CLIENTS | PEOPLE | PERFORMANCE

26 July 2011

Christine Chapman
Major Development Assessment
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Our ref: 21/19757/171590
Your ref:

Dear Ms Chapman

Kimbriki Resource Recovery Project
Response to Submissions Report

This letter is to address responses to the Submissions Report for the Kimbriki Resource Recovery Environmental Assessment (EA) from the following:

- NSW Office of Water (NOW);
- Warringah Council; and
- RTA.

1 NSW Office of Water (23 June 2011)

Item 1 – EC determination

Additional investigations have found that the proposed EEC Coastal Upland Swamp in the Sydney Basin Bioregion (which was recently listed as a Preliminary Determination by the NSW Scientific Committee on 15 April 2011) occurs along the drainage path on the site and south of the site.

It is recommended that the Determination for the EEC needs to be made before the project is approved, or the Department of Planning and Infrastructure needs to verify if it is possible to relocate the proposed buildings/proposal away from the upland swamp on the site and avoid potential impacts.

KEE's response is that this determination could take many months to resolve, and it is likely to be the same as the draft determination, so that waiting for this determination would delay the project unnecessarily. Significant additional delays could leave the SHOROC councils without a disposal location for putrescible wastes when Belrose landfill closes in 2014.

In terms of the Gahnia Swamp assemblages, the Submissions Report (SR) stated that 0.13 ha or 8% of the proposed EEC would be removed by the proposal, but that 1.58 ha would be retained and managed in a protected offset area. In response to NOW's request to relocate the proposed buildings/proposal away from the upland swamp on the site and avoid potential impacts, KEE has decided to reduce the footprint of the platform by eliminating the proposed amenities and office building, which would now be incorporated within other buildings on the site. This retains the 8% of the Gahnia swamp area that would have been affected by the proposal. The revised platform footprint is shown on Figure 1.

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Item 2 – Replication of Natural Conditions

NOW reiterates that the project needs to ensure that the volume, velocity, frequency of flow and water quality etc entering the swamp and downstream drainage lines replicates natural conditions, as the SR proposed EEC Coastal Upland Swamp in the Sydney Basin Bioregion has now been identified as occurring on the site and south of the site.

The detailed engineering design for the project will be done by the tenderer who wins the right to build and operate the Resource Recovery Centre. They will be required to ensure that the volume, velocity, frequency of flow and water quality etc. entering the swamp and downstream drainage lines replicates natural conditions as closely as possible. This may require a series of channels to be placed around, or beneath the building slabs, to ensure that water from the upstream end of the site is able to flow unimpeded to the EC area downstream.

Item 3 – Detailed Drainage Plan

The detailed drainage plan is critical to ensure that the project is not going to adversely modify the natural flow regime and subsurface flow leaving the site or the quality of water to assess the potential impact of the project on the downstream environment. The project should not modify the geomorphology or the hydrology of the upland swamp and cause sedimentation or erosion of the swamp and watercourses downstream. The Preliminary Determination indicates that localised disturbance may cause localised erosion which may result in the development of knick points that initiate more widespread erosion of swamp sediments.

The project will obviously modify the drainage path upgradient of the Gahnia swamp area, as a non-permeable platform will be located there instead of the current natural vegetation. However, the impacts on drainage path flows would be minimised by directing clean roof water from the maturation building/final processing building into the area to the south of this building, as shown on Figure 12.4 of the EA. The hydrological modelling undertaken by GHD and reported in Section 12.6.2 of the EA has indicated that the water flows into this area would rise from current levels of 15.1 ML/yr to 16.4 ML/yr, an increase of less than 10% as a result of the project. Any water containing sediments arising during construction would be directed to stormwater detention ponds, and water from paved surfaces would be directed to the Kimbriki site's existing water management system (refer EA Section 12.6.2).

It is noted that the reduced area of the platform (refer Figure 1) will also reduce the amount of rain water that falls on the platform, and shift the balance closer to the natural flow system.

Figure 1 – Revised project footprint

Item 4 – Timing of Drainage Plan

The SR does not state when the detailed drainage plan is to be developed. Because of the sensitive downstream environment, NOW strongly recommends that the drainage plan be prepared and agreed to by DP&I, Warringah Council and NOW prior to any approval of this project.

KEE believes that a detailed drainage plan cannot be developed until the detailed design of the project is undertaken. This will be done once a successful tenderer is appointed by KEE to build and operate the Resource Recovery Facility. However, the tenders cannot be let until an environmental approval is obtained to proceed with the project. There have been significant delays with approval of this project already, and KEE believes that preparation of a detailed drainage plan should be a condition of consent of the approval, rather than be prepared prior to approval.

Item 5 – GDE (Groundwater Dependent Ecosystems)

Monitoring the impact of the proposal on the GDE during construction and operation needs to be included as a condition of approval. The monitoring must demonstrate that the geomorphic stability and the hydrology of the upland swap are maintained, and sedimentation or erosion of the swamp and watercourses downstream do not occur.

KEE is happy for this to be included as a condition of approval.

2 Warringah Council (27 June 2011)

Council did not agree with all aspects of the SR, and sought external advice on some technical issues - riparian and stormwater management (Civil Certification), and ecological impacts (Footprint Green).

However, in its submission, it drew attention to particular aspects of the reports, which are addressed below:

Item 1 – Extent of Gahnia swamp

The Gahnia swamp and therefore the Coastal Upland Swamp is considered to extend an additional 30m north from that shown on Figure 1 – Drainage Path Vegetation Assessment in the Submission Report (KEE/GHD).

Ecotone, KEE's ecological consultant, has mapped the extent of the Coastal Upland Swamp, and it is shown on Figure 2, with the original platform layout. This shows how much of the swamp was affected by the original platform layout. It does not appear to extend an additional 30 m north of the area shown on Figure 1 in the SR.

The final platform layout shown in Figure 1 will preserve the Ghania swamp, which is part of the interim listed EEC Coastal Upland Swamp.

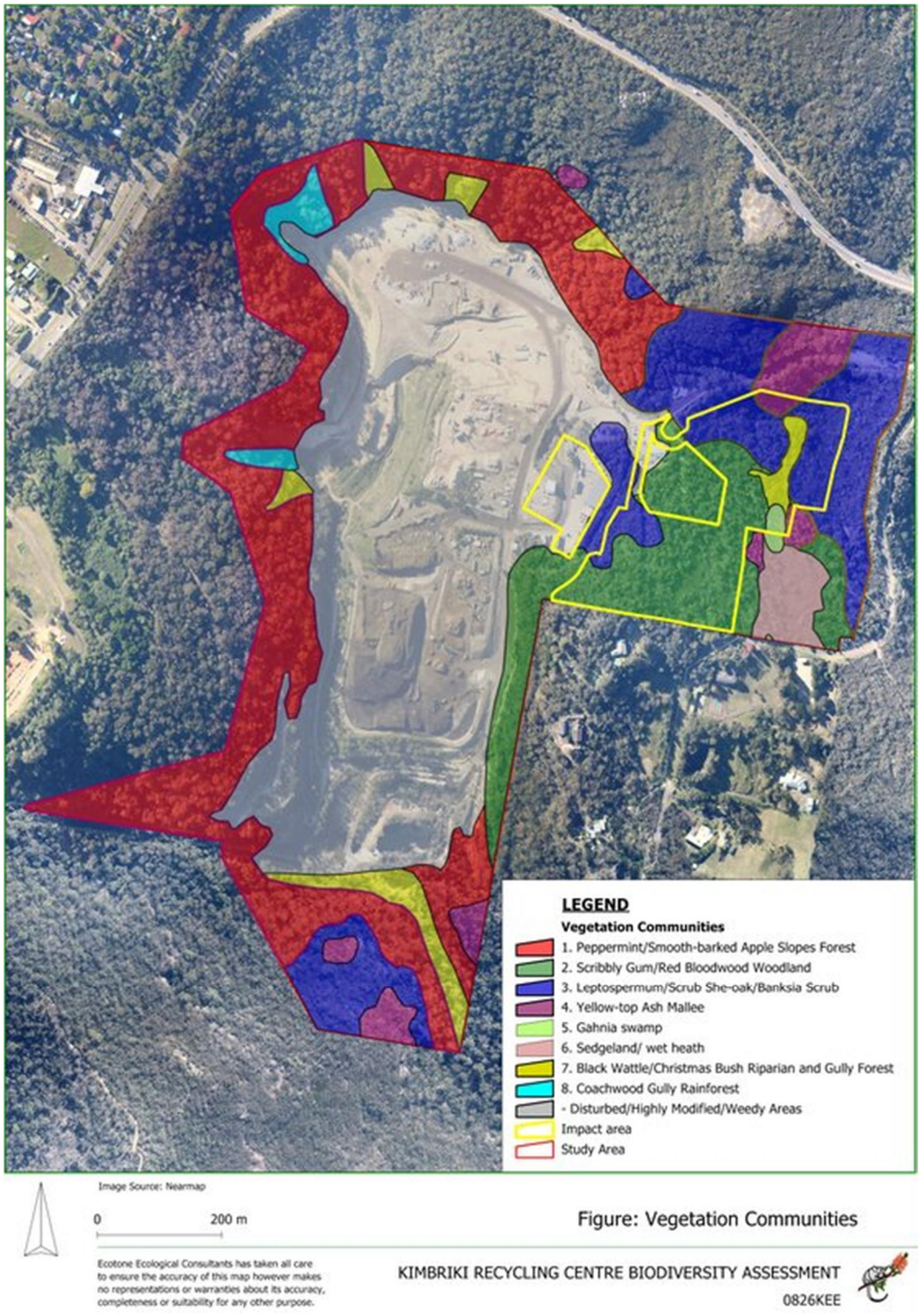

Figure 2 – Updated Vegetation Communities map showing EEC Coastal Upland Swamp species

Item 2 – Groundwater dependent ecosystems

No adequate assessment has been made on the impact of the groundwater dependent ecosystem of the coastal upland swamp and peripheral areas as a result of the waters that are diverted or used by the proposed development.

Refer to the Item 3 of the NOW submission above. The project seeks to maintain the natural water flows into this EC area, and as a result, should have minimal impact on groundwater dependent ecosystems downgradient of the site.

Item 3 – Compensatory Conservation Offsets

Despite the application of some form of security (covenant, zoning etc) and some level of management of those areas, the offset will not result in a substantial improvement in habitat quality and therefore the outcome will be a net loss in spatial extent (approx. 5.5 ha of habitats).

The offset package has been determined in consultation with the Office of Environment and Heritage (OEH), and is based on use of the Biobanking methodology, which takes into account the current condition of the offset areas. Therefore, it is not open to further adjustment. KEE will also advise tenderers that if they are able to reduce the size of the platform, that these adjustments should be made to further minimise the impacts on vegetation and habitat.

Item 4 – Groundwater Dependent Ecosystems Policy

A "wetland" is considered to exist within the developed portion of the site (ie at the location of the proposed Amenities block)……..It is recommended that the development be sited clear of the identified riparian corridor.

There is insufficient non filled land on the entire KEE site to relocate the maturation building without impacting on other significant vegetation, such as the area to the west of the building, containing specimens of the listed species *tetratheca glandulosa*. However, to reduce the impact on the EEC Coastal Upland Swamp, the amenities block has been deleted, as it is assumed that it can be incorporated within one of the other two buildings (refer Figure 1). This has reduced the impact on the drainage corridor and the EEC Coastal Upland Swamp species.

Item 5 – Concept stormwater details

The concept stormwater details provided by GHD in the February 2011 Environmental Assessment are inadequate and do not demonstrate feasibility.

The Environmental Assessment or the development application does not provide enough stormwater management details to demonstrate feasibility and minimal impact.

Detail design work will be undertaken by the successful tenderer for the project, once they are appointed by KEE, which will demonstrate how the water issues will be managed on site. This situation (building an industrial type development within an area with many and varied drainage paths) is certainly not unique in this part of Sydney, which is hilly and has extensive natural vegetation. There are many examples of successful developments in the Warringah area that have minimal impact on water flows and quality in the surrounding areas.

Item 6 – Conditions of approval

Council has outlined 6 conditions for approval, which are reproduced below.

1. *Due to the increased hard surface run off, potential increased discharge velocity, increased nutrient discharge and the associated impacts on the watercourse and the wetland, it is important that adequate details of stormwater treatment and detention devices are provided to ensure that there will be no hydrological change arising from the Project. Council would normally require this information prior to granting approval although, if this is not considered necessary, this information should be required by way of condition.*
2. *Any impact on any riparian land (including vegetation) must be minimised to the greatest extent possible.*
3. *Adequate stormwater treatment devices should be installed and maintained in perpetuity to ensure that water quality hydrology mimics pre-development characteristics.*
4. *A water and groundwater quality testing program should be prepared and implemented to ensure that the construction and operation of the Project does not negatively impact on the downstream environments and that the relevant water and groundwater targets are achieved.*
5. *The proposed wastewater irrigation area is to be located so as to ensure contaminated water does not impact any watercourse.*
6. *A Biodiversity Management Plan should be prepared in accordance with Warringah Council's Guidelines and implemented in perpetuity for threated species including Tetratheca glandulosa (to ensure the long-term viability of the species), the offset areas and the Coastal Upland Swamp. Council should be consulted on the development of the Biodiversity Managementn Plan (including in relation to the design of the offset). A public positive covenant should be created which requires compliance with the plan.*

These are accepted by KEE and are included in the Statement of Commitments.

3 RTA (9 June 2011)

In its letter of 9 June 2011, RTA requested that the following be included in the conditions of consent:

Item 1 – Minimising impedance to through movement

The RTA has reviewed the applicant's submission report and our letter dated 14 March 2011 and has the following comments for the Department's inclusion in the condition of consent.

7. *To minimise impedance to through movements and to facilitate turning movements into and out of Kimbriki Road, the following improvement works needs to be undertaken as part of this development:*
    a. *Extend the length of the right turn bay on Mona Vale Road by approximately 30m as suggested in the traffic report.*
    b. *The RTA does not support the use of an existing westbound lane on Mona Vale Road as a continuous acceleration lane. The application is required to extend the existing acceleration lane to meet current Standards (detailed in point 2 of this letter).*

c. *The RTA requires the eastbound acceleration lane on Mona Vale Road forming part of the seagull (existing) intersection to be extended to enhance road safety at this location to minimise potential for "rear-end" crashes. This may require some localised road widening to facilitate the extension.*

d. *Widening of Kimbriki Road to provide a dedicated left turn lane of 80 metres 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.*

   The RTA also requires SIDRA modelling, which incorporates the abovementioned improvements, to be undertaken to demonstrate that the intersection of Mona Vale Road and Kimbriki Road will operate satisfactorily.

Overall response

GTA Consultants assisted GHD in addressing the RTA proposed conditions of consent (SRDAC Letter of 9 June 2011) relating to the intersection design of Mona Vale Road/Kimbriki Road. GTA Consultants engaged with the RTA's land use planning section and provided them with a copy of Concept Plan B, which addresses items 1 a) to d) of the SRDAC letter. A copy of Concept Plan B is attached.

On 1 July 2011, the RTA agreed to a 250 m length for the westbound acceleration lane (Item 1b). This was in accordance with the concept plan that GTA provided to RTA, who also agreed that there is no need to adjust the length or width of the eastbound acceleration lane (Item 1c).

GTA Consultants also engaged with the RTA's corridor planning section to ensure that the intersection concept designs prepared by KEE were consistent/compatible with any future Mona Vale corridor proposals of the RTA.

The RTA provided in-principle approval to the proposed intersection layout of Kimbriki Road/Mona Vale Road that they were provided with (Concept Plan B), in a letter dated 18 July 2011 (Ref: RDC 10M689b Vol 3 SYD10/01026/02). A copy of the letter is attached. The RTA indicated that there were no firm plans as yet for what the RTA corridor proposals would include but that they had initiated Preliminary Environmental Investigations (PEI) associated with the longer term upgrade of Mona Vale Road (between Terry Hills and Ingleside) to improve capacity along this corridor. This PEI work is programmed to be completed by the end of 2011.

A copy of this ecological mapping has been provided to GTA (attached). This indicates that there are no significant ecological constraints associated with the Kimbriki related intersection works, which only appear to involve shifting the edge of the road by 2-3 metres.

Items 2 to 8 – Additional standard RTA conditions

8. *The abovementioned intersection works shall be designed in accordance with Austroads Guide to Road Design in association with relevant RTA supplements (available on www.rta.nsw.gov.au) and shall be submitted to the RTA for review and endorsement.*

   It should be noted that a plan checking fee (amount to be advised) and lodgement of a performance bond may be required from the applicant prior to the release of the approved design plans by the RTA. The developer will be required to enter into a Works Authorisation Deed (WAD) for the

abovementioned works. The WAD will need to executed prior to the RTA's assessment of the detailed design plans. The Construction Certificate shall not be released until such time the WAD is executed.

9. *The developer shall 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.*
10. *The layout of the proposed car parking areas associated with the subject development (including, driveways, grades, turn paths, sigh distance requirements, aisle widths, aisle lengths, and parking bay dimensions) should be in accordance with AS 2890.1 – 2004 and AS 2890.2 – 2002 for heavy vehicle usage.*
11. *All vehicles shall enter and exit the site in a forward direction.*
12. *All vehicles shall be wholly contained on site before being required to stop.*
13. *A Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements, traffic control and advanced warning signs shall be submitted to Council and RTA prior to the issue of a construction certificate.*
14. *All works associated with the proposed development shall be at no cost to the RTA.*

In accordance with Clause 104(4) of State Environmental Planning Policy (Infrastructure) 2007, it is essential that a copy of Department of Planning's determination on the proposal (conditions of consent if approved) is forwarded to the RTA at the same time it is sent to the developer.

KEE accepts all of these conditions, and they have been included in the Statement of Commitments.

4 Adjustments to Offset Strategy Areas and Platform Footprint

Some adjustments have been made to the proposed offset strategy for the project, to ensure that the proposed offset strategy is consistent with the original consent (Development Consent 96/371) for the overall Kimbriki site, which defined areas approved for future quarrying and landfilling.

The offset areas proposed in the EA had not taken account of the operational areas defined in the 1996 consent. This only became apparent recently during preparation of a Master Plan for the Kimbriki site. To avoid possible confusion in future between offset areas and operational areas, these adjustments have been made, and the offset areas shown on the attached plan (Figure 2) are anticipated will become part of the EA Consent.

The original proposed strategy in the EA (along with identified restricted activity areas) and the adjusted offset strategy are both shown in Figure 3 and Figure 4 respectively.

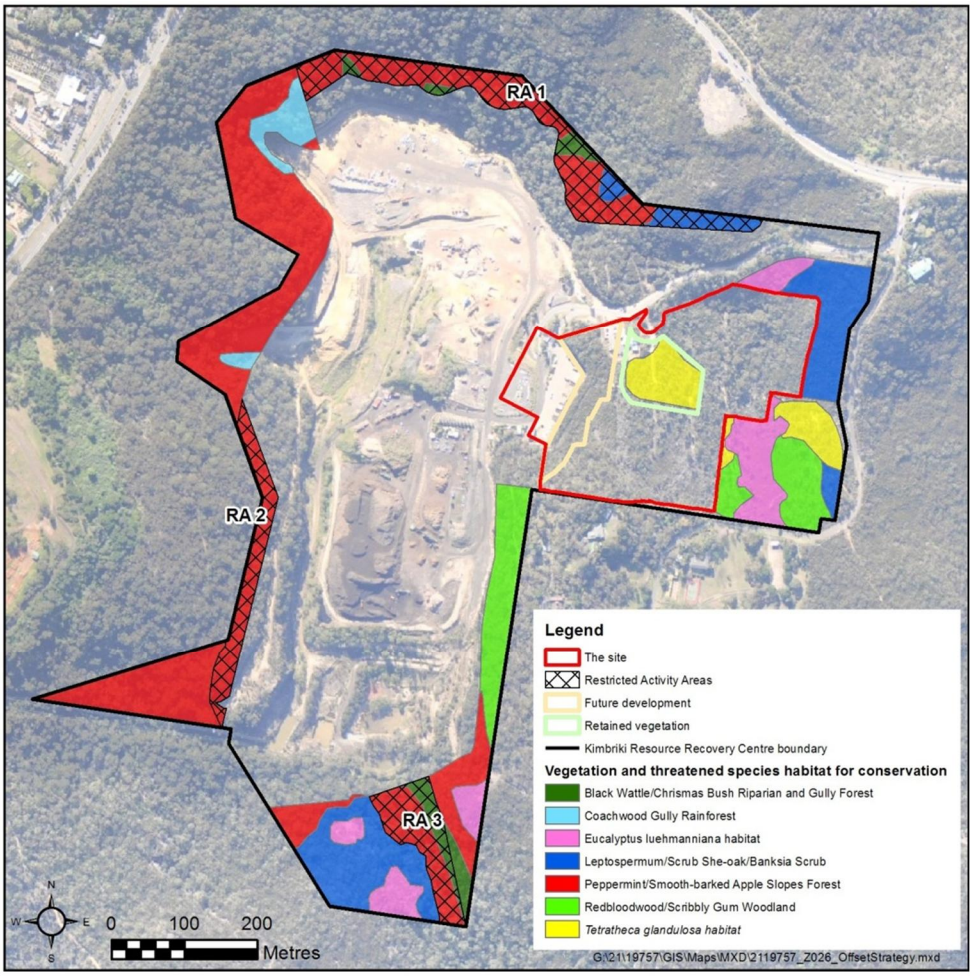

Figure 3 – Proposed EA offset strategy and restricted activity areas

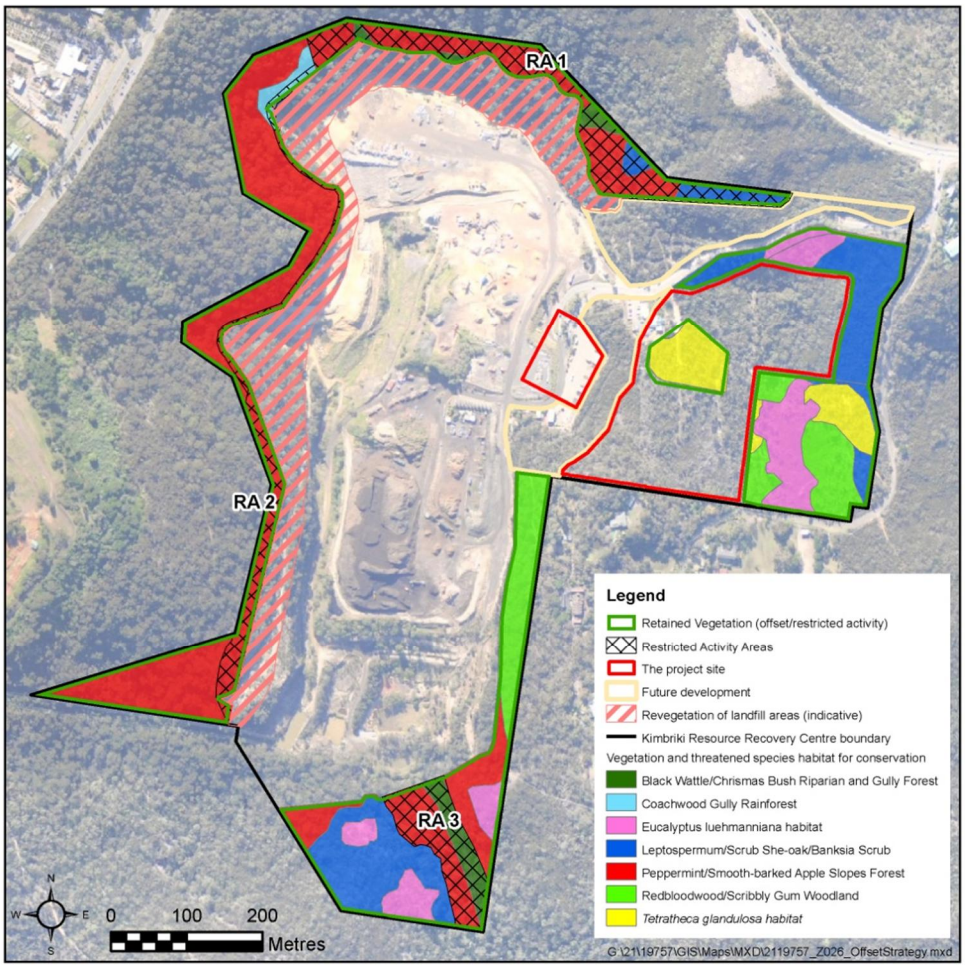

Figure 4 – Revised offset strategy, restricted activity areas and (long-term) rehabilitation areas

As described in Section 1 (on page 1), KEE decided to reduce the footprint of the platform in response to NOW's request to relocate the proposed buildings/proposal away from the upland swamp on the site. The adjusted platform area is shown on Figure 1. The additional vegetation retained as a result of this adjustment to the platform footprint adds to the overall ecological offset strategy.

Table 1 shows the offset strategy as it appeared in the EA. Table 2 shows the revised offset strategy and the difference in area to be protected. The revised offset strategy provides a net increase in offset ratio of affected species and vegetation communities from 2.56:1 to 2.60:1. The area of vegetation to be removed by the project is now less (5.52 ha compared to 5.75 ha), and the removal of the amenities area from the platform adds 0.23 ha of new offset area. A slight adjustment to the platform shape has also resulted in an increase in the offset area of approximately 0.08 ha to the north of the platform.

Table 1 Original offset strategy

Vegetation category	Area (ha) / no plants removed by project	Area (ha) / no plants to be protected	offset ratio
Tetratheca glandulosa – known plants	2 plants	18 plants	9:1
Tetratheca glandulosa habitat	0.56	1.90	3.4:1
Eucalyptus luehmanniana habitat	0.20	1.48	7.4:1
General native vegetation (total), made up of:	4.99	11.37	2.3:1
Peppermint/Smooth-barked Apple Slopes Forest	0	5.83	infinite
Redbloodwood/Scribbly Gum Woodland	2.80	2.02	0.7:1
Leptospermum/Scrub She-oak/Banksia Scrub	2.19	2.91	1.3:1
Coachwood Gully Rainforest	0	0.61	infinite
Total - all vegetation categories	**5.75**	**14.75**	**2.56:1**

Table 2 Revised offset strategy

Vegetation category	Difference due to the project	Area (ha) / no plants removed by project	Area (ha) / no plants to be protected	offset ratio
Tetratheca glandulosa – known plants		2 plants	18 plants	9:1
Tetratheca glandulosa habitat	0	0.56	1.90	3.4:1
Eucalyptus luehmanniana habitat	+0.08	0.15	1.56	10.4:1
General native vegetation (total), made up of:		4.81	10.87	2.2:1
Peppermint/Smooth-barked Apple Slopes Forest	-0.38	0	5.45	infinite
Redbloodwood/Scribbly Gum Woodland	+0.18	2.62	2.2	0.8:1
Leptospermum/Scrub She-oak/Banksia Scrub	+0.05	2.19	2.96	1.4:1
Coachwood Gully Rainforest	-0.35	0	0.26	infinite
Total - all vegetation categories	**-0.42**	**5.52**	**14.33**	**2.60:1**

The adjustments to the offset areas on the western side of the site (due to the need to align offset areas with operational areas defined in the 1996 consent), result in a reduction of 0.73 ha in the vegetation retained as offsets near the landfilling areas. However, this is partially offset by an increase of 0.31 ha in environmental offsets on or adjacent to the project site, resulting in a net vegetation loss across the entire KEE site, of 0.42 ha.

However this reduction in overall vegetation has no effect on vegetation communities disturbed by the project, as the areas of vegetation that is no longer included in the offset areas comprise species that are not present in the project area (Peppermint/Smooth-barked Apple Slopes Forest and Coachwood Gully Rainforest), and are commonly found in the vicinity of the Kimbriki site and in the region. As shown in Table 2, the overall offset ratio associated with the project increases from 2.56:1 to 2.60:1, due to the preservation of additional *Eucalyptus luehmanniana* habitat and Redbloodwood/Scribbly Gum Woodland.

We trust the above adequately addresses your concerns and look forward to receiving advice about approval of the project, subject to the revised Statement of Commitments.

Yours sincerely

David Gamble
Service Group Manager – Waste Management
02 9239 7354

Attachments: RTA letter
Concept Plan B
Ecological mapping
Revised Statement of Commitments

RTA letter

Our Reference:	RDC 10M689b Vol 3 SYD10/01026/02
Your Reference:	MP 10_0065
Contact:	Angela Malloch
Telephone:	8849 2041

NSW GOVERNMENT | Transport Roads & Traffic Authority

GTA Consultants
PO Box 5254
West Chatswood NSW 1515

Attention: Matthew Houlden

KIMBRIKI RESOURCE RECOVERY PROJECT – KIMBRIKI ROAD, TERREY HILLS

Dear Sir/Madam,

Reference is made to your correspondence dated 5 July 2011 with regard to the abovementioned development application, which was referred to the Roads and Traffic Authority (RTA) for in principle support of the layout of Kimbriki Road/Mona Vale Road intersection.

The RTA has reviewed the aaSIDRA analysis and provides in-principle approval to the intersection layout of Kimbriki Road/Mona Vale Road including the following works:

1. Extension of the right turn bay on Mona Vale Road by approximately 30 metres to total 100 metres.
2. Extension of the existing westbound acceleration lane to 250 metres in length.
3. Widening of Kimbriki Road to provide a dedicated left turn lane 80 metres in length and a separate right turn lane.

Should you require any further clarification in relation to this matter, please call the contact officer named at the top of this letter.

Yours faithfully,

O Hodgson

Owen Hodgson
Senior Land Use Planner
Transport Planning, Sydney Region

18 July 2011

Roads and Traffic Authority of New South Wales

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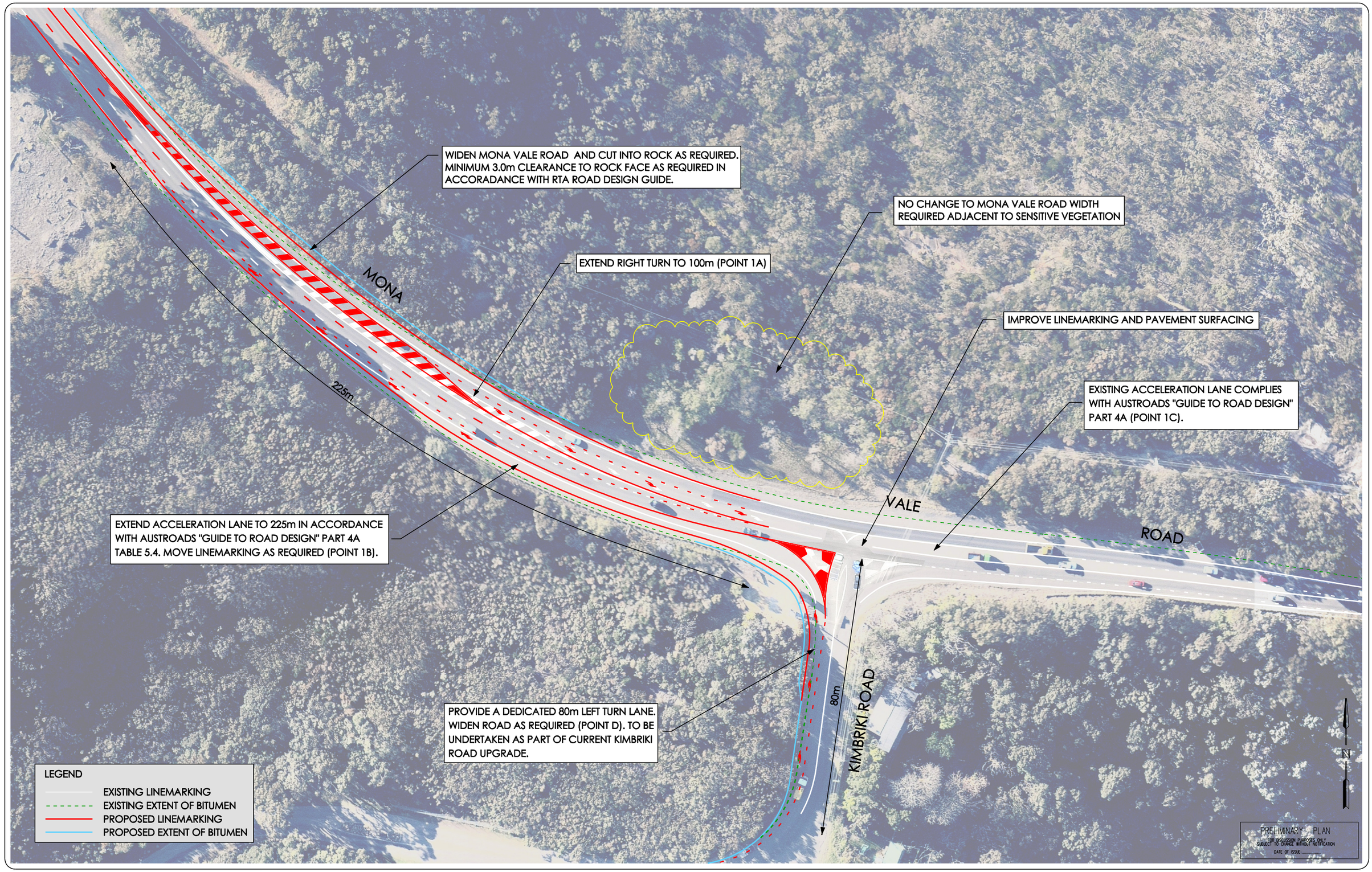
Concept Plan B



AMENDMENTS

ISSUE	DATE	DESCRIPTION	P.M.
P1	24 06 11	INITIAL ISSUE - B L	MH

GENERAL NOTES

1. ALL DIMENSIONS AND RADII ARE IN METRES AND ARE TO THE FACE OF KERB AND CHANNEL.
2. BASE INFORMATION OBTAINED FROM NEARMAP AERIAL PHOTOGRAPHY DATED 16 MAY 2011.
3. GTA CONSULTANTS DOES NOT TAKE ANY RESPONSIBILITY FOR THE ACCURACY OF THE EXISTING CONDITIONS BASE (AERIAL PHOTOGRAPHY) ON WHICH THE SETOUT DETAIL IS BASED. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE EXISTING CONDITIONS INCLUDING UNDERGROUND SERVICES SHOULD BE VERIFIED ON SITE.
4. MONA VALE ROAD - SPEED ZONE 70KM/H

DESIGNER B L I
DRAWN B L I
DATE 24 JUNE '11
CHECKED M HOULDEN

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CLIENT KIMBRIKI ENVIRONMENTAL ENTERPRISES PTY LTD

KIMBRIKI RD FUNCTIONAL DESIGN
MONA VALE ROAD/ KIMBRIKI ROAD
TERREY HILLS

CONCEPT PLAN - OPTION B

DRAWING NO. JS11482-02
ISSUE P1

Ecological mapping

Revised 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.
	An operational environmental management plan would be prepared and implemented as outlined in section 18.2.2 of the EA. 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. 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. 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. Additional measures are proposed to contribute to the formal offset strategy and impact mitigation measures proposed in the EA (chapter 8). They include 'Restricted Activity' areas, where existing vegetation will be retained, but necessary works such as construction of stormwater diversion drains and stormwater treatment facilities will be undertaken in future. Measures include:

Issue	Commitments
	• Formal offset areas as shown in Figure 4; • Three further areas of restricted activity (totalling approximately 4.7 ha), as shown in Figure 4; • Project site landscaping; • Future regeneration of completed landfilling as indicated in Figure 4 (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. 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

Issue	Commitments
	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. 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

Issue	Commitments
	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. The design of the operational stormwater management system, as outlined in chapter 12 of the EA, 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

Issue	Commitments
	disruptions to natural water flows and control the quality of water runoff into the natural drainage flow path. A stormwater management (including details of stormwater treatment and detention devices) would be prepared prior to commencement of construction. 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. 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. 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, including the measures identified in section 10.5.1 of the EA. 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.
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.
Hazards	All safeguards identified in the hazard identification process (Table 15.1 of the EA) 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

Issue	Commitments
	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.