

Response to Submissions Report

**Kembla Grange Resource Recovery Facility
Building Material Storage and
Resource Recovery Facility Exceeding 30,000 Tonnes per Annum and
Redesign and Expansion of Approved Facility**

**Lot 10 DP 878167
50 Wyllie Road, Kembla Grange
Application No. SSD-5300**



Prepared for Bicorp Pty Ltd

**by TCG Planning
20 May 2015**

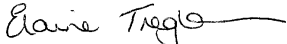
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Appendix 3	Development Consent DA 2009/1153/D and approved plans;
Appendix 4	Construction Certificate 965-2012
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Appendix 6	Correspondence from Burrell Solicitors
Appendix 7	Revised Development Plans
Appendix 8	Revised Architectural Plans
Appendix 9	Revised Landscape Plan
Appendix 10	Revised Preliminary Hazard Analysis
Appendix 11	Revised Waste Management Plan
Appendix 12	Revised Air Quality Assessment
Appendix 13	Revised Noise Assessment
Appendix 14	Revised Vegetation Management Plan
Appendix 15	Correspondence Regarding Bushfire Protection
Appendix 16	Technical Note-Rail Level Crossing Modelling Traffic Management Plan
Appendix 17	Traffic Impact Statement

1 Introduction

1.1 Background and Development Proposal

In September 2014 TCG Planning (on behalf of Bicorp Pty Ltd) submitted SSD5300 seeking approval for an increase in operational capacity and the redesign and expansion of the footprint of storage areas at the Kembla Grange Waste Recovery Facility located at Lot 10 DP 878167 Wylie Rd, Kembla Grange. The land is currently utilised for the purpose of a building material storage and recycling facility, which was approved on 29 April 2010 pursuant to Development Consent 2009/1153. Modification was granted to this consent on 17 July 2012 (DA-2009/1153/A) to increase the annual tonnage to 29,999 tonnes per year. A further modification (DA-2009/1153/D) was granted on 7 May 2015 for the "reconfiguration of the site layout and additional site facilities". Modifications B and C were withdrawn from Council.

The expanded facility, which is the subject of the current state significant development application (SSD 5300) will process up to 230,000 tonnes of waste per annum. Following the issuing of DA-2009/1153/D, which authorised a number of existing structures/facilities on the site, it is confirmed that the current application seeks approval for:

- The processing of up to 230,000 tonnes per annum of building and demolition waste, including brick, concrete, soils, timber, general/solid waste, and non putrescible organic waste;
- Building material storage, waste storage, and processing/stockpiling areas; and
- Ancillary infrastructure including plant and equipment such as crushers, screens and front-end loaders.
- The redesign and expansion of the footprint of storage areas on site, thereby providing a more functional operational arrangement. In addition to an expansion of the footprint of the operations, this development application seeks consent for the provision of an upgraded stormwater management system; the provision of the additional buildings on the site including an OHS training room, office and workshop; minor alterations and the fitout of the approved shed for use as an indoor processing and storage shed; the provision of additional car parking spaces; a skip bin storage area and provision of a truck parking area.
- The undertaking of the development in two stages. Stage 1 will incorporate all works, with the exception of works to the east of the watercourse [including the construction of the buildings (the workshop, OHS training room and office building), on site detention basin (OSD) B, and the truck parking/ access], which will be constructed in Stage 2.

The Environmental Impact Assessment was publicly advertised from 9 October to 7 November 2014 and a number of submissions were received from members of the public, Wollongong City Council and state agencies. This Response to Submissions (RTS) has been prepared on behalf of the applicant, Bicorp Pty Ltd, to address the issues raised in such submissions, to incorporate revised management and mitigation measures where appropriate, to detail changes to the project as a result of the further analysis which has been undertaken, and to incorporate a revised Statement of Commitments. The Response to Submission Report has been prepared following request from the Director General under Clause 85A of the Environmental Planning and Assessment Regulations, 2000.

1.2 Submissions

This 'Response to Submissions Report' addresses submissions from the following persons/agencies/organisations:

- Department of Planning and Environment;
- Department of Primary Industries (NSW Office of Water);
- Environment Protection Authority;
- NSW Rural Fire Service;
- Office of Environment and Heritage;
- Transport, Sydney Trains;
- Wollongong City Council;
- Three (3) submissions from private consultants/members of the public.
- A petition containing seventy (70) signatures in support of the project.

1.3 Report Structure

This response to Submissions/Preferred Project report is structured in the following manner;

Section 1: Introduction

Contains the background to the project and a summary of the submissions received in response to the exhibition of the project.

Section 2: Response to Submissions

Provides a response to the issues raised in the submission received from government agencies and the public.

Section 3: Modifications made to the Project

Confirms modifications which were made to the project as a result of the additional assessment process.

Section 4: Revised Statement of Commitments

Presents the revised Statement of Commitments for the project.

Table 1 lists the documents which are appended to this report:

Table 1: Amended/Additional Documentation

Appendix	Report/Plans	Author	Reference	Date
Appendix 1	Summary of Government Agency Submissions	TCG Planning	-	May 2015
Appendix 2	Summary of Public Submissions	TCG Planning	-	May 2015
Appendix 3	Development Consent DA 2009/1153/D and approved plans.	Wollongong City Council	-	7 May 2015
Appendix 4	Construction Certificate No. 965-2012	Illawarra Building Certifiers	-	18 August 2014
Appendix 5	Interim Occupation Certificate No. 965-2012	Illawarra Building certifiers	-	18 April 2013
Appendix 6	Correspondence	Burrell Solicitors	-	11 May 2015
Appendix 7	Revised Development Plans	KFW	Various - Refer Table 4	Various - Refer Table 4
Appendix 8	Revised Architectural Plans	DJ Little Design	Job No. 21304 Sheets 1-22	15 May 2015
Appendix 9	Revised Landscape Plan	Ochre	Drawing 1442-LC01F	8 May 2015
Appendix 10	Revised Preliminary Hazard Analysis	Benviron	E49/4 Document No. 1	18 April 2015
Appendix 11	Revised Waste Management Plan	Benviron	E49/8 Document No. 6	8 April 2015
Appendix 12	Revised Air Quality Assessment	GHD	-	April 2015
Appendix 13	Revised Noise Assessment	GHD	-	April 2015
Appendix 14	Revised Vegetation Management Plan	Southern Habitat	-	May 2015
Appendix 15	Correspondence Regarding Bushfire Protection	Ecological and RFS	-	8 May 2015 and various emails
Appendix 16	Technical Note - Rail Level Crossing Modelling Traffic Management Plan West Dapto Road, Kembla Grange	Cardno	Ref 82015053	17 December 2014
Appendix 17	Revised Traffic Impact Assessment	KFW	KF110816-Rev E	22 April 2015

1.4 Summary of Submissions

A total of six (6) submissions were received from government agencies, one from the local Council, three (3) from members of the public and one petition in support of the project containing seventy (70) signatures.

Table 2 summarises the key issues raised in the government agency submissions and public submissions and the relevant section of this Response to Submissions where each issue is addressed. A summary of the submissions from government agencies is contained in **Appendix 1**, whilst **Appendix 2** contains a summary of the public submissions.

Table 2: Summary of Submissions

Submission Issue	Stakeholder	Report Section
Planning	Wollongong City Council Private Submission	Section 2.4
Existing Approvals and Operations	Wollongong City Council Department of Planning and Environment Private Submission	Section 2.1
Consultation	Private Submission	Section 2.3
Staging	Department of Planning and Environment	Section 2.2.2
Air Quality - Dust	Environment Protection Authority Cardno Kaliwest	Section 2.5.1
Odour	Environment Protection Authority Cardno Kaliwest	Section 2.5.2
Noise	Environment Protection Authority Kaliwest	Section 2.6
Waste	Environment Protection Authority	Section 2.8
Preliminary Hazard Analysis	Cardno	Section 2.9
Greenhouse Gas	Private Submission	Section 2.10
Contamination	Private Submission	Section 2.11
Bushfire Risk	Rural Fire Service	Section 2.12
Riparian Land	Department of Primary Industries (Office of Water) Rural Fire Service Office of Environment and Heritage	Section 2.12.3
Biodiversity	Office of Environment and Heritage	Section 2.13
Flooding	Office of Environment and Heritage	Section 2.14
Groundwater	Department of Primary Industries (Office of Water)	Section 2.15
Traffic	Transport Sydney Trains Department of Planning and Environment Private Submission	Section 2.16
Servicing	Wollongong City Council	Section 2.17

2 Response to Submissions

2.1 Approvals

Issues relating to approvals, authorisation, compliance, enforcement and commitments by the proponent were raised within a 'Private and Confidential' submission which is summarised as Attachment 2 of the Department and Planning and Environment's (DPE) correspondence of 19 January 2015. DPE also requested the submission of further information regarding Construction Certificates and final Occupation Certificates in its correspondence of 19 January 2015. Further, legal advice was requested to be submitted regarding the mechanism to be utilised for regularising of existing consents. Such matters are addressed under the following key headings;

- 1) Approvals and Commitments
- 2) Regularising of Existing Consents
- 3) Licences

2.1.1 Approvals and Commitments

DPE requested that information be provided with respect to the following:

- *"Provide details of any Construction Certificates and final Occupation Certificates issued for existing development on the site which have not already been provided to Wollongong City Council".*

Wollongong City Council states the following with respect to the issuing of an Occupation Certificate:

- *"Council's records reveal that an Interim Occupation Certificate has been issued for the earthworks, hardstand area, drainage works, road works and bridge only on 18 April 2013. Council do not have record of a final Occupation certificate being issued for DA 2009/1153/A".*

Wollongong Council also notes that at the date of exhibition of SSD 5300 it was assessing two applications (DA 2009/1153/C and 2009/1153/D) for modification of the facility. Modification C seeks to vary the terms of a condition such that an Interim Occupation Certificate may be issued for the development. Council confirms that *"Modification D seeks the reconfiguration and use of site facilities, that includes additions and alterations with the relocation of buildings and car parking. No changes are sought to the processing capacity of the development. It is considered that this modification is sought primarily to regularise the activities and reflect the development as currently on site".*

Council's submission states *"if Council does support and approved either or both of these modification applications prior to determination of the current State Significant Development Application, Council will inform the department of any such determination".*

The 'Private and Confidential' submission states:

- *"The development has been doubled and the approved throughput increased without obtaining development consent."*
- *"Little effective enforcement by Wollongong City Council in response to unlawful development and breaches of local planning controls".*

- *"The application seeks retrospective approval for unlawful works and such approval cannot be lawfully granted."*
- *"Commitments made by the Proponent cannot be trusted given their environmental performance and compliance record".*

Response:

Development Consent DA-2009/1153 was granted on 29 April 2010 for a "building material storage and recycling facility". A subsequent modification was issued on 17 July 2012 (DA-2009/1153/A) which granted consent for an increase in annual tonnages to 29,999 tonnes per year, and to increase the maximum storage capacity to 2,500 tonnes.

The following Construction Certificates and Occupation Certificates (**Appendix 4 and 5**) have also been issued by Illawarra Building Certifiers in relation to the Kembla Grange Resource Recovery Facility:

- Construction Certificate 965-2012 (pertaining to Development Consent DA 2009/1153/A) for the workshop and office, issued on 18 August 2014;
- Interim Occupation Certificate 965-2012 for earthworks, hardstand area, drainage works, road works and bridge. Illawarra Building Certifiers have confirmed that this certificate was issued on 18 April 2013;

It should be noted that Bicorp Pty Ltd has worked cooperatively with Wollongong Council since 2013 to obtain authorisation for the facilities on the site which were relocated or did not form part of the original approval (DA 2009/1153). The outcome has been the issuing of a further modification (DA 2009/1153/D) under Section 96(2) of the Environmental Planning and Assessment Act, 1979. This modification, which was issued on 7 May 2015, granted approval for *"a reconfiguration of the site layout and additional site facilities"*. Specifically, this modification has granted approval to the following:

- An increase in size of existing approved Outdoor Open Processing, Stockpiling and Loading Area of 2064m², increased from 6750m² to 8814m².
- Use of moveable concrete block bins.
- Change in position of part of existing approved internal road, re-routed around the expanded area.
- Relocation from the approved location & reconfiguration in the size & shape & number of buildings for the purpose of offices, staff amenities etc.
- The provision and siting of a generator.
- Provision of ten (10) carparking spaces as required by condition 19 of DA 2009/1153/A and relocation from the approved position.
- The weighbridge, which is required to appropriately monitor approved tonnage levels.
- Relocation of the septic tank adjacent to the staff amenities.
- The relocation and reconfiguration of the equipment storage area to park approved machines.
- The equipment area containing the demountable fabric covered workshop and equipment area..

A copy of Development Consent DA 2009/1153/D and the approved plans are contained in **Appendix 3** of this Response to Submissions. The current application, SSD 5300, therefore does not seek the approval for the authorisation of any existing works on the site following the issuing of DA-2009/1153/D. Further, it is noted that Development Application 2009/1153/C, which was also under consideration at the date of exhibition of the EIS, has now been withdrawn and hence holds no relevance to the current SSD application. A Final

Occupation Certificate is anticipated to be issued by Illawarra Building Certifiers following confirmation of the completion of works associated with DA 2009/1153/D.

With respect to the submission which states that Wollongong Council taken little effective enforcement action, it is noted that Wollongong Council has in fact taken action to ensure that conditions of consent are complied with. In 2014 Wollongong City Council took legal action in relation to non compliance with conditions of consent relating to lodgement of information pertaining to onsite detention, positive covenants, erosion/sediment control, engineering works, dust monitoring/suppression, stormwater quality/flows and scour/erosion protection. Further, the enforcement action also related to the incorrect placement of a number of facilities on the site or unauthorised works including the carparking, office buildings and shipping containers, skip bins, weighbridge, pump out system, generator, equipment storage area, shipping containers, skip bins, stockpiles, storage bays. No issue was raised by Wollongong Council, nor did Council take action in relation to the capacity or 'throughput' of the facility, as Bicorp has confirmed that the facility currently operates within its approved annual capacity of 29,999 tonnes and operates a weighbridge on site to confirm this tonnage. As a result of this enforcement action Council, in accordance with the Land and Environment Court judgement, issued a fine to Wollongong Recycling Pty Ltd on 31 July 2014.

Bicorp subsequently lodged documentation with Wollongong Council on 4 July 2014, with such information addressing engineering and hydraulic matters (including certificates of compliance), air and dust monitoring, an OSD maintenance schedule, structural certification, water quality monitoring, positive covenant and a restriction on the use of the land. Further, DA 2009/1153/D, which was approved by Wollongong Council on 7 May 2015, now authorises the reconfiguration of the site layout and the 'as built' site facilities, to address matters which were the subject of the enforcement action.

The revised Statement of Commitments contained in Section 4 of this Response to Submissions details Bicorp's commitments with respect to the operations of the Kembla Grange Resource Recovery Facility. Whilst the previous enforcement action is acknowledged, it cannot be presumed that further non compliance with conditions and/or commitments will occur. Should non compliance occur in respect of any development consent, Part 6 of the Environmental Planning and Assessment Act, 1979 will continue to provide implementation and enforcement powers to ensure compliance.

2.1.2 Regularising of Existing Consents

Wollongong City Council states within its submission:

"It is recognised as provided in the EIS, that DA-2009/1153/A cannot be surrendered due to components of this development consent are associated with a number the existing structures/works on site in which an interim Occupation Certificate has been granted to date.

However, it is considered that this State Significant Development application sought will consider and address all matters on the site existing and proposed. If the department is to support the application and grant consent, it is understood that the consent will regularise the entire operation and use of the site as a resource recovery facility including existing and proposed structures and buildings. "

DPE has requested that legal advice be provided on the recommendations for regularising existing consents within an SSD consent.

Response:

Advice on the regularising of existing consents has now been sought from Bicorp's legal representative John Burrell, with a copy of this legal opinion contained in Appendix 6. This advice states the following:

"Existing works and Structures"

On 7 May 2015, Wollongong City Council approved section 96 application DA 2009/1153D which encompasses all of the existing works and structures on the site 'as built'. Council has power to grant such consent even though in effect it is retrospective in respect of works/structure which were undertaken/erected prior to consent being granted - Windy Dropdown P/L Warringah Council [2000] NSWLEC 240.

"Previous Consent"

There is now no reason once the SSSD has been granted to retain any of the previous consents provided these have been acted upon in respect of the physical site works and structures relied upon for the operation of the proposed SSSD Consent. The applicant will therefore accept any reasonable condition of consent requiring DA 2009/1153A & DA 2009/1153 D be extinguished after any requisite occupation certificate under those consents has been issued. This will preserve the lawfulness of the works and structures undertaken/erected under those consents."

2.1.3 Licences

Wollongong City Council states within its submission:

"The proposal will require an Environment Protection Licence (EPL) as the development is identified as a scheduled activity in Schedule 1 of the Protection of the Environment Operations (POEO) Act. Council also confirmed that it considers that the EPL should include conditions that relate to "hours of operation, odour, leachate, collection and disposal, surface water quality monitoring, dust and air quality monitoring, vegetation and riparian corridor management of the development".

The Environment Protection Authority (EPA) stated in its submission:

"It is noted that the project will require a licence under the Protection of the Environment Operations (POEO) Act 1997 to commence construction activities and to operate. The proponent will need to make a separate application to the EPA to obtain a licence once the development project approval is granted".

Response:

The comments provided by Council and the EPA in relation to the obtaining of an Environmental Protection Licence are concurred with. The recommended conditions of consent provided by Council and the EPA and the POEO Act address such matters. No changes are required to the project as a result of this licensing requirement.

2.2 Plans and Staging

Issues raised by DPE which relate to the submitted documentation and the extent of proposed works are addressed under the following headings.

- 1) Plans of Existing and Proposed Works
- 2) Staging

2.2.1 Plans of Existing and Proposed Works

Wollongong City Council states within its submission:

"The consent in DA-2009/1153/A included a workshop building. It is noted that on a site inspection in October 2014 construction has commenced for this building.It is noted that the existing site plan in drawing number C19 is not entirely representative of the site currently nor does it reflect the approved site plan related to consent DA-2009/1153/A, in particular the number and location of buildings shown on this plan."

DPE requested that the plans and a schedule of the existing and proposed development should clearly identify existing and new work/buildings and relevant consents; should identify works to be demolished and retained; and should clarify what works form part of the SSD development.

Response:

Following the granting of Development Consent 2009/1153/D on 7 May 2015 the scope of the current application (SSD 5300) is now clarified within Section 1.1 of this Response to Submissions, to confirm that the proposed development;

- does not include the provision of the additional buildings on the site identified as site offices and amenities (labelled as Buildings A to D on Plans prepared by DJ Little Design Ref: 21304 Sheets 1-22 dated 15 May 2015) following authorisation/approval of such buildings by DA 2009/1153/D;
- does not include the provision of the equipment storage area following authorisation of such area by DA 2009/1153/D;
- does not include the construction of the western shed (Building H), which was approved pursuant to DA2009/1153 but does include minor alterations and the fitout of this approved shed for use as an indoor processing and storage shed.
- does not include the relocation of carparking spaces, with the location of the existing carparking spaces authorised by DA 2009/1153/D, however SSD 5300 does seek approval for the construction of sixteen (16) additional spaces.

Additional plans have now been prepared by KFW to clarify those works which currently exist on the site, those works which have been granted consent pursuant to DA2009/1153/D and those works which form part of the current application (SSD5300). Such plans are referenced as:

- Drawing C35 - Historical and Proposed Development Compilation Plan
- Drawing C36 - Historical and Proposed Development Separate Development Plan (Existing)
- Drawing C37 - Historical and Proposed Development Separate Development Plan (Sect 96)
- Drawing C38 - Historical and Proposed Development Separate Development Plan (SSD 5300)

Further, **Table 3** confirms those works which are existing, works which have been approved pursuant to DA-2009/1153/D and works which form part of the current application (SSD 5300). This table also details the relevant consents which approved the listed works, together with applicable construction and occupation certificates.

Table 3: Schedule of Existing, Approved and Proposed Works

	DA 2009/1153(A) Approved 17/7/2012	Construction Certificate 965-2012	Interim Occupation Certificate 965-2012	DA 2009/1163/D Approved 7/5/15	SSD5300 Under Assessment
Processing and Stockpiling Area	DA 2009/1153 granted approval for Outdoor Open Processing, Stockpiling and Loading Area to the east of the shed containing designated stockpile areas. Area of 6750m ² .	-	OC incorporated earthworks and hardstand area.	Authorised 2064m ² expanded Outdoor Open Processing, Stockpiling and Loading Area, increased from 6750m ² to 8814m ² .	Approval sought for the redesign and expansion of the footprint of the operations conducted on the site to accommodate an extension of the central processing and stockpiling area including an operational area for an increased number of outdoor shredders, crushers, loaders and equipment.
Moveable Block Bin Storage Area/Operational Plan	Did not form part of DA2009/1153/A	-	-	Approved construction of moveable block bins.	Approval sought for revised Operational Plan including construction of expanded and relocated moveable block bins storage area.
Access Road	DA 2009/1153 granted approval for access road from Wylie Road to operational area. Southern section of access road from Wylie Road constructed as per approval.	-	OC incorporated roadworks.	Authorised the relocated position of the northern section of the access road to reflect 'as built' position re-routed around the expanded area and a waiting/passing area prior to the bridge.	Approval sought for a widened and extended perimeter road which provides access to the turning/backing area, processing/stockpiling area, truck parking and proposed workshop etc.
Bridge	DA 2009/1153 granted approval for bridge.	-	OC incorporated bridge.	Bridge unchanged	Approval sought for construction of a replacement bridge over the creek and a new cattle gate which precedes bridge access.
Designated Turning/Backing Area	Did not form part of DA2009/1153/A.	-	-	Did not form part of DA2009/1153/D.	Approval sought for construction of a new vehicle turning/backing area to the north of the processing area.
Weighbridge	Did not form part of DA2009/1153/A.	-	-	Authorised the constructed weighbridge, which was required to appropriately monitor approved tonnage levels.	Weighbridge unchanged - not part of SSD application.
Carparking	DA2009/1153/A approved six (6) carparking spaces within the processing area. DA2009/1153/A approved ten (10) carparking spaces within the processing area. The 'as built' position differs from approved position.	-	OC incorporated hardstand area	Authorised the relocation of ten (10) spaces to the east of the access road in their 'as built' position.	Relocation and construction of carparking spaces to provide a total of 26 carparking spaces (ie an additional 16) on the site.

	DA 2009/1153(A) Approved 17/7/2012	Construction Certificate 965-2012	Interim Occupation Certificate 965-2012	DA 2009/1163/D Approved 7/5/15	SSD5300 Under Assessment
Untarping Area	Did not form part of DA2009/1153/A.	-	-	Did not form part of DA2009/1153/D.	Approval sought for construction of new untarping area to the west of the main access road.
Truck Parking	Did not form part of DA2009/1153/A	-	-	Did not form part of DA2009/1153/D	Approval sought for construction of new truck parking area (incorporating 6 spaces and 1 overnight space) in eastern portion of site.
Equipment Area	Did not form part of DA2009/1153/A	-	-	Authorised the demountable fabric covered workshop equipment storage area (with re-arranged storage containers) for parking of approved equipment 'as built'.	Equipment area unchanged - not part of SSD application. Approval sought for adjacent transtank for fuels and oil storage.
Site Offices and Amenities (Buildings A-D)	Approved the construction of a workshop, manager's office and two shipping containers to west of watercourse.	Approved the construction of office.	-	Authorised the 'as built' relocation & reconfiguration in the size & shape & number of buildings for the purpose of offices, staff amenities etc (ie. 4 buildings labelled A-D). Included pergola and disabled ramp between buildings and carpark.	Site offices and amenities unchanged - not part of SSD application
Site Office (Building E)	Did not form part of DA2009/1153/A	-	-	Did not form part of DA2009/1153/D	Approval sought for Site Office (Building E) to east of watercourse.
Workshop (Building F)	Did not form part of DA2009/1153/A	-	-	Did not form part of DA2009/1153/D	Approval sought for Workshop (Building F) to east of watercourse to be used for servicing and mechanical repairs of trucks and plant equipment.
OH&S Training Room (Building G)	Did not form part of DA2009/1153/A	-	-	Did not form part of DA2009/1153/D	Approval sought for OH&S Training Room (Building G) to east of watercourse.
Shed (Building H)	Approved the construction of a shed (to the west of the processing area).	Approved the construction of shed.	-	No change - did not form part of DA 2009/1153/D.	Approval sought for alteration to accommodate Identification of the approved workshop as an indoor processing and storage shed and minor alterations to the design of the building.
Shipping Container	Required removal of one existing shipping container to east of watercourse.	-	-	No change - did not form part of DA 2009/1153/D.	No change - removal does not form part of SSD5300.

	DA 2009/1153(A) Approved 17/7/2012	Construction Certificate 965-2012	Interim Occupation Certificate 965-2012	DA 2009/1163/D Approved 7/5/15	SSD5300 Under Assessment
Green Waste Shredding Area	Did not form part of DA2009/1153/A	-	-	Did not form part of DA2009/1153/D	Approval sought for construction for green waste shredding area.
Drainage & Water Quality/ Recycling Works	DA 2009/1153/A Approved the construction of an OSD pond south of processing area/stockpiling area.	-	OC incorporated drainage works	Approved amended drainage design including upgrading of OSD and water recycling pond, fencing, access ramp, scour protection.	Approval sought for additional drainage works to accommodate the redesigned and expanded storage areas and to provide improved wastewater management including a shredding runoff pond, enlarged water recycling pond and detention basins (A and B).
Rainwater Tanks/ Leachate Tanks	Approved rainwater tank adjacent to shed (DA 2009/1153). Additional tank approved pursuant to DA2009/1153/D.	-	OC incorporated drainage works	Approved provision of: - 1 x 20,000L water tank to allow for draining of the covered equipment area; - 1 additional 20,000L tank to south of shed; and - 1 x 10,000L water tank to allow for drainage of offices. No change to approved water tank to south of approved workshop (20,000L)	Approval sought for: - Leachate collection tanks to south of shed; - Relocation of the 20,000L rainwater tank adjacent to equipment area.
Generator	Did not form part of DA2009/1153/A	-	-	Authorised the existing generator located to the north of the site offices 'as built'.	No change - generator does not form part of SSD5300.
Septic Tank	Approved septic tank to south of shed.	-	-	Authorised the septic tank in its existing location adjacent to the site offices and the provision of a further tank to the south of the offices.	No change - septic tank does not form part of SSD5300
Vegetation Management	Approved riparian corridor works.	Controlled Activity Approval issued 27/2/2012 pursuant to 10ERM2009/1008)-	-	No change - did not form part of DA 2009/1153/D.	Approval sought for amendment to the riparian corridor works to accommodate reduced planting in specified areas for Asset Protection Zone purposes and offset areas
Landscaping	Did not form part of DA2009/1153/A	-	-	Did not form part of DA2009/1153/D	Approval sought for landscaping works as shown on the submitted Landscape Plan.

The plans of the existing and proposed works, together with the revised Development Plans prepared by KFW, are contained in **Appendix 7** (in A3 format) and are listed in Table 4. This table also confirms the amendment which have been made by KFW to address inconsistencies between plans or to address plan anomalies since exhibition of the plans in November 2014.

Table 4: Schedule of Development Plans

Plan Reference	Name	Amendment No.	Date	Plan Amendments
C10	Site Plan	O	8 May 2015	Delineation of outdoor processing area to address APZ requirements. Note added and legend updated to confirm covering of green waste. Note 14 added to clarify weekly servicing of septic tank. Staging Coloured Disabled parking space relocated to be consistent with DA 2009/1153/D.
C11	Site Sections	F	8 May 2015	Change to sheet numbering only (now sheet 2 of 18)
C12	Pond Details	G	8 May 2015	Change to sheet numbering only (now sheet 3 of 18)
C13	Soil and Water Management Plan	K	18 May 2015	Note added and legend updated to confirm covering of green waste. Staging Coloured Disabled parking space relocated to be consistent with DA 2009/1153/D. Change to sheet numbering (now sheet 4 of 18)
C14	Soil and Water Management Details	C	8 May 2015	Change to sheet numbering (now sheet 5 of 18)
C15	Surfaces Plan	E	8 May 2015	Staging Coloured Disabled parking space relocated to be consistent with DA 2009/1153/D. Change to sheet numbering (now sheet 6 of 18)
C16	OSD Basin B	D	8 May 2015	Note added to confirm OSD Basin B to be constructed with Stage 2 Change to sheet numbering (now sheet 7 of 18)
C17	Shredding Area Detail	C	8 May 2015	Change to sheet numbering (now sheet 8 of 18)
C18	Swept Path and Carparking Plan	E	8 May 2015	Disabled parking space relocated to be consistent with DA 2009/1153/D. Staging Coloured Change to sheet numbering (now sheet 9 of 18)
C19	Existing Site Plan	C	18 May 2015	Staging Coloured Change to sheet numbering (now sheet 10 of 18)
C27	Site Plan-Proposed Layout	C	8 May 2015	Delineation of outdoor processing area to address APZ requirements. Staging Coloured Notation added regarding weekly pump out of septic tank Disabled parking space relocated to be consistent with DA 2009/1153/D. Change to sheet numbering (now sheet 11 of 18)
C28	Cut and Fill Plan	C	8 May 2015	Staging Coloured Coloured hatching provided in legend and on plan to delineate areas of cut and areas of fill. Disabled parking space relocated to be consistent with DA 2009/1153/D. Change to sheet numbering (now sheet 12 of 18)
C29	Site Plan-Usage Areas	B	21 April 2015	Delineation of outdoor processing area to address APZ requirements. Disabled parking space relocated to be consistent with DA 2009/1153/D. Staging Coloured Change to sheet numbering (now sheet 13 of 18)
C30	Site Plan-Proposed Layout-PMF Flood Lines	C	8 May 2015	Delineation of outdoor processing area to address APZ requirements. Disabled parking space relocated to be consistent with DA 2009/1153/D. Staging Coloured Change to sheet numbering (now sheet 14 of 18)

Plan Reference	Name	Amendment No.	Date	Plan Amendments
C31	Rainwater Harvesting Plan	C	8 May 2015	Delineation of outdoor processing area to address APZ requirements. Disabled parking space relocated to be consistent with DA 2009/1153/D. Staging Coloured Note added to confirm covering of green waste. Change to sheet numbering (now sheet 15 of 18)
C32	Leachate Control Plan	E	8 May 2015	Delineation of outdoor processing area to address APZ requirements. Staging Coloured Correction to name of shed to refer to indoor processing and storage shed (rather than general processing shed). Omitted reference included to skip bin storage area, vehicle turning/backing area, restricted stockpiling area. Note added regarding greenwaste stockpile. Disabled parking space relocated to be consistent with DA 2009/1153/D. Change to sheet numbering (now sheet 16 of 18)
C33	Site Plan-Proposed Layout-Q100 Flood Lines	B	8 May 2015	Staging Coloured Disabled parking space relocated to be consistent with DA 2009/1153/D. Change to sheet numbering (now sheet 17 of 18)
C34	Operational Plan-Layout Version 1	B	8 May 2015	Delineation of outdoor processing area to address APZ requirements. Staging Coloured Disabled parking space relocated to be consistent with DA 2009/1153/D. Change to sheet numbering (now sheet 18 of 18)
C35	Historical and Proposed Development Compilation Plan	-	April 2015	-
C36	Historical and Proposed Development Separate Development Plan (Existing)	-	April 2015	-
C37	Historical and Proposed Development Separate Development Plan (Sect 96)	-	April 2015	-
C38	Historical and Proposed Development Separate Development Plan (SSD 5300)	A	18 May 2015	-

2.2.2. Staging

DPE has requested the submission of further details regarding the proposed staging and specifically reference to a plan indicating the location of the three buildings to be constructed in Stage 2, and accompanied by any other relevant details of the proposed staging.

Response:

Approval is sought for the undertaking of the development in two stages, with each stage to incorporate the following works:

- **Stage 1:** The undertaking of all works and the erection of all buildings, including the expansion of the capacity of the facility to 230,000 tonnes per annum, with the exception of works to the east of the watercourse.
- **Stage 2:** The undertaking of all works to the east of the watercourse including the construction of the Buildings E, F and G (as referenced on plans prepared by DJ Little Design Ref: 21304 Sheets 1-22) being the workshop, OHS training room and office buildings; construction of on site detention basin (OSD) B; the truck parking/ access and associated earthworks.

Section 2.16.3 of this Response to Submissions contains further details regarding construction timing of the project.

- The undertaking of the development in two stages. Stage 1 will incorporate all works, with the exception of works to the east of the watercourse

2.3 Consultation

The 'Private and Confidential Submission' states:

- *"The EIS does not comply with requirements of the DGRs including evidence of consultation with the Environment Protection Authority".*

Response:

Section 8 of the EIS dated September 2014 confirms that the Director General's requirements specified the need for consultation with specified government agencies, Wollongong City Council and the local community/ stakeholders during the preparation of the Environmental Impact Statement. Consultation with the following agencies was detailed in this section of the EIS:

- Department of Primary Industries (including the NSW Office of Water);
- Roads and Maritime Services;
- Wollongong City Council;
- Local community and stakeholders.

It is confirmed that the following additional consultation has occurred with the Environmental Protection Authority during preparation of the EIS and Response to Submissions:

- A meeting with Kate Woods of the EPA which was held in 2013 prior to lodgement of SSD 5300 . Matters which were discussed included the interpretation of existing conditions relating to site capacity and the requirements for the facility in the event that the composting operations are expanded as a component of the state significant development proposal.

- Discussions at an on site inspection attended by Nick Fenely and Mark Cooper of the EPA on 14 October 2014 which lead to the recommended conditions being imposed by the EPA.

Further, the EPA has been formally consulted on three occasions via referral from the Department of Planning and its most recent submission has been addressed within this Response to Submissions.

It is also confirmed that additional consultation has occurred with the following agencies during preparation of this Response to Submissions:

NSW Rural Fire Service: David Peterson of Ecological consulted with Jason Maslen of NSW Rural Fire Service to seek clarity regarding the RFS requirements, as contained in its submission of 26 November 2014. Specifically, advice was sought on the distance of the APZ, the delineation of storage areas and building construction requirements via telephone discussions and emails of 22 April and 1 May 2014 (refer **Appendix 15**).

Office of Environment and Heritage: During preparation of the Response to Submissions further consultation occurred between Calvin Houlison of OEH and officers of KFW regarding flood affectation of the site.

2.4 Planning

A number of general planning issues were raised within a 'Private and Confidential' submission and also within the submission from Wollongong City Council. The issues are addressed under the following headings:

- 1) Consistency with the Objectives of the Environmental Planning and Assessment Act
- 2) Consistency with Zone Objectives
- 3) Compliance with Wollongong Local Environmental Plan 2009

2.4.1 Consistency with Objectives of the Environmental Planning and Assessment Act

The Department of Planning's summary of the "Private and Confidential submission states:

"The granting of consent for the SSD application would be inconsistent with the public interest and the relevant objects of the EP&A Act."

Response:

The Environmental Impact Statement (EIS) dated September 2014 confirms (in section 6.1.1) that the proposed development is consistent with the Objectives contained in Section 5 of the Environmental Planning and Assessment Act, 1979. Specifically this section states:

"Section 5 Objectives

The EP & A Act and accompanying Regulation provide the framework for environmental planning in NSW and include provisions to ensure that proposals which have the potential to impact the environment are subject to detailed assessment, and to provide opportunity for public involvement. The objectives of this Act as contained in Clause 5 are:

- (a) to encourage:
 - (i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the

- purpose of promoting the social and economic welfare of the community and a better environment,*
- (ii) the promotion and co-ordination of the orderly and economic use and development of land,*
 - (iii) the protection, provision and co-ordination of communication and utility services,*
 - (iv) the provision of land for public purposes,*
 - (v) the provision and co-ordination of community services and facilities, and*
 - (vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
 - (vii) ecologically sustainable development, and*
 - (viii) the provision and maintenance of affordable housing, and*
- (b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

Relevance to proposed development:

The proposed development is consistent with the nominated objectives of the Act and is considered capable of fulfilling the statutory requirements. The site investigations have determined that the proposed development will not result in any significant negative impacts that cannot be adequately mitigated or managed. This Environmental Impact Statement confirms that the proposed development can be undertaken in a manner which will not adversely impact on natural resources but will promote the economic use of the land in a manner which will provide an improved level of resource management within the Illawarra."

As further clarification, the following information provides detail regarding the manner in which the objectives of the EPA Act will be met:

Objective (a) (i):

The development is for a resource recovery facility which will contribute to the prevention and avoidance of waste; an increase in the recovery and use of secondary materials; a reduction in toxicity in products and materials; and a reduction in litter and illegal dumping. The Waste Management Plan prepared by Benviron in April 2015 concludes that there will be a minimal amount of waste generated from the Resource Recovery Facility. Benviron also confirm that the facility will also assist in helping the NSW Government to achieve the following targets:

- *Municipal Waste- from baseline 26%to 66%;*
- *Commercial and Industrial (C&I) waste from baseline 28% to 63%;*
- *Construction and demolition (C&D) waste – from baseline 65% to 76%,*

Hence, objective (a)(i) is met.

Objective (a) (ii):

The development will encourage the orderly expansion of the facility in a coordinated manner in compliance with Objective (a)(ii).

Objective (a) (iii):

The development will not impact on the existing service easement sited adjacent to the western boundary of the site and will not place unreasonable demand on services in compliance with Objective (a)(iii).

Objective (a) (iv):

The development is not for a public purpose and hence objective (a)(iv) is not relevant to the proposal.

Objective (a) (v):

The development will provide a recycling facility for use by the general community and building industry and hence this objective is met.

Objective (a) (vi):

The development will be contained within the IN2 Light Industrial zone with the Biodiversity Assessment prepared by Conacher Environmental confirming that *"the proposed development will occupy the existing disturbed areas of the site within areas which contain Cleared Land and a relatively small area of Regrowth Acacia with Exotic Shrub vegetation. The occurrences of Disturbed Subtropical Rainforest and Disturbed Red Gum Forest present will be retained within the site"*. Further, *"The proposal is not likely to significantly alter connectivity for wildlife within the subject site or locality as the development footprint will be located within mostly existing cleared areas. The existing level of connectivity along the watercourse which intersects the development site will be maintained and improved in accordance the Vegetation Management Plan prepared for the site by Southern Habitat (2013)"*. On this basis Objective (a)(vi) is met.

Objective (a) (vii):

The development will not provide affordable housing and hence this objective is not relevant.

Objective (b)

This State Significant Development application is under assessment by a state agency with consultation at a local level, in adherence with this objective.

Objective (c)

The Environmental Planning and Assessment Act and Regulations provide the process which has been established for the assessment of this State Significant development application, which includes opportunity for public involvement. This Response to Submissions has been prepared to address issues raised during this consultation phase.

Section 11 of the EIS details the economic and resource/recovery benefits and concludes that the development is in the public interest for the following reasons:

- *The Kembla Grange Resource Recovery Facility will result in the establishment of an expanded innovative mixed construction and demolition waste sorting, processing and recycled product manufacturing facility, which currently does not exist elsewhere within the region. The project will create sustainable jobs, divert waste from landfill, recover valuable resources and produce a range of recycled materials to be sold back to the Illawarra and surrounding markets adding value to the local economy. Customers will include companies and individuals who undertake projects involving earthworks and demolition, together with customers and individuals who purchase recycled landscaping and building materials.*

- *The additional mixed use C & D waste recycling operation will generate a further additional 27.7 full time equivalent jobs at the site on an ongoing long term basis. It will also generate significant local employment during the construction phases.*
- *The location of the Kembla Grange plant also has a major geographical and transport distance advantage over the existing sites at Port Kembla and Dunmore. The Kembla Grange site is also located near the population centroid for Wollongong and Shellharbour with nearby with major residential and commercial development to occur in the West Dapto precinct and Shell Cove area.*

The above information demonstrates that the proposed development is consistent with the objectives contained in Section 5 of the Environmental Planning and Assessment Act, 1979 and no alteration to the project is required to meet such objectives.

2.4.2 Consistency with Zone Objectives

The submission from Wollongong City Council states:

- *"The site is zoned IN2 Light Industrial and RE2 Private Recreation pursuant to Wollongong Local Environmental Plan (LEP) 2009. The proposal is considered to be categorised as a 'resource recovery facility' which is a type of "waste or resource management facility" and is permissible with consent in the IN2 zone. The proposal appears to be wholly located within the IN2 zoned land of the site. Any works associated with the proposed resource recovery facility are to be located in the IN2 zoned portion of the site."*

The Department of Planning's summary of the "Private and Confidential submission states:

- *"The proposal is inconsistent with the objectives of the IN2 Industrial zone. The EIS does not justify those inconsistencies."*

Response:

The site was previously zoned under Wollongong Local Environmental Plan 2010 (West Dapto). Following the consolidation of WLEP 2010 (West Dapto) with WLEP 2009 the subject site is now zoned part IN2 Light Industrial and RE2 Private Recreation under WLEP 2009, as confirmed in Section 7.1.1 of the Environmental Impact Statement dated 17 September 2014. Section 7.1.1 of the EIS confirmed that "the proposed development footprint will be located within the IN2 zone". This is clearly confirmed within Drawing C29 – Site Plan Usage Areas prepared by KFW which contains an overlay of the zone boundary (outlined in red in the **Figure 1** for clarity).

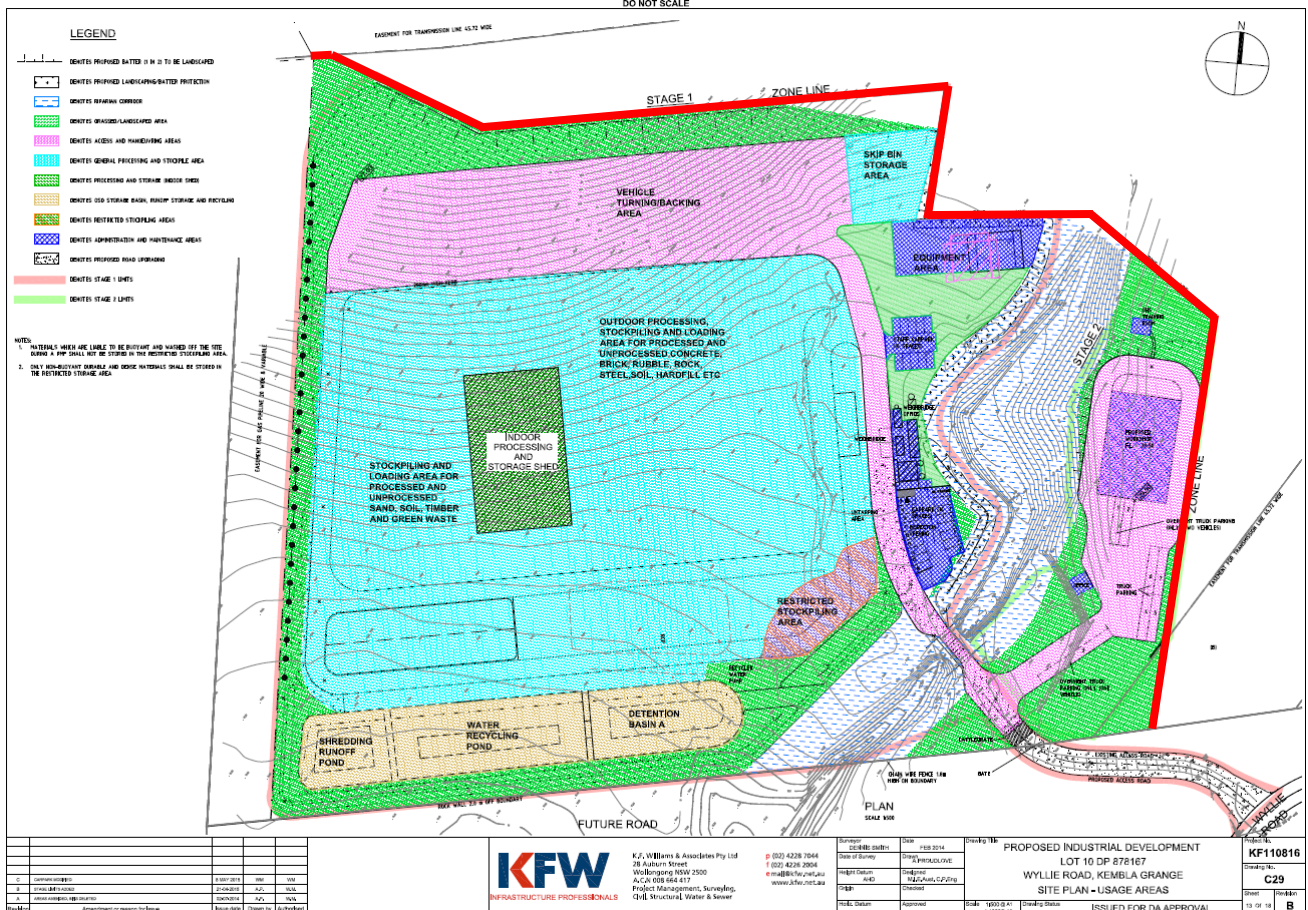


Figure 1: Drawing C29 Revision B – Site Plan Usage Areas prepared by KFW with overlay of the zone boundary outlined in red.

Hence, no modification is required to the footprint of the development, as it has been adequately demonstrated that the development footprint is wholly located within the IN2 Light Industrial zone and is a permissible use. Wollongong City Council concurs with this position.

The objectives of the IN2 Light Industrial zone which now apply under Wollongong LEP 2009 are:

- a) To provide a wide range of light industrial, warehouse and related land uses.
- b) To encourage employment opportunities and to support the viability of centres.
- c) To minimise any adverse effect of industry on other land uses.
- d) To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.
- e) To support and protect industrial land for industrial uses.
- f) To encourage appropriate forms of industrial development which will contribute to the economic and employment growth of Wollongong.

Compliance with the objectives of the IN2 zone is achieved in the following manner:

Objective (a): The resource recovery facility will provide a use which is aligned and comparable with light industrial functions having regard to the processing functions undertaken and is therefore a related landuse and meets objective (a).

Objective (b): The facility will provide ongoing employment for an additional 32 staff and will promote the ongoing viability of the Kembla Grange Employment Area identified as a key function of the West Dapto growth area in Chapter D16: West Dapto Release Area of Wollongong Development Control Plan 2009.

Objective (c): This EIS (dated September 2014) has demonstrated that, subject to the implementation of the required mitigation measures, the proposed development can operate with acceptable and minimal impacts on other landuses.

Objective (d): The development will not provide services for the day to day needs of workers and hence this objective is not relevant. The development adheres to objective (a).

Objective (e): The use of the site for a resource recovery facility ensures that the land is utilised for a permissible use which aligns with an industrial function.

Objective (f): The development provides for a processing facility which the EIS has demonstrated is an appropriate use on this site. The facility will contribute to economic growth of Wollongong, through the employment of an additional 32 persons during ongoing operations and 4-6 persons during construction.

Therefore, as stated in Section 7.1.3 of the EIS dated September 2014 *"the site will continue to be utilised as a 'building material storage and recycling facility', in adherence with the above objectives, which seek to encourage employment opportunities associated with an industrial use, and provide improved facilities for industrial workers. This EIS considers potential amenity impacts associated with the proposed development and provides appropriate mitigating strategies, also in accordance with the zone objectives"*.

2.4.3 Compliance with Wollongong Local Environmental Plan 2009

Wollongong City Council in its submission of 16 November 2014 states:

"The site is identified to be in an urban release area and consideration of Clause 6.2 Development Control Plan of Wollongong LEP 2009 is required. Currently there is no development control plan for the site (Neighbourhood Plan). Clause 6.2 does not apply if the development can meet the requirements of Clause 6.2(4)(d) as provided below:

(d) proposed development on land that is of a minor nature only, if the consent authority is of the opinion that the carrying out of the development would be consistent with the objectives of the zone on which it is situated".

Response:

Wollongong City Council acknowledges that the development *"may not be considered minor in nature"* however notes that the intent of Clause 6.2 of WDCP 2009 is to ensure that subdivision occurs in a logical manner. Council has advised that *"the proposed development is contained to a single lot within an existing industrial subdivision and is not considered to deviate from the achievement of the objective of this clause"*.

It is understood from Council's comments that the preparation of a development control plan is not required and hence no additional information or amendment to the proposal is required in response to this comment.

2.5 Air Quality

Comments provided by the Environment Protection Authority in relation to dust and odour principally relate to the following key matters:

- 1) Mitigation measures to control dust;
- 2) Operation of systems to control odour, including treatment of the leachate pond and stockpiles.

Two (2) submissions from the public (Kaliwest and Cardno on behalf of Patrick Autocare) raised concern regarding:

- 3) The potential impact of dust deposition affecting adjoining properties, and principally car storage facilities.

The issues raised with respect to air quality are addressed within sections 3.5.1 and 3.5.2;

2.5.1 Dust Mitigation Measures

The submission from Cardno on behalf of Patrick Autocare raises the following with respect to dust emissions:

1. *"The proponents' Air Quality Assessment be expanded to model additional sensitive receptors within the PAC's facilities at 66 West Dapto Road and 17 Reddall Road. PAC's facilities are sensitive receptors within the definition of the phrase as defined by Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (NSW Dept. of Environment and Conservation, 2005) and are located much closer to the KGRRF site than any of the sensitive receptors presently modelled in the EIS". Cardno suggest that typical winds from the north and northeast will result in dust and odour emissions, principally dust from concrete operations, damaging vehicles at the PAC sites. The use of Hydrofluoric Acid to wash vehicles is considered harmful to human health and the environment.*
2. *Further, Cardno state that "even with all mitigation measures in place, the PAC site at 66 West Dapto Road will be exposed to a maximum 24 hour average of 50 to 80 micrograms per cubic metre of PM10 particles. Approximately half the site area would be exposed to PM10 concentrations of 50 micrograms per cubic metre or more. The impacts at 17 Reddalls Road would be less with levels between 40 and 70 micrograms per cubic metre. The background level determined was 21.3 micrograms per cubic metre".*
3. *"The proposed expansion of the KGRRF would result in the predicted annual average concentration of TSPs rising to between 50 and 60 micograms per cubic metre on the northern quarter of Pac's facility at 66 West Dapto Road even with all proposed mitigation measures implemented. This is a 25% - 50% increase in fine particle levels on this part of the site which is used for storage of motor vehicles."*
4. *"The air quality assessment notes in table 13 that the regulatory criteria for exposure to PM10 particles over 24 hours is 50 micrograms per cubic metre. this level is exceeded significantly at PAC's 66 West Dapto Road site."*

The submission from Kaliwest raises the following with respect to potential air quality impacts on car storage facility located at No. 17 Reddalls Rd:

"Kaliwest does not object to the proposed works however conditions should be imposed to ensure that air quality emissions and dust deposition do not interfere with the enjoyment of surrounding properties including the outdoor storage of motor vehicles on No. 17 Reddalls Rd."

The Environment Protection Authority note the following in relation to dust:

"In the uncontrolled emissions modelling scenario the maximum predicated incremental 24 hour average PM10 impact at a receptor is 53.3ug/m3, indicating that mitigation measures are required to ensure compliance with the EPA's 24 hour average PM10 impact assessment criterion at all sensitive receptors. This is confirmed by the second modelling scenario incorporating watering of haul roads, with no predicted incremental or cumulative exceedence of the criterion at sensitive receptors. Predicted annual average PM10, TSP and 24 hour average and annual average PM2.5 are all below the relevant EPA impact assessment criterion and NEPM advisory standards." The EPA notes that a range of mitigation measures are proposed including level 2 watering, watering of material prior to haulage, limiting vehicle speeds and suspension of excavation activities or use of water sprays during high speed wind events.

Response:

The revised Air Quality Assessment prepared by GHD (dated April 2015) now includes the Patrick Autocare site at No. 66 West Dapto Road as a sensitive receptor. The revised report also acknowledges (in section 2.1) the location of the other car storage facility at No. 17 Reddalls Road. However, GHD note that additional modelling has not included No. 17 Reddalls Road as the April 2015 Air Quality Assessment confirms that the proposal meets the criteria at the Patrick Autocare site and all other sensitive receptors, including 17 Reddalls Road. This is clearly evident in the dust contour figures contained in the revised Air Quality Assessment and as reproduced in Figures 3 and 5 of this Response to Submissions . Hence, it is considered unnecessary to assess additional receptors, following inclusion of the Patrick Autocare site, which has been shown to be the worst case scenario.

In response to the issued within the submissions from the EPA, Cardno and Kaliwest, the following updates to the Air Quality Report have been made since exhibition of the documentation in November 2014:

- Amendment to Table 13 (previously 14) to include Patrick Autocare as Receiver 6, not Receiver 5, as previously stated in the GHD report dated February 2015.
- Reference to No. 66 West Dapto Road and No. 17 Reddalls Road as Sensitive Receivers and reference to such within:
 - Table 1 (Air quality sensitive receivers) as Receiver ID 5 and 6 respectively;
 - The location plan contained in Figure 3;
 - Table 13 (maximum predicted dust impact at sensitive receivers);
 - Table 14 (Maximum predicted dust impact at sensitive receivers with mitigation measures);
 - Figure 15 also now incorporates the Patrick Autocare site and shows the maximum predicted 24-hour PM10 ground level concentration (GLC) contours for WRF operations with mitigation.
 - Figure 16 has also been updated to incorporate the Patrick Autocare site and shows the maximum predicted annual TSP ground level concentration (GLC) contours for WRF operations with mitigation.
 - Section 6.2 confirms that "to be conservative, the receptor location for dust deposition has been assumed to be at the northern boundary of the Patrick Autocare property. This has

been undertaken to show that dust deposition levels are predicted to be below the criteria on the entire site".

- o Section 3.5 (Project odour criterion) which notes that the "'Patrick Autocare Vehicle Storage Facility - Stage 2 Statement of Environmental Effects' prepared by Cardno in March 2014 states that a maximum of 25 employees will be on this site at any one time. Hence in accordance with Table 7.5 of the approved methods from Modelling and Assessment of Air Pollutants in New South Wales a 50U impact assessment criteria has been applied to the Patrick Autocare vehicle storage facility at No. 66 West Dapto Road and also the Rural Fire service building located to the northeast of the site as both sites will have less than 30 persons present".

Potential impacts have been assessed in the Air Quality Assessment (AQA) as per the requirements of the Approved Methods for Modelling and Assessment of Air Pollutants in New South Wales (DECC 2005). Section 6.1.3 and Table 13 of the report confirm that *"results show that dust deposition levels are predicted to exceed the annual dust deposition criteria of 4g/m²/month at Receiver 6" (66 West Dapto Rd).*

Following exhibition of the proposal in November 2014 GHD considered various management and mitigation options, in addition to the Level 2 water sprays which were previously proposed for the access road. This includes the use of chemical dust suppressants on the access roads and Level 2 water sprays on the truck turning and backing areas to provide more effective management than water spraying alone. With the incorporation of such mitigation measures the dust deposition contours now show that the dust concentration levels with mitigation measures applied are predicted to be below the criteria at the Patrick Autocare property boundary. Specifically, Figure 15 of the Air Quality Assessment shows the maximum predicted 24-hour PM₁₀ ground level concentration (GLC) contours for the facility with mitigation (ie. is particulate matter 10 micrometers or less in diameter), Figure 16 of the assessment shows the maximum predicted annual TSP (ie total suspended particulates) ground level concentration (GLC) contours for the facility with mitigation.

When comparing the contours in Figures 15 (Predicted - Cumulative PM₁₀ 24-hour Average Concentration (with mitigation ug/m³)) of the July 2014 AQA with Figure 15 of the April 2015 AQA a lesser level of impact is evident, due to the incorporation of additional mitigation measures, including chemical spraying, within the April 2015 modelling. The July 2014 report modelled only mitigation measures in the form of Level 2 water sprays. A similar level of improvement is also evident from the contours contained in Figure 16 (Predicted - Cumulative TSP Annuals Average Concentration (with mitigation) ug/m³ in the July 2014 AQA and those contained in Figure 16 of the April 2015 AQA. The comparative contours as contained in Figures 15 and 16 of the GHD reports of July 2014 and April 2015 are contained in Figures 2 to 5 of this Response to Submissions.

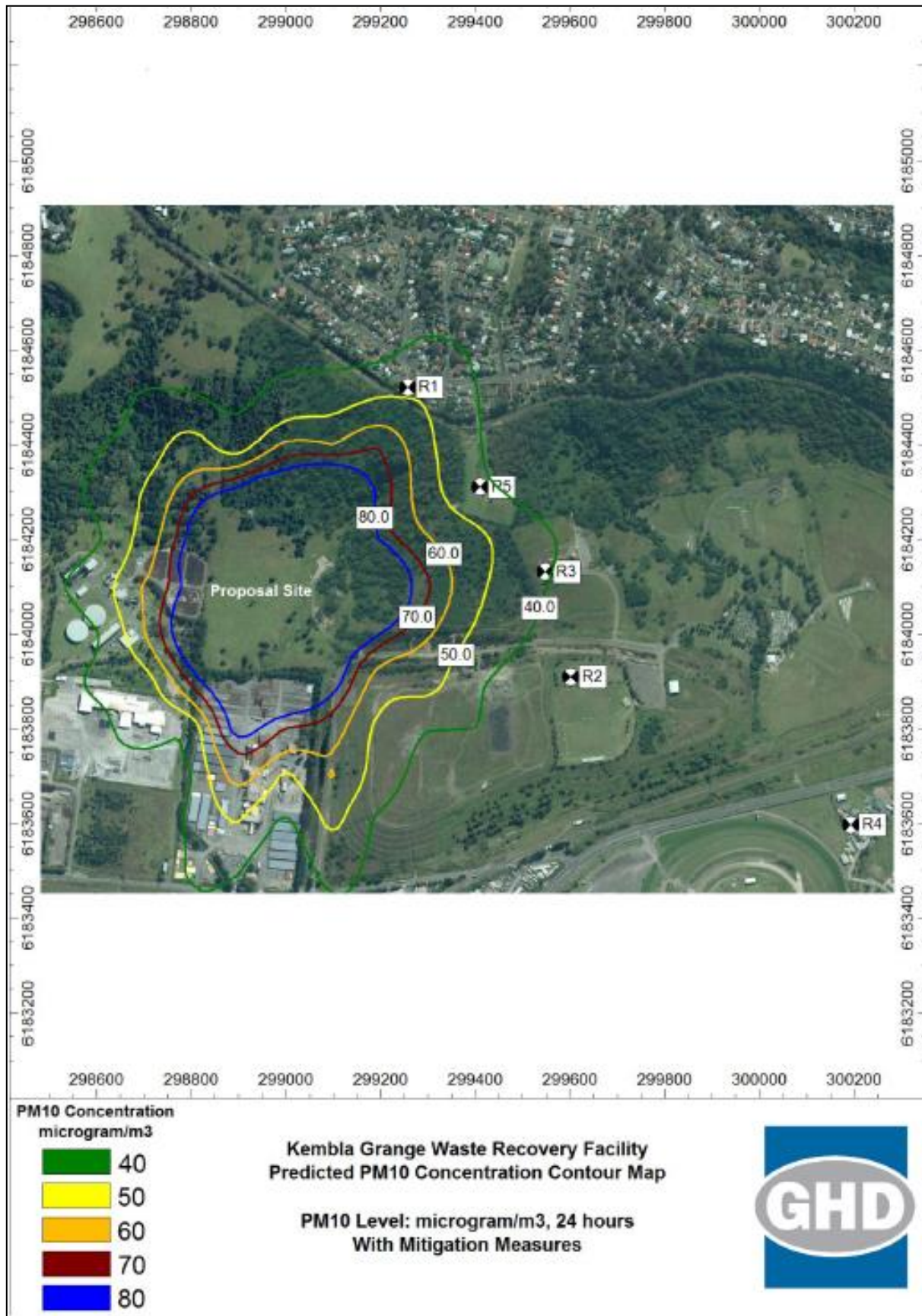


Figure 2: Predicted - Cumulative Pm₁₀ 24-hour Average Concentration (with mitigation) µg.m³ - Ref: **APRIL 2014** (now superseded) Ref: Air Quality Assessment (Figure 15), GHD

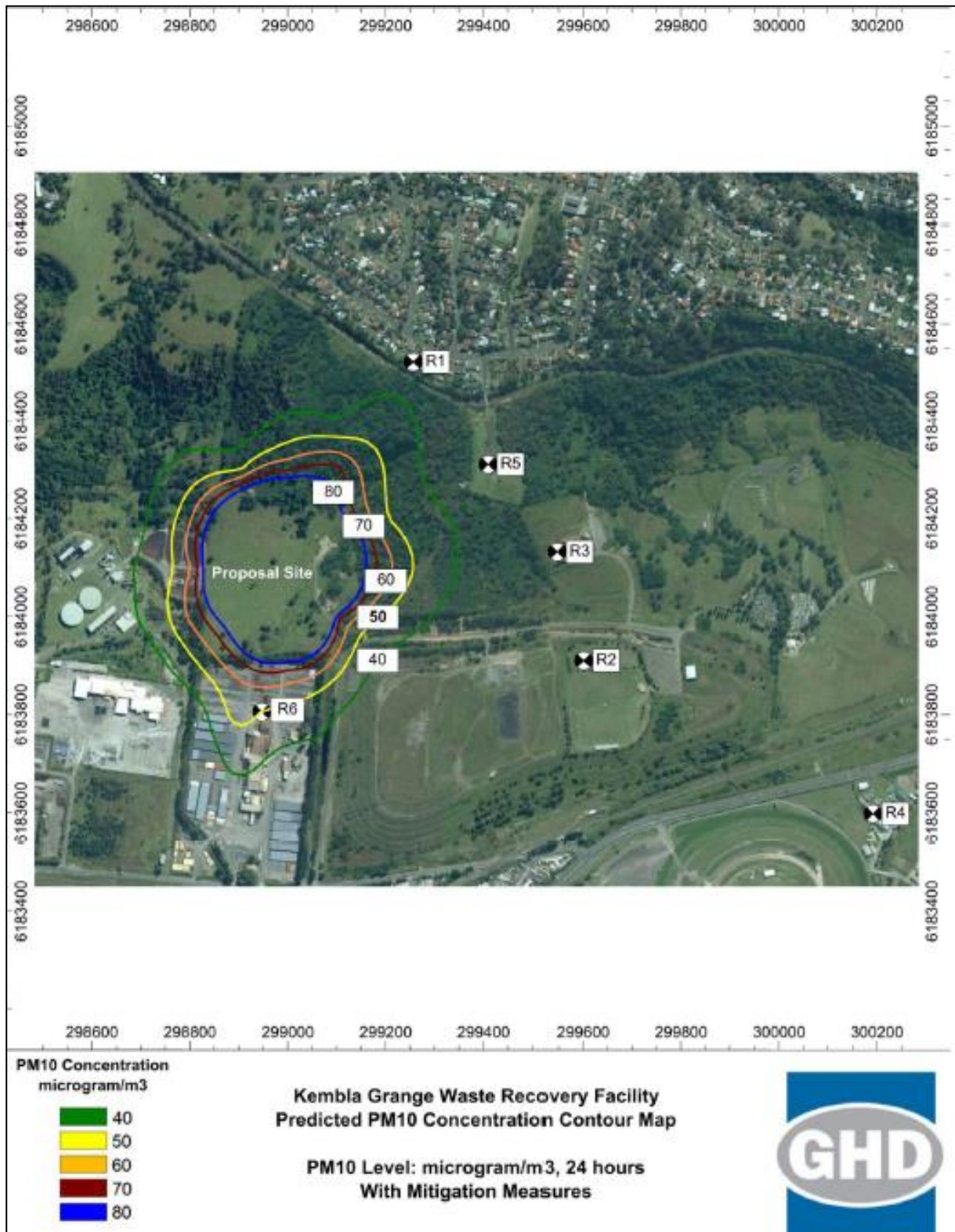


Figure 3: RE-MODELLED Predicted- Cumulative Pm₁₀ 24-hour Average Concentration (with mitigation) $\mu\text{g.m}^3$ - Ref: **APRIL 2015** Ref: Air Quality Assessment (Figure 15), GHD

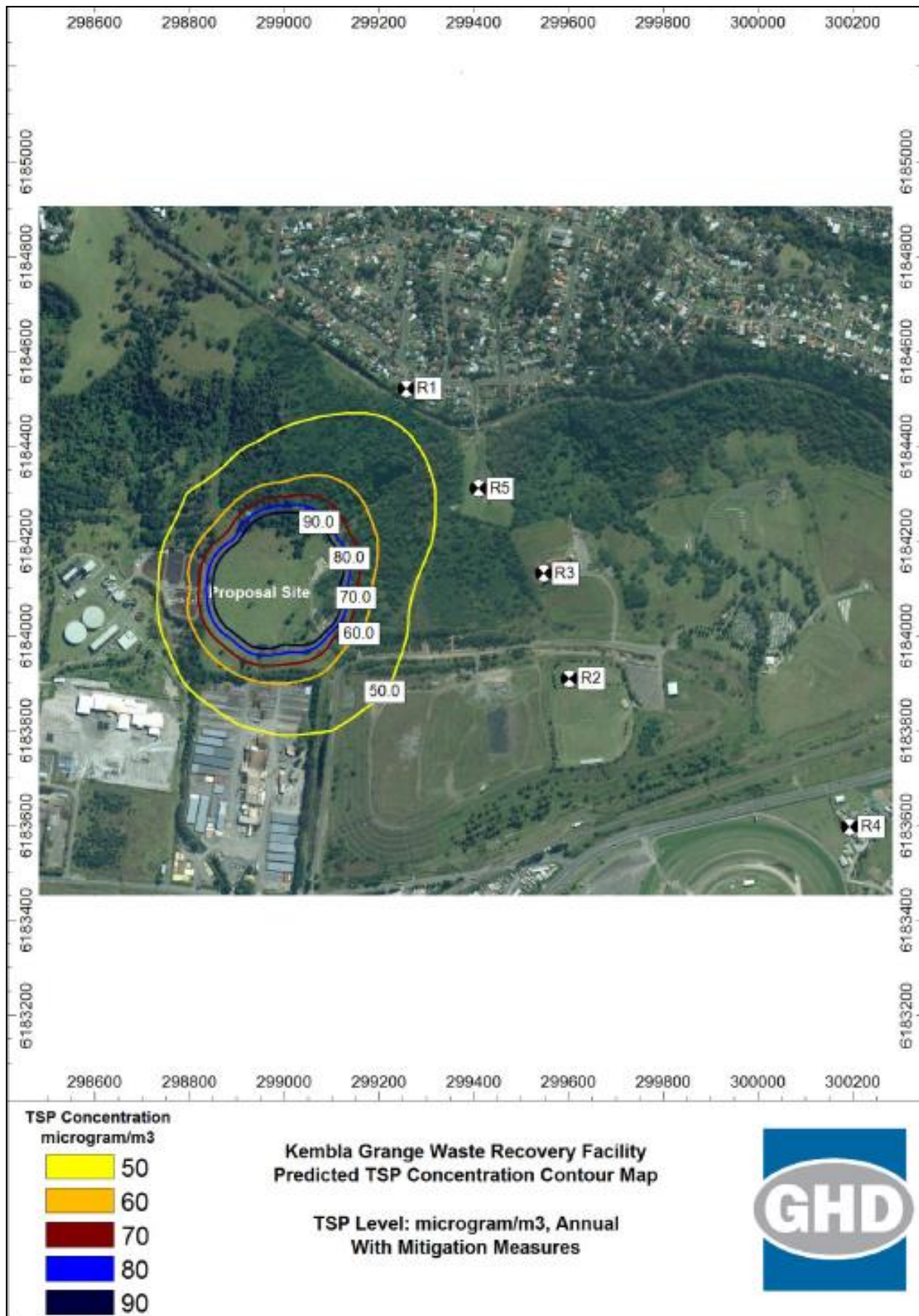


Figure 4: Predicted- Cumulative TSP Annual Average Concentration (with Mitigation) $\mu\text{g.m}^{-3}$ - **APRIL 2014** (now superseded) Ref: Air Quality Assessment (Figure 16), GHD

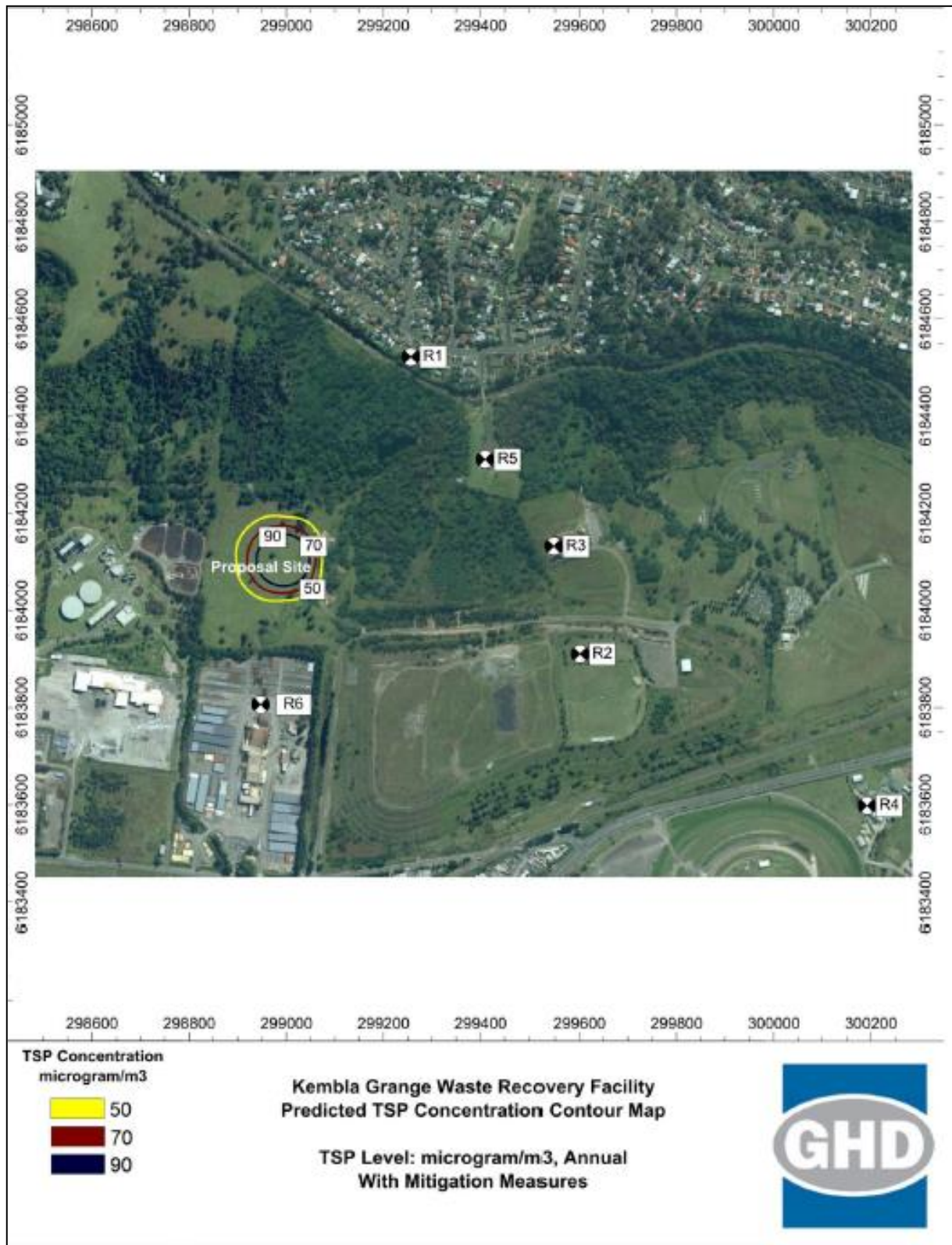


Figure 5: RE-MODELLED Predicted- Cumulative TSP Annual Average Concentration (with Mitigation) $\mu\text{g.m}^3$ - Ref: **APRIL 2015** Ref: Air Quality Assessment (Figure 16), GHD

With respect to Figure 15 Cardno had previously noted that the PAC site at 66 West Dapto Road will be exposed to a maximum 24 hour average of 50 to 80 micrograms per cubic metre of PM₁₀ particles and that approximately half the site area would be exposed to PM₁₀ concentrations of 50 micrograms per cubic metre or more. The impacts at 17 Reddalls Road would be between 40 and 70 micrograms per cubic metre. Such levels are based on the contours contained in the July 2014 version of the AQA. In comparison, the April 2015 version now confirms that the PAC site at 66 West Dapto Road will be exposed to a much lesser extent, with only a minor portion of the site being affected by levels of between 60 to 80 micrograms per cubic metre. Less than half the site is now affected by levels of between 40 micrograms per cubic metre, with the majority of this portion being in the range of 40 to 60 micrograms per cubic metre. The revised contours contained in Figure 15 of the April 2015 AQA (reproduced as Figure 3 in this RTS) also confirm that, with the additional mitigation, No. 17 Reddalls Road will not be affected by PM₁₀ particles.

With respect to Cardno's statement that Table 13 shows the regulatory criteria for exposure to PM₁₀ particles over 24 hours of 50 micrograms per cubic metre is exceeded significantly at PAC's 66 West Dapto Road site it is noted that Table 13 demonstrates the maximum predicted dust impact at sensitive receivers, *without mitigation*, whilst the data which should be referred is that contained in Table 14 (as reproduced in Table 5 of this RTS) , which includes modelling *with mitigation measures*.

Table 5: Maximum predicted dust impacts at sensitive receivers with mitigation measures

Pollutant	Averaging Period	Units	Max Predicted Incremental Impact	Adopted Back-ground Level	Cumulative Impact	Criteria
Receiver 1: 57 Fairloch Ave, Farmborough Heights						
Pm ₁₀	24-hour	µg/m ³	14.5	21.3	35.8	50
Pm _{2.5}	24-hour	µg/m ³	6.4	6.6	13.0	-
Pm ₁₀	Annual	µg/m ³	1.1	21.3	22.4	30
TSP	Annual	µg/m ³	2.3	42.6	44.9	90
Dust deposition	Annual	g/m ² /month max. total	0.3	2	2.3	4
Receiver 2: Ian McLennan Park						
Pm ₁₀	24-hour	µg/m ³	5.9	21.3	27.2	50
Pm _{2.5}	24-hour	µg/m ³	2.5	6.6	9.1	-
Pm ₁₀	Annual	µg/m ³	0.3	21.3	21.6	30
TSP	Annual	µg/m ³	0.7	42.6	43.3	90
Dust deposition	Annual	g/m ² /month max. total	0.04	2	2.04	4
Receiver 3: Macedonian Orthodox Church						
Pm ₁₀	24-hour	µg/m ³	9.2	21.3	30.5	50
Pm _{2.5}	24-hour	µg/m ³	4	6.6	10.6	-
Pm ₁₀	Annual	µg/m ³	0.4	21.3	21.7	30
TSP	Annual	µg/m ³	0.9	42.6	43.5	90
Dust deposition	Annual	g/m ² /month max. total	0.06	2	2.06	4
Receiver 4: Kingston Lodge						
Pm ₁₀	24-hour	µg/m ³	1.6	21.3	22.9	50
Pm _{2.5}	24-hour	µg/m ³	0.7	6.6	7.3	-
Pm ₁₀	Annual	µg/m ³	0.1	21.3	21.4	30
TSP	Annual	µg/m ³	0.2	42.6	42.8	90
Dust deposition	Annual	g/m ² /month max. total	0.01	2	2.01	4

Pollutant	Averaging Period	Units	Max Predicted Incremental Impact	Adopted Back-ground Level	Cumulative Impact	Criteria
Receiver 5 Rural Fire Service						
Pm ₁₀	24-hour	µg/m³	10.2	21.3	31.5	50
Pm _{2.5}	24-hour	µg/m³	4.5	6.6	11.1	-
Pm ₁₀	Annual	µg/m³	0.9	21.3	22.2	30
TSP	Annual	µg/m³	1.9	42.6	44.5	90
Dust deposition	Annual	g/m²/month max. total	0.2	2	2.2	4
Receiver 6 Patrick Autocare						
Pm ₁₀	24-hour	µg/m³	28	21.3	49.3	50
Pm _{2.5}	24-hour	µg/m³	11.8	6.6	18.4	-
Pm ₁₀	Annual	µg/m³	1.6	21.3	22.9	30
TSP	Annual	µg/m³	7.1	42.6	49.7	90
Dust deposition	Annual	g/m²/month max. total	1.8	2	3.8	4

Cardno also raised concern that the predicted annual average concentration of TSPs will rise to between 50 and 60 micograms per cubic metre on the northern quarter of PAC's facility at 66 West Dapto Road even with all proposed mitigation measures implemented. In response to this, it is noted that following modelling to include the additional mitigation measures Figure 16 of the AQA dated April 2015 (reproduced as Figure 5 in this RTS) now shows that all adjacent sites, including the sites at No. 66 West Dapto Rd and 17 Reddalls Road will comply with TSP concentration levels.

The additional mitigation measures (ie chemical spraying) which have been included in the revised assessment confirm (in Table 14 reproduced as Table 5 of this RTS) that the criteria for dust impact at all sensitive receivers is met with mitigation, including PM10 particles at the Patrick Autocare site. The April 2015 AQA also now includes an additional figure (Figure 17) which demonstrates this by detailing the predicted annual dust deposition contours for the facility with mitigation. Figure 17 of this report is reproduced in Figure 6 of this RTS. GHD note within the AQA that "to be conservative, the receptor location for dust deposition has been assumed to be the northern boundary of the Patrick Autocare property", rather than the offices where the criteria would generally apply.

The Environment Protection Authority in its submission of 15 December 2014 concurs that "predicted annual average PM10, TSP and 24 hour average and annual average PM2.5 are all below the relevant EPA impact assessment criterion and NEPM advisory standards." and confirms that the mitigation measures will include:

- Level 2 watering of the unsealed access road and truck turning areas;
- Watering of material prior to loading for haulage where appropriate;
- Limiting of vehicle speeds on site;
- Suspension of excavation activities or use of water sprays during high speed wind events.

The EPA recommends that the following conditions be specified in the air quality management plan for the facility:

- Truck movements be minimised during windy conditions.
- Reduction of emissions from crushing and processing activities through the use of wet suppression systems which are potential additional options for additional dust mitigation.

The above recommendations have been incorporated within the revised Statement of Commitments contained in Section 4 of this Response to Submissions.

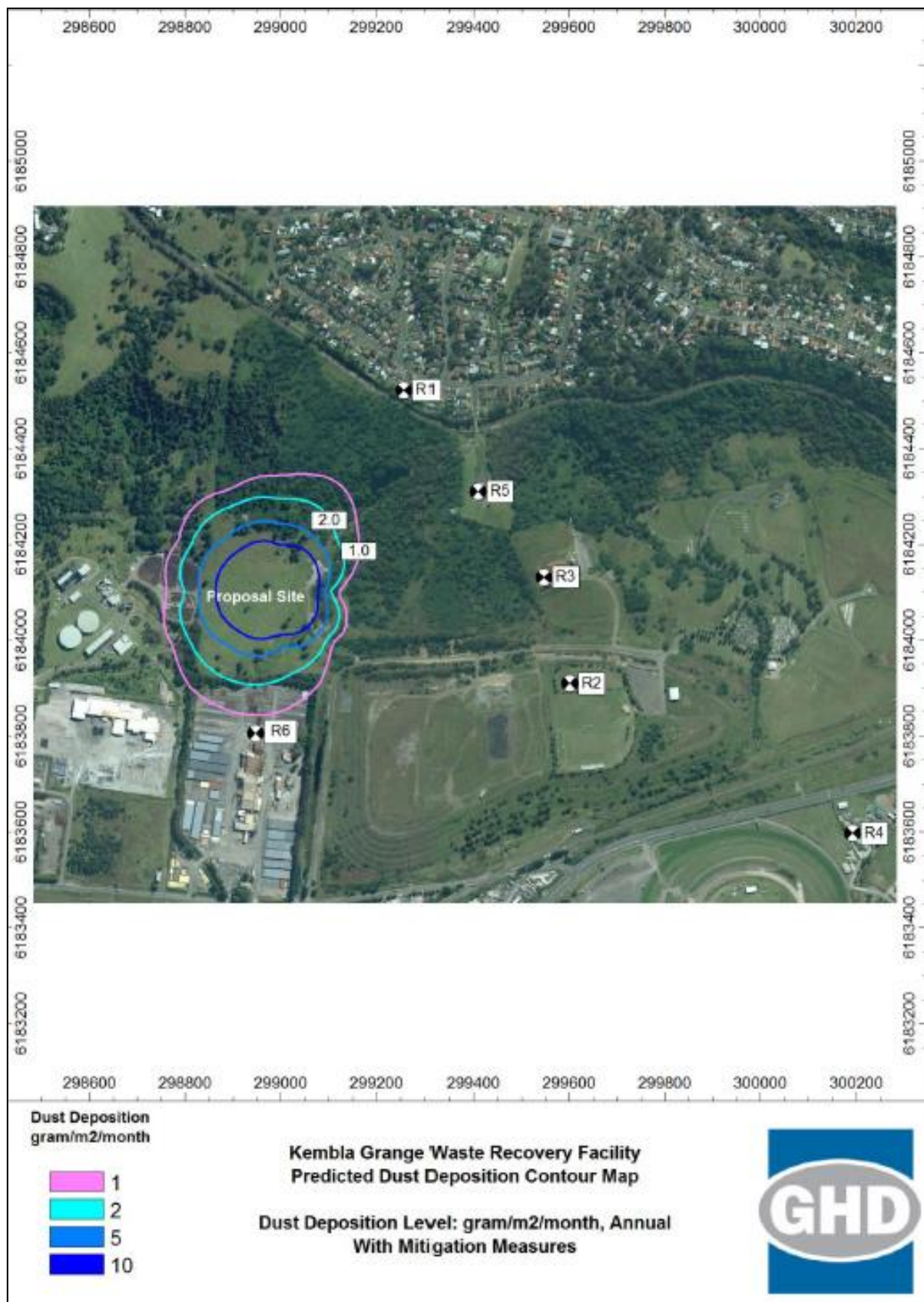


Figure 6: Predicted Annual Dust deposition (with mitigation) g/m³/month Ref: Air Quality Assessment (Figure 17), GHD, April 2015

Following modelling , which has been conducted by GHD in accordance with the Approved Methods (OEH assessment criteria). GHD conclude within Section 8 of the AQA (April 2015) that:

"Dust mitigation measures in the form of chemical dust suppressants on the access roads, Level 2 water sprays on the truck turning area and backing areas are predicted to reduce dust emissions resulting in compliance with the adopted criterion at all private receivers."

Following exhibition of the EIS in November 2014 GHD have also given further consideration to the potential impact of crushing activities and found that such activities will be a large contributor to dust emissions. Hence, GHD recommend that wet suppression systems (such as spray nozzles) be adopted as part of the dust mitigation requirements for the site.

Accordingly, the Statement of Commitments submitted in September 2014 has now been updated to incorporate the following additional/revised management and mitigation measures as recommended by GHD (and contained in section 7.1 and 7.2 of the revised Air Quality Assessment).:

- Chemical Dust suppressant spraying to be undertaken on the unsealed access road from the site office into the site. This will be undertaken as per the supplier's requirements.
- Watering of truck turn around and reversing areas will be undertaken with at least 2L/m²/hr as required to control dust emissions. Any other areas that are visible sources of dust will be appropriately watered until dust impact is no longer an issue.
- Watering of the main access roads will be provided with chemical dust suppressants. Chemical dust suppressants will be used as per the manufacturers' specifications. Additional dust suppression will be applied if dust from the road is visibly observed to be leaving the site boundary.
- A dust suppression system will to be installed and operated for the crushing plant. The system will be operated as per manufacturers' specification and used whenever dust from the crusher has the potential to be transported offsite in the direction of sensitive receptors.

Cardno, in its submission prepared for Patrick Autocare also raise concern that the use of Hydrofluoric Acid to wash vehicles is considered harmful to human health and the environment. GHD have given consideration to such comments and note that the monitoring of deposition of dust in Australia is conducted primarily to protect against amenity nuisance impacts. Due to sampling of dust deposition it cannot be used to assess potential health impacts which is what the national air quality legislation is focussed on. The methodology utilised in the Air Quality Assessment is considered to be the most effective method to determine the potential for amenity impacts (dust on cars) of the proposal. The air quality assessment has been undertaken in accordance with the Approved Methods (OEH assessment criteria). Further, the assessment demonstrated that the dust impacts from the site meet the criteria at the Patrick Property boundary, rather than the offices where the criteria would generally apply. The predictions show the proposal will meet the Approved Methods criteria at Patrick and all other receptors. Cardno has not provided any advice on current levels of dust experienced at the site and at what level would necessitate the need to use current use of Hydrofluoric Acid, however should this occur this would be required to be utilised in accordance with the Material Safety Data Sheet (MSDS) and any site environmental and safety management requirements.

2.5.2 Odour Mitigation

Comments regarding odour originating from the Kembla Grange Resource Recovery Facility are contained within the submissions lodged by the EPA and Cardno on behalf of PAC. Cardno suggest that the facility will emit unpleasant odour *"to an even greater extent than currently occurs due to the expanded operations. Even with all proposed mitigation measures there will still be an unacceptable odour at the northern end of the PAC's site at 66 West Dapto Rad. This odour could over time permeate the cars stored on this section of the site, with PAC required to introduce an enhanced cleaning regime to maintain these vehicles in an acceptable condition. Furthermore, odour would have an impact on the amenity of the surrounds itself"*.

The EPA notes comments focus on:

- The performance of systems;
- The ability to retrofit additional control measures;
- Treatment of the leachate pond and stockpiles;
- Odour auditing.

Specifically the EPA notes that *"to achieve less than 2OU at the nearest sensitive receptors enclosure of composting activities under negative pressure and discharge of emissions via stack is required as a minimum , with biofilter treatment of emissions prior to discharge further reducing the risk of odour impacts"*. The EPA raises concern that should mitigation systems outlined in the EIS not perform at the level of control assumed (90% for the biofilter) *"there is a risk of odour impacts at nearby sensitive receptors"*.

Further, the EPA recommends that:

- The facility be constructed *"so as not to preclude the retrofit of additional control measures such as a biofilter if required"*.
- The proponent considers *"additional odour mitigation measures relating to the leachate pond and management of organic waste and mature compost stockpiles including coverage of the later to prevent ingress of water and minimising onsite storage time prior to processing and/or removal offsite as part of the air quality management plan for the facility."*
- *Odour auditing requirements will need to be includes as part of the environmental protection licence conditions for the facility to ensure that any potential issues from these sources are addressed as required once operations commence"*.

Response:

Following review of the submission received GHD has reconsidered the option available to odour mitigation. As a result of this further assessment the odour mitigation assessment has been modified and the use of a biofilter has been removed. GHD confirm that the use of a building ventilation with all building air emitted through a stack as originally assessed increases dispersion into the surrounding environment and reduces the predicted odour levels to meet the criteria at all identified sensitive receptors. Based on predictions in the assessment, there is no need for the inclusion of a biofilter to meet the criteria. **Figure 7** which is extracted from the Air Quality Assessment (Figure 19) shows the predicated odour contours with building ventilation and GHD confirm that *"based on the assumptions made in this assessment, predicted odour levels form the proposed green waste composting will comply with the criteria if the WRF building is kept at negative pressure and all air if released in to the atmosphere via a stack"*.

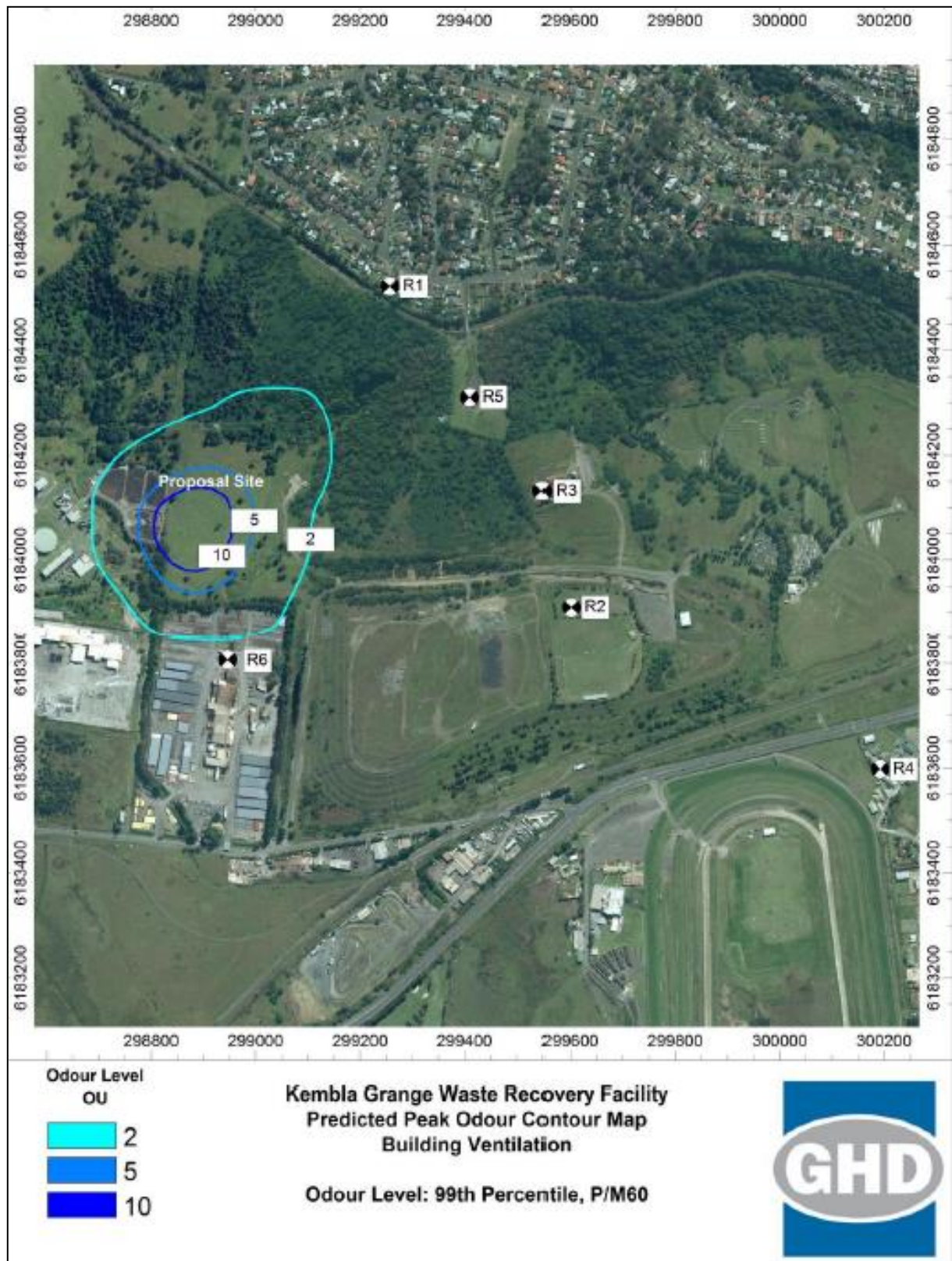


Figure 7: Predicted Peak Odour Contour Map, OU with Building Ventilation Ref: Air Quality Assessment (Figure 19), GHD, April 2015

The following additional odour management measures are therefore recommended to address the matters which were specifically raised by the EPA:

- Ensure the building is designed and constructed in a way that allows for the retrofitting of a biofilter, if required.
- Minimise the onsite storage times of organic material prior to processing.
- If the chosen composting process allows, cover the matured compost stockpiles to help reduce the ingress of water and reduce odour.
- If the leachate pond is a significant source of odour, investigate the use of aerators. Aerators can be installed in the leachate pond in order to minimise odour, enhance biological degradation and encourage evaporation.
- Annual odour sampling of the building ventilation stack will be undertaken.

With respect to the requirements for covering of mature stockpiles, DPE has suggested that *details be provided "of temporary vegetation to stockpile areas where stockpile is to be left for more than two months, as indicated on the Soil and Water Management Plan "*. In this regard Drawing C13 (Soil and Water Management Plan, Revision J, dated 21 April 2015) and C32 (Leachate Control Plan, Revision D, dated 22 April 2015) have been updated by KFW (refer **Appendix 7**) to confirm that stockpiles which are left for more than 2 months will be temporarily revegetated or alternatively stockpiles will be covered by tarpaulins. Sheet C14 (revision C dated 8 May 2015) contains details of the temporary vegetation and confirms that the following species will be used for this purpose:

"...the revegetation mixture should include the following species for both Autumn & Spring sowings-Duraturf Park Blend (Wright Stephensen Seed Mix) Thoroughbred Turf Tall Fescue (15kg/ha) Unhulled Couch(4kg/ha) Perennial Ryegrass (37kg/ha) Chewings Fescue (5kg/ha) Multigrow/Enrich Fertilizer at 500kg/ha".

Further, with respect to auditing of the facility Bicorp has confirmed that it raises no objection to Condition 29 (Dust and Odour Audit) as recommended by the Environment Protection Authority. In the event that odour modelling is required it is suggested that this should occur only at the building discharge point, unless there are odour complaints or issues.

With respect to the timing of preparation of an Air Quality Management plan it is recommended that this be prepared and submitted prior to the commissioning of the expanded operations. This is consistent with condition 13 of the EPA's recommended conditions which states:

"The air quality management plan must be submitted to and approved by the EPA prior to the commencement of any dust and/or odour generating activities at the site".

2.6 Noise

The Environmental Protection Authority in its submission of 15 December 2014 provided a comprehensive analysis of the Noise Assessment prepared by GHD focusing on:

- 1) Criteria and Calculation of the Rating Background Level (RBL);
- 2) Operational Noise Assessment; and
- 3) Mitigation.

In response to the issues raised regarding the report methodology and outputs, GHD has undertaken a review of the issues raised and has provided the following comments, which are accompanied by a revised Noise Assessment (April 2015).

2.6.1 Criteria and Calculation of the Rating Background Level (RBL)

The EPA commented that the rating background level calculations:

- Were based on weather data sourced from the Albion Park weather station. The use of a nearer weather station (such as the Office of Environment and Heritage (OEH) air quality monitoring station at Kembla Grange) was recommended.
- Included some periods of noise data corresponding to adverse weather conditions that should have been excluded.
- Should be undertaken strictly in accordance with the Industrial Noise Policy (EPA 2000).

Response:

GHD confirm that the Albion Park weather station is the nearest publically available source of weather data (provided by the Bureau of Meteorology). Weather data from OEH air quality monitoring station at Kembla Grange is not publically available. Hence, the Albion Park weather station data is considered representative and has been retained.

GHD has re-analysed the Albion Park weather data and filtered noise data corresponding to all periods of adverse weather conditions (defined as where wind speeds were measured to be greater than 5m/s or when rainfall occurred). Additionally, the calculation of the RBL has been undertaken strictly in accordance with the Industrial Noise Policy (EPA 2000). It should be noted that this procedure leads to an insufficient number of data points to calculate the day time RBL. However, this is considered acceptable as the assessment is based on the most stringent night time RBL.

Following consideration of the issues raised by the EPA with respect to the criteria and calculation of the RBL the following amendments have now been incorporated within the revised to the Noise Assessment (dated April 2014):

- Table 2-1 and Figure 3: Inclusion of Patrick Autocare as a sensitive receiver.
- Section 2.2.1 (Unattended noise monitoring results) has been updated to confirm that "*the noise data has been filtered in accordance with the Industrial Noise Policy Appendix B, excluding invalid data (when wind speeds are greater than 5m/s or when rainfall occurred) and to address the number of valid date points*".
- Tables 2-3 (site boundary summary of noise monitoring results, dB(A)) and Table 2-4 (Bardess Crescent summary of noise monitoring results, dB(A)) to incorporate revised noise monitoring results following consideration of the revised data.

2.6.2 Operational Noise Assessment

The EPA made the following comments on the operational noise assessment:

- Consistency in the use of the correct assessment time period based on the facility operational hours.
- Provision of details regarding modifying factor adjustments.
- The use of a reduced ground absorption coefficient value of 0.5, from 0.75.

- Using stability categories with a 3 m/s wind from the North-western quadrant.

Response:

Such comments have been considered by GHD and in response to the issues raised, GHD has amended the Noise Assessment to be consistent in the description of the facility operational hours which starts during the night-time period. GHD has also added additional descriptions regarding the noise characteristics of equipment anticipated to be on site (and the relevant modifying factor adjustments). The ground absorption coefficient has been reduced to 0.5 for all predictions.

Noise measurements undertaken of existing equipment onsite were assessed for tonality however this was determined not to be an issue and no modifying factors adjustments were applied. Tonality of all new equipment would be assessed during compliance noise monitoring.

GHD has undertaken a modelling test using the Concave algorithm with a 2 m/s wind from the north-western quadrant. The results indicate that the used ISO algorithm predicts higher noise levels at all sensitive receivers. The ISO algorithm takes into account the presence of a well-developed moderate ground based temperature inversion, such as commonly occurs on clear, calm nights or 'downwind' conditions which are favourable to noise propagation. Hence, the provided results are considered conservative and the modelling algorithm has not been changed.

The Noise Assessment prepared by GHD (dated April 2015) has therefore been amended (since exhibition of the September 2014 version of the Noise Assessment) to address the partial operation of the facility during the night time period and to update the resultant operational noise assessment:

- Section 3.2.5 (sleep disturbance during operation) - Deletion of the reference to the facility operating only during the daytime period.
- Table 3.5 in section 3.3.1 to update the proposal specific construction noise criteria (dB(a)).
- Table 3.6 in section 3.3.2 to update the proposal specific operational noise criteria.
- Section 4.1.3 (modelling methodology) - amendment of the ground absorption coefficient from 0.75 to 0.5; deletion of the reference to 'soft grassy land'; to include reference to the height of foliage to the north of the site and to the rail corridor noise barrier; and to confirm the height of modelling of noise sensitive receivers.
- Table 4-2 in section 4.1.4 to amend predicted construction noise levels DB(A).
- Section 5.1.2 (modelling methodology) to incorporate a revised ground absorption coefficient of 0.5; to include reference to the height of foliage to the north; and to delete reference to the facility only operating during the day time.
- Section 5.1.3 to clarify modifying factor adjustments.
- Table 5.2 in section 5.1.4 to update predicated operational noise levels at all receivers including Patrick Autocare.

2.6.3 Mitigation

With respect to mitigation the submission from the EPA states *"No operational noise mitigation measures were proposed, as the modelled impact of the WRF as presented in the NA complied with PSNLs. The EPA estimates indicates that the proposal will contribute up to 2 dBA above the adopted PSNL at Kingston Town, but the PSNL was based on background noise measurements between the WRF and monastery. The PSNL for Kingston Town, if it were actually measured at Kingston Town, is likely to be higher due to proximity to the Princes Motorway (M1)"*.

Response:

Section 6.2 (Operational Mitigation Measures) of the revised Noise Assessment dated April 2015 confirms that with the amendments to the assessment, the modelling results continue to indicate that *"the operational noise criteria will not be exceeded at any sensitive receiver. Once the design for the WRF has been finalised, a review should be undertaken to check that noise levels do not exceed the assumed levels in this assessment"*.

Specific operational noise mitigation measures were not listed in the prior Noise Assessment prepared in September 2014 as the predicted levels in the report were below the criteria. The report did state that general noise mitigation measures outlined in the construction noise mitigation measure should be referred to. However, the revised report dated April 2015, whilst noting that compliance is still achieved, recommends that the following noise mitigation measures be undertaken during operation of the site:

- Once operational, undertake compliance noise monitoring to determine the noise contribution of all significant site equipment and machinery and the impact on nearby receivers.
- All equipment would be selected to minimise noise emissions. Equipment would be fitted with appropriate silencers and be in good working order. Machines found to produce excessive noise compared to normal industry expectations would be removed from the site or stood down until repairs or modifications can be made.
- Upon receipt of a valid noise complaint, monitoring would be undertaken and reported as soon as possible. If exceedances were detected, the situation would be reviewed in order to identify means to attempt to reduce the impact to acceptable levels.
- Where possible, avoid the use of noisy equipment such as the crusher and screen during the night time period (6am-7am) when the site is operational.

GHD has confirmed that the amendments to the noise assessment do not change the outcomes of the assessment and the project is acceptable from an acoustic perspective. This is also acknowledged by the EPA with the submission confirming that *"whilst some issues discussed above remain outstanding and may need to be addressed for any further development of the site in the future, the issues do not significantly affect the outcomes of this assessment"*. The EPA recommends that conditions of consent include noise limits that apply at all times at the identified noise sensitive receivers. Further *"monitoring conditions (M8.1 and R4) can be varied and should be negotiated with the proponent and EPA by DPE before being finalised in any project approval."*

Accordingly, the additional operational mitigation measures as recommended by GHD (and listed above) have been incorporated within the revised Statement of Commitments (refer Section 4). Bicorp raises no

objection to Conditions 27 and 28 (Noise Monitoring Report) as recommended by the Environment Protection Authority, which will be included as conditions should consent be issued.

2.7 Land Use Conflict

The "Private and Confidential submission states the following in relation to potential land use conflict:

- *The "Public Recreation zoning of adjacent land is inconsistent with the proposed heavy industrial uses. No buffer is proposed and the operations are within 400m of Farmborough Heights residences. "*
- *"Prevailing winds will blow dust and odour towards Farmborough Heights residence and will increase noise impacts.*
- *"Sunday" operating hours – unacceptable given the proximity of residences*

Response:

The proposed development is wholly sited within the IN2 Light Industrial zone of WLEP 2009, as confirmed in section 2.4.3 of this Response to Submissions and also as confirmed within the submission lodged by Wollongong City Council. The 'Private and Confidential' submission incorrectly states that the adjacent lands are zoned "Public Recreation" however it is noted that adjacent lands to the north and east are zoned RE2 Private Recreation. This includes the balance of the land owned by Bicorp which does not contain any part of the proposed development footprint and hence will provide an effective buffer to the residences within Farmborough Heights.

Land beyond the RE2 zoned lands to the north is zoned E2 Environmental Conservation and the uses which are permissible with consent in this zone are limited (under WLEP 2009) to *"Environmental facilities; Environment protection works; Extensive agriculture; Recreation areas"*. Hence, this land is unlikely to be developed for any purpose which would lead to land use conflict with the proposed resource recovery facility but, conversely, such land will provide an effective buffer to the residence of Farmborough Heights.

One allotment to the north-east, which houses the Rural Fire Service is zoned RE1Public Recreation, however permissible uses within this zone are also limited under the land use table of WLEP 2009. The use of this land is also currently clearly established

With respect to the suggestion that the zoning of adjacent lands is inconsistent with the 'heavy industrial uses', it is submitted that the proposed resource recovery facility is not defined as a heavy industrial use, nor have the specialist consultant investigations undertaken as part of the EIS concluded that the proposed development will impact on residences in Farmborough Height to greater than acceptable levels.

Specifically, the Air Quality Assessment prepared by GHD in April 2015 has concluded:

- *"Dust mitigation measures in the form of chemical dust suppressants on the access roads, Level 2 water sprays on the truck turning area and backing areas are predicted to reduce dust emissions resulting in compliance with the adopted criterion at all private receivers."*
- *"Based on the assumptions made in this assessment, predicted odour levels from the proposed green waste composting will comply with the criteria if the WRF building is kept at negative pressure and all air is released into the atmosphere via a stack".*

The potential noise impacts of the development were considered within the Noise Assessment prepared by GHD, based on operating hours of 6am to 6pm Monday to Saturday, 8am to 4pm Sundays and no work on public holidays. Construction hours will be in accordance with the Interim Construction Noise Guideline (DEC, 2009) which recommends standard hours for construction activities of 7am to 6pm Monday to Friday, 8am to 1pm Saturday, with no work on Sundays or public holidays.

A revised Noise Assessment has now been prepared by GHD (dated April 2015) which addresses the partial operation of the facility during the night time period and updates the resultant operational noise assessment. This revised Noise Assessment reconfirms that:

- *"Construction activities during recommended standards hours are not predicted to exceed the noise affected construction noise management levels at nearby sensitive receivers. Recommended noise mitigation measures would be implemented where feasible and reasonable.*
- *Operational noise from the Wollongong WRF is predicted to comply with the INP at the surrounding sensitive receivers during daytime and night time operations".*

GHD confirms that *"the proposal will be acceptable from an acoustic perspective assuming the recommended mitigation measures are implemented"*. The recommended mitigation measures are listed within the Statement of Commitments (SOC) contained in Section 4 of this Response to Submissions, however the SOC has now been updated to incorporate the hours of operation as modelled within the acoustic report and to include a number of other mitigation measures as detailed in section 2.6.3 of this RTS.

Hence, there is no demonstrated need for an additional buffer to the residences in Farmborough Heights, as the revised documentation prepared to support this Response to Submissions confirms that the proposed development will not unreasonably impact on residences in Farmborough Heights, with the implementation of the recommended mitigation measures. Further discussion of potential dust, odour and noise impacts are discussed within foregoing sections of this Response to Submissions.

2.8 Waste

The submission from the EPA states;

- *"The EIS contains conflicting information about how some wastes are proposed to be handled at the site. For example, information on stockpile storage limits and process locations for organic wastes provided in the Waste Management Plan prepared by Benviron conflicts with information contained in the Air Quality Impact Assessment (AQIA) and Noise assessment (NIA) prepared by GHD".*
- *"The modelling undertaken for the AQIA and NIA was based on assumptions of certain types and quantities of waste being received, processed and stored at the site. To ensure impacts are limited to those modelled in the EIS, it is important that the type and quantity of wastes approved to be received and processes are limited to those modelled in these assessment".*
- *Outputs: The EPA understands that the proponent intends on recovering much of the waste received at the facility and using it to make products that will be sold to consumers for various uses. The proponent must comply with the Protection of the Environment Operations (Waste) Regulations 2014.*

- *Garden Waste: The proponent intends on receiving 30,000 tonnes of non-putrescible organic waste at the premises each year, with 6,300 tonnes to be composted and the remainder to be mulched for direct sale or sold as firewood. Any garden waste must be composted in accordance with the "Compost Order 2014". The quantity of garden waste must not exceed 6,300 tonnes. Raw mulch must only contain horticultural barks, leaf mulch and wood chip mulch produced from forestry and sawmill residues and urban wood residues and/or branches, tree stumps and bark that are absent of leaves, flowers, fruit and plant propagules.*

Response:

Section 1.2 of the Air Quality Assessment prepared by GHD in April 2015 confirms that the proposal includes the processing of up to 230,000 tonnes per annum of building and demolition waste including brick, concrete, soils, timber, general and solid waste and composting of up to 6,300 tonnes per annum of green waste. Similarly, such quantities are confirmed within page 1.2 of the Noise Assessment prepared by GHD in April 2015.

Section 4.3.1 (Development Capacity) of the EIS dated September 2014 confirms that the proposal involves;

- An increase in the processing capacity to up to 230,000 tonnes per annum, with a redesign and expansion of the footprint of the development, thereby providing a more functional operational arrangement.
- A maximum storage capacity of 45,000 tonnes of waste at any one time, increased from the 2,500 tonnes which can currently be stored on the site pursuant to Development Consent 2009/1153/A;
- Processing of up to 871 tonnes per day.
- Processing of up to 30,000 tonnes of non putrescible organics per annum (of which 6,300 tonnes per annum will be composted and 23,700 tonnes per annum will be mulched or sold as firewood)
- Storage of no more than 2500m³ of organic matter on the site at any time (which includes timber, tree stumps etc). Of the 2500m³ of organics, no more than 500m³ tonnes of this will comprise compost.

Such quantities are consistent with those contained in the Air Quality and Noise Assessment undertaken by GHD in April 2015, with both documents confirming that the facility will process a total of 230,000 tonnes of waste per annum, including 30,000 tonnes of non putrescible organics, of which 6,300 tonnes per annum will be composted and 23,700 tonnes per annum will be mulched or sold as firewood).

To ensure consistency between documents Figure 3 of the Waste Management Plan revised by Benviron on 8 April 2015 has now been updated to confirm that "no more than 6,300 tonnes per annum of compost will be processed" at the facility. A copy of the revised Waste Management Plan is contained in **Appendix 11** of this RTS.

The quantities listed in the EPA's waste limits are noted, with the facility to be permitted to receive a maximum of 230,000 tonnes of general solid (non putrescible) waste per annum, subject to the listed 'Other Limits'. Further, the EPA's advice regarding the need for the proponent to comply with the Protection of the Environment Operations (Waste) Regulations 2014 and also to ensure that raw mulch contains an appropriate composition of materials is noted and acknowledged. Section 2.4 of the Waste Management Plan dated April 2015 addresses the process for the disposal of unsuitable material off site. Section 4.0 (page 8) of this assessment confirms "The proponent intends on receiving 30,000 tonnes of non-putrescible organic waste at

the premises each year, with 6,300 tonnes to be composted and the remainder to be mulched for direct sale or sold as firewood. Any garden waste must be composted in accordance with the 'Compost Order 2014'. The quantity of garden waste must not exceed 6,300 tonnes. Raw mulch must only contain horticultural barks, leaf mulch and wood chip mulch produced from forestry and sawmill residues and urban wood residues and/or branches, tree stumps and bark that are absent of leaves, flowers, fruit, and plant propagules."

2.9 Preliminary Hazard Analysis

The submission received from Cardno, on behalf of Patrick Autocare Pty Ltd (PAC), raises a number of concerns regarding the Preliminary Risk Assessment prepared by Benviron. The key issues raised in relation to the analysis are:

- 1) Adequacy of the Preliminary Hazard Analysis and compliance with the requirements of SEPP 33 - Hazardous and Offensive Development.
- 2) Consideration of current and future landuses.
- 3) Work practices employed on the site.

The three key issues raised with respect to the Preliminary Hazard Analysis are addressed in sections 2.9.1, 2.9.2 and 2.9.3.

2.9.1 Adequacy of Preliminary Hazard Analysis

The submission prepared by Cardno on behalf of Patrick Autocare raises the following issues with respect to the adequacy of the risk assessment and its compliance with legislative requirements:

- The Preliminary Risk Analysis "lists a number of project components and incidents which could result in scenarios that have impacts on and off site. These are vehicles collisions, vehicle theft, various kinds of fires, explosions, thefts of material, chemical leaks and spills, soil dust release and bushfires". The risk assessment does not identify any items relevant to the release of PM10 air pollution or release of contaminated dust from construction waste. Further, "it does not assess the risk that the mitigation measures proposed to reduce air pollution such as water spraying, filtration and ventilations systems might fail. The failures of these systems would lead to harmful air pollution events which would exceed the estimates given in the Air Quality Assessment and likely not meet OEH and EPA requirements".
- There is no mention of the potential for dangerous forms of waste to be accidentally introduced to the site in the course of its operation including asbestos, lead or other likely contaminants and the potential for such to be significantly released into the atmosphere during crushing, loading and storage processes.

Response:

Amendment to the Preliminary Hazard Analysis was undertaken by Benviron in April 2015 to include reference to the Patrick Autocare and Kaliwest properties within section 2.4, which noted that the Patrick Autocare property is sited 300m south, whilst the Kaliwest property is sited 500 to the southwest. A copy of the revised Preliminary Hazard Analysis is contained in **Appendix 10** of this RTS.

Further, following exhibition of the EIS and consideration of issues raised within submissions, the Preliminary Hazard Analysis prepared by Benviron in April 2015 now incorporates dust, odour and the importation of hazardous material within the risk assessment. Specifically, Section 3.6, which has now been inserted within the

Preliminary Hazard Analysis notes that *"dust and odour risks can lead to the generation of potentially hazardous or offensive gas emissions. Potential environmental impacts may include release of significant quantities or air emissions and contaminated material. Other impacts include damage to property and injury."* The measures which have been incorporated within the project to reduce the level of risk are incorporated within sections 7.2 and 7.3 of the Air Quality Assessment prepared by GHD (April 2015) and are also consistent with the measures contained in section 3.6 of the Preliminary Hazard Analysis dated April 2015. Such measures are;

- *"Water material prior to it being loaded for haulage, where appropriate.*
- *Aim to minimise the size of storage piles where possible.*
- *Limit cleared areas of land and clear only when necessary to reduce fugitive dust emissions.*
- *Control on-site traffic by designated specific routes for haulage and access and limiting vehicle speeds to below 25km/hr*
- *All trucks hauling material should be covered before exiting the site and should maintain a reasonable amount of vertical space between the top of the load and top of the trailer.*
- *Material spillage on sealed roads should be cleaned up as soon as practicable.*
- *A rumble-strip at the interface of the sealed road and the unsealed access road should be considered.*
- *Excavating operations conducted in areas of low moisture content material should be suspended during high wind speed events or water sprays should be used.*
- *A site specific odour management plan to be developed for commissioning.*
- *Design and installation of an appropriate building ventilation system at negative pressure at all times during operation."*

In addition, the Preliminary Hazard Analysis recommends that the following be undertaken::

- *"Appropriate induction and training of personnel.*
- *Procurement of spill and water cart equipment adequate for the level of risk identified for the project and regularly maintained and tested to ensure good working order.*
- *Correct storage and handling of all substances, including waste , under conditions that minimise the risk of fire, explosion or release of toxic emissions, with specific measures that address the use of solvent-extraction reagents."*

It is noted that the Preliminary Hazard Analysis does not include an Odour Management Plan however does include the mitigation measures provided in the air quality assessment. As referenced in Section 3.6 of the Preliminary Risk Assessment an Odour Management Plan will be prepared prior to the commencement of the expanded operations and will be in best practice with NSW Government guidelines. It is more appropriate that this will form part of the operation of the site so it can be modified and updated regularly in order to manage varying site conditions.

The conclusion of the Preliminary Hazardous Analysis confirms that following consideration of the additional potential risks *"it is anticipated that many of the potential hazardous scenarios raised in this PHA are low"* and that *"hazard treatment measures have been proposed, where required, to produce a 'low' level of risk in accordance with the risk acceptance criteria and therefore the risks are within acceptable limits for the operation of the site".*

With respect to the potential that the recommended mitigation measures might fail and would exceed the estimates given in the Air Quality Assessment and likely not meet OEH and EPA requirements", Table 4 of the Air Quality Assessment deals with the failures of the systems with various management processes. However if a major failure occurs, work will be required to cease until the management system is repaired and operational. This requirement has been incorporated within the revised Statement of Commitments.

The revised Preliminary Hazard Analysis prepared by Benviron in April 2015 now also includes consideration (in section 3.7) of the potential for hazardous materials to be imported into the site, which could result in the release of product, hydrocarbons or waste materials with consequent adverse impact on the environment and/or injury. Section 3.7 confirms that to minimise the level of risk *"contractors will be required to comply with Bicorp's procedures and the relevant codes and standards for transport, storage and handling of hazardous materials (including emergency response). Similarly, contractors will be required to adhere to New South Wales road rules. In the event that the importation of hazardous materials by contractors the contingencies are shown in table 4 (importation of material) and also in Attachment 4 - Hazard Contingency Strategy"*. Specifically:

- Table 4 (Hazard Identification Risks) includes the proposed treatment measures to address a range of risks including, but not limited to, the importation of hazardous materials and release of harmful air pollutants;
- A Hazardous Material Management Strategy is now included as Attachment 4 of the Preliminary Hazard Analysis with this strategy providing detail of the protocol to be employed on the site; the method of excavation of contaminated materials and the method of disposal to an off site landfill licensed by NSW EPA; onsite capping which is to be used to isolate areas in the subsurface from the surrounding uncontaminated environment; and the use of a site management plan if a 'cap and contain' strategy is required to be employed.

It is submitted that with the inclusion of the additional hazard assessment to address air, odour and the potential importation of hazardous materials to the site, that the Preliminary Hazardous Analysis prepared by Benviron in April 2015 meets the requirements of State Environmental Planning Policy No. 33 - Hazardous and Offensive Development as it meets the relevant aims and objectives contained in Part 1 Section 2 which state that :

- (d) to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account, and*
- (e) to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact.*

Further, Section 13(a) of Part 3 of SEPP 33 requires that:

"In determining an application to carry out development to which this Part applies, the consent authority must consider (in addition to any other matters specified in the Act or in an environmental planning instrument applying to the development):

- (a) current circulars or guidelines published by the Department of Planning relating to hazardous or offensive development.*

In this regard Benviron confirms that the PHA assess all the potential risks in accordance with the associated industry by:

- Providing a list of all the hazardous materials used in the proposed development and the quantity of each present.
- Assessing the dangerous goods classification for each material, including subsidiary class(es); the mode of storage used (that is, bulk or packages/containers) and the maximum quantity stored or held on site;
- Determining the distance of the stored material from the site boundary for any of the materials in dangerous goods classes 1.1, 2.1 and 3
- Comparing to a screening threshold and to other criteria outlined in the following documents-
 - HIPAP No. 1 — Industry Emergency Planning Guidelines;
 - HIPAP No. 2 — Fire Safety Study Guidelines;
 - HIPAP No. 3 — Environmental Risk Impact Assessment Guidelines;
 - HIPAP No. 4 — Risk Criteria for Land Use Safety Planning

The assessment has been undertaken in accordance with the requirements of SEPP 33 and as such determines that the proposed development poses "no significant risk for offense".

2.9.2 Current and Future Landuse

The submission prepared by Cardno on behalf of Patrick Autocare also raises concern that the Preliminary Risk Analysis does not give due consideration of current and future land use in the vicinity of the Kembla Grange Resource Recovery Facility. Cardno suggest that the Preliminary Risk Analysis does not provide sufficient information for the consent authority to assess the development and its mitigation measures in the context of future land use.

As stated by Cardno *"the land surrounding KGRRF and Patrick these activities are likely to expand in future given the growth of Wollongong, and hence the need for greater employment in the area and future residential development of the greater West Dapto area. The future land use of West Dapto is outlined in Wollongong City Council's Wollongong Development Control Plan 2009, Chapter D16: West Dapto Release Area. The West Dapto Master Plan (see figure 7) indicates that the land surrounding the KGRRF to the south and south east is intended for light industrial development"*. Cardno on behalf of PAC believe the proposal does not adhere to best practice design as required to be considered under SEPP (Infrastructure) 2007 and this concern has not been adequately addressed in the EIS. Specifically, PAC are concerned that the proposed expansion of operations at the subject site will produce levels and types of dust and air pollution that will create a land use conflict with PAC's operations in the area.

Response:

The land surrounding the Kembla Grange Resource Recovery Facility is now zoned under the provisions of Wollongong local Environmental Plan 2009 following the incorporation of the West Dapto LEP within this planning instrument. As noted in the submission from Cardno, land immediately to the west and south of the KGRRF is zoned IN2 Light Industrial. However, the Cardno submission does not identify that the land further to the south and southwest is zoned IN3 Heavy Industrial.

It is concurred that Section 13(e) of Part 3 of SEPP 33 requires consideration of 'any likely to future land use surrounding the development'. Guidance on such future landuses is contained in WLEP 2009, with the land use

table for both the IN2 Light Industrial and IN3 Heavy Industrial land use tables confirming that a range of landuses are permissible and hence could potentially scour on adjacent lands:

Uses permissible with consent within the IN2 Light industrial zone of WLEP 2009:

Advertising structures; Agricultural produce industries; Animal boarding or training establishments; Aquaculture; Boat building and repair facilities; Community facilities; Crematoria; Depots; Freight transport facilities; Hardware and building supplies; Helipads; Industrial retail outlets; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Mortuaries; Neighbourhood shops; Places of public worship; Plant nurseries; Recreation areas; Recreation facilities (indoor); Roads; Self-storage units; Service stations; Sex services premises; Take away food and drink premises; Transport depots; Vehicle body repair workshops; Vehicle repair stations; Vehicle sales or hire premises; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water treatment facilities

Uses permissible with consent within the IN3 Heavy Industrial zone of WLEP 2009:

Advertising structures; Boat building and repair facilities; Depots; Freight transport facilities; General industries; Hazardous storage establishments; Heavy industrial storage establishments; Heavy industries; Helipads; Industrial retail outlets; Kiosks; Light industries; Offensive storage establishments; Recreation areas; Recreation facilities (indoor); Roads; Rural industries; Service stations; Storage premises; Take away food and drink premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres; Water supply systems

The above list of permissible uses confirm that the uses permitted in the broader locality extend to heavy industries, offensive storage establishments, hazardous storage establishments, heavy industrial storage establishments, general industries, light industries, boat and vehicle body building workshops. Waste and resource management facilities, such as that which is now proposed and such as the nearby Whytes Gully facility, are permissible as waste or resource management facilities with the IN2 Light industrial zone.

As noted on the Cardno submission Chapter D16: West Dapto Release Area of Wollongong Development Control Plan 2009 contains a Draft West Dapto Masterplan 2013 which replaces the West Dapto Masterplan 2009, as referenced in the Cardno submission. This Masterplan also provides guidance as to the future land uses in this locality. An extract of this Masterplan is contained in **Figure 8**. This Masterplan shows that, consistent with the zoning of WLEP 2009, land to the southwest and south is to be used for Light industrial uses, whilst further beyond heavy industrial uses are encouraged.

This Chapter confirms that Stages 1 and 2 of this release area will be characterised by the "The Kembla Grange employment area, containing 175 hectares of new employment land". Further, the objectives of this chapter of WDCP 2009 seek to encourage employment generating uses as noted in the following relevant objectives:

"(a) To enable the development of the West Dapto Release Area for residential, employment, industrial and environmental conservation areas in a manner consistent with the Wollongong LEP (West Dapto) 2010 and the West Dapto Master Plan (Figure 4.2).

(f) To improve employment opportunities and economic growth in the Illawarra region whilst ensuring that commercial and industrial development is of a high design standard, ecologically sustainable and energy efficient. "

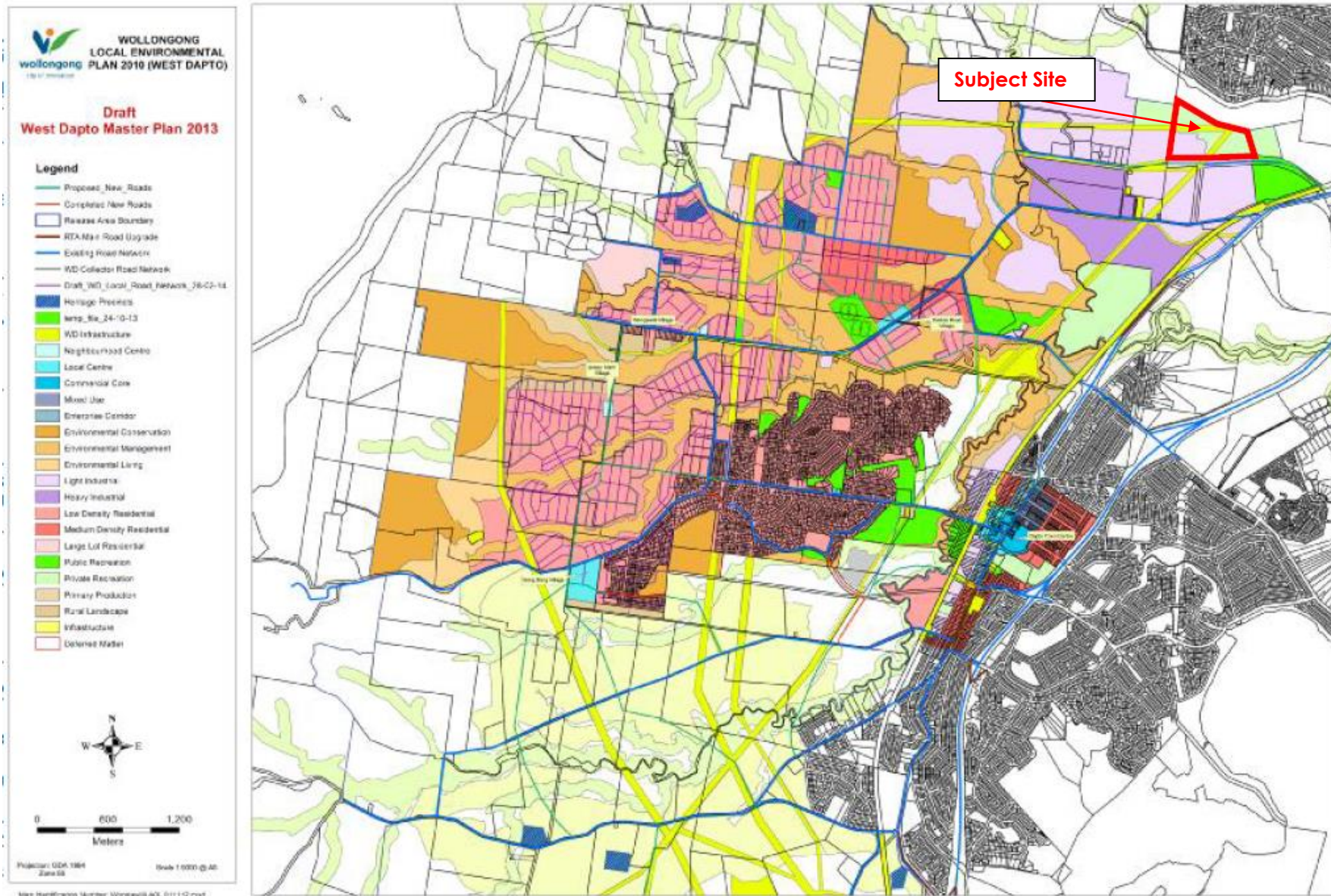


Figure 8: Draft West Dapto Masterplan 2013 (Ref: Wollongong Development Control Plan 2009, Wollongong City Council - Nb. Clarity limited in original document).

Further, Section 6.3.13 of Chapter D16 (Employment Area) confirms that:

"The creation of employment opportunities within and near to West Dapto is a key strategy in enabling people to work close to where they live and thereby reduce the overall traffic generated by the development. The main employment areas are West Kembla Grange and a small expansion of the Yallah industrial area. In addition employment will be provided in the centres and within community and other services generated by the development. The West Kembla Grange area will continue as a major industrial precinct. The availability of land within this area and its suitability for development is a key opportunity for West Dapto. West Kembla Grange is likely to benefit from infrastructure upgrading in the early stages of the urban development as it is located in close proximity to areas in the north which are likely to be released first. An enterprise corridor has also been planned to the north and south of Dapto Regional Centre and between the railway and the F6 in the south adjacent to the Yallah Campus of the Illawarra Institute of TAFE, which will provide additional local employment opportunities. 1 All development within land zoned for employment purposes shall be in accordance with the principles contained within the Wollongong LGA Employment Lands Strategy (Hill PDA, 2006). 2 Sections 4.2, 4.3 and 4.4 of the Strategy contain specific controls in relation to land for general employment uses, land for heavy industrial uses and land for light industrial uses. 3 These principles include preserving large parcels and clusters of light and heavy industrial land and ensuring that business parks are not accommodated in light industrial zones. 4 Refer to Chapter B5 Industrial Development for controls relating to development on industrial lands."

Clearly WLEP 2009, Chapter D16 West Dapto Release Area, the West Dapto Masterplan and the Wollongong LGA Employment lands Strategy allow and encourage the type of use which is proposed. The facility has the capacity to generate additional employment within the Illawarra and is suitably located within an employment lands precinct where both light and heavy industrial uses are permissible and where such uses were obviously contemplated and encouraged when WLEP 2009 was initially drafted.

The submission from Cardno raises the potential for land use conflicts with Patrick Autocare operations and specifically the need to address Section 123(c)(i) of State Environmental Planning Policy (Infrastructure) 2007 which requires consideration of "whether the development is located so as to avoid land use conflicts, including whether it is consistent with any regional planning strategies or locational principles included in the publication EIS Guideline: Landfilling (Department of Planning, 1996).....". In this regard Section 2.4 (Land Use Conflicts) of the revised Preliminary Hazard Analysis (April 2015) now addresses potential land use conflicts. This section of the PHA confirms that the proposed expansion of the Kembla Grange Resource Recovery facility is consistent with the objectives of the DCP and Masterplan, as it will provide a significant amount of employment and an essential service (waste management) to the proposed land release area to complement the Kembla Grange landfill facility located approximately 1.5km to the west of the site. Further, it is considered that it has been adequately demonstrated that the facility is appropriately located, as the distance from the Whytes Gully landfill will provide a convenient transport alternative to allow for recycling of material which cannot be accepted as landfill.

The facility will also play meet the objectives of Chapter E7 of WDCP 2009 which seeks: "(c) To encourage development which facilitates waste minimisation and complements waste services offered by Council or private contractors;

- e) To maximise reuse and recycling of building materials and household, industrial and commercial waste;
f) To provide appropriately located, sized and accessible waste storage facilities."

In summary, it is maintained that the proposed expansion and the mitigation measures presented within the Air Quality Assessment and PHA show the risks are low and are very unlikely to impact upon the surrounding sensitive receivers. Further, the risk of land use conflict between the facility and PACs operations is also concluded by Benviron to be low, with the implementation of the recommended mitigation strategies.

2.9.3 Unsafe Work Practices

Cardno also raise concern that current unsafe practices have been observed on the proposed development site, allegedly demonstrated in photos contained in Figures 8 and 9 of the submission dated 7 November 2014. Cardno also suggest that the current facility does not appear to be operating at an acceptable environmental level with regard to safety, with the associated risks likely to increase as a result of the expansion.

Response:

In response to this submission Bicorp confirm that the current work practices undertaken by at the existing Kembla Grange facility are in accordance with the safe works site operation management plan and are in accordance with all relevant work policies. Bicorp advise that the photo provided is misinterpreted as it actually shows the safe works methodology in place. The photo shows the excavator parked (the door is wide open) with its bucket flat on the waste stockpile, which is undertaken whilst a member of the public unloads within the vicinity of the machine. A safety manager employed by the Kembla Grange Resource Recovery Facility (KGRRF) also monitors the traffic movements and the operation of machinery within the site.

Bicorp confirm that safety is a priority of KGRRF and will be undertaken with the upmost regard. The site is currently operated in best practice in order to mitigate any potential concerns particularly with dust. Currently dust and air pollutants are managed with water carts and sprays and have been effective as previous ambient dust monitoring results indicate that dust levels are below the guideline criteria. It is noted that KGRRF have not received any complaints from its current operation.

2.10 Greenhouse Gas

The 'private and confidential submission' states that:

"Greenhouse Gas Emissions will be nine times greater than those for other facilities in NSW".

Response:

The Greenhouse Gas Assessment prepared by Pacific Environment in October 2013 confirms that *"The greenhouse gas emissions intensity for the project, in terms of emissions per tonne of waste processed is five times greater than the greenhouse gas emissions intensity for other facilities in the NSW GMR. The majority of Scope 1 emissions during operation are from composting. The emissions intensity for the project may be higher than for other facilities in the NSW GMR as not all these facilities are likely to have on-site composting. It is also likely that many other similar facilities would not have on-site electricity generation. That is, a large part of the emissions inventory for other facilities may comprise of Scope 2 emissions. When taking this difference in*

reporting boundaries into account, the emissions associated with this project would likely be more comparable with those of other facilities".

This report confirms that on-site electricity generation and composting comprise a significant component of the emissions and that if these differences were discounted the emissions from the facility are likely to be similar to those of other similar facilities. On this basis no change to the Kembla Grange operations are considered warranted.

2.11 Contamination

Contamination of the site was raised within the 'Private and Confidential submission', with this submission stating:

"A contamination assessment is required as the site is potentially contaminated."

Response:

Under Clause 7(2) of State Environmental Planning Policy 55 - Remediation of Land requires the undertaking of investigations pertaining to contamination where there is a change of land use. Specifically this clause states:

- (2) Before determining an application for consent to carry out development **that would involve a change of use on any of the land** specified in subclause (4), the consent authority must consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land planning guidelines.
- (3) The applicant for development consent must carry out the investigation required by subclause (2) and must provide a report on it to the consent authority. The consent authority may require the applicant to carry out, and provide a report on, a detailed investigation (as referred to in the contaminated land planning guidelines) if it considers that the findings of the preliminary investigation warrant such an investigation.
- (4) The land concerned is:
 - (a) land that is within an investigation area,
 - (b) land on which development for a purpose referred to in Table 1 to the contaminated land planning guidelines is being, or is known to have been, carried out,
 - (c) to the extent to which it is proposed to carry out development on it for residential, educational, recreational or child care purposes, or for the purposes of a hospital—land:
 - (i) in relation to which there is no knowledge (or incomplete knowledge) as to whether development for a purpose referred to in Table 1 to the contaminated land planning guidelines has been carried out, and
 - (ii) on which it would have been lawful to carry out such development during any period in respect of which there is no knowledge (or incomplete knowledge).

In this instance the land will continue to be used for a waste recycling facility, consistent with the current use of the land and hence a contamination assessment is not required to be undertaken under the provisions of SEPP 55.

2.12 Bushfire Risk and Vegetation

Issues pertaining to bushfire hazard/mitigation and vegetation planting/management were raised within the submission from The Rural Fire Service and the Department of Primary Industries (Office of Water). The issues are addressed under the following headings:

- 1) Asset Protection Zones
- 2) Building Construction Standards
- 3) Riparian Corridor Planting

2.12.1 Asset Protection Zones

The NSW Rural Fire Service submission states:

"A large part of the subject site is mapped as bushfire prone. Generally the vegetation hazard is outside the proposed area and operations but does include the riparian corridor that bisects the processing and stockpiling area, and the proposed workshop. Other areas of bushfire prone vegetation are in relatively close proximity to the development to its north and east. This is of particular concern given that the development proposes open stockpiles of potentially flammable materials such as green waste and timber. There is potential for a bushfire in the bush both within and beyond the site, to ignite the open stockpiles. The reverse also applies, i.e. a fire within the site has the potential to spread to the adjoining bushland."

Given this bushfire risk the RFS considers it appropriate to maximise the separation distance between bushfire prone vegetation and the proposed development. This is best achieved through the provision of an appropriately manage asset protection zone (APZ). The RFS provides recommended conditions below and includes an APZ with the riparian corridor. Whilst acknowledging the vegetation management plan and landscaping plan for this riparian corridor it is the view of the RFS that the need to minimise bushfire risk should take precedence over these plans. "

Response:

In response to the issues raised consultation has occurred with Jason Maslen of NSW Rural Fire Service (by David Peterson of Ecological) to determine to clarify the components of the facility which are of greatest concern from a bushfire hazard perspective, with a view to investigating options to address the issues raised. Such consultation confirmed that the hazard posed by the material stored within stockpiles is the issues of greatest concern, due to potential level of flammability. Whilst the RFS has noted in its submission that *"generally the vegetation hazard is outside of the proposed area of operations"* it has referenced the need for a 100m asset protection zone from the riparian corridor that *"bisects the processing and stockpiling area"*. The siting of the riparian corridor planting is shown in the revised Landscape Plan prepared by Ochre which is contained as

Appendix 9.

The RFS has requested in its recommended condition of consent (Condition No. 1) that this riparian corridor planting be managed as an inner protection area, with the Asset Protection zone to extend:

- For 100m north and east of the outdoor processing and stockpiling area.
- West and south of the outdoor processing and stockpiling area to the property boundary.
- An additional 19m east of the proposed workshop building.

Following consultation with RFS it was determined that the most appropriate mechanism to ensure that storage flammable material does not occur in close proximity to the riparian corridor is to delineate the type of material which can be stockpiled, loaded and processed within 100m of the riparian vegetation and the type of material which can be stockpiled and loaded beyond the recommended 100m APZ distance. To address this issue an amended Site Plan (Revision O dated 8 May 2015) has been prepared by KFW which shows that to the east of the Indoor Processing Shed (which equates to a distance of in excess of 100m from the riparian corridor planting) only non flammable materials such as concrete, brick, rubble, rock, steel, soil, hardfill and the like will be loaded, processed and stockpiled. Flammable materials, such as timber and greenwaste (in addition to sand and soil), will be stockpiled and loaded to the west of the indoor processing and storage shed, at a distance of greater than 100m.

Jason Maslen of the RFS has confirmed in emailed advice of 29 April 2015 (refer **Appendix 15**) that, based on this delineation of materials, there may be scope for revised APZ requirements, subject to construction of the proposed buildings to appropriate AS3959-2009 standards and review of a plan which reflects the general arrangement of uses. Hence, it is understood that the revised plan (Ref: C10 revision O dated 8 May 2015), together with this Response to Submissions will be referred to RFS to seek agreement on this arrangement.

Further discussion regarding the RFS's recommended conditions of approval has been provided by Ecological as quoted below. A complete copy of the advice provided by Ecological is also contained in **Appendix 15**:

"The recommended 100 m APZ is viewed to be excessive for the nature of the proposal and the level of bushfire risk to and from the site. Notwithstanding this, the site plan has been amended ... to confine the loading, stockpiling and processing stages of the combustible waste to more than 100 m from the riparian zone to the east as follows:

- *Stockpiling and loading area for green waste and timber to be confined to the western and south-western sides of the 'Indoor Processing & Storage Shed' over 100 m from the riparian area, and*
- *'Indoor Processing & Storage Shed' will house other combustible waste over 100 m from the riparian area.*

In addition to the APZs, all external stockpiles, loading and storage areas, as well as road and hard surfaces can be drenched with a sprinkler system designed for dust control. The system can be activated if fire or embers threaten the facility and is powered by a generator with back-up battery power. In addition to the sprinklers, there will be a 20,000 litre tank plus dam that can be used as a static water supply by fire fighters. A water truck will also be on site with 30,000 litre capacity and 30 m water spray canon that can empty in 10 minutes and refill in 15 minutes.

New and existing buildings are also proposed to be constructed and retrofitted with bushfire protection measures in line with AS 3959-2009 Construction of buildings in bushfire prone areas which will minimise the chance of ignition from a fire in the riparian area. These are not habitable buildings and AS 3959 does not typically apply to these types of structures or developments under the Building Code of Australia or Planning for Bushfire Protection 2006.

On this basis it is requested that amendment to the following recommended conditions of the RFS occur:

Recommended RFS Condition 1:

- 1) *At the commencement of works and in perpetuity the property shall be managed as an inner protection area (IPA) as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones' as follows:*

- For 100m north and east of the outdoor processing and stockpiling area.*
- West and south of the outdoor processing and stockpiling area to the property boundary.*
- An additional 19m east of the proposed workshop building.*

Note: The asset protection zone includes all of the riparian area between the processing and stockpiling area and the workshop area.

Ecological Response:

"It is requested that the RFS recommended condition be amended to require management as an Inner Protection Area to the facility area with the exception of the riparian zone".

Recommended RFS Condition 7:

- 7) *"Landscaping to the site is to comply with the principles of Appendix 5 of 'Planning for Bush Fire Protection 2006'. In this regard the following landscaping principles are to be incorporated into the development:*

- Restrict planting in the immediate vicinity of the buildings;*
- Maximum tree cover should be less than 15%, and maximum shrub cover less than 10%;*
- Planting should not provide a continuous canopy to the building (i.e. trees or shrubs should be isolated or located in small clusters);*
- Use smooth bark species of trees species which generally do not carry fire up the bark into the crown;*
- Avoid planting of deciduous species that may increase fuel at surface/ground level (i.e. leaf litter);*
- Avoid climbing species to walls;*
- Use of low flammability vegetation species; and*
- No additional planting within the riparian corridor".*

Ecological Response:

"A recommendation on landscaping across the site was not provided in the bushfire report. It is requested that the RFS recommended condition be amended to exclude the riparian zone".

2.12.2 Building Construction Standards

The RFS submission also requests the imposition of a number of other conditions (Conditions 2-6) pertaining to the construction standards of the workshop building located to the east of the watercourse and the office buildings located to the west of the watercourse. Recommended conditions 2-6 are listed below together with a response from Ecological, which suggests upgrading of the construction standard of specified buildings if the RFS supports the request for removal of the Inner Protection Area requirements from the riparian corridor. Relocation of the buildings is not considered necessary if the specified construction standards are adhered to.

RFS Recommended Condition 2: Construction of the Workshop Building

- 2) Construction of the workshop building, other than its western elevation, shall comply with Sections 3 and 8 (BAL 40) Australian Standard AS3959-2009 'Constructing of buildings in bush fire-prone areas' and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection'.

Ecological Response:

"This condition is not dissimilar to that proposed in the bushfire report, other than the RFS has requested that BAL-40 apply to three elevations rather than two. The applicant will accept this condition."

RFS Recommended Condition 3: Construction of the Workshop Building

- 3) Construction of the western elevations of the workshop building shall comply with sections 3 and 7 (BAL 29) of Australian Standard AS3959-2009 'Construction of buildings in bushfire-prone areas' and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection'.

Ecological Response:

"As above. The applicant will accept this condition."

RFS Recommended Condition 4: Construction of the Office Building

- 4) Construction of the south-eastern and north-eastern elevations of the office building shall comply with sections 3 and 7 (BAL 29) of Australian Standard AS3959-2009 'Construction of buildings in bushfire-prone areas' and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection'

Ecological Response:

"RFS recommends reducing the BAL from that proposed in the bushfire report from BAL-FZ/40 to BAL-29/19 due to the RFS recommendation to maintain the adjacent riparian area as an Inner Protection Area. As it is requested to remove the Inner Protection Area requirement from the riparian area (see point 1 above) it is recommended the BAL be increased to align with that proposed in the bushfire report. That is, the north, west and south elevations to comply with BAL-FZ, and the east elevation to comply with BAL-40."

RFS Recommended Condition 5: Construction of the Office Building

- 5) Construction of the south-western and north-western elevations of the office building shall comply with sections 3 and 6 (BAL 19) of Australian Standard AS3959-2009 'Construction of buildings in bushfire-prone areas' and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection'.

N.B. The above construction standards are based on maintenance of the riparian corridor as an inner protection area as per condition 1.

Ecological Response:

"As above. It is recommended the BAL be increased to align with that proposed in the bushfire report. That is, the north, west and south elevations to comply with BAL-FZ, and the east elevation to comply with BAL-40."

RFS Recommended Condition 6: Existing Buildings

- 6) "The existing buildings to be retained are required to be upgraded to improve ember protection. This is to be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes any

sub floor areas, openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders."

Ecological Response:

"RFS recommends upgrading the existing buildings to improve ember protection. This recommendation is not dissimilar to that proposed in the bushfire report. The applicant will accept this condition."

Ecological conclude in correspondence dated 7 May 2015 "in summary, the stockpiling and processing areas of combustible materials have been confined to areas on the site with least exposure to the bushfire hazard. In combination with the sprinkler system, static water supply, water cannon and building construction standards as per AS 3959, it is of my professional opinion that the riparian area, as proposed, can co-exist with the proposed facility in a manner that achieves the aim and objectives of Planning for Bushfire Protection 2006."

2.12.3 Riparian Corridor Planting

The Department of Primary Industries (NSW Office of Water) states in its submission:

"The Vegetation Management Plan (Version 3, dated June 2014, Appendix 17) for the proposal states 'we do not consider the implementation of a fully structured riparian corridor compatible to the surrounding land use' (page 15).

Further information needs to be provided to justify this statement, and the Office of Water recommends that the development be undertaken in accordance with the Guidelines for Controlled Activities on Waterfront Land (2012). In particular it is recommended that the VMP is amended and fully structured native vegetation that emulates the local vegetation community is established along either side of the unnamed tributary of Gibson's Creek on the site, for the entirety within the site. If the SSD is approved, it is recommended a condition of approval is provided which specifies this.

Section 10.2 of the EIS indicates that where a lower density of planting is required to accommodate the APZ an additional landscaped area which is equivalent in size has been provided to offset the encroachment of the APZ (page 230). This offsetting should be in accordance with the Guidelines for Controlled Activities on Waterfront Land (2012). "

The Office of Environment and Heritage states within its submission:

"In order to ensure the ongoing function and viability of the riparian corridor and habitat connectivity it proposes to maintain, we recommend that the riparian zone be maintained in perpetuity by an appropriately qualified and experienced bush regenerator. The immanence measures outline in the VP could simply be extended to cover a longer time period".

Response:

In response to the issues raised a revised Vegetation Management Plan has been prepared by Southern Habitat dated May 2015 which includes the following changes (as referenced in 1.2 of the revised VMP).

- Detailed discussions of how the VMP provides for fully structured native vegetation that emulates the local community. See section 2.7;

- The inclusion of a specified native species planting composition and density table reflecting a fully structured riparian corridor where this does not conflict with Asset Protection Zones within the site as specified by NSW RFS. (appendix F) The list had been omitted in versions 3 and 4 as the vegetation had already been installed. It is recommended that some additional planting be undertaken to ensure the performance criteria of this version of the VMP are achieved. It shall also be necessary to assess and remove planted vegetation where it conflicts with RFS specifications for the Asset Protection Zone. See section 2.7;
- Clarification as to the manner in which the proposed offset areas are in accordance with the Guidelines for Controlled Activities on waterfront Land. See section 2.7'
- The quantification and locations of encroachment offset plants to allow for the above mentioned APZ's and to comply with NSW Office of Water guidelines for riparian corridors on waterfront land. See appendix D-Landscape plan 1442-LCO1F (Rev. F, 05/05/2015);
- The quantification and locations of Asset Protection Zones. (see appendix D landscape plan 1442-LCO1F(Rev, F, 05/05/2015)'
- Description of required vegetation structure and maximum densities as well as ongoing maintenance obligations for the Asset Protection Zones to comply with NSW RFS specifications See sections 2.7 and 3.4;
- An up to date Landscape plan (see appendix D-landscape plan 1442- LCO1F (Rev. F, 05/05/2015) showing:
 - Reduced area of fully structured riparian planting due to APZ: 506m²
 - Offset planting due to reduced area: 506m²
 - Remaining unaffected riparian planting: 2,960m²
- An updated VMP area map with clear delineation of zones and boundaries (see appendix E).

With respect to the need for a fully structured riparian corridor this issue has been considered by Southern Habitat who confirm within Section 2.6 (Restoration Potential) of the revised VMP that:

"Due to NSW RFS specifications for the creation and maintenance of two areas of APZ within the Riparian Corridor, encroachment offset planting has been specified adjacent to the original riparian corridor area. This is in line with the NSW Office of Water Guidelines for riparian corridors on waterfront land which states:

"Non riparian corridor works and activities can be authorised within the outer riparian corridor, so long as the overage width of the vegetated riparian zone can be achieved over the length of the watercourse within the development site." And "may be used for non-riparian uses including asset protection zones"

To meet Office of Water obligations some infill plantings throughout the Riparian Zone, (excluding APZ areas), are required to ensure that fully structured native vegetation that emulates the local community is achieved. Please refer to appendix F for Planting types and densities required.

The reduced area of fully structured riparian planting due to APZ is 506m². The offset planting due to reduced area is 506m². The remaining unaffected riparian planting is 2,960m²."

The revised VMP therefore confirms that the offset areas meet the requirements of the Guidelines for Controlled Activities on Waterfront Land (2012) which states that "an equivalent area connected to the riparian corridor must be offset on the site". The offset areas are connected to the riparian corridor and are of an equivalent area and provide the required average width for the length of the corridor. Hence, no further

amendment to the landscape plan or VMP is considered warranted. Accordingly, Section 3.0 of the revised VMP now includes the following additional planting within the scope of works:

"Infill planting to ensure that the site achieves fully structured riparian vegetation, refer to Appendix F (excepting the areas noted on 1442-LC01F rev F 08/05/2015)".

Effectively, this will result in the implementation of fully structured riparian vegetation, except in the position where offsetting is required, as shown on the revised Landscape Plan dated 8 May 2015, as contained in **Appendix 9**. The inclusion of fully structured planting in this location is considered feasible based on the preliminary advice of the RFS that there may be scope for revised APZ requirements, subject to construction of the proposed buildings to appropriate AS3959-2009 standards and delineation of materials within stockpile areas. Appendix F of the revised VMP recommends the following planting:

Table 6: Recommended Species to Achieve Fully Structured Riparian Composition

Species type	Species	Common Name	QTY	Contribution Within Species Type (%)
Ground Covers				
	Carex longibrachiata	Bergalia Tussock	1150	27.1%
	Commelina cyanea		800	18.8%
	Dichondra repens	Kidney Weed	800	18.8%
	Oplismenus imbecillis	Basket Grass	1150	27.1%
	Pseuderanthum variabile	Pastel Flower	350	8.2%
		Sub-total	4250	100%
Vine and Climbers				
	Aphanopetalum resinosum	Gum Vine	150	20%
	Cayratia clematidea	Slender Grape	150	20%
	Maclura chochinensis	Cockspur Thorn	150	20%
	Pandorea pandorana	Wonga Vine	150	20%
	Smilax australis		150	20%
		Sub-Total	750	100%
Shurbs/Mid Canopy				
	Abutilon oxycarpum	Lantern Bush	80	11.27%
	Breynia oblongifolia	Coffee Bush	60	8.45%
	Cassine australis	Red Futed Olive	40	5.63%
	Livistona australis	Cabbage Palm	100	14.08%
	Pittosporum multiflorum	Orange Thorn	40	5.63%
	Rapanea variabilis	Muttonwood	60	8.45%
	Rubus parvifolius	Native Raspberry	120	16.90%
	Streblus brunonianus	Whalebone	90	12.68%
	Synoum glandulosum	Rosewood	60	8.45%
	Trema tomentosa	Native Peach	60	8.45%
		Sub-Total	710	100.00%
Canopy Tree				
	Acacia maidenii	Maiden's Wattle	60	8.63%
	Alectryon subcinereus	Native Quince	60	8.63%
	Alphitonia excels	Red Ash	60	8.63%
	Doryphora sassafras	Sassafras	50	7.19%
	Eucalyptus quadrangulata	White Box	120	17.27%
	Ficus coronate	San paper Fig	40	5.76%
	Ficus macropylla	Moreton Bay Fig	5	0.72%
	Glochidion ferdinandi	Cheese Tree	40	5.76%
	Guoia semiglauc	Guioa	35	5.04%
	Planchonella australis	Black Apple	60	8.63%
	Syzygium smithii	Lillypilly	75	10.79%
	Toona ciliate	Red Cedar	90	12.95%
		Sub-Total	695	100.00%

With respect to the proposed offset areas shown on the revised Landscape Plan prepared by Ochre, such areas have been provided to meet the asset protection zone requirements detailed in the Bushfire Protection Assessment prepared by Ecological in July 2014 which specifies the provision of:

- a 16m wide APZ to the east of the office buildings (Building A to D);
- a 15m wide SPZ to the west of the OHS room (Building G).

Hence, a reduced level of planting is provided within the riparian corridor adjacent to such buildings. Such areas will not contain fully structured vegetation but will contain a reduced level of planting in order to provide the required asset protection distances. This revised Vegetation Management Plan prepared by Southern Habitat (**Appendix 14**) also confirms that the following level of planting will be provided within the riparian corridor:

Table 7: Quantity of Riparian Corridor Planting and Offset Areas

Planting Location	Area
Areas of reduced planting for APZ purposes (adjacent to Buildings A to D and Building G0)	506m ²
Offset areas (to south of equipment area and to south east of Detention basin A)	506m ²
Remaining unaffected riparian planting	2,960m ²

With respect to the recommendation by Office of Environment and Heritage for an extended maintenance period for the riparian corridor works, this issue has been considered by Southern habitat who recommend the preparation of an annual report, with works arising from this report able to be implemented by staff of the facility for a period extending only to the operational timeframe of the facility. Specifically, Section 4.1 of the revised Vegetation Management Plan prepared by Southern Habitat (May 2015) has been updated to confirm that following the two (2) year maintenance period and final report:

"ongoing maintenance shall continue for the operational life of the facility. The maintenance will require the compilation and submission of an annual report to relevant stakeholders and must be prepared by a suitably qualified person/organisation.

The annual report must include but is not limited to-

A) Site conditions:

- 1) Weed cover percentage*
- 2) Native cover percentage*
- 3) Identification and determination of actions to remedy any issues pertaining to the ongoing maintenance of the riparian vegetation for the 12 months following the report*

With respect to the section of the recommended condition which applies to Asset Protection Zone maintenance within the riparian corridor it is noted that this part of the condition is no longer required as the riparian corridor is not intended to serve the function of an asset protection zone, having regard to the supplementary advice provided by Ecological dated 7 May 2015.

It is also confirmed that the following updates have also been provided to the Vegetation Management Plan prepared by Southern Habitat dated May 2015 and the Landscape Plan prepared by Ochre dated 8 May 2015 (which is included at A3 size as an **Appendix 9** of this Response to Submissions Report).

- The amendment dates on the Landscape Plan have been enlarged for clarity;
- Appendix E of the Vegetation Management Plan has been updated to clarify the red outline of the Illawarra Subtropical Rainforest EEC.
- Any references to the Landscape Plan in the Vegetation Management Plan have been updated to reflect the most recent version of the Landscape Plan.

2.13 Biodiversity

Issues pertaining to biodiversity are contained within one government agency submission (Office of Environment and Heritage) and one submission from a member of the public 'Private and Confidential submission'. Issues raised within such submission are addressed under the following headings:

- 1) Impact on threatened species, endangered populations or endangered ecological communities.
- 2) Management of the Riparian Corridor.

2.13.1 Impact on EECs

The 'Private and Confidential' submission suggests that there will be "*impacts on State and Commonwealth listed species with no proposed offsets*".

OEH request that the recommendations and mitigation measures outlined in the EIS, VMP and Flora and Fauna Assessment should be imposed as conditions of consent, including fencing of the small Illawarra Subtropical Rainforest remnant.

Response:

The Biodiversity Assessment prepared by Conacher Environmental confirms that the development will not impact on endangered ecological communities. Specifically, this report confirms that:

- *"The proposed development will occupy the existing disturbed areas of the site within areas which contain Cleared Land and a relatively small area of Regrowth Acacia with Exotic Shrub vegetation. The occurrences of Disturbed Subtropical Rainforest and Disturbed Red Gum Forest present will be retained within the site. A summary of the proposed vegetation clearing is provided in Table 73.*
- *The proposal is not likely to significantly alter connectivity for wildlife within the subject site or locality as the development footprint will be located within mostly existing cleared areas. The existing level of connectivity along the watercourse which intersects the development site will be maintained and improved in accordance the Vegetation Management Plan prepared for the site by Southern Habitat (2013)."*

Conacher Environmental also confirm that "*Significance assessments were undertaken for biodiversity listed within the EPBC Act (1999), the TSC Act (1995) and the FM Act (1994). These assessments determined that the proposal is not likely to have a significant impact on a Matter of National Environmental Significance according to the criteria provided in the AGDE (2013) Significant Impact Guidelines or a significant impact on*

threatened species, populations or ecological communities or their habitats in accordance with Section 5A of the EP&A Act (1979). Further assessments and/or approvals under State Environmental Planning Policies 14, 19, 26 or 44 are not required. It is considered that the proposal will maintain or improve biodiversity values within the site and locality with regard to native vegetation and habitats, aquatic habitats and groundwater dependant ecosystems."

Conacher Environmental confirm that *"the proposal is likely to have a minor contribution to the cumulative loss and/or modification of vegetation and fauna habitats within the local area, however the site is currently utilised as a resource recovery facility, and the expansion of these activities within the site is considered not likely to have a substantial cumulative impact within the region or locality"*.

Accordingly, no additional offset areas are warranted. The absence of any significant impact on threatened species, endangered populations or endangered ecological communities is acknowledged by OEH, with the department confirming that *"the vast majority of works are contained within the cleared portion of the site. The areas of remnant vegetation, including EECs, are to be retained and protected as part of the proposal. Therefore the ecological impacts will be minimal, especially of the recommended mitigation measures outlined in the application documentation are implemented"*.

With respect to the request by OEH that the mitigation measures outlined in the EIS, VMP and Flora and Fauna Assessment should be imposed as conditions of consent, the Statement of Commitments has been revised to reflect the recommendation of the VMP prepared by Southern Habitat which states:

"It is recommended that the erection of a standard three strand wire fence be undertaken around the extent of the ISR to indicate and protect this particular remnant. A buffer zone of 5m shall apply within this fencing"

It is noted that the other mitigation measures as recommended by such documents were previously incorporated within the Statement of Commitments.

2.13.2 Management of the Riparian Corridor

The Office of Environment and Heritage notes that *"vegetation management and rehabilitation of the riparian zone identified in Clause 7.14 of Wollongong LEP 2010 has been underway since August 2013 and is well progressed. the works being undertaken in accordance with the Vegetation Management Plan (VMP) prepared by Southern Habitat (June 2014) will improve the ecological value and function of the riparian zone. It is worth noting that the VMP currently has a two year maintenance period attached to it which will ensure it is managed appropriately for that period of time, however without ongoing management beyond the maintenance period it is likely to suffer degradation. In order to ensure the ongoing function and viability of the riparian zone and habitat connectivity it proposes to maintain, we recommend that the riparian zone be maintained in perpetuity by an appropriately qualified and experienced bush regenerator. The maintenance measures outline in the VMP could simply be extended to cover a longer period of time"*.

Response:

Bicorp do not raise objection to the extension of the maintenance period, however request that any condition refer to the 'life of the facility' rather than 'in perpetuity', to ensure that ongoing maintenance is no longer

required if the facility is not operational. Further, it is requested that rather than requiring the maintenance to be undertaken by an experienced bush regenerator after the initial maintenance period, that an annual report be prepared by a qualified person, with ongoing maintenance works to be carried out by any other person.

Section 3.13 of the Vegetation Management Plan prepared by Southern Habitat (now dated May 2015) has been updated to confirm that following the two (2) year maintenance period and final report:

"ongoing maintenance shall continue for the operational life of the facility. The maintenance will require the compilation and submission of an annual report to relevant stakeholders and must be prepared by a suitably qualified person/organisation.

The annual report must include but is not limited to-

A) Site conditions:

- 1) Weed cover percentage
- 2) Native cover percentage
- 3) Identification and determination of actions to remedy any issues pertaining to the ongoing maintenance of the riparian vegetation for the 12 months following the report

B) Asset Protection Zone maintenance:

- 1) Assessment of fuel loads in the Riparian corridor in areas defined by NSW RFS as APZs, see appendix D.
- 2) Description of actions required to satisfy APZ requirements as defined by NSW RFS at the time of the report. "

The Statement of Commitments has been amended to confirm that the 'relevant stakeholder' in this situation would be the NSW Office of Water.

2.14 Flooding

The Office of Environment and Heritage and Wollongong City Council raised the following issues pertaining to flooding within submissions;

- 1) Flood Impact on development;
- 2) Development Impact on Flood behaviour
- 3) Safety Impacts;
- 4) Range of Flood Events; and
- 5) Contingencies should design rainfall be exceeded.

2.14.1 Flood Impact on Development

Flooding issues were received in the submission received from the Office of Environment and Heritage (OEH), with the department advising that the determining authority should be satisfied that *"the floodplain management and water quality matters raised previously have been addressed"* including *"the impact of flooding on the potential development (including overland flows)"*.

Response:

Flooding was previously assessed by a comprehensive 2-Dimensional flood model within the Flood Analysis Review prepared by KFW in which potential adverse effects of climate change were modelled. The impact of

flooding on the development was clearly shown in the appendices to this report dated June 2014, with clear colour charts indicating key flooding characteristics of depth, velocity and velocity x depth (flood hazard). Such diagrams demonstrate that the proposed development is unaffected by a 1%AEP flood, even with the potential effects of climate change superimposed.

It is further noted that in reviewing the submissions, KFW held discussions with Calvin Houlison of OEH and it was understood that the comments regarding flooding were of a general nature. It is also understood that Wollongong City Council (WCC) is satisfied with the issues raised under the heading 'Flooding'. Evidence for this can be seen in the WCC response to NSW Planning & Environment dated 18 Nov 2014 as outlined below:

- In Attachment A of the Wollongong City Council submission dated 18 Nov 2014, six issues are raised. It is noted that none of the six issues concern flooding issues raised by OEH.
- In Attachment B of the Wollongong City Council submission dated 18 Nov 2014, Council provides recommended conditions of consent pertaining to drainage and flooding, including condition 29 (Flood Warning Signage), Condition 30 (Flood Depth Indicators) and Condition 31 (Roofwater Drainage). Condition 31 specifies that *"all roof areas shall be provided with a roofwater drainage system designed to collect and convey roofwater up to a 1 in 100 year ARI storm event to the approved on site stormwater detention"*

Accordingly, further review of the flood modelling was not considered warranted.

2.14.2 Development Impact on Flood Behaviour

OEH also required that the determining authority ensure that *"The impact of the potential development on flood behaviour (particularly topography changes) including any management measures to mitigate adverse flood impacts"* is addressed.

Response:

The 2-Dimensional flood model prepared by KFW in March 2014 also demonstrated that the proposed topographic changes with the site are not influenced by 1%AEP flood, even with the potential effects of climate change superimposed.

2.14.3 Safety Impacts

OEH also requires that the determining authority ensure that *"The impacts of flooding on the safety of people/users of the development including flood hazard on access routes and access requirements in times of flood"*.

Response:

In order to address the impact of flooding on the safety of people/users of the Kembla Grange facility the 2-Dimensional flood model prepared by KFW in March 2014 modelled the potential adverse impacts of the waterway crossing being blocked, in addition to the impacts of climate change. The report confirms that flood free access and egress is available in floods up to and including a 1% AEP flood. Should the waterway crossing be blocked and potential effects of climate change occur, safe access and egress from the site will still be available. In this case the Velocity x Depth product is less than 0.4 m²/s, which is still considered to be safe.

It is noted that a 1% AEP or more extreme flood will cause serious disruption to transportation within the greater Wollongong region. Such floods are generally of short duration, typically 2–4 hours, after which disruption to transportation eases.

As demonstrated by KFW within the Flood Analysis Review in June 2014 the site provides safe refuge for personnel during a PMF and thereby satisfies the goals of Wollongong Council's Development Control Plan 2009 and the NSW Flood Plain Development Manual.

2.14.4 Range of Flood Events

Consideration of the full range of flood impacts up to and including the PMF was also a requirement of OEH, as referenced in the submission of 4 November 2014.

Response:

The 1% AEP flood is a significant flood and is used in Wollongong and other local government areas to set the flood planning level. As demonstrated by KFW within the Flood Analysis Review prepared in June 2014, the development is unaffected by the 1% AEP flood. This report also demonstrated the impact of the Probable Maximum Flood (PMF). As the site is not affected by the 1% AEP flood further analysis of floods of lower magnitude than 1% AEP is considered unwarranted.

2.14.5 Design Contingencies

OEH state that *"it is unclear whether adequate consideration has been given to contingencies related to the performance of stormwater infrastructure should design rainfall be exceeded. It is recommended that a risk management approach be developed in line with current engineering best practice to minimise impacts on the environmentally sensitive receiving waters of Lake Illawarra"*.

Response:

the above comments have been reviewed by KFW to ascertain if further analysis of loading is warranted. In regard to the internal catchment KFW note the following:

The design discharge for the OSD pond has been estimated in accordance with current best practice using risk/probability methods. Such methods implicitly accept a degree of risk that the design rainfall may at some time be exceeded both within the site catchment and the wider region. In such events it is accepted that the stormwater infrastructure will 'fail'. Measures to protect the environment in such an event have been included in the site design. Such measures include:

- a. The operational area is designed to be above the 1% AEP flood level in order to prevent materials being washed off the site
- b. Scour protection is included in the OSD overflow weir to avoid soil being scoured by overflow and subsequently washed off the site
- c. The operational and material storage area are generally above the PMF. Again, materials will not be washed off the site.
- d. The site is an area of safe refuge for personnel should an extreme flood occur while personnel are present on site.

The 1% Annual Exceedance Probability (AEP) flood was used for designing the OSD volume, pipes and pits, in line with current best practice, Wollongong Council Development Control Plan 2009 and by the NSW Flood Plain Development Manual 2005 (FPDM). The design implicitly complies with the level of risk acceptable by Wollongong Council and NSW FPDM. Further, the green waste shredding area runoff collection pond has been designed in accordance with the NSW EPA guidelines, that is for a 1 in 10 year 24 hour duration rainfall burst. The green waste shredding area runoff collection pond has been designed in accordance with NSW EPA requirements and implicitly complies with the level of risk acceptable by the NSW EPA.

In regard to the internal catchment KFW advise that the implementation on site of both OSD and SQID will ensure that the downstream impacts are minimised in line with current best practice and acceptable to NSW EPA and Wollongong City Council. Flooding characteristics in the Illawarra region are characterised by short duration floods which closely match the storm rainfall. Flooding ceases within 2 -3 hours of the rainfall ceasing. Road and traffic infrastructure external to the site which may be affected by flooding is not within the applicant's influence or control.

The operations on site are weather dependent. Deliveries of materials will usually cease during wet weather. Demand for the materials recovered on site is weather dependent. Sales will typically cease during wet weather. It is reasonable to conclude that in the event of a prolonged wet weather period, site operations will generally cease and personnel will not attend the site for employment. Therefore it is unlikely that personnel will not be on the site during prolonged or severe wet weather. The proposal will therefore not increase the exposure to flood risk of employees, customers nor suppliers. Further, the site will provide safe refuge in the event of a flood of magnitude greater than 1% AEP should personnel are on the site during an extreme flood event.

2.15 Groundwater

Groundwater issues as raised by the Department of Primary Industries (Office of Water) in its submission are summarised under the following headings:

- 1) Intercepting and monitoring of groundwater;
- 2) Licensing and quantification of expected flows.

2.15.1 Intercepting and Monitoring of Groundwater

The Office of Water noted that the EIS states that "it is not expected that the development will intercept groundwater but groundwater may be 'discovered' if construction is undertaken during adverse weather or if there is a lapse between investigation and construction"...." should this happen further assessment will be undertaken and the Office of Water will be notified and an accurate qualification of the likely take of groundwater will be provided to allow for authorisation from the office of Water". The Office of Water requests that it be provided with a copy of any further assessment report. Further, the Office of Water notes that it is a recommendation of the EIS that a groundwater monitoring program be adopted prior to construction to confirm groundwater regime. The Office of Water also requests that it be provided with the results of such groundwater monitoring results.

Response:

As confirmed within the Groundwater Assessment prepared by Benviron in June 2014 and noted by the Office of Water, further assessment will be undertaken if groundwater is encountered during construction. The Office

of Water also noted that the Groundwater Assessment confirms (in Section 8.0 Discussion) that should this happen the Office of Water will be notified and "an accurate that *qualification of the likely take of groundwater will be provided to allow for authorisation from the office of Water*".

In response to the request for the Office of Water to be notified of the intercepting and/or monitoring of groundwater the following additional/revised commitments (as recommended by DPI) have been incorporated within the Statement of Commitments contained Section 4:

- Quarterly Testing of the groundwater on the site shall be undertaken to identify any future trends and characterise the groundwater within the local area. Monitoring is to commence at least three months prior to construction commencing and the results of the groundwater monitoring programme are to be provided to the Office of Water.
- Groundwater presence or levels will be confirmed if construction is undertaken during or following adverse weather or if a significant time period elapses between this investigation and construction. The Office of Water shall be notified prior to any works occurring that are likely to intercept or extract groundwater and an estimate of the likely take of groundwater shall be provided to the Office of Water to assess the need for an authorisation.

2.15.2 Licensing and Quantification of Expected Flows

The Office of Water stated in its submission "If groundwater is intercepted or extracted, depending on the volumes encountered and the duration of pumping, an authorisation may be required from the Office of Water in relation to construction excavation and dewatering activities" DPI also note that a licence for temporary construction dewatering activities is likely to be required for the take of groundwater associated with the proposed dewatering to construct basements. Standard Conditions of Approval which are likely to be applied to a Part 5 Licence are provided in the attachment to the DOPI letter. Details of water management and disposal during dewatering will be required to support the application for dewatering authorisation from Office of Water. The Office of Water is unlikely to support any proposal that requires permanent or semi permanent pumping/extraction of groundwater. Adequate construction methods should be used to permanently seal any subsurface voids. If this is unavoidable the proponent must obtain a water access licence.

Response:

As noted in the Groundwater Assessment prepared by Benvion in June 2014 the development will not require the extraction of groundwater. Specifically Section 2.5 (Proposed Development) of the Groundwater Assessment confirms that "*No works are expected to intercept or connect with the groundwater sources o the site*". Although referenced in the advice from the Office of Water it is noted that no 'basements' are proposed in conjunction with this development. Section 8.0 (Discussion) of the assessment confirms that "*during the investigations groundwater seepage was only detected in four wells ranging from 7.0 to 7.3m.*" The report concludes that "*reasons for this non detection of water were attributed to the surrounding geology and the topography of the site*". It is therefore considered that the comments from DPI are general in nature and that no further investigation into groundwater is considered warranted at this time. As noted in Section 3.6.1 of the Groundwater Assessment monitoring will occur and the Office of Water will be notified if groundwater is intercepted or extracted during the constriction process.

2.16 Traffic and Transport

Issues relating to traffic and transport impacts arising from the proposed development are addressed under the following headings:

- 1) Level Crossing;
- 2) Traffic Generation and Impacts
- 3) Construction Timing
- 4) Carparking

2.16.1 Level Crossing

Sydney Trains state the following in the submission dated 5 December 2014:

"...Sydney Trains recently granted concurrence to three development applications (Das) being assessed by Wollongong City Council. These three Das required concurrence from Sydney Trains in accordance with Clause 84 State Environmental Planning Policy (Infrastructure) 2007 due to their proposed increase in traffic over the current level crossing at West Dapto Road, Kembla Grange.

As this proposed development also involves an increase in traffic over the same level crossing an assessment needs to be undertaken on the impact of this increase taking into account the current traffic volumes and the proposed increase via the three Das assessed by Council.

As your Department is aware, the traffic documentation provided by the applicant of this application relies on the July 2012 traffic count and Council's modelling for the Princes Hwy/West Dapto Rd intersection undertaken in 2011. Further, their report is also based on a future lighted intersection at the Princes Hwy/West Dapto Road intersection. This data would now be out of date given the influx of traffic since these studies were undertaken, especially as the lighted intersection Princes Hwy/West Dapto Road is now operational resulting in a change in how traffic functions in this area.

In order for Sydney Trains to properly review the impact of this proposal it will require the applicant to submit a revised traffic modelling report/traffic management plan. From this Sydney trains can then determine if a level crossing risk assessment is also required."

Response:

Cardno was engaged to prepare a Rail Level Crossing Modelling Traffic Management Plan in relation to traffic impact on the railway level crossing located on West Dapto Road, Kembla Grange in response to Sydney Trains comments (**Appendix 16**). Cardno assessed the rail level crossing, the impacts of queuing on the approaches to the rail level crossing and the queue from the West Dapto Road / Princes Highway intersection to the rail level crossing and noted:

- *"The 13 October 2014 traffic tube count that was undertaken showed that the maximum daily traffic volume that crossed the rail level crossing was 3500 vehicles. This is close to the ALCAM rating capacity of this rail level crossing which has a capacity of 3700 vehicles per day. Therefore, to consider any future proposed developments in the area, further investigations and mitigations should be considered.*

- The queue lengths on the approaches to the railway level crossing were sufficiently within the distances to the adjacent intersections to the east and west for the AM and PM peak periods of the years 2015 and 2025 with development.
- The worst case AM and PM peak hour queue length from the West Dapto Road / Princes Highway intersection is 81m (year 2024 PM peak hour), which is below the distance to the rail level crossing, which is 130m away."

Hence, Cardno concluded that "it is clearly shown that the queue lengths on the West Dapto Road leg of the West Dapto Road / Princes Highway are acceptable for the AM and PM peak periods with the proposed expansion of the Wollongong Recycling and Building Supplies development in the years 2015 and 2025 (future scenarios). This assessment was undertaken with the addition of the traffic generated from the other proposed developments (committed developments) in the vicinity of the subject site".

Cardno forwarded this Technical Note directly to Sydney Trains in December 2014 and a response on whether a Stage 2 Assessment will be required was received by DPE from Sydney trains on 17 April 2015. This advice states:

".... representatives of Sydney Trains, NSW Trains and RMS attended a Level Crossing Risk Assessment Workshop on the 28th October 2014 with Wollongong City Council. This workshop resulted in the preparation and submittal of a site specific level crossing risk assessment and Modelling Traffic Management Plan in relation to the traffic impacts on the railway level crossing located at West Dapto Road, Kembla grange resulting from two development proposals lodged just prior to this SSD application. Council also undertook further traffic counts to assist the assessment of these previous development proposals.

As a result, and on request by Sydney Trains, the proponent for this proposal has obtained and utilised this previously prepared information and incorporated data for this proposal to prepare an updated Technical Note-Rail Level Crossing Modelling Traffic Management Plan, West Dapto Road-Kembla Grange.

As such, Sydney Trains now advises that the proposal has been reviewed and your Department is requested to impose the condition provided in Attachment A."

Hence, the preparation of a Stage 2 assessment is not required and Sydney Trains has confirmed its support for the project.

2.16.2 Traffic Generation and Impacts

The summary of the 'Private and Confidential' submission prepared by DPE states:

- "Traffic - significant increase without sufficient evidence that the surrounding network can cater for the increase"
- .

The Department of Planning and Environment submission required that the revised Traffic Impact Assessment address the following:

- "A review of the level of service on the surrounding road network as a result of your proposal.
- justification for the assumption of an increase from 500 vehicles per day to 1000 vehicles per day (page 2165, EIS);

- justification for the selection of traffic generation rates based on the existing development;
- details and citation of the source of the recommended onsite parking provision, for example Council's requirements.
- legible figures and appendices.

Response:

The submitted Traffic Impact Assessment prepared by KFW in September 2014 and the Rail Level Crossing Modelling Traffic Management Plan prepared by Cardno on 17 December 2014 confirm that the surrounding road network can accommodate the increased traffic flows. It is understood that there is no outstanding objection from Roads and Maritime Services (RMS).

It is noted that Wollongong City Council has recently up graded the West Dapto Road/Princes Highway Intersection. The analysis for the intersection upgrade work takes into account the broad traffic generation from the West Dapto and Kembla Grange Precinct. It is understood that RMS is satisfied with this issue.

With respect to the traffic generated by the Kembla Grange Resource Recovery facility the revised Traffic Impact Statement prepared by KFW dated April 2015 suggests an AADT in Wylie Road of 500 vpd (vehicles per day). A copy of this revised Traffic Impact Statement is contained as **Appendix 17**. The assessment confirms (in Table 1 reproduced in Table 8 below) that the predicated 260 vehicles per day generated by the existing facility is based on:

Table 8: Existing Traffic Generation (30,000 tonnes per annum (Ref KFW)

30,000/pt-Traffic Generation/Weekday ie. 120t/days				
Description General	Vehicle Types	Number	Total	Equivalent
Employees 8 Visitors 4 Machinery/deliveries	Standard Car	4	8	
	Standard car	4	8	
	Single unit Trucks	4	12	
Material Delivery	Standard car/utes	24	48	
		6	18	
		6	48	
Material Sales	Standard car/utes	24	48	
	Single unit Trucks	6	18	
	Trucks/Dogs	6	48	
		Total	260/day	

*Equivalent Movements based on Car/Utility/Car Trailer = 1 Single unit truck = 1.5 Truck/Dog or Semi= 4

Page 6 of the Traffic Impact Statement dated April 2015 has been revised to confirm that this calculation is based on the following traffic generation from the existing recycling facility and from adjacent developments:

"Vehicle generation from the Wollongong Lawn Cemetery would be concentrated in platoons with average 10/15 vehicles at a time.

The present day Wylie Road AADT can be estimated by considering the traffic generation from the three main traffic generating developments as follows:

- Existing Recycling facility AADT: 260 vpd (refer Table 1 of KFW TIS contained as Table 8 above)
- Church AADT: The Church car park has approx. 112 spaces. Assuming 80% attendance will generate 2 x 90 vehicles on Sunday for 52 weeks. 7 day AADT = 26vpd. Traffic generated by the church during normal week days will be negligible.

- Cemetery AADT: 30vpd.

The current AADT for Wylie Road was therefore estimated by KFW to be 316 vpd. This was rounded to 500vpd in the Traffic Impact Statement dated April 2015.

With respect to the estimated traffic generation as a result of the expanded facility Table 4 of the Traffic Impact Statement dated April 2015 (and reproduced in Table 9 below) outlines the predicted traffic generation rates when production increases to 230,000 tonnes.

Table 9: Predicted Traffic Generation (230,000 tonnes per annum (Ref: KFW)

230,000 t/pa- Predicted Traffic Generation/Weekday – i.e. 910t/day			
Description	Vehicle Type	Number	*Total movement equivalent
General Employees 40	Standard cars	20	40
Visitors 16	Standard cars	16	32
Deliveries	Single Unit Trucks	12	36
Material delivery	Standard car/utes	174	174
	Single unit truck	58	87
	Truck/Dogs	40	160
Material sales	Standard car/Utes	174	174
	Single unit trucks	58	87
	Truck/dogs	40	160
		Total	950/day

*Total Standard vehicles equivalent numbers based on: Car/Utility/Car Trailer = 1, Single axel truck =1.5, Truck/Dog or semi =4

KFW therefore estimate that "the total daily traffic generation in standard vehicle unit equivalents is 950/day" which is based on a "10% peak hour rate this is 95 vehicles/peak hour". Section 6.3 (Page 6) of the revised Traffic Impact Statement dated April 2015 has been updated to provide justify the "assumption of an increase from 500 vehicles per day to 1000 vehicles per day". Specifically, KFW confirm:

"Traffic generation from the Church and cemetery are expected to remain constant over time at 56vpd. Growth of AADT in Wylie Road from existing development would not increase by more than 1% pa.

The AADT when the site reaches output of 230,000t/a will therefore be 1,006 vpd (ie. p50 vpd plus 56vpd) which has been rounded to 1,000vpd".

Further, KFW also note that "Production will increase from 120 tonnes (per) day to 871 tonnes (per) day. This is an increase by a factor of 7.25. Comparing Table 1 with table 4 it is evident that:

- Car/Utes increase from 24 to 124 (5.2 fold increase)
- Single Unit Trucks increase from 6 to 58 (9.7 fold increase)
- Truck & Dog Trailer increase from 6 to 40 (6.7 fold increase).

These figures are generally consistent with the increase in production at the facility."

The impact of the expanded development on the level of service of surrounding intersections was previously considered within the Traffic Impact Statement, with KFW confirming that with respect to the site entry off Wylie Road "all legs of the intersection operate at a level of service of A for the existing and proposed traffic volumes", as demonstrated in Table 10 below:

Table 10: Intersection Level of Service - Site Entry/Wylie Rd

Intersection-Level of Service (Degree of Saturation) Site Entry/Wyllie Road			
Scenario	Site Entry	Wyllie Road North	Wyllie Road South
Existing	A(0.01)	A(0.01)	A(0.01)
100,000t/pa	A(0.03)	A(0.01)	A(0.02)
150,000t/pa	A(0.04)	A(0.01)	A(0.03)
230,000t/pa	A(0.06)	A(0.01)	A(0.05)

Similarly, KFW concluded that with respect to the Wylie Rd/West Dapto Road Intersection all legs of the intersection will operate at a level of service of A, as demonstrated in Table 11 below:

Table 11: Intersection Level of Service - Wylie Rd/West Dapto Rd

Intersection- Wyllie Road/West Dapto Road - Level of Service (Degree of Saturation)			
AM Peak			
Scenario	Wyllie Road	West Dapto Rd East	West Dapto Rd West
Existing	A(0.00)	A(0.08)	A(0.13)
100,000t/pa	A(0.04)	A(0.10)	A(0.13)
150,000t/pa	A(0.05)	A(0.11)	A(0.13)
230,000t/pa	A(0.08)	A(0.13)	A(0.13)
PM Peak			
Existing	A(0.02)	A(0.14)	A(0.11)
100,000t/pa	A(0.04)	A(0.15)	A(0.12)
150,000t/pa	A(0.05)	A(0.16)	A(0.12)
230,000t/pa	A(0.07)	A(0.18)	A(0.12)

The Traffic Impact Statement also previously included consideration of the level of capacity of this intersection just prior to the Northcliffe Drive extension being completed, with the intersection level of service contained in Table 12.

Table 12: Intersection Level of Service - Wylie Rd/West Dapto Rd

Intersection- Wyllie Road/West Dapto Road Level of Service (Degree of Saturation)			
Scenario	Wyllie Road	West Dapto Rd North	West Dapto Rd South
2031-AM Peak	A(0.18)	A(0.41)	A(0.32)
2031-PM Peak	A(0.18)	A(0.32)	A(0.48)

KFW concluded that "All legs of the intersection still operate at a level of service of A, the degree of saturation rises from (0.18) to (0.48), i.e. the intersection is still satisfactory".

KFW have reconsidered the level of service on the surrounding road network as a result of the proposal and confirm in section 9.1.2 that the "existing and proposed intersection of West Dapto Road and the Princes Highway will be controlled by traffic lights". Based on the predicted Level of Service reproduced in Tables 10 to 12 of this Response to Submissions "it may be deduced that the Level of Service at other intersections will not be adversely affected by the proposed development". Accordingly, the outcomes of the Traffic Impact Statement are unchanged, with KFW continuing to conclude that "the future upgrading of the adjacent road system is not anticipated to occur in this timeframe and hence the impact on the existing road system was investigated."

Hence, based on the outcomes of this assessment, no amendments to the project to address traffic generation level or site capacity are considered warranted nor is there considered to be a need to incorporate any additional commitments within the Bicorp's Statement of Commitments.

A number of minor updates have been undertaken to the Traffic Impact Statement and are incorporated within the April 2015 version being:

- Section 3.2 (page 5) - Clarification of the amount of material which is typically processed on a Saturday, being "25% of the normal week-day production rate".
- Updating of Drawings T01, T02, T03 and T04; renaming as Figures 1, 2, 3 and 4 respectively including amendment to the legend to improve clarity.
- Updating of Figure 4.3.7 and renaming as Figure 5 including amendment to the legend to improve clarity.

2.16.3 Construction Timing

Further, DPE has requested that the applicant:

- *Clarify the statements (page 217 of the EIS) referring to the four month construction period and that the development will occur over the next 5 years.*

Response:

It is intended that construction of infrastructure will occur within a 4 month period, with the development then taking 5 years in which to reach its maximum capacity of 230,000 tonnes per annum.

The bulk earthworks involved in creating the site facilities in Stage 1 would occur over a period of approximately 3 months. The Stage 1 plant would be constructed over a period of approximately 6 months and then commissioned over the following 3 months. Overall, all components required to commence site operation would occur over a period of approximately 12 months. This will then be followed by a gradual increase in capacity to 230,000 tonnes over a period of approximately 2-5 years.

KFW in Section 9.3 (page 23) of the revised Traffic Impact statement dated April 2015 have confirmed that *'it must be noted that it is most unlikely that the construction work described above will occur all at once. the construction work required to bring the facility up to 230,000 tpa is most likely to occur over a period of 5 years and will therefore have minimal traffic impact.'*

2.16.4 Carparking

With respect to the provision of carparking for the existing facility Condition 19 of DA 2009/1153/D requires the provisions of ten (10) carparking spaces (including one disabled space). In determining the level of carparking required to service the expanded facility, guidance was initially sought from Chapter E3 of Wollongong DCP 2009 which specifies the provision of carparking for industrial developments based on the gross floor area of buildings, with 1 car space required per 75m². It was not considered that this method of calculation would provide a reasonable representation of carparking demand, given that a significant area of the development is conducted in an open air situation. Hence, carparking was assessed on a site specific basis, having regard to employee and visitor parking numbers.

Section 7.0 (Site Internal Traffic Movements) of the revised Traffic Impact Statement prepared by KFW in April 2015 confirms that carparking is provided on the basis of:

- 1 carparking space per 2 employees (based on 40 employees) ie. 20 spaces;
- 1 carparking space per 4 visitors (based on 16 visitors per day, staying for a max period of 2 hours) ie. 4 spaces.

A total of 24 spaces are therefore estimated to be required. In support of this number KFW notes in section 7.0 of the Traffic Impact Statement that *"all vehicles will enter and leave the site via the weighbridge. The processing area will be out of bounds to the public.....Customers intending purchase materials will initially proceed to the weighbridge and be authorised to proceed to a designated area (after payment or material) to have their vehicle or trailer loaded. Customers will therefore not require a designated parking space."*

To accommodate the expanded facility the Site Plan (Ref KF110816 Drawing C10 Revision 0 dated 8 May 2015) prepared by KFW shows the siting of a total of 26 carparking spaces on the site, with 16 spaces located to the south of the office buildings and 10 staff spaces located to the north of the offices. It is submitted that the proposed 26 spaces are adequate to cater for the demands of staff and patrons of the expanded facility. However, it is noted that the Site Plan (Ref: Sheet 2 of 22 dated 15 May 2015 prepared by DJ Little Design now shows the relocation of the disabled parking space to a position immediately to the south of the approved office. Further the revised plans prepared by DJ Little also show the provision of a disabled ramp leading from the disabled parking space to the office. The amended siting of the disabled parking space and the disabled ramp has been endorsed by Wollongong City Council in its granting of Development Consent DA 2009/1153/D on 7 May 2015.

2.17 Servicing

Wollongong City Council states in its submission:

"The site does not appear to be connected to a Sydney Water sewer line and therefore on-site sewage management for the site will need to be considered. Due to the environmental sensitivity of the site (close to riparian corridor on site) only a pump out system will be appropriate. Recommended conditions will require a licence to be obtained for the approval to install and operate an on-site sewage management system under the Local Government Act 1993".

Response:

It is confirmed that, as suggested by Council, the subject site is not connected to the reticulated sewerage system. Hence a pump out system is currently utilised and this will continue following upgrading of the facility.

3 Modifications Made to the Project

Following the issuing of DA-2009/1153/D by Wollongong City Council on 7 May 2015 this Response to Submissions clarifies the scope of the current development application and confirms that SSD-5300 does not seek to authorise existing structures on the site. A schedule has now been prepared (**Table 3**) which confirms those works which are existing, works which have been approved pursuant to DA-2009/1153/D and works which form part of the current application (SSD 5300). This table also details the relevant consents which approved the listed works, together with applicable construction and occupation certificates. This schedule is also accompanied by additional plans prepared by KFW (Drawings C35-38) which show existing, approved and proposed works.

Further, this Response to Submissions confirms that the development will be staged, with Stage 1 to incorporate all works, with the exception of works to the east of the watercourse [including the construction of the buildings (the workshop, OHS training room and office building), on site detention basin (OSD) B, and the truck parking/access], which will be constructed in Stage 2. This staging is also reflected on the revised development plans prepared by KFW.

Following review of the submissions received from government agencies and the public, further assessment of potential air quality emissions has been undertaken by GHD, with the revised Air Quality Assessment prepared by GHD (dated April 2015) now including the Patrick Autocare site at No. 66 West Dapto Road as a sensitive receptor. The revised report also acknowledges the location of the other car storage facility at No. 17 Reddalls Road, however additional modelling of this site was not considered warranted as the Air Quality Assessment confirms that the proposal meets the criteria at the Patrick Autocare site and all other sensitive receptors, including 17 Reddalls Road.

Following exhibition of the proposal in November 2014 GHD also considered various management and mitigation options, in addition to the Level 2 water sprays which were previously proposed for the access road. This includes the use of chemical dust suppressants on the access roads and Level 2 water sprays on the truck turning and backing areas to provide more effective management than water spraying alone. With the incorporation of such mitigation measures, the dust deposition contours now show that the dust concentration levels with mitigation measures applied are predicted to be below the criteria at the Patrick Autocare property boundary.

GHD has also reconsidered the option available to odour mitigation. As a result of this further analysis the odour mitigation assessment has been modified and the use of a biofilter has been removed. GHD confirm that the use of a building ventilation with all building air emitted through a stack as originally assessed increases dispersion into the surrounding environment and reduces the predicted odour levels to meet the criteria at all identified sensitive receptors.

Following consideration of the issues raised by the Environment Protection Authority regarding the data and methodology utilised in the undertaking of the Noise Assessment, GHD has revised the Noise Assessment (April 2015) and has addressed the partial operation of the facility during the night time period. This revised assessment confirms that *"the proposal will be acceptable from an acoustic perspective assuming the*

recommended mitigation measures are implemented". Hence, there is no demonstrated need for an additional buffer to the residences in Farmborough Heights as the revised documentation prepared to support this Response to Submissions confirms that the proposed development will not unreasonably impact on residences in Farmborough Heights, with the implementation of the recommended mitigation measures.

Amendment to the Preliminary Hazard Analysis has also been undertaken by Benviron in April 2015 to address issues raised within submissions, specifically to include reference to the Patrick Autocare and Kaliwest properties and to now incorporate dust, odour and the importation of hazardous material within the Risk Assessment.

In response to the issues raised by RFS and DPI (Office of Water) regarding asset protection zones and the riparian corridor, consultation has occurred with the NSW Rural Fire Service who have confirmed that the hazard posed by the material stored within stockpiles is the issues of greatest concern, due to potential level of flammability. Following consultation with RFS it was determined that the most appropriate mechanism to ensure that storage flammable material does not occur in close proximity to the riparian corridor is to delineate the type of material which can be stockpiled, loaded and processed within 100m of the riparian vegetation and the type of material which can be stockpiled and loaded beyond the recommended 100m APZ distance. To address this issue an amended Site Plan (Revision O dated 8 May 2015) has been prepared by KFW which delineates the storage, stockpiling and processing areas.

Upgrading of the construction standard of specified buildings will be required if the RFS supports the request for removal of the Inner Protection Area requirements from the riparian corridor. Relocation of the buildings is not considered necessary if the specified construction standards are adhered to. Effectively, this will allow for the implementation of fully structured riparian vegetation within the riparian corridor, except in the position where asset protection zones are required and offset areas are provided.

In order to address potential traffic impacts identified within submissions, Cardno was engaged to prepare a Rail Level Crossing Modelling Traffic Management Plan to assess the impacts of queuing on the approaches to the nearby rail level crossing and the queue from the West Dapto Road / Princes Highway intersection to the rail level crossing. This report was referred to Sydney Trains, with advice received by DPE on 17 April 2015 confirming the preparation of a further assessment is not required and Sydney Trains has confirmed its support for the project.

The additional analysis which was undertaken in response to the submissions received confirms that no change to the layout or the capacity of the facility is warranted, as the proposed Kembla Grange Waste Recovery Facility, which will process up to 230,000 tonnes per annum, will have minimal environmental impacts, subject to the implementation of the recommended mitigation strategies.

4 Revised Statement of Commitments

The following revised Statement of Commitments amends the Statement which was submitted to the Department of Planning and Environment in September 2014 and has been prepared in response to the outcomes of additional investigations which have now been undertaken. Bicorp commit to the undertaking of the following:

4.1 Geotechnical Design Solutions, Works and Investigations

The following recommendations to address geotechnical constraints will be implemented by Bicorp:

- 1) Additional site investigations (confirmatory holes and pits) will be undertaken, if required by the supervising geotechnical consultant at critical locations (eg on steeply sloping ground) to ensure that the local and regional stability are assessed with respect to the proposed engineering elements and design performances.
- 2) As part of site preparation prior to construction works, all vegetation, topsoil and any uncontrolled fill will be removed.
- 3) All footings will be found on same bearing stratum.
- 4) The base of all footing excavations will be inspected by a qualified geotechnical engineer to ensure footing will found in competent materials as designed.
- 5) Should variation in descriptions in soil types, colour or depths be discovered during construction, a geotechnical engineer will be notified so that the potential influence on the footing as it may be affect surrounding engineering elements may be assessed.
- 6) During design consideration will be given to the CSIRO sheet BFT-18 '*foundation maintenance and footing performance*'.
- 7) Temporary surface protection against erosion will be provided in accordance with the requirements of the supervising geotechnical engineer.
- 8) In the long term, the excavation faces will be retained by engineered retaining structure in particularly along the eastern hilly section of the site. These structures will be designed to withstand the applied lateral pressures of the soil/rock layers, the existing surcharges in their zone of influence; including existing structures, and construction related activities, and also hydrostatic pressures (if it is appropriate).
- 9) Preliminary pavement design for a flexible pavement option will be in accordance with Figure 8.4 of the Austroad Design Guide (2012). The pavement will comprise the following layers:
 - 40 mm thick dense grade asphalt AC14 on 7-10mm primer seal coat,
 - 120 mm thick DGB20 Base Course compacted to 98% Standard Compaction Ratio, and
 - 330 mm thick DGS40 Sub-base Course in two equal layers compacted to 98% Standard Compaction Ratio.

4.2 Groundwater

The following will be implemented by Bicorp in relation to groundwater monitoring and reporting:

- 1) Groundwater presence or levels will be confirmed if construction is undertaken during or following adverse weather or if a significant time period elapses between this investigation and construction. The Office of Water will be notified prior to any works occurring that are likely to intercept or extract

groundwater and an estimate of the likely take of groundwater will be provided to the Office of Water to assess the need for an authorisation.

- 2) Quarterly Testing of the groundwater on the site will be undertaken to identify any future trends and characterise the groundwater within the local area. Monitoring will commence at least three months prior to construction commencing and the results of the groundwater monitoring programme will be provided to the Office of Water.
- 3) Development of a Soil and Water Management Plan to minimise the amount of surface runoff and potential migration of contamination.
- 4) Engineering of the development working platform to minimise the infiltration of any contaminants into the underlying soils.

4.3 Hazards

The following measures will be implemented by Bicorp to address hazards associated with transport, construction, on site storage of fuels/hydrocarbons, and site operation in relation to dust, bushfire and theft:

- 1) Preparation of an Emergency Management/Response Plan.
- 2) Preparation of an Environmental Management Plan.
- 3) Preparation of a Work Health and Safety Plan.
- 4) Preparation of a Hazardous Material Management Plan.
- 5) Appropriate induction and training of personnel and the implementation of operator training.
- 6) The purchase of spill response equipment and the implementation of spill response training.
- 7) Emergency services (police, fire brigade) will be contacted when required.
- 8) The implementation of site security to limit public access, as required.
- 9) Procurement of fire fighting equipment adequate for the level of risk and regular maintenance and testing of such equipment.
- 10) Preparation of a Bushfire Management Plan.
- 11) Regular maintenance inspections of equipment.
- 12) The preparation of a Traffic Management Plan.
- 13) Implementation of procedures to ensure that handling and storage of flammable and combustible liquids is in accordance with Australian Standards.
- 14) Storage and handling of all substances, including waste, under conditions that minimise the risk of fire, explosion or toxic emissions, with implementation of specific measures that address the use of solvent-extraction reagents.
- 15) Implementation of specific procedures for high risk tasks.
- 16) Appropriate induction and training of personnel in emergency response (internal and external) procedures.
- 17) Ongoing communication with agencies such as Rural Fire Services and monitoring of risk levels in relation to fire danger ratings.
- 18) Vacuuming and sweeping of site, as required.
- 19) Procurement of spill and water cart equipment adequate for the level of risk identified for the project and regularly maintained and tested to ensure good working order.
- 20) If a major failure of air quality management systems occurs, processing will cease at the facility until the management system is repaired and operational.

4.4 Biodiversity

Bicorp commit to the implementation of the following biodiversity protection measures:

- 1) Retention of remnant intact native vegetation / endangered ecological communities.
- 2) Erection of a standard three strand wire fence around the extent of the Illawarra Subtropical Rainforest located within the area of workings to indicate and protect this particular remnant. A buffer zone of 5m will apply within this fencing.
- 3) Retention of identified hollow bearing trees.
- 4) Retention of a 10m wide vegetated riparian corridor to protect aquatic habitats.
- 5) Retention of identified hollow bearing tree.
- 6) Revegetation of disturbed batters and landscape areas with native flora species.
- 7) Undertaking of weed management in accordance with the requirements of the Noxious Weeds Act (1993).
- 8) Removal of vegetative matter from earth moving machinery prior to entering and leaving the site.
- 9) Undertaking of weed management of the vegetated riparian buffer area in accordance with the Vegetation Management Plan prepared by Southern Habitat (2013).
- 10) Rapid revegetation and/or stabilisation of disturbed areas.
- 11) Remove windblown rubbish.

4.5 Vegetation

- 1) The following will be implemented by Bicorp to protect the Moreton Bay Fig on the site:
 - Retention of a reserve as shown on the Landscape Plan dated May 2015.
 - Removal of the Hickory Wattles 4 & 5 (simply by cutting out with a chainsaw, not heavy machinery) which will disrupt the Fig's roots.
 - Removal of the Lantana infestation.
 - Retention of the small Whalebone Tree east of the Fig, and the young Moreton Bay Fig about 7m south - west of the Fig.
 - Secure quarantining of the Fig's reserve on the works (i.e. east) side with a steel picket and ribbon fence (known as a Tree Protection Zone/TPZ exclusion fence).
 - No works (apart from Lantana & Hickory removal) to be undertaken within this zone.
- 2) The Restoration Plan of Action, as contained in the Vegetation Management Plan, updated by Southern Habitat in May 2015 will be implemented.
- 3) A two (2) year maintenance programme will commence following completion of primary weed control and revegetation throughout the riparian corridor. Following this maintenance period and final report, the ongoing maintenance shall continue for the operational life of the facility. The maintenance will require the compilation and submission of an annual report to NSW Office of Water and must be prepared by a suitably qualified person/organisation. The annual report must include but is not limited to site conditions including:
 - Weed cover percentage
 - Native cover percentage
 - Identification and determination of actions to remedy any issues pertaining to the ongoing maintenance of the riparian vegetation for the 12 months following the report.

4.6 Bushfire

The following bushfire mitigation and protection recommendations will be adhered to by Bicorp:

- 1) The stockpiling and loading area for green waste and timber is to be confined to the western and south-western sides of the 'Indoor Processing & Storage Shed' over 100 m from the riparian area or within the Indoor Processing & Storage Shed.
- 2) Construction of the workshop building, other than its western elevation, shall comply with Sections 3 and 8 (BAL 40) Australian Standard AS3959-2009 'Constructing of buildings in bush fire-prone areas' and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection'.
- 3) Construction of the western elevations of the workshop building shall comply with sections 3 and 7 (BAL 29) of Australian Standard AS3959-2009 'Construction of buildings in bushfire-prone areas' and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection'.
- 4) Construction of the south-eastern and north-eastern elevations of the office building shall comply with Sections 3 and 8 (BAL 40) of Australian Standard AS3959-2009 'Construction of buildings in bushfire-prone areas' and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection'.
- 5) Construction of the south-western and north-western elevations of the office building shall comply with BAL-FZ of Australian Standard AS3959-2009 'Construction of buildings in bushfire-prone areas' and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection'.
- 6) At the commencement of works and for the life of the facility the property, with the exception of the riparian zone, will be managed as an inner protection area (IPA) as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones' as follows:
 - For 100m north and east of the outdoor processing and stockpiling area.
 - West and south of the outdoor processing and stockpiling area to the property boundary.
 - An additional 19m east of the proposed workshop building.
- 7) The existing buildings to be required will be upgraded to improve ember protection. This will be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes any subfloor areas, openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.
- 8) The development will be serviced by a static water supply to meet the PBP requirement for a minimum amount of 20,000 litres for fire fighting purposes.. The water supply will be visible and readily accessible to fire fighting vehicles and a suitable connection for Rural Fire Service purposes will be made available (65 mm Storz fitting). The supply will be accessible to within 3 m by fire fighting appliances

4.7 Acoustic Measures

The following general noise mitigation measures will be implemented by Bicorp to mitigate construction noise impacts:

- 1) All engine covers will be kept closed while equipment is operating.
- 2) As far as possible, materials dropping heights into or out of trucks will be minimised.
- 3) Vehicles will be kept properly serviced and fitted with appropriate mufflers. The use of exhaust brakes will be eliminated, where practicable.

- 4) Machines found to produce excessive noise compared to industry best practice will be removed from the site or stood down until repairs or modifications can be made.
- 5) All equipment will be selected to minimise noise emissions. Equipment will be fitted with appropriate silencers and be in good working order. Machines found to produce excessive noise compared to normal industry expectations will be removed from the site or stood down until repairs or modifications can be made.
- 6) The constructor will provide a phone number at the site entrance detailing the site contact so that noise complaints can be received and addressed in a timely manner.
- 7) Upon receipt of a noise complaint, monitoring will be undertaken and reported as soon as possible. If exceedances are detected, the situation will be reviewed in order to identify means to attempt to reduce the impact to acceptable levels.
- 8) All site workers will be sensitised to the potential for noise impacts on local residents and encouraged to take practical and reasonable measures to minimise the impact during the course of their activities. This will include:
 - Avoid the use of loud radios.
 - Avoid shouting and slamming doors.
 - Where practical, machines will be operated at low speed or power and switched off when not being used rather than left idling for prolonged periods.
 - Keep truck drivers informed of designated vehicle routes, parking locations and delivery hours.
 - Minimise reversing.
 - Avoid dropping materials from height and avoid metal to metal contact on material.
 - All engine covers would be kept closed while equipment is operating.
- 9) When the expanded facility is operational compliance noise monitoring will be undertaken at that time to determine the noise contribution of all significant site equipment and machinery and the impact on nearby receivers.
- 10) Upon receipt of a valid noise complaint, monitoring would be undertaken and reported as soon as possible. If exceedances were detected, the situation would be reviewed in order to identify means to attempt to reduce the impact to acceptable levels.
- 11) Where possible, avoid the use of noisy equipment such as the crusher and screen during the night time period (6am-7am) when the site is operational.

4.8 Environmental and Amenity Impacts

The following flood mitigation and water quality measures will be implemented by Bicorp:

- 1) Up to three 100,000L rainwater tanks in addition to a permanent pool to provide for dust suppression.
- 2) Use of recycled crushed concrete in road pavements and hardstand areas to promote infiltration and reduce the volume of surface runoff.
- 3) Provision of two OSD basins, one on either side of the watercourse.
- 4) Capture of hydrocarbons, including two Rocla downstream defenders to capture hydrocarbons in oil and grease from runoff. A Humeceptor is also to be installed upstream.
- 5) Implementation of a Operation and Maintenance Plan for WSUD in regard to weekly and monthly inspection and maintenance, as well as after every rainfall event >25mm, in addition to six monthly inspections and maintenance.

4.9 Dust and Odour Management

The following general dust mitigation will be implemented by Bicorp:

- 1) Material will be watered prior to it being loaded for haulage, where appropriate.
- 2) Watering of truck turn around and reversing areas will be undertaken with at least 2L/m²/hr as required to control dust emissions. Any other areas that are visible sources of dust will be appropriately watered until dust impact is no longer an issue.
- 3) Chemical Dust suppressant spraying will be undertaken on the unsealed access road from the site office into the site. This will be undertaken as per the supplier's requirements. Additional dust suppression will be applied if dust from the road is visibly observed to be leaving the site boundary.
- 4) A dust suppression system will be installed and operated for the crushing plant. The system will be operated as per manufacturers' specification and used whenever dust from the crusher has the potential to be transported offsite in the direction of sensitive receptors.
- 5) The size of storage piles will be minimised where possible.
- 6) Cleared areas of land will be limited and cleared only when necessary to reduce fugitive dust emissions.
- 7) On site traffic will be controlled by designating specific routes for haulage and access and limiting vehicle speeds to below 25 km/hr.
- 8) All trucks hauling material should be covered before exiting the site and should maintain a reasonable amount of vertical space between the top of the load and top of the trailer.
- 9) Material spillage on sealed roads will be cleaned up as soon as practicable.
- 10) A rumble-strip at the interface of the sealed road and the unsealed access road will be provided.
- 11) Excavating operations conducted in areas of low moisture content material will be suspended during high wind speed events or water sprays will be used.

The following odour mitigation measures will be implemented by Bicorp:

- 12) Design and installation of an appropriate building ventilation system at negative pressure at all times during operation.
- 13) A site odour management plan be developed prior to commissioning the facility with the increased capacity.
- 14) On site storage times of organic material will be minimised prior to processing.
- 15) If the chosen composting process allows, the matured compost stockpiles will be covered to reduce the ingress of water and reduce odour.
- 16) If the leachate pond is a significant source of odour Bicorp will investigate the use of aerators to minimise odour, enhance biological degradation and encourage evaporation.
- 17) Validation sampling of odour from any key odour discharge points will be undertaken after commissioning.
- 18) Annual odour sampling of the building ventilation stack will be undertaken.
- 19) If required (as demonstrated by annual odour sampling), all air will be treated in an odour control system prior to discharge.

4.10 Energy Efficiency

The following recommendations pertaining to energy efficiency will be implemented by Bicorp:

- 1) Diesel will be used in the on site generator during construction and operation to provide all power to the site.
- 2) Diesel will be used in on site vehicles.
- 3) Diesel will be used in the transport of construction materials, operation raw materials and waste to the site and to transport site outputs to end- use/disposal location, where such machinery is operated by Bicorp.

4.11 Waste Management

The following will be adhered to by Bicorp in relation to the acceptance, processing, storage and disposal of waste:

- 1) The proposed development will operate at a maximum capacity of 230,000 tonnes of waste per annum;
- 2) The facility will have a maximum storage capacity of 45,000 tonnes of waste at any one time;
- 3) The facility will have a processing capacity of up to 871 tonnes per day;
- 4) The facility will process up to 30,000 tonnes of non putrescible organics per annum (of which 6,300 tonnes per annum will be composted and 23,700 tonnes per annum will be mulched or sold as firewood);
- 5) The facility will store no more than 2500m³ of organic matter on the site at any time (which includes timber, tree stumps etc). Of the 2500m³ of organics, no more than 500m³ tonnes of this will comprise compost.

4.12 Heritage Conservation

If impacts are proposed outside the current development footprint in conjunction with a future development application in areas of low-moderate Aboriginal archaeological potential, further investigations will be undertaken at that time.