plan for the Project to the satisfaction of the Director-General. The Plan must:
   a) be submitted to the Director-General for approval prior to commencement of any construction works;
   b) include:
      i. a soil and water management plan;
      ii. a noise and vibration management plan;
      iii. a vegetation clearing protocol;
      iv. a traffic management plan;
      v. a waste management plan;
      vi. an air quality (dust) management plan; and
      vii. an erosion and sediment control plan.

REPORTING

Pre-Construction Compliance

4. Prior to the commencement of construction, the Proponent must certify in writing to the Director-General that all the relevant conditions of this approval have been complied with and advise the Director-General of the planned construction commencement date.

Pre-Operation Compliance

5. Prior to the commencement of operations, the Proponent must submit 'work as executed' plans to the Department for all the development associated with the Project. These plans must be prepared by a suitably qualified and experienced expert, and include plans showing the 'work as executed' plans laid over the approved plans to demonstrate that the development has been carried out in accordance with the approved plans.

Incident Reporting

6. Within 24 hours of detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) harm to the environment, the Proponent must notify the Department and EPA of the exceedance/incident.

7. Within 6 days of notifying the Department and EPA, the Proponent must provide a written report to the Department and EPA that:
   a) describes the date, time, and nature of the incident;
   b) identifies the cause, or likely cause, of the incident; and
   c) describes what action has been taken to date address the incident and what actions are proposed to be implemented in the future to either address the consequences of the incident or avoid a recurrence of the incident.

ANNUAL REVIEW

8. One year after the commencement of Operations, and annually thereafter, the Proponent must review the environmental performance of the Project to the satisfaction of the Director-General. This review must:
   a) describe the operations that were carried out in the past year;
   b) analyse the monitoring results and complaints records of the Project over the past year, which includes a comparison of these results against the
      - relevant statutory requirements, limits or performance measures/criteria;
      - monitoring results of previous years; and
      - relevant predictions in the EA;
   c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
   d) identify any trends in the monitoring data over the life of the Project; and
   e) describe what measure will be implemented over the next year to improve the environmental performance of the Project.

INDEPENDENT AUDIT

9. Within 1 year of the commencement of Operations, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent must commission and pay the full cost of an Independent Environmental Audit of the Project. This audit must:
   a) be carried out by a suitably qualified, experienced and independent audit team containing a waste management specialist and odour expert, whose appointment has been endorsed by the Director-General;
   b) include consultation with EPA;
   c) assess the environmental performance of the Project, and its effects on the surrounding environment;
   d) determine whether the Project is complying with the relevant standards, performance measures and statutory requirements;
   e) review the adequacy of the Environmental Management Strategy for the Project, compliance with the requirements of this approval, and any other licences and approvals; and, if necessary,
   f) recommend measures or actions to improve the environmental performance of the Project, and/or any plan/program required under this approval.

10. Within 3 months of commissioning the audit, or as otherwise agreed by the Director-General, the Proponent must submit a copy of the audit report to both EPA and the Director-General with a response to any recommendations contained in the audit report.

REVISION OF STRATEGIES, PLANS & PROGRAMS

11. Within 3 months of the submission of an:
    a) audit under condition 9 of schedule 5;
    b) incident report under condition 6 of schedule 5; and
    c) annual review under condition 8 of schedule 5,

    the Proponent must review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Director-General.

    Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Project.

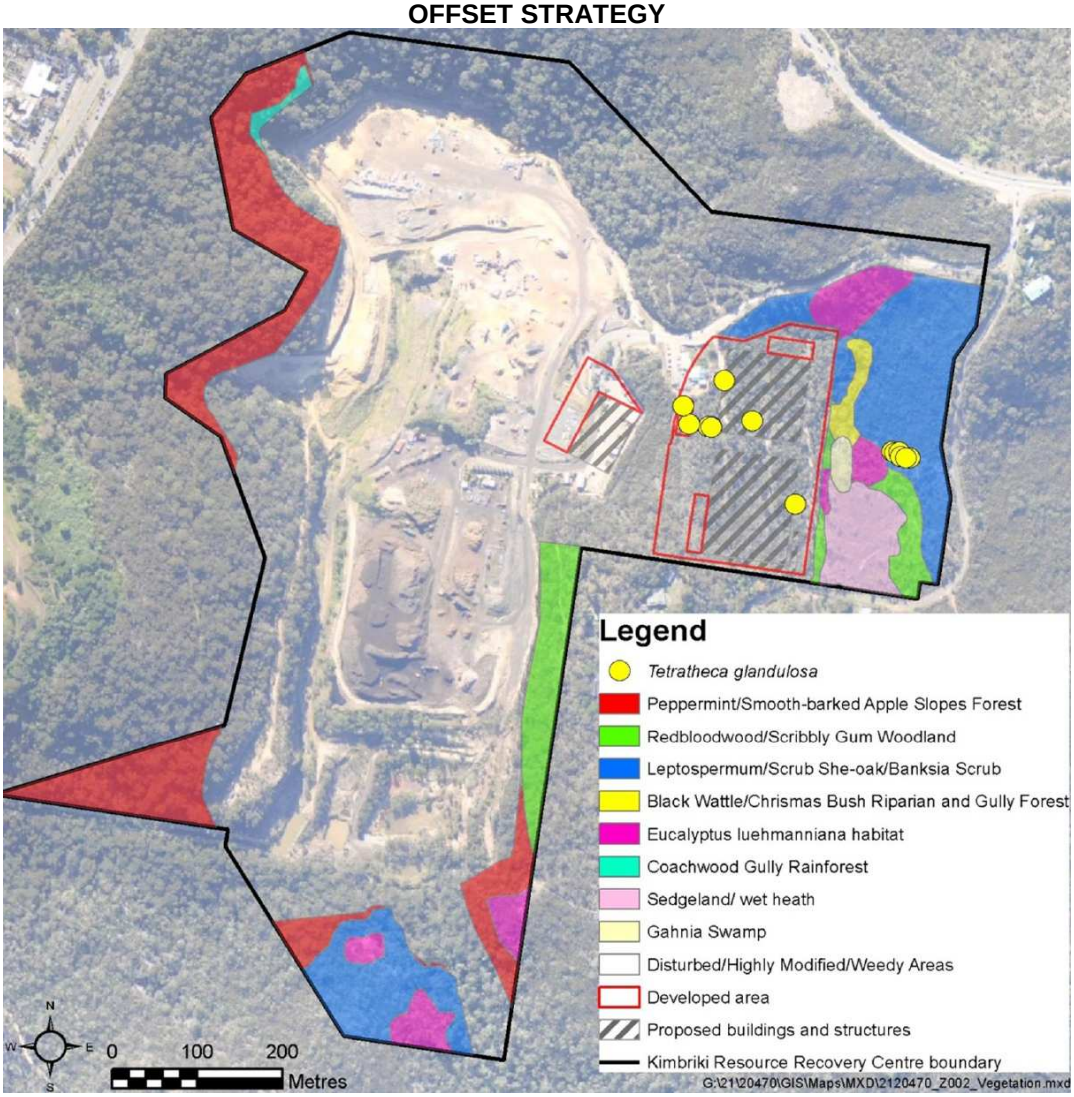
ACCESS TO INFORMATION

12. From the commencement of the construction of the Project, the Proponent must make the following information publicly available on its website as it is progressively required by the approval:
    a) a copy of all current statutory approvals;
    b) a copy of the current plans and programs required under this approval;
    c) a summary of the monitoring results of the Project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;
    d) a complaints register, which is to be updated on a monthly basis;
    e) a copy of the Annual Reviews (over the last 5 years);
    f) a copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit; and
    g) any other matter required by the Director-General.

APPENDIX A

SITE LAYOUT PLAN

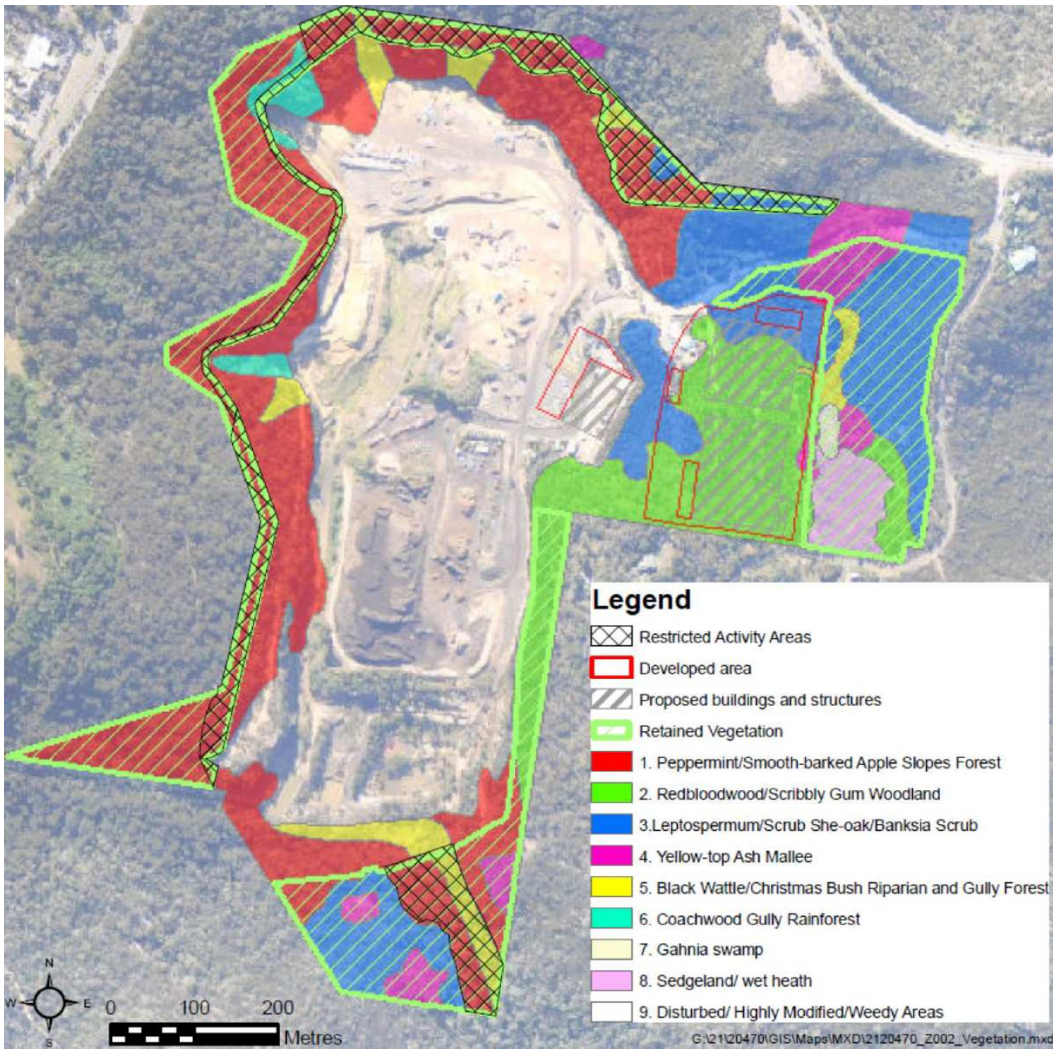
OFFSET STRATEGY



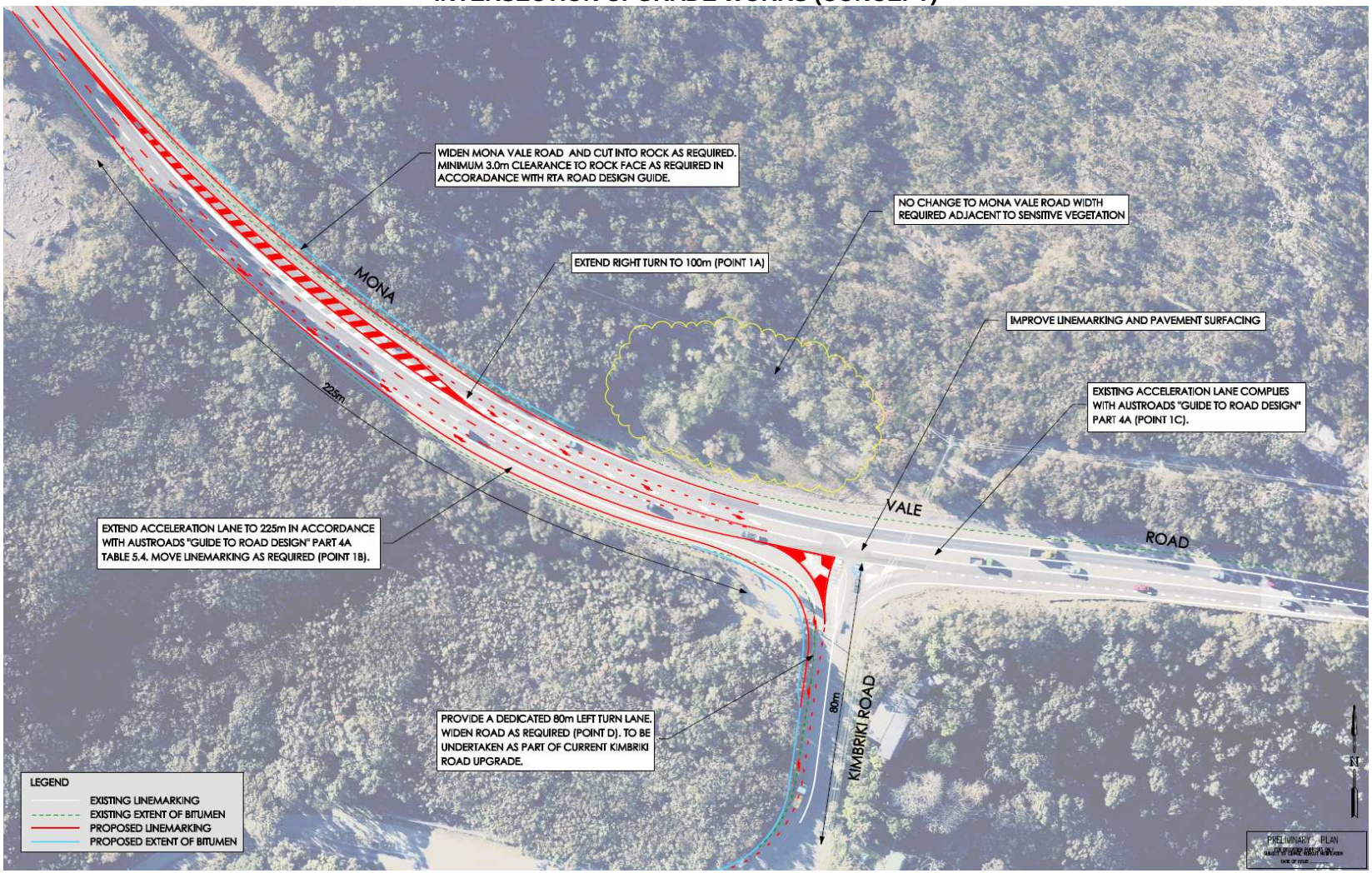
Vegetation type	*Disturbed area (ha)*	*Retained area (ha)*	*Ratio*
1. Black Wattle/Christmas Bush Riparian and Gully Forest	0.02	0.28	14:1
2. Coachwood Gully Rainforest	0	0.15	infinite
3. Eucalyptus luehmanniana habitat	0.02	1.52	76:1
4. Gahnia Swamp	0	0.14	infinite
5. Leptospermum/Scrub She oak/Banksia Scrub	0.90	4.66	5.2:1
6. Peppermint/Smooth barked Apple Slopes Forest	0	5.00	infinite
7. Redbloodwood/Scribbly Gum Woodland	3.62	1.79	0.5:1
8. Sedgeland/ wet heath	0	1.00	infinite
TOTAL	**4.56**	**14.54**	**3.2:1**

- Note vegetation types 1, 4 and 8 are included in the EEC CUS

RESTRICTED ACTIVITY AND RETAINED VEGETATION AREAS



INTERSECTION UPGRADE WORKS (CONCEPT)



APPENDIX B: KEE's STATEMENT OF COMMITMENTS

1. Statement of Commitments

The proponent commits to implement the measures outlined in Table 1. The recommended content of the construction and operation environmental management plan are outlined in chapters 8 to 18 in part C of the environmental assessment (EA). Table 1 lists those measures that are additional to environmental management measures.

Table 1 Kimbriki Resource Recovery Project - Commitments

Issue	Commitments
Site footprint	A revised site footprint is shown on Figure 1 along with retained natural vegetation areas. This is smaller than the footprint shown in the EA. The building works will not extend outside this revised footprint.
General management plans	A construction environmental management plan would be prepared and implemented as outlined in section 18.2.2 of the EA (reproduced as Table 2). An operational environmental management plan would be prepared and implemented as outlined in section 18.2.2 of the EA (reproduced as Table 3). 1.1.1 The Operational Environmental Management Plan would take account of the possibility of mechanical failure and human error, and include contingency measures to ensure that there are no adverse impacts on surrounding residences and businesses should one or more element of the process not operate as planned.
Biodiversity	An offset strategy would be implemented following finalisation of agreements with government agencies, and would be in the form of a public positive covenant pursuant to Section 88E of the *Conveyancing Act 1919*. A Biodiversity Management Plan would be prepared for the designated offset area including *Tetratheca glandulosa and the Coastal Upland Swamp area*. The Plan would be prepared in accordance with Warringah Council's Guidelines. 1.1.2 The selected offset areas would be reserved in perpetuity, physically protected, and managed in accordance with the Biodiversity Management Plan to ensure the long-term survival of threatened and significant flora, fauna and ecological communities. 1.1.3 Areas identified as being EEC significant would be monitored to ensure no impacts as a result of the construction and ongoing operations. The construction and ongoing operations could be modified in the event there was a measured impact arising. 1.1.4 Additional measures are proposed to contribute to the formal offset strategy and impact mitigation measures proposed in the EA (chapter 8). 1.1.5 They include 'Restricted Activity' areas, where existing vegetation will be retained, but necessary works such as

Issue	Commitments
	construction of stormwater diversion drains and stormwater treatment facilities will be undertaken in future. Measures include: • Formal offset areas as shown in Figure 2; • Areas of restricted activity (totalling approximately 4.7 ha), as shown in Figure 3; ▪ Project site landscaping; ▪ Future regeneration of completed landfilling (this may vary according to operational requirements); and ▪ As far as practicable, inclusion of additional land if the successful proponent requires less land area to conduct the works.
Air quality and odour	Measures to reduce the potential for air quality impacts would be incorporated into the design of the facility as described in section 9.4 of the EA. The specifications provided to prospective equipment suppliers would dictate the technical and environmental performance the equipment would be expected to meet, based on the proponent's operational requirements and the conditions of consent for the project. An odour management plan would be prepared as part of the operation environmental management plan detailing measures for the control of odour generation. The proposed composting tunnels, control equipment and receiving area would be housed within a fully enclosed building, which would be maintained at negative air pressure; The waste processing activities proposed under the project would take place indoors under controlled conditions with bio filters to remove odour from expelled air. Outdoor refinement or stockpiling of wastes, in-process materials or finished products associated with the project would not be allowed. Air vents in the sides of the buildings would allow fresh air to be drawn in to replace the volume of air being extracted by electrically driven fans. These fans would run continuously to maintain the buildings at negative pressure. The buildings would be fitted with high-speed roller doors (including air curtains), which would be kept closed as much as possible. Waste would be deposited within the building and following discharge from the truck, the driver would be required to utilise a high pressure washer to ensure that the tailgate seal and the rear of the truck is washed clean. Biofilters would be installed to treat the air collected from the buildings before it is released to the atmosphere. The biofilters would be enclosed and vented through a stack one metre above the roof line to disperse any odour such that air quality goals for odour can be met.

Issue	Commitments
	A dust management plan would be prepared for both construction and operation phases of the project. The Construction Environmental Management Plan would include a number of mitigation measures, including preparation and implementation of a dust management plan. This would include measures to limit dust emissions including: • Site management measures • Managing stockpiles of excavated materials to suppress dust emissions • Watering of unsealed haul roads and disturbed surfaces • Restricting the size of disturbed surfaces as much as practicable • Preventing truck over-loading and covering dusty loads • Vehicle movement controls. • Ceasing dust generating activities during excessively dusty conditions and when dust emission criteria from operations cannot be maintained • Dust monitoring during construction in accordance with recognised standards. The Operational Environmental Management Plan would include a number of mitigation measures, including preparation and implementation of a dust management plan. This would include measures to limit dust emissions including: • No stockpiling of waste or waste derived products outdoors; • No refinement or handling of waste or waste derived products outdoors; • Ensuring all the areas used for vehicle movements are sealed and kept clean by the use of washdown trucks or street sweepers; and • Landscaping all other outdoor areas to ensure they are vegetated to reduce dust emissions.
Traffic and transport	During the detailed design phase the proponent would ensure that the layout of the proposed car parking areas, including driveways, aisle widths, grades, parking bay dimensions, sight distance requirements and turn paths is designed in accordance with AS 2890.1-2004 and AS 2890.2-2002 for heavy vehicle usage. All vehicles would enter and exit the site in a forward direction. All vehicles would be wholly contained on site before being required to stop. Car parking areas and entry/exit points would be clearly delineated through line marking and signage to ensure smooth, safe traffic flow. If construction works or operational requirements of the project impact on right-turn movements into and out of the Kimbriki Resource Recovery Centre, the proponent may also introduce specific operational procedures for the morning peak.

Issue	Commitments
	A minimum of approximately 80 parking spaces would be provided during construction. Adequate parking spaces for 60 operational staff plus visitors would be provided as part of the design of the project. To minimise impedance to through movements and to facilitate turning movements into and out of Kimbriki Road, the following works would be undertaken: • Extension of the length of the right turn bay on Mona Vale Road by approximately 30 m to a total 100 m; • Extension of the existing westbound acceleration lane to 250 m length; • Widening of Kimbriki Road to provide a dedicated left turn lane of 80 m in length and a separate right turn lane. The left turn slip lane in Kimbriki Road would allow larger vehicles to have uninterrupted access to the westbound acceleration lane; and • SIDRA modelling which incorporates the above improvements to demonstrate that the intersection of Mona Vale Road and Kimbriki Road would operate satisfactorily The design works would be undertaken in accordance with Austroads Guide to Road Design in association with relevant RTA supplements. The design would be submitted to the RTA for review and endorsement prior to the improvement works commencing. The proponent would enter into a Works Authorisation Deed (WAD) for the works to the intersection as described above. The WAD would be executed prior to the RTA's assessment of the detailed design plans. The proponent would be responsible for all public utility adjustment/relocation works to the intersection necessitated by the above works and as required by the various public utility authorities and/or their agents. A Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangement, traffic control and advanced warning signs shall be submitted to Warringah Council and RTA prior to the issue of a construction certificate. The proponent would continue to liaise with the Roads and Traffic Authority regarding the design and upgrading of the Mona Vale Road/Kimbriki Road intersection.
Soil and water	The proponent would implement measures during construction to minimise soil erosion and discharge of sediments from the site. The proponent would upgrade the capacity of the Kimbriki Resource Recovery Centre stormwater treatment system to cope with the increased flows associated with the project, to meet current EPL requirements for offsite surface water discharges. The proponent would require the successful tenderer to undertake detailed engineering design for the project to ensure that the volume, velocity, frequency of flow, and water quality entering the swamp and downstream drainage lines replicates natural conditions as closely as possible.

Issue	Commitments
	The design of the operational stormwater management system, as outlined in the Preferred Project Report (Nov 2011), would minimise the potential for impacts on surface water, nearby creeks and on groundwater. A detailed drainage plan would be prepared prior to commencement of construction. The drainage plan would include measures to minimise disruptions to natural water flows and control the quality of water runoff into the natural drainage flow path. A stormwater management plan (including details of stormwater treatment and detention devices) would be prepared prior to commencement of construction. This will be in accordance with the principles illustrated outlined in the Preferred Project Report. Any impact on any riparian land (including vegetation) would be minimised to the greatest extent practicable. Adequate stormwater treatment devices would be installed and maintained to ensure that water quality and hydrology mimics pre-development characteristics. A water and groundwater quality testing program would be prepared and implemented. GDEs would also be monitoring during construction and operation, as per Tables 18.1 and 18.2 of the EA, which are reproduced as Table 2 and Table 3. The proposed wastewater irrigation area would be located so as to ensure contaminated water does not impact any watercourse.
Greenhouse gas	Potential energy efficiency measures including in the areas of lighting, compressed air, ventilation, odour prevention and removal, heating and cooling, and process efficiency (as detailed in section 13.4 of the EA) would be considered in the detailed design phase of the project.
Noise	The project would be designed and operated to ensure that noise criteria are not exceeded during operations. A construction noise management plan would be prepared as part of the construction environmental management plan to detail how construction noise impacts would be minimised. This would include the measures identified in section 10.5.1 of the EA. Whilst there may be some exceedences of the +10 dB(A) target levels stated in the Preferred Project Report, these would be limited to the levels shown in Table 4. An operational noise management plan would be prepared incorporating the measures for the control of noise identified in section 10.5.2 of the EA. Operational noise levels would be limited to the levels shown in Tables 10.3 and 10.4 of the EA, which are reproduced as Table 5 and Table 6.
Heritage	If any Aboriginal cultural objects are uncovered during construction, all works would cease and a suitably qualified archaeologist and Aboriginal community representatives would be contacted to determine the significance of the object(s) and appropriate management responses. If human remains were located during construction, all works would cease and the NSW Police, the Aboriginal community and OEH notified.

Issue	Commitments
Hazards	All safeguards identified in the hazard identification process (Table 15.1 of the EA reproduced as Table 7 would be implemented through the development and implementation of a comprehensive safety management system for the operation of the facility. To minimise potential bushfire risk, asset protection zones would be provided and maintained, appropriate construction materials and methods would be used, safe access and egress and an adequate supply of water would be provided:
Visual	A landscape concept plan would be developed as part of the detailed design of the project. The plan would include tree plantings consistent to assist in reducing visual impacts of the project and include native and endemic species to ensure the existing character is retained. The design of the project would involve consideration of building materials and treatments to minimise the potential visibility of the project. Design recommendations provided in section 16.4 of the EA would be incorporated into the detailed design of the project where practicable.
Socio-economic/litter	The proponent would undertake ongoing consultation with the local community and other key stakeholders during construction and operation. The proponent currently has programs in place to deal with litter escaping from vehicles using the site. These programs would be expanded to include the additional waste collection vehicles visiting the site.

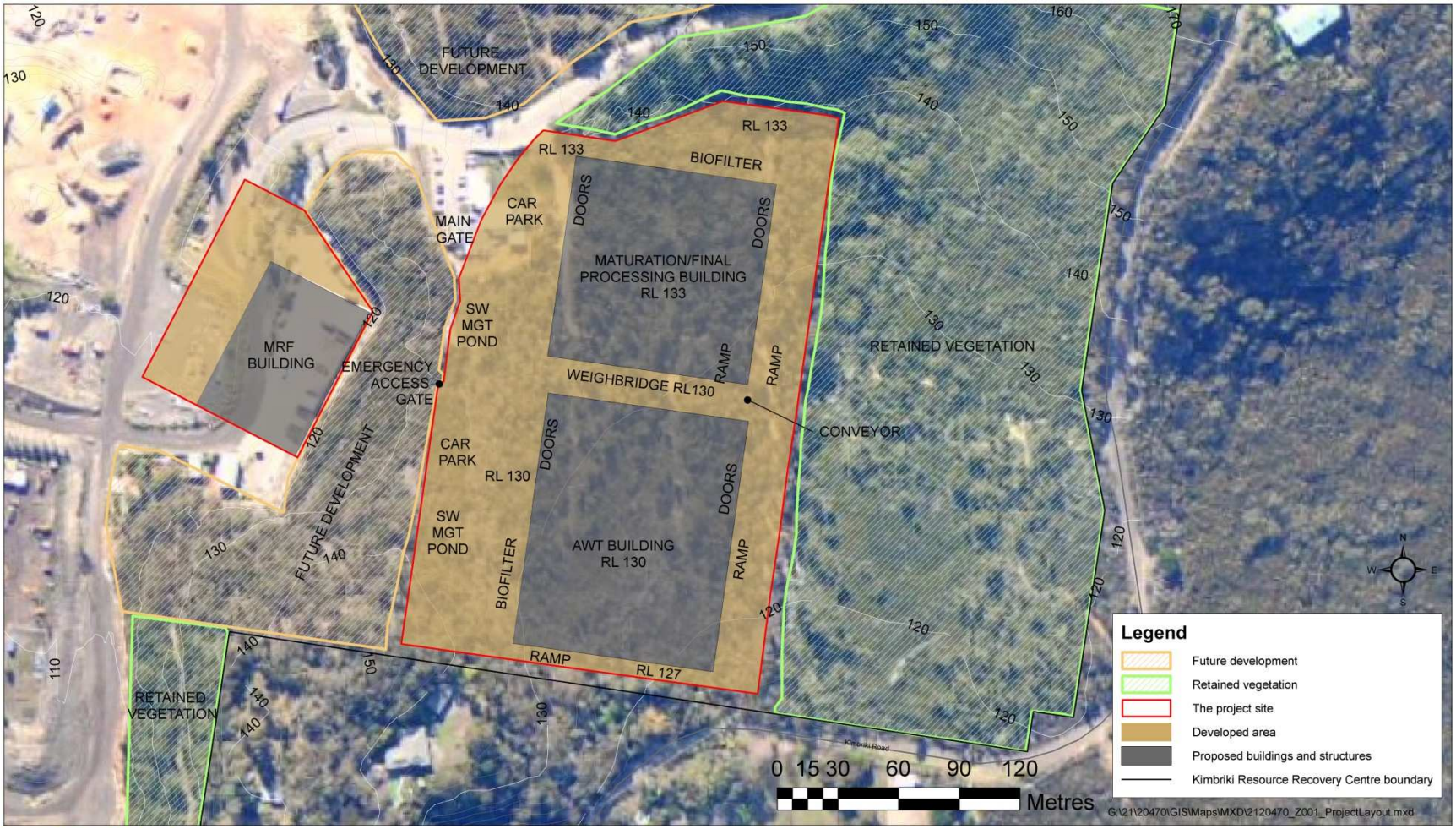


Figure 1 Revised project footprint

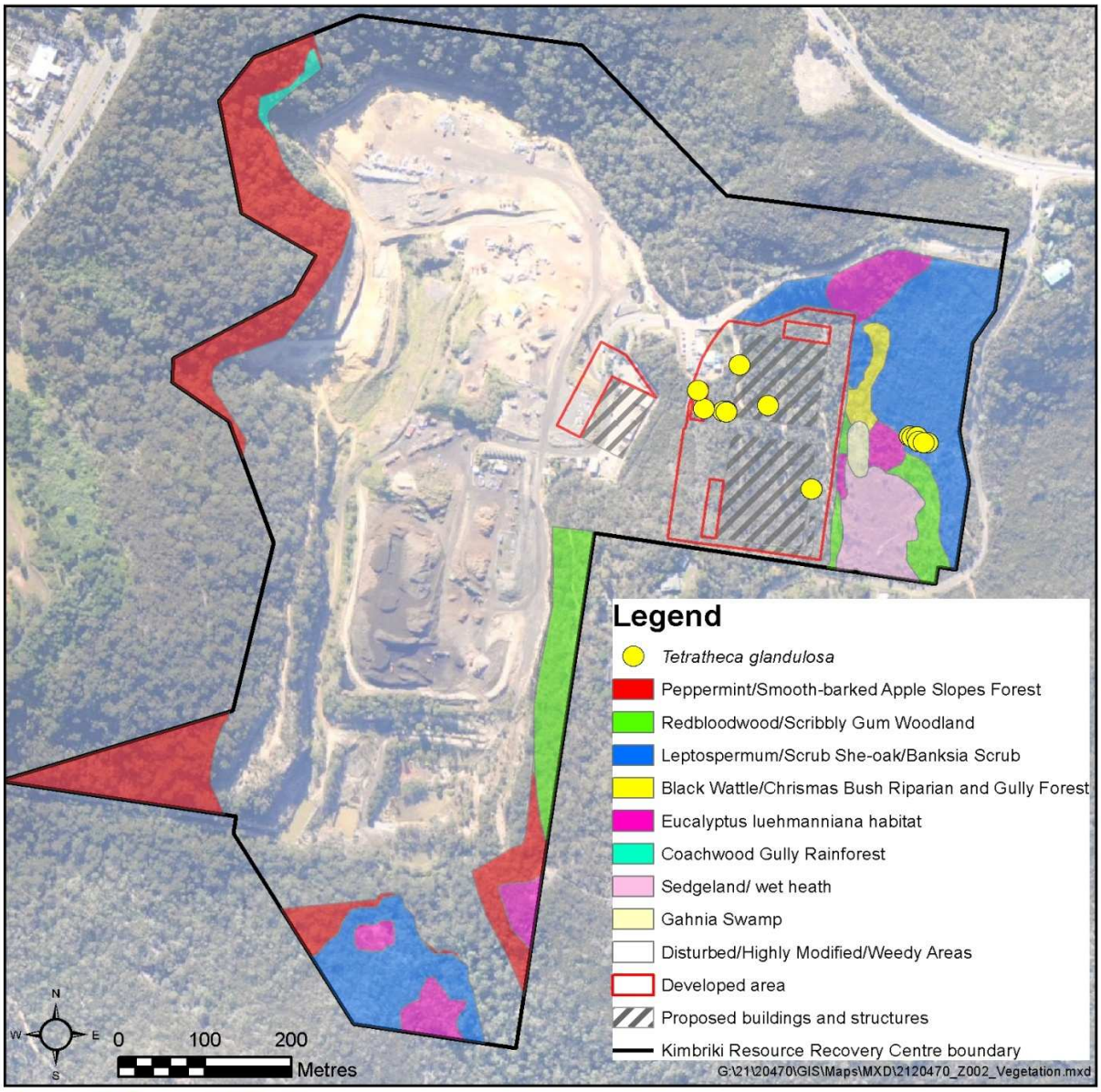


Figure 2 Formal offsets

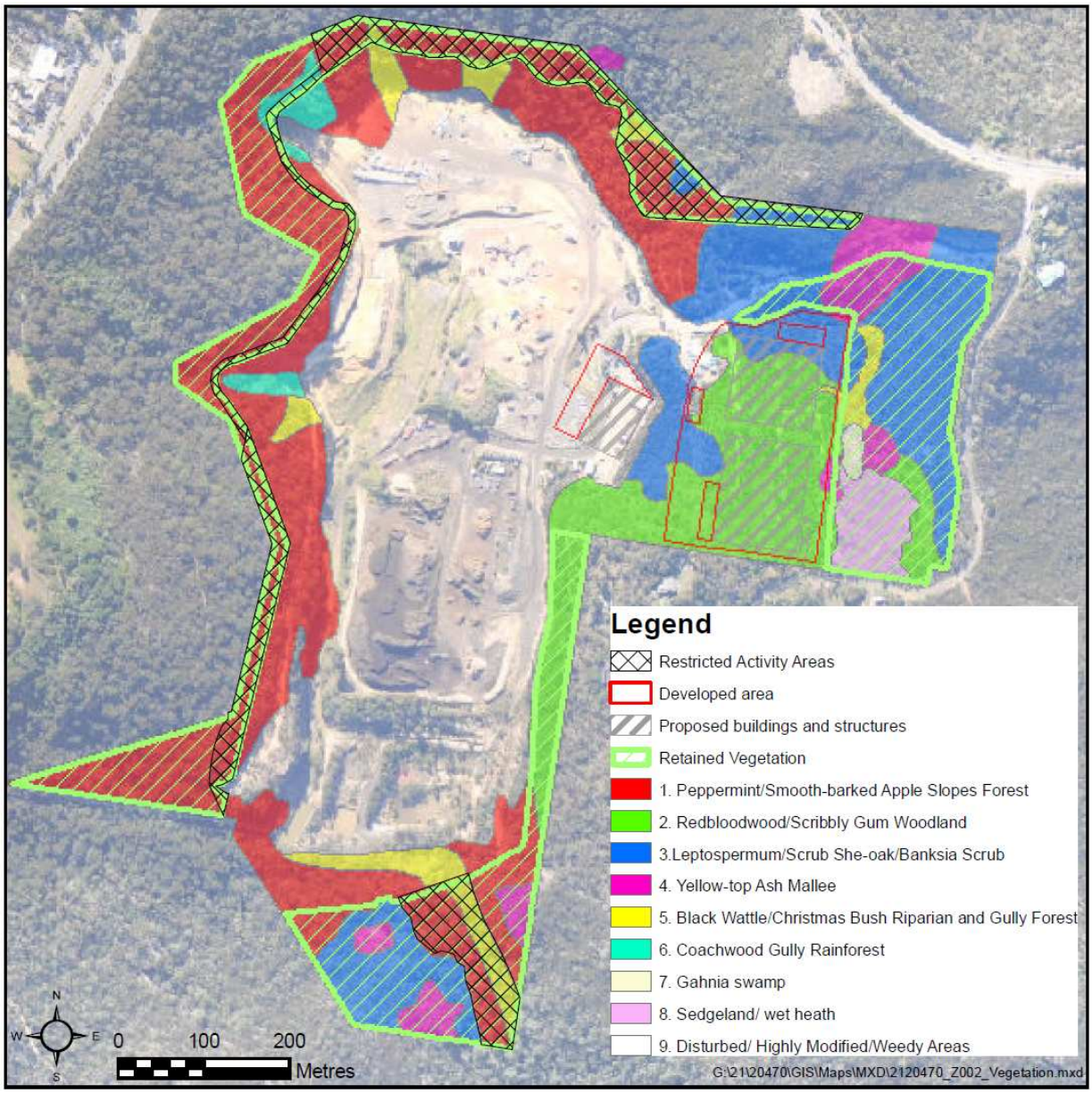


Figure 3 Restricted activity areas and retained vegetation

Table 2 Monitoring requirements during construction

Issue	Monitoring
Noise	Measure noise levels at the boundary prior to construction, at commencement of construction and monthly during construction.
Biodiversity	Monitor the extent of clearing to ensure it is confined to areas in the environmental assessment.
	Monitor the impact on groundwater dependent ecosystems.
Air quality	Continually monitor dust generation from site (visually) to ensure excessive dust is not being produced and that dust suppression activities are effective.
	Monitor dust generation from site by checking readings from existing dust gauges on site - on a monthly basis.
Waste	Inspect waste receptacles to ensure they are not overfilled and are being collected regularly.
	Monitor waste recycling and disposal procedures to ensure they are being complied with.
Water	Review results from surface water sampling undertaken as part of the overall Kimbriki Resource Recovery Centre environmental management.
Groundwater	Review groundwater levels and sampling results as part of overall Kimbriki Resource Recovery Centre environmental management.
Erosion and sediment control	Prior to commencement of each stage of construction, inspect site to ensure that sediment and control devices are in place.
	Inspect sediment control devices to ensure they are installed and operating correctly. Inspect devices particularly during wet weather events to monitor water flows and drainage lines and install new devices as required.
Traffic	Inspect trucks to ensure they are not overloaded, adhere to speed limits, cover their loads, correctly licensed and undertake regular inspections and safety checks.
	Inspect signs and hazards markers to ensure they are used appropriately, are in place and clearly visible.

Table 3 Monitoring requirements during operation

Issue	Monitoring
Water	Monitor water in sedimentation dams and receiving waterways on a quarterly basis. Monitor surface water during wet weather events.
Air quality	Monitor dust generation from site by checking readings from existing dust gauges.

Issue	Monitoring
	Monitor odour levels once plant is operating and undertake regular odour patrols in the area.
Groundwater	Review groundwater levels and quality sampling results from monitoring as part of overall Kimbriki Resource Recovery Centre environmental management.
Noise	Conduct noise monitoring at plant during plant commissioning stage and normal operation.
Pest, vermin and weed control	Arrange for inspection on an annual basis by a licensed pest control and ensure adequate control is implemented. Control weeds using an appropriate biodegradable herbicide.
Traffic	Ensure vehicles are adhering to speed limits, and weights limits and using defined access roads.
Biodiversity	Monitoring of the implementation of the vegetation management plan, as described in section 8.4.1 of the EA. Monitor the impact on groundwater dependent ecosystems.

Table 4 Predicted construction noise levels (dB(A)) – Revised Layout

Receiver	Criteria	Predicted noise levels	Predicted maximum exceedence
A	60	32 – 46	-
B	60	39 – 53	-
C	43	39 – 53	10
D	43	41 – 55	12
E	43	40 – 54	11
M	43	48 – 62	19
N	43	38 – 52	9
O	43	40 – 54	11
P	43	38 – 52	9
National Park Reserve	60	43 – 57	-

Table 5 Construction noise goals

Time of day	Residences	RBL $L_{A90(period)}$	Management level $L_{Aeq(15min)}$	
Recommended standard hours	Residences adjacent to Mona Vale Road	50 dB(A)	Noise affected	60 dB(A)
			Highly noise affected	75 dB(A)
	Residences south of the site	33 db(A)	Noise affected	43 dB(A)
			Highly noise affected	75 dB(A)
Outside recommended hours	All residences	28 to 29 dB(A)	Noise affected	35 dB(A)

Table 6 Operation noise criteria (dB(A))

Residences	Criteria	Day (7 am-6 pm)	Evening (6 pm-10 pm)	Night (10 pm-7 am)
Residences south of the site	Rating background level, $L_{A90(Period)}$	33	34	28
	Existing level of industrial noise; $L_{Aeq(Period)}$	35 to 43	-	-
	Intrusiveness criteria, $L_{Aeq(15min)}$	38	39	35
	Amenity criteria (suburban), $L_{Aeq(Period)}$	55	45	40
	DECCW EPL noise limit (L13091)	45 $L_{A10(15min)}$	-	-
	Project specific criteria	**43 $L_{Aeq(15min)}$**	**39 $L_{Aeq(15min)}$**	**35 $L_{Aeq(15min)}$**
Residences adjacent to Mona Vale Road	Rating background level, $L_{A90(Period)}$	50	42	29
	Existing level of traffic noise; $L_{Aeq(Period)}$	64	60	55
	Intrusiveness criteria, $L_{Aeq(15min)}$	55	47	35
	Amenity criteria (road traffic noise), $L_{Aeq(Period)}$	54	50	45
	DECCW EPL noise limit (L13091)	45 $L_{A10(15min)}$	-	-
	Project specific criteria	**43 $L_{Aeq(15min)}$**	**43 $L_{Aeq(15min)}$**	**35 $L_{Aeq(15min)}$**

Table 7 Hazard identification

Hazard Scenario	Causes	Consequences	Recommended Safeguards
Hazardous waste	Hazardous waste enters project and reacts with other materials	Generation of toxic fumes Personnel exposure to toxic substances	Hazardous materials sorting and screening Operational procedures for management of hazardous waste
Hazardous waste	Significant volumes of hazardous material enter the RRF	Generation of toxic fumes. Personnel exposure to toxic substances	Hazardous materials sorting and screening Operational procedures for management of hazardous waste
Ignition of incoming materials or finished product.	Stockpiling of incoming material for extended periods Overall power failure or interruption for significant period of time leading to lack of aeration Failure of aeration system for other reasons	Anaerobic decomposition takes place producing methane biogas Potential for destruction of the project	Minimise storage time of incoming materials prior to processing Gas monitoring Fire extinguishers and suppression systems. Install aeration system for maturation building to maintain ventilation and restrict temperature rise of finished product
Ignition of flammable materials	Ignition of flammable materials stored onsite e.g. waste paper, cardboard, plastics etc	Fire develops	Operation procedures for storage of materials Designated storage areas Fire detectors Fire extinguishers and suppression systems
Ignition of toxic flammable materials	Ignition of flammable materials stored onsite e.g. waste paper, cardboard, plastics etc	Potential for the generation of toxic fumes	Operation procedures for storage of materials Designated storage areas Fire detectors Fire extinguishers and suppression systems.
Operational / mechanical interactions	Failure of machine guarding / working in close proximity to rotating and moving equipment	Personal injury	Machine guarding Operational / maintenance procedures Operator competency
Vehicle interactions	Vehicle movements in vicinity of personnel	Personal injury	Traffic management plan including standard traffic rules, signage etc Designated pedestrian areas Driver competency Operational procedures
Particulate	Aerobic digestion process generates	Personal health	Operational procedures

Hazard Scenario	Causes	Consequences	Recommended Safeguards
generation	odour and particulates	issues	Air filtered through biofilter prior to release
Confined space incident	Access to tunnels	Possible asphyxiation due to atmospheric conditions within confined space	Operational procedures, including confined space entry permit Operator competency in confined space entry Breathing apparatus Aeration of tunnel prior to entry Gas monitoring
Fall from height	Person working at height falls	Personal injury	Operator competency for working at heights Work at heights procedures and work permit Suitable work at heights equipment e.g. fall protection
Electrical incident	Exposure to damaged electrical equipment	Electrocution	Design and maintenance of all electrical systems as per legislative requirements Physical protection (cabinets, bollards etc.) around high risk electrical installations