Hyder Consulting Pty Ltd Level 5, 141 Walker Street Locked Bag 6503 North Sydney NSW 2060 Australia Tel: +61 2 8907 9000 Fax: +61 2 8907 9001 www.hyderconsulting.com



19th June 2015

Dear Ms Nicholson,

Integrated Designated Development Application No. 523/2014 Dunmore Resource Recovery Redevelopment Lot 1 DP 110135 & Lot 1 DP 419907, 58 Buckleys Road & Lot 21 DP 653009, 44 Buckleys Road, Dunmore

This letter provides a response to additional information requests sought by Shellharbour City Council (SCC) – City Development (and the Joint Regional Planning Panel (JRPP)) dated 6th May 2015. It is understood, the Environmental Protection Authority (EPA) and Department of Primary Industries (DPI) are currently assessing the additional information submitted on 19 March 2015 for this Development Application (DA) and that, this letter serves to provide additional information to support the assessment process.

The Environmental Impact Statement (EIS) for the Dunmore Resource Recovery Facility Redevelopment was placed on exhibition between 16 January 2015 and 16 February 2015 in accordance with Section 79 (1)(a) of the *Environmental Planning & Assessment Act 1979* (EP&A Act).

During this exhibition period submissions were received from both government agencies and stakeholders. This letter has been prepared to address additional comments raised by SCC-City Development and thereby satisfy the provisions of Section 79C of the EP&A Act.

Project Background

SCC is proposing to redevelop its existing waste management facilities at Buckleys Road, Dunmore, referred to as the Dunmore Resource Recovery Redevelopment (the Proposal). The Proposal will be located on the eastern side (the Proposal site) of the Dunmore Recycling and Waste Disposal Depot site (DRWDD site). SCC (the Applicant) is seeking approval for the Proposal under Part 4 (Designated Development) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Hyder Consulting has been engaged by SCC to prepare the necessary documentation to support the lodgement of a DA for the Proposal.

The DRWDD site is located on Buckleys Road, Dunmore, within the Shellharbour Local Government Area. The DRWDD is the principle site used by SCC for waste disposal and resource recovery .The DRWDD site, which is owned and operated by SCC, requires an upgrade in order to assist SCC in maximising resource recovery, minimising waste disposal to landfill, improving site safety, and increasing operational efficiency.

An EIS (dated December 2014) was prepared by Hyder on behalf of SCC, to address the Secretary's Environmental Assessment Requirements (SEARs) (Reference 677 and 691) which were provided for the Proposal. The EIS provided a comprehensive assessment of all issues identified in the SEARs.

The EIS also identified a number of mitigation measures to address any identified potential environmental impacts associated with the Proposal.

Project Overview

In summary, the Proposal includes the following works:

- Earthworks including levelling (cut and fill) of the Proposal site
- Upgrade of the internal road network and reconfiguration of entry intersection, including reallocation of traffic routes and upgrades and relocation of weighbridges
- Reorientation of the revolve centre and associated visitor car parking
- Relocation and reorganisation of the Transfer Facility, including the construction of a covered shallow 'push-pit' and a front resource recovery area
- Introduction of the tunnel composting Food Organics and Green Organics (FOGO) and associated biofilter
- Relocation of staff and office facilities, car parking and operational equipment and storage repair areas
- Relocation of the existing leachate storage areas (existing ponds) from EPL 12903 to EPL 5984 and inclusion of storm water storage tanks on-site, integrated storm-water management system
- Expansion and reconfiguration of the existing composting facility works, including improved sorting, maturation and pick-up areas
- Relocation of gas flare
- Relocation and extension of existing utilities
- Selected tree removal and boundary screen landscaping.

Overview of Submission Received

Table 1 provides a detailed summary of additional issues raised by the SCC- City Development and the JRPP and provides responses and clarifications to each submission with reference to the EIS and supporting technical specialist reports (where applicable).

Issue	Comment	Clarification/Response	Reference
Reconfiguration of Buckleys Road			
Intersection works	The proposed reconfiguration works to the entry intersection on Buckleys Road is not supported on the basis of the information submitted. In this regard please submit revised plan/s that show the removal of entry reconfiguration works to Buckleys Road.	It is acknowledged that the proposed reconfiguration would re-direct traffic from a public road into the facility. The Proposal would operate as a public facility for use by the surrounding community. Given the nature of the facility, and the high proportion of the traffic travelling on Buckleys Road that are associated with this facility (existing and proposed operations), a reconfiguration was previously considered appropriate to maximise safety and improve traffic flows on Buckleys Road, and within the Proposal site. However, the adjoining Dunmore Resources and Recycling property (DRR site) has raised concerns associated with the impact of the reconfiguration of the access point for the Proposal site with regard to operation of their site and traffic safety/flow. Under the previous response for request to additional information dated 19 th March 2015 Hyder made a number of alterations to the Proposal site entry works and undertook assessment of three options for the reconfiguration of the site access, including analysis of the advantages and disadvantages associated with each option in collaboration with SCC. The reconfigured site access would allow vehicles accessing the DRR site to continue unimpeded along Buckleys Road from the north-west. Vehicles heading north and south will be separated by a traffic island, which will act as a traffic control measure on vehicles exiting the private facility, and encourage drivers to reduce speed on approach to the intersection. This will reduce the risk of head on collisions and provide separation to vehicles entering and leaving the DRR site at the location of the intersection. Notwithstanding this, the previous site reconfiguration, Option B has not been supported by SCC- City Development in correspondence dated the 6 th May 2015. Council have	Section 5 and 8.4 of the EIS Volume 1, Section 8.4 Appendix B and Volume 2 Appendix E of the EIS Appendix A and B of this letter.

Table 1: Response to comments raised during the public exhibition period

Issue	Comment	Clarification/Response	Reference
		requested submission of revised plans to show the removal of any entry reconfiguration works to Buckleys Road. In consideration to this Hyder has altered the entry to the Proposal site reconfiguring it to reflect as best possible a safe design that is similar to existing conditions. This option is presented in Appendix A, and removes the kerb build out and diversion of Buckleys Road into the Proposal site. Vehicles travelling on the main road to the DRR site would still have priority over vehicles egressing from the DRWDD site. Adequate lines of sght are available for vehicles exiting this facility. The swept paths of both entry and exit vehicles are unhindered and both movements can operate simultaneously. A technical traffic memo to support this response is also provided in Appendix B of this letter.	
Community consu	Iltation		
Consultation with the DRR site owners	 To support the statement that the proponent has addressed the consultation requirements detailed in SEARS # 677 and # 691, evidence is required that landowners/occupiers of 57 Buckleys Road Dunmore were: invited in writing to attend a meeting on 2.04.2014 to discuss the proposed development and the MasterPlan for the site, and advised in writing on 12.12.2014 that the EIS for the proposal was to be lodged in the near future as referred to in section 4.3 'community consultation' of the EIS. 	 Additional evidence to support consultation undertaken for the adjoining DRR site is provided in Appendix C. In summary, the following opportunities have been provided to the adjoining site owner: DRR representatives were invited by writing (refer letter dated 25th March 2014) to attend a resident information session on the 2nd April 2014. Note a representative from DRR was not in attendance at this meeting. Letter circulated to landowners/occupiers of 57 Buckleys Road (including the DRR site) advising of timelines for lodgement of EIS and DA. Notice provided to DRR representatives on 15th January 2015 of proposed integrated designated DA No. 523/2014, including exhibition dates, process for inspection of plans and documents and timeframes for receipt of responses. 	Appendix C of this letter.

Issue	Comment	Clarification/Response	Reference
Traffic and Parking	g		
Stop Bars	 The EIS p54 figure 5.4 (Volume 1) and site plan show 2 stopping bars. Can you please clarify what is meant by a stop 'bar'. Should these stop bars function as a stop line please clarify which traffic has right of way. 	A "stop bar" as defined in the Manual on Uniform Traffic Control Devices (MUTCD) is essentially a stop line. The proposed traffic arrangement prompts incoming vehicles to stop before crossing the path of the existing retail traffic. Traffic signage will be installed to reinforce the right-of-way protocols and safe movement of traffic within the DRWDD site. Section 5.3.1 of the EIS notes that the proposed traffic arrangement prompts incoming heavy (commercial) vehicle traffic on route to the landfill or sandmining operations on DRWDD site to stop before crossing the path of existing retail traffic (departing the resource recovery operations). Exiting retail traffic will have priority over exiting heavy vehicle traffic. On further consideration, a stop line on the exit lane for the retail traffic is not required as heavy vehicle traffic will be required to yield for existing retail traffic. Figure 5-4 in the EIS has been updated to reflect this change and is provided in Appendix D.	Volume 1 of the EIS, Section 5.3.1, Figure 5.4, page 54. Appendix D of this letter
	 What is the purpose of the 'heavy vehicle queuing/stacking' as shown on the plan? Is it likely that the queuing of heavy vehicles may obstruct entry of vehicles into the site wanting to go to the waste facilities past the Revolve Centre? 	The length of the entry lane is approximately 35 m and can accommodate 2-3 heavy vehicles in queue (within the site) at any one time. As discussed above, priority is given to retail vehicles exiting with heavy vehicles entering having to wait until it is clear to cross. Section 8.4.2 of the EIS notes that the peak arrival of heavy vehicle traffic associated with the Proposal is estimated to be a maximum of 6 peak hour heavy vehicle movements (i.e. 1 vehicle per 10 minutes). Hence, it is not expected that queueing of heavy vehicles will obstruct Buckleys Road or entry of heavy/light vehicles turning left into the DRWDD site (travelling to the resource recovery operations).	Volume 1 of the EIS, Section 5.3.1, Figure 5.4, page 54 and Section 8.4.2, page 127
Traffic generation	• The EIS p124 (Volume 1) says that the no. of vehicles into the site has been based on weighbridge data. This would suggest then that this data does not include the no. of visitors to the Revolve Centre. In this	Weighbridge data provided by Council for the period 2011/2012 essentially included all vehicle movements into the DRWDD site, accounting for the various operations, including the Revolve Centre that comprise existing DRWDD operations. The Revolve Centre is being operated by a contractor, Mission Australia, and no data was made	Volume 2 of the EIS, Appendix E, Section 5.4.1, page 22.

Issue	Comment	Clarification/Response	Reference
	regard the traffic generation data does not appear to include the Centre's traffic rates. Clarification of existing and proposed future traffic generation rates associated with the Revolve Centre are required.	available for the Traffic and Transport Impact Assessment (provided in Volume 2, Appendix E of the EIS). Section 8.4 of the EIS notes that in the absence of actual traffic volume estimates, the expected number of customers to the Revolve Centre was based on the total estimate of customers to the Transfer Facility. This equates to 125 light vehicle and 18 heavy vehicle daily traffic movements. It is assumed that waste brought in by customers for disposal at the DRWDD site is initially assessed at the Revolve Centre for reuse or recycling prior to disposal at the Transfer Facility. For the purpose of this assessment, it is assumed that the number of customers to the Revolve Centre will be the same customers directed to the Transfer Facility. It is important to note that this is essentially a conservative (worst-case) approach with regard to traffic impacts associated with the Proposal. On this basis, the Traffic and Transport Impact Assessment suitably addresses the potential traffic, and associated impacts, from the existing Revolve Centre.	
	• The traffic study concludes that the increase in traffic volumes associated with the proposal will be minimal with only an increase of 12 heavy vehicle trips/day to the organics facility. Page 64 of the EIS states that the organics facility will employ about 4 persons. The vehicle trips associated with these additional workers does not appear to have been included in the traffic generation data. In addition, an assumption appears to have been made that the improved transfer facility will not result in an increase the number of users to the site.	Section 5.5.7 of the EIS notes that the Organics Facility would be operated by 3-4 employees. It is important to note that no additional workers are anticipated as a result of the Proposal. It is assumed that the overall staff numbers have already been included in the count for existing light vehicle traffic movements for the organics facility. The future traffic generation calculated net future generation compared to the existing. The increase of 12 heavy vehicle trips per day for the organics facility is attributed to the forecast increase in organic waste. The EIS assumes no growth in the generation of self-haul garden organics. An assumption has been made that light vehicles would drop off organics to the Transfer Facility rather than the Organics Facility and that there would be no change in quantity of the waste. As such there will be no increase in light vehicle movements associated with the Organics Facility.	Section 5.5.7, Volume 1 of EIS page 65 and Section 8.4.2, Volume 1 of EIS page 125

Issue	Comment	Clarification/Response	Reference
	 As other Councils begin to include organics collection as part of their waste collection services with this waste stream being managed off-site to a suitable organics processing facility, the question arises as to whether other Councils will seek to dispose of their organics to the new facility. Traffic generation predications for the proposed development should consider future operational/commercial growth opportunities that may be created by the redevelopment. 	The Proposal overview, documented in Section 1.1 of the EIS states that the upgraded Resource Recovery Facility would receive waste primarily from the Shellharbour LGA, however there would be the potential for receipt of select waste from other surrounding LGAs. Furthermore, Section 2.2 of the EIS estimates organics processing tonnes would increase from 19,500 tonnes in 2014/15 to 23,350 tonnes in 2024/25. This projected increase includes potential contribution of organics waste volumes from other LGAs, particularly Kiama. Section 1.2 of the Master Plan (Volume 1, Appendix B of the EIS) notes that the preferred site layout option (assessed in the EIS) provides sufficient developable area to accommodate processing of SCC's organic waste streams, plus food and garden organics from the neighbouring Kiama Council, should this be deemed beneficial in the future. Therefore, the Traffic and Transport Impact assessment documented in Section 8.4 of the EIS (and Volume 2, Appendix E of the EIS) considers future traffic generation numbers associated with the Proposal.	Section 1.1 Volume 1, Appendix B of the EIS Volume 2, Appendix E of the EIS
Car parking	 The EIS p129 first dot point (Volume 1) states that 16 car parking spaces for the Revolve Centre's customers is proposed. It is also stated however that the proposed peak volume will be 28 vehicles and a worst case scenario will see 32-48 vehicles at any one time at the Centre. In this regard, please advise how the proposed number of spaces will be adequate for the Centre. 	The visitor car parking requirements for the Revolve Centre is assessed assuming a maximum stay duration per parking space for each light vehicle to be twenty to thirty minutes and each heavy vehicle to be 30 minutes. Section 8.4.2 of the EIS notes that the Revolve Centre has allowed for provision of 16 visitor car parking spaces. This has been based on a worst case scenario where visitor parking requirements have been assessed based on the maximum peak hour vehicle volume movements. The allocation of parking spaces is based on a 20 to 30 minute dwell time per space which equates to a capacity of 32 to 48 vehicles at any one hour. The peak hour volume is estimated to be 25 light vehicles and 3 heavy vehicles. Hence, the car parking provisions are sufficient to accommodate future traffic at the Revolve Centre.	Section 8.4.2 Section 5.4.1 of Appendix E, Volume 2 of the EIS

Issue	Comment	Clarification/Response	Reference
	 The siting of customer parking, including trailer parking spaces, adjoining the internal road to and from the transfer facility and other facilities has the potential to conflict with the other users of the site as customers enter/leave these spaces. Please clarify how the parking location and associated loading/unloading activities will not conflict with the through traffic of heavy and light vehicles to the organics and transfer facilities. 	omer parking, including aces, adjoining the nd from the transfer facilities has the potential e other users of the site er/leave these spaces. w the parking location bading/unloading conflict with the through nd light vehicles to the isfer facilities.	
Drainage			
Stormwater	Figure 8-10 of the EIS (Volume 1) shows a drainage channel along the eastern boundary of the development site located on the adjoining property and this channel discharging into a water storage pond also on this property. However the owner of this property states that this channel is located within the development site and does not discharge into this pond but rather to Rocklow Creek. In this regard, the location of the drainage channel and where it discharges to needs to be clarified.	A detailed site survey has been undertaken of the drainage line located along the eastern boundary of the Proposal site (refer to Appendix D). The purpose of this site survey is to verify the drainage lines location relative to the Proposal site and the adjoining DRR property. Under the existing conditions, the easternmost drainage channel, as shown in Figure 8-10 of the EIS, receives runoff generated from within the Proposal site, particularly with regard to the Revolve Centre sub- catchment (also referred to as sub-catchment No. 6, refer to Section 8.6 of the EIS). The runoff from this area of the Proposal site is transported into the existing drainage channel via an existing culvert which discharges at the south eastern boundary of the Proposal site to Rocklow Creek. The survey of the drainage channel provided in Appendix D demonstrates the existing drainage line is located within the Proposal site boundary and does not discharge to the dam on the adjoining DRR site as previously identified in the EIS. The Stormwater Concept Plan, provided with the previous information request dated 19	Appendix E of this letter.

Issue	Comment	Clarification/Response	Reference
		March 2015, was previously updated to reflect the location of the eastern drainage line.	

Summary of Mitigation Measures

Minor amendments have been made to the mitigation measures for the Proposal to respond the comments provided within this submission.

Additional mitigation measures provide the final mitigation measures to be incorporated into the conditions for the consent for the DA, as required by Schedule 2, Part 3, cl 7(1)(E) of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regs).

The final mitigation measures are presented in Appendix F. Additional measures have been underlined with deletions struck through.

Conclusion

Shellharbour City Council (SCC) proposes to redevelop its existing waste management facilities at Buckleys Road, Dunmore (the Proposal).

The EIS was publicly exhibited by SCC between 16 January 2015 and 16 February 1015. During this period submissions were invited from anyone with an interest in the Proposal including members of the community and government. Council received a total of 19 submissions. This letter has been prepared to respond to submissions raised by both community and government.

The Proposal will provide significant benefit by reducing the amount of waste requiring landfill disposal and improve resource recovery rates; providing sustainable waste management services for the SCC LGA. Based on the updates provided in this letter, as well as the findings of the EIS, it is recommended that the Proposal be approved subject to suitable conditions of consent.

Brad Searle Associate Technical Director - Environment +61 (0) 2 8907 9059

APPENDIX A

PROPOSED INTERSECTION REALIGNMENT



APPENDIX B

TRAFFIC RESPONSE

Hyder Consulting Pty Ltd Level 5, 141 Walker Street Locked Bag 6503 North Sydney NSW 2060 Australia Tel: +61 2 8907 9000 Fax: +61 2 8907 9001 www.hyderconsulting.com



18th June 2015

Dunmore Resource Recovery Traffic Impact Assessment Addendum Report

Technical Note-1: Addendum Report

A) Introduction

This Technical Note has been prepared as an Addendum to the Traffic Impact Assessment Report submitted for the above proposal in response to an additional information request for the Dunmore Resources Recovery Redevelopment EIS (R3) project.

This_Technical Note provides an updated assessment on the intersection performance for Buckley Road and Dunmore Road intersection based on the adjoining Dunmore Resources and Recycling (DRR), and Dunmore Sand Quarry property approved development applications wherein:

- The assessment on levels of service for Buckley Rd and Dunmore Rd has been updated using approved DA heavy vehicle movement (average of 13 heavy vehicle movements per day for the DRR site and average of 30 heavy vehicle movements per day for the Dunmore Sand Quarry operations)
- Undertake an assessment of worst case scenario for the adjoining DRR site and Dunmore Sand Quarry property, of 26 and 80 vehicles per day respectively, in terms of impact on levels of service.
- Provided updated safety assessment for Buckley Rd and Dunmore Rd based on realignment of intersection to existing conditions Dunmore Resources and Recycling (DRR) property

B) Impact on Intersection Operation of Dunmore Road / Buckleys Road

The Austroads Guide to Traffic Engineering Practice – Part 5 provides guidance on the assessment of at grade intersections. The guidelines state that at grade intersections carrying light crossing and turning volumes, the capacity figures for uninterrupted flow generally apply for the approach roads. The Guide further indicates the maximum traffic volume combinations for uninterrupted flow conditions. When the combinations of major road and minor road volumes are less than the prescribed combinations in Table 5, the Guide states that it is unnecessary to flare intersection approaches or to carry out an intersection analysis.



Major Road Type ¹	Major Road Flow (vph) ²	Minor Road Flow (vph) ³
Two Lane	400	250
	500	200
	650	100
Four Lane	1000	100
	1500	50
	2500	25

Table 1 Intersection Capacity – Uninterrupted Flow Conditions

Notes:

1. Major road is through road (i.e. has priority).

2. Major road design volumes include through and turning movements.

3. Minor road design volumes include through and turning volumes

The traffic volume on Dunmore Road (major road) is around 460 vehicles per hour during the peak hour. On Buckleys Road, only vehicles to/from the DRWDD site, Integral Energy Depot, DRR and Dunmore Sand Quarry on the adjoining property are regular users. Traffic movements to/from the DRWDD Site consist of staff movements and visitor vehicle movements to either the landfill site, transfer facility or the organics facility. The total peak hour visitor vehicle arrivals is around 35 (Refer to Traffic Impact Assessment Report, Section 5.1.1 - 25 light vehicles and 10 heavy vehicles) and staff vehicle movements are approximately 15. In total, there are approximately 100 traffic movements associated with the DRWDD site going in and out of Buckleys Road during the peak hour.

The approved DA for the adjoining DRR site allows for an average of 13 heavy vehicles per day. In a worst case scenario, this equates to approximately 3-4 heavy vehicles during the peak hour. This volume has been accounted for in the previous assessment of the intersection performance.

The approved DA for the Dunmore Sand Quarry allows for between 10 - 50 heavy vehicles per day, with an average of 30 adopted for the purpose of this assessment. It is noted that the EIS prepared for this DA states that at peak periods, this number may increase to 80 vehicles per day. This has been adopted for the assessment of the worst case scenario.

Based on the approved vehicles numbers for the Sand Quarry Site and DRR site it was assumed that the peak hour traffic volume for the two developments would not likely to exceed 50 vehicles per hour. This volume also allows for an unknown volume associated with the Integral Energy Depot site.

Therefore, the major and minor road flows considered in the previous assessment for the intersection of Dunmore Road with Buckleys Road are:

- Major Road: Dunmore Road 460 vehicles per hour
- Minor Road: Buckleys Road 150 vehicles per hour

Recent information received has established the vehicle movements for the DRR site to be approximately 26 vehicles per day or 52 vehicle movements, assuming a worst case scenario whereby approved vehicle movements double (26 In and 26 Out). Adding a worst case scenario for the Dunmore Sand Quarry operations of 80 vehicles per day, total worst case vehicles would reach 106 vehicles per day. Consequently, during the peak hour, the vehicle movements would likely be less



than the 50 movements assessed above. A worst case scenario of half all movements occurring during the peak hour would result in a total of 153 heavy vehicles, when vehicles associated with the DRWDD site are combined with those for the neighbouring site. This would still result in less than 200 total vehicles on a minor road, (Buckleys Road).

This is less than the 500/200 volume combination in Table 1 above.

As such, no further assessment of the intersection is required and it can be concluded that the level of service would not decrease for either Dunmore Road or Buckleys Road as a result of the DRWDD Proposal, even under an absolute worst case scenario.

C) Realignment of Intersection to Existing Conditions with Dunmore Resources and Recycling (DRR) Site

The principle for the modified alignment is to reflect as best as possible a safe design that is similar to the existing situation. This removes the kerb build out and deflection on entry to the DRR site.

Vehicles travelling on the main road would still have priority over vehicles egressing from the DRWDD site. Adequate visibility splays are available to provide sightlines for vehicles exiting this facility. The swept paths of both entry and exit vehicles are unhindered and both movements can operate simultaneously.

This is a safe design option that is the most similar to the existing intersection arrangement for the DRR site.

APPENDIX C

CONSULTATION WITH THE DRR SITE



Administration Centre Lamerton House, Lamerton Crescent Shellharbour City Centre NSW 2529

> Postal Address Locked Bag 155 Shellharbour City Centre NSW 2529

15 December 2014

p. 02 4221 6111 f. 02 4221 6016 e. records@shellharbour.nsw.gov.au www.shellharbour.nsw.gov.au

DX 26402 Shellharbour City Centre

The Resident PO BOX 811 SEVEN HILLS NSW 1730

Project Update on the Dunmore Resource Recovery Redevelopment

Dear Resident,

The Dunmore Recycling & Waste Disposal Depot (DRWDD) is the principle site used by Shellharbour City Council (SCC) for waste disposal and resource recovery. The DRWDD, which is owned and operated by Council, requires an upgrade in order to assist Council in maximising resource recovery, minimising waste disposal to landfill, improving site safety and increasing operational efficiency.

The proposal includes the following works:

- Decommissioning of Existing Transfer Station and construction of new Transfer Station
- Re-configuration of the existing Revolve Centre to promote improved traffic flows
- Upgrade of the Organics Facility to incorporate food organics
- Relocation of existing leachate storage and gas flaring infrastructure
- Upgrade of internal road network and weighbridges
- Upgrade and relocation of utilities and auxiliary facilities as required
- Demolition of existing storage shed

Council has engaged Hyder Consulting to prepare a concept Masterplan and Environmental Impact Statement (EIS) for the project. Council are planning to lodge the EIS and DA in the coming weeks, at which time this development application will be on public exhibition for review and comment.

Please find enclosed a factsheet which provides a status update on the project.

If you have any queries or comments in relation to the project, please contact Council's Team Leader – Waste Management, Courtney Williams on 4221 6111, or via email courtney.williams@shellharbour.nsw.gov.au.

Yours sincerely

Courtney Williams Team Leader Waste Management



Administration Centre Lamerton House, Lamerton Crescent Shellharbour City Centre NSW 2529

> Postal Address Locked Bag 155 Shellharbour City Centre NSW 2529

15 January 2015

p. 02 4221 6111 f. 02 4221 6016 e. records@shellharbour.nsw.gov.au www.shellharbour.nsw.gov.au

DX 26402 Shellharbour City Centre

Dunmore Resources and Recycling Pty Ltd PO Box 3152 MINNAMURRA NSW 2533

Notice of Proposed Integrated Designated Development Development Application No. 523/2014

Dear Sir/Madam

We have received the following application:

Applicant: Shellharbour City Council

Description: Dunmore Resource Recovery Redevelopment

Integrated Development: Approval Required – Aquifer Interference Approval and Controlled Activity Approval under the *Water Management Act 2000*, Approval Body – NSW Office of Water

> Approval Required – Environment Protection Licence under the *Protection* of the Environment Operations Act 1997, Approval Body - Environment Protection Authority

Location: Lot 1, DP 110135, 58 Buckleys Road, Lot 21, DP 653009, 44 Buckley, Lot 1, DP 419907, 58 Buckleys Road, Dunmore

Exhibition Dates: 16 January 2015 to 16 February 2015

Determining Authority: Joint Regional Planning Panel (Southern)

You may inspect the plans and documents relating to the proposed development, free of charge, between 8.30am and 4.30pm at our Customer Services Counter, located on Level 1 of our Administration Centre. They are also available on our website. The documentation is also available at the Wollongong Office of the Department of Planning and Infrastructure, State Office Block, Level 2, 84 Crown Street, Wollongong between 8.30am and 4.45pm.

If you would like to comment on the proposal you must write to us by 16 February 2015.

If you object to the proposal you must give us your reasons.

Any submission/s with respect to this application will be detailed in a report to the Joint Regional Planning Panel (Southern). Submissions may be viewed by other persons with an interest in the application.

If you write to us, you <u>must</u> indicate whether or not you have made a 'reportable political donation' or 'gift' in the past two years to a Councillor or Council employee. You must state yes or no on your submission. If yes, it must be accompanied by a Political Donations and Gifts Disclosure Statement.

The relevant form and explanatory information can be obtained from Council's Administration Centre or Council's website. You may wish to make a submission on-line. Go to www.oasis.shellharbour.nsw.gov.au click on DA notification then on the relevant DA.

Integrated Designated Development DA 523/2014 Lot 1, DP 110135, 58 Buckleys Road, Lot 21, DP 653009, 44 Buckleys Road, Lot 1, DP 419907, 58 Buckleys Road, Dunmore

For your information under the *Government Information (Public Access) Act 2009* we are required to publicly release any correspondence or information we have on this matter, which means your personal information may not be confidential. It will not however be displayed on Council's website.

Political Donations and Gifts Disclosure Statement forms will be kept in a public register held at Council's Administration Building and will also be available on our website.

Any person who makes a submission by way of objection, and who is dissatisfied with the determination of the consent authority to grant development consent, may appeal to the Land and Environment Court.

Please direct your enquiries concerning this application to the assessing officer Victoria Nicholson on (02)4221 6111.

Yours sincerely

Jet Meredith

Grant Meredith Group Manager City Development

List of Owners and/or Occupiers Sent Letters

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Report Program Number - ci_dm058	08/01/2015	
Notified. Date Document Produced: 08/01/2015 Augusta PKWY SHELL COVE	Mr C S & Ms A J Hadenham 11 Augusta Parkway SHELL COVE NSW 2529	LOT: 20 DP: 1035074 Endeavour Energy PO Box 811
LOT: 32 DP: 1171019 Mr W N & Mrs L I Collins 28 Muirfield Avenue SHELL COVE NSW 2529	13 Augusta PKWY SHELL COVE LOT: 6919 DP: 1155515 Mr M J & Mrs C J Parker 13 Augusta Parkway	SEVEN HILLS NSW 1730 The Occupier 7 Buckleys Road SHELL COVE NSW 2529
1 Augusta PKWY SHELL COVE LOT: 6901 DP: 1155515 The Occupier 1 Augusta Parkway	SHELL COVE NSW 2529 15 Augusta PKWY SHELL COVE LOT: 6920 DP: 1155515	44 Buckleys RD DUNMORE DP: 1114284 The Occupier 44 Buckleys Road
SHELL COVE NSW 2529 Mr V Pasashnikov & Ms E Ivanova 15 Huntingdale Close SHELL COVE NSW 2529	Ms R M Walton 15 Augusta Parkway SHELL COVE NSW 2529	DUNMORE NSW 2529 44 Buckleys RD DUNMORE LOT: 21 DP: 653009 The Occupier
3 Augusta PKWY SHELL COVE LOT: 6902 DP: 1155515 Mr L S O'Riain & Ms A T Ryan	17 Augusta PKWY SHELL COVE LOT: 6929 DP: 1155515 Mr C A Hore & Mrs D M Sloan 17 Augusta Parkway SHELL COVE NSW 2529	44 Buckleys Road DUNMORE NSW 2529 The Occupier 44 Buckleys Road
2/6 Kembla Street WOLLONGONG NSW 2500 The Occupier 3 Augusta Parkway	19 Augusta PKWY SHELL COVE LOT: 6930 DP: 1155515 Mr C S & Mrs S Shaw 19 Augusta Parkway	57 Buckleys RD DUNMORE LOT: 2 DP: 609762 The Occupier
5 Augusta PKWY SHELL COVE LOT: 31 DP: 1171019 The Occupier	SHELL COVE NSW 2529 21 Augusta PKWY SHELL COVE LOT: 1 DP: 1170811	57 Buckleys Road DUNMORE NSW 2529 The Occupier 57 Buckleys Road
5 Augusta Parkway SHELL COVE NSW 2529 Mr B S & Mrs P Dickey PO Box 4064	Mr M Bloom 21 Augusta Parkway SHELL COVE NSW 2529	DUNMORE NSW 2529 Dunmore Resources and Recycling Pty Ltd PO Box 3152 MINNAMURRA NSW 2533
SHELLHARBOUR NSW 2529 7 Augusta PKWY SHELL COVE LOT: 6916 DP: 1155515 Mr C Exposito & Ms S P Yuan	Buckleys RD SHELL COVE LOT: 1 DP: 609762 Killalea State Park Trust PO Box 4016	Dunmore Resources and Recycling Pty Ltd PO Box 3152 MINNAMURRA NSW 2533
7 Augusta Parkway SHELL COVE NSW 2529 9 Augusta PKWY SHELL COVE	SHELLHARBOUR NSW 2529 Buckleys RD DUNMORE LOT: 16 DP: 222044 Mr G A McClure & Ms K McNiven	Dunmore Resources and Recycling Pty Ltd PO Box 3152 MINNAMURRA NSW 2533 Dunmore Resources and
LOT: 6917 DP: 1155515 Mr C G & Mrs G P Goodwin 9 Augusta Parkway SHELL COVE NSW 2529	8 Gibraltor Avenue KIAMA DOWNS NSW 2533 The Occupier 51 Dunmore Road DUNMORE NSW 2529	Recycling Pty Ltd PO Box 3152 MINNAMURRA NSW 2533
11 Augusta PKWY SHELL COVE LOT: 6918 DP: 1155515		1



Administration Centre Lamerton House, Lamerton Crescent Shellharbour City Centre NSW 2529

> Postal Address Locked Bag 155 Shellharbour City Centre NSW 2529

p. 02 4221 6111 f. 02 4221 6016 e. records@shellharbour.nsw.gov.au www.shellharbour.nsw.gov.au

DX 26402 Shellharbour City Centre

25 March 2014

Dunmore Resources and Recycling Pty PO Box 3152 MINNAMURRA NSW 2533

Resident Information Session - Dunmore Resource Recovery Redevelopment (R3) Project

I am writing to give you an update on proposed changes to services offered at Dunmore Recycling and Waste Disposal Depot.

Shellharbour City Council owns and operates the Dunmore Recycling & Waste Disposal Depot, which is located on Buckleys Road Dunmore. The site services the Shellharbour Local Government area providing landfilling and resource recovery facilities.

A new level of facilities for now and the future

The site has been operating since the early 1970's servicing the Shellharbour area; the proposed changes will see the redevelopment of the current facility providing increased resource recovery and improved customer and staff safety.

The major components of the redevelopment will include the relocation of the existing Transfer Station and the construction of a tunnel composting facility for Food Organics and Garden Organics.

The development of the tunnel composting facility for Food Organics and Garden Organics will result in the weekly collection of the kerbside green-lidded bin.

Interested in learning more about this upgrade?

As your property lies within proximity to the Dunmore Recycling & Waste Disposal Depot we would like to invite you to an information session to be held at The Links Golf Club on 2 April 2014 from 6:00pm till 7:30pm. This information session will be attended by specialist consultants and Council staff who will be available to answer questions relating to the proposed redevelopment.

Please RSVP by 31 March 2014 by calling Courtney Williams on 4221 6117, as light refreshments will be served on the evening.

Yours sincerely

Lee A. Furness Director Corporate Policy



Shellharbour community update

DEVELOPMENT PROPOSALS

Council has received applications for the proposed developments shown below. You can inspect plans and documents relating to the proposed developments by visiting our Customer Services Counter, located on Level 1 of our Administration Centre, between 8.30am and 4.30pm on weekdays, except public holidays,

If you consider that you may be affected by the proposal, you can make a written submission. If you object to the proposed development, you'll need to explain the grounds of the objection in your submission.

For your information under the Government Information (Public Access) Act 2009 we are required to publicly release any correspondence or information we have on this matter. If you choose to make a submission, it may be viewed as part of the information contained with the DA, which s your personal information may not be Jential, it will not however be displayed on

Council's website. Any written submission must indicate whether

Any written submission must indicate whether or not a 'reportable political donation' or 'gift' has been made in the past two years to a Councillor or Council employee. If yes, the submission must be accompanied by a Political Donations and Gifts Disclosure Statement. Political Donations and Gifts Gifts Disclosure Statement forms will be kept in a public register held at Council's Administration Building and will also be available on our website.

The relevant form and explanatory information cap be obtained from Council's Administration Centre or Council's website

Written submissions must be received by Council no later than 4.30pm of the day the exhibition period concludes. Correspondence can be made by emailing, faxing or by mail. Details are provided at the bottom of this page.

498/2014 DA NO:

APPLICANT: Mr D M Celima DESCRIPTION: Three Townhouses with Garages and Torrens Tille Subdivision (Multi Dwelling Housina) LOCATION: Lot 6561, DP 1191537, 3 Pine Valley

Way, Shell Cove EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

500/2014 0

APPLICANT: Mr R J Phelan DESCRIPTION: Retention of Existing Dwelling, Construction of Villa with Garage and Strata Title Subdivision (Dual Occupancy) LOCATION: Lot 161, DP 24321, 24 Antrim

Avenue, Warilla EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

DA NO: DA 511/2014

INTEGRATED DEVELOPMENT: Approvals Required – Bush Fire Safety Authority Under s100B under Rural Fires Act 1997 Approval Body for the Bush Fire Safety Authority -Rural Fire Service

APPLICANT: Pecorp Design DESCRIPTION: Four Townhouses with Garages and Strata Title Subdivision (MultiDwelling Housing) LOCATION: Lot 1030, DP 1052706, 19 Lyrebird Close Blackhuff EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

DA NO: 512/2014

APPLICANT: Pecorp Design **DESCRIPTION:** Two Townhouses with Garages and Torrens Title Subdivision (Dual Occupancy) LOCATION: Lot 939, DP 1182133, 39 Rosemont Circuit, Flinders EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

DA NO: 514/2014 APPLICANT: Infi

Infinite Designs and Building Consultancy DESCRIPTION: Two Townhouses with Garages,

Retaining Wall and Torrens Title Subdivision (Dual Occupancy)

LOCATION: Lot 240, DP 1146607, 9 Rachel Avenue, Flinders

EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

DA NO: 515/2014

APPLICANT: Letica Pty Ltd DESCRIPTION: Two Townhouses with Garages, and Torrens Title Subdivision (Dual Occupancy) LOCATION: Lot 1002, DP 1184300, 24 Elizabeth Circuit, Flinders

EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

DA NO: 519/2014

APPLICANT: Shellharbour Workers Club Ltd DESCRIPTION:Resurfacing and Extension to Shellharbour Workers Club South Western Caroark

LOCATION: Lot 105, DP 261166, 1 Liddell Street, Sheilharbour

EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

521/2014 DA NO:

APPLICANT: One Three Designer Homes DESCRIPTION: Consolidation of Lot 8008 & Lot DESCRIPTION: Consolidation of Lot 8006 & Lot 8009 to Create One Lot, Construction of Three Townhouses & Three Villas with Garages and Strata Title Subdivision (Multi Dwelling Housing) LOCATION: Lot 8008, DP 1171150, 176 Pioneer Drive, Lot 8009, DP 1171150, Pioneer Drive, Flinders Flinders

EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

522/2014 DA NO:

APPLICANT: JIH Building Designs DESCRIPTION: Two Townhouses with Garages and Torrens Title Subdivision (Dual Occupancy) LOCATION: Lot 2932, DP 1181803, 4 Foster Road Flinders EXHIBITION PERIOD: 15 January 2015 - 4

February 2015

DA NO: 524/2014

APPLICANT: Tasman Design Group Pty Ltd DESCRIPTION: Two Townhouses with Garages and Torrens Title Subdivision (Dual Occupancy LOCATION: Lot 1005, DP 1184300, 18 Elizabeth Circuit, Flinders EXHIBITION PERIOD: 15 January 2015 – 4

February 2015

na NO-526/2014

INTEGRATED DEVELOPMENT: Approvals Required - Bush Fire Safety Authority Under s100B under Rural Fires Act 1997 Approval Body for the Bush Fire Safety Authority -

Rural Fire Service

Rural Fire Service APPLICANT: JIH Building Designs DESCRIPTION: Two Townhouses with Garages, One with Swimming Pool and Torrens Title Subdivision (Dual Occupancy) LOCATION: Lot 6720, DP 1171495, 2 Bonville

Parkway, Shell Cove EXHIBITION PERIOD: 15 January 2015 - 4

February 2015

DA NO: 528/2014

APPLICANT: Pecorp Design DESCRIPTION: Two Townhouses with Garages and Torrens Title Subdivision (Dual Occupancy LOCATION: Lot 8202, DP 852573, 74 College Avenue, Blackbutt

EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

DA NO: 529/2014

APPLICANT: RPS Australia East Ply Ltd

DESCRIPTION: New Road (Extension to Crest Road) LOCATION: Lot 101, DP 785139, Crest Road,

Albion Park EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

DA NO: 530/2014

APPLICANT: Design Matters DESCRIPTION: Two Townhouses with Garages and Torrens Title Subdivision (Dual Occupancy LOCATION: Lot 1102, DP 1171153, 138 Pioneer Drive Flinders

EXHIBITION PERIOD: 15 January 2015 - 4 February 2015

531/2014 DA NO:

INTEGRATED DEVELOPMENT: Approvals Required – Bush Fire Safety Authority Under s100B under Rural Fires Act 1997 Approval Body for the Bush Fire Safety Authority -

Rural Fire Service APPLICANT: ATTT Holdings Ply Ltd

APPLICANT: ATT Holdings Hit Ltd DESCRIPTION: Two Townhouses with Garages and Torrens Title Subdivision (Dual Occupancy LOCATION: Lot 6733, DP 1174570, 5 National Avenue, Shell Cove EXHIBITION PERIOD: 15 January 2015 - 4

February 2015

507/2014 DA NO

APPLICANT: Design Matters NOMINATED INTEGRATED DEVELOPMENT: Controlled Activity Approval under the Water Management Act 2000 Approval Body for the Controlled Activity Approval – NSW Office of Water INTEGRATED DEVELOPMENT: Approvals Required – Bush Fire Safety Authority under s100B under Rural Fires Act 1997

Approval Body for the Bush Fire Safety Authority – Rural Fire Service CONSENTAUTHORITY: Shellharbour City Council

DESCRIPTION: Subdivision of Existing Lot to Create a 3 Lot Torrens Subdivision, Existing Dwelling to be Located on Proposed Lot 1, New Dwellings Proposed to be Constructed on Proposed Lols 2 & 3

LOCATION: Lot 1, DP 119597, 46A Station Street, Albion Park Rail EXHIBITION PERIOD: 15 January 2015 - 13

February 2015

DA NO: 525/2014

APPLICANT: RPS Australia East Pty Ltd NOMINATED INTEGRATED DEVELOPMENT: Controlled Activity Approval under the Water Management Act 2000 Approval Body for the Controlled Activity Approval – NSW Office of Water INTEGRATED DEVELOPMENT: Approvals Required – Bush Fire Safety Authority under s100B under Rural Fires Act 1997

INTEGRATED DESIGNATED DEVELOPMENT

DEVELOPMENT PROPOSAL FOR THE JOINT REGIONAL PLANNING PANEL

DA NO: 523/2014

DA NO: 523/2014 APPLICANT: Shellharbour City Council INTEGRATED DEVELOPMENT: Approval Required - Aquifer Interference Approval and Controlled Activity Approval under the Water Management Act 2000, Approval Body – NSW Office of Water Approval Required – Environment Protection Licence under the Protection of the Environment Operations Act 1997, Approval Body - Environment Protection Authority DETERMINING AUTHORITY: Joint Regional Planning Panel (Southern) DESCRIPTION: Dumore Resource Recovery Redevelopment DETERMINING AUTHORITY: Downlow Development LOCATION: Lot 1, DP 110135, 58 Buckleys Road, Lot 21, DP 653009, 44 Buckleys Road, Lot 1, DP 419907, 58 Buckleys Road, Dunmore EXHIBITION PERIOD: 16 January 2015 - 16 February 2015

Any submission/s with respect to the above application will be provided to the Joint Regional Planning Panel (Southern) and may be viewed by other persons with an interest in the application.

Plans and Environmental Impact Statement can also be viewed at the Wollongong Office of the Department of Planning and Infrastructure, State Office Block, Level 2, 84 Crown Street, Wollongong between 8.30am and 4.45pm.

Note: Any person who makes a submission by way of objection, and who is dissatisfied with the determination of the consent authority to grant development consent, may appeal to the Land and Environment Court.



All correspondence address to: The General Manager Locked Bag 155 Shellharbour City Centre NSW 2529

Administration Centre Lamerton House, Lamerton Crescent Shellharbour City Centre NSW 2529

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www.shellharbour.nsw.gov.au

A STREET STREET

Approval Body for the Bush Fire Safety Authority -Rural Fire Service CONSENT AUTHORITY: Shellharbour City

Council DESCRIPTION: Torrens Title Subdivision of Land

to Create 95 Residential Lots LOCATION: Lot 252, DP 1047669, Pleasant View

Close, Albion Park EXHIBITION PERIOD: 15 January 2015 - 13 February 2015

DEVELOPMENT CONSENTS

Notice is hereby given in accordance with the Environmental Planning & Assessment Act, 1979, as amended, of the following approvals granted by Council

DEVELOPMENT APPLICATIONS

Albion Park DA 450/2014

Use and Filout of Shop 2 as a Real Estate Office and Associated Signage at Lot 1, DP 202063, 220 Tongarra Road, Albion Park

DA 476/2011 (Part 3) Deferred Commencement Amendment to Demolition of Structures and

Construction of 32 Townhouses with Garages and Torrens Title and Community Subdivision (Multi Dwelling Housing) at Lot 4, DP 714125, 32 Terry

Demolition of Structures and Construction of Four Townhouses with Garages and Strata Subdivision (Multi Dwelling Housing) at Lot 28, DP 21337, 214 Princes Highway, Albion Park Rail

Four Townhouses with Garages and Strata Subdivision (Multi Dwelling Housing) at Lot 9, DP

Alterations and Additions to Existing Building and Vehicle Sales Premises at Lots 101 and 102, DP

1008414, 4 and 6 Shaban Street, Albion Park Rail

707365, 223 Princes Highway, Albion Park Rail

Event Relay For Life at DP 813443, Tongarra Road, Albion Park

Street Albion Park

Albion Park Rail

DA 402/2014

DA 417/2014

DA 466/2014

PROGRAM OF STAKEHOLDER ACTIVITIES

FOR DUMORE RESOURCE RECOVERY REDEVELOPMENT - DUNMORE

MILESTONE	WHEN	ACTIVITY	TASK
COUNCIL BRIEFING	24 September @ 6.30 pm	Meeting	Information session on projects Intent + status
MEDIA RELEASE	11 September	Briefing	Overview of projects
PUBLIC NOTIFICATIONS	23-25 September	Ads in Lake Times + letter box drop	Notification (copy of ad by 17 September)
MAIL OUT	25 March 2014	Letter drop	Information regarding project + fact sheet + invite to community meeting
COMUNITY MEETING	2 April 2014	Meeting	At Links 6-7pm to inform The community and Q+A
MAIL OUT	15 December 2014	Letter drop	Project update/DA + EIS
DA + EIS - ON PUBLIC EXHIBITION		DA notification	

APPENDIX D

DUNMORE SITE ENTRY LAYOUT PLAN



APPENDIX E

SITE SURVEY (DRAINAGE LINE)



APPENDIX F

MITIGATION MEASURES

No.	Mitigation measure	Implementation stage
0.	General environmental management	
0A	 A Construction Environmental Management Plan (CEMP) would be prepared to manage impacts on the environment during the construction phase. This would address management of the following: noise air (odour, dust) emissions construction traffic and interaction with existing operational traffic groundwater (including leachate capture and containment) soil erosion and surface water contamination and Acid Sulphate Soils flora and fauna preservation and protection hazard and risk management bushfire management heritage (including unexpected finds during excavations) waste management and integration with current procedures 	Construction
0B	The existing EPLs 12903 and 5984 would be updated to be consistent with the proposed layout, proposal boundary and operations of the Proposal in the context of the greater DRWDD site.	Operation
0C	 The existing Site Management Plan (SMP) would be revised to be consistent with the requirements of EPL 12903 and 5984 and the operations of the Proposal in the context of the DRWDD site. In particular the SMP would need to address: site layout and boundary changes odour containment and management dust suppression and erosion management flora and fauna preservation and protection management of chemicals and hazardous materials surface water management 	Operation

No.	Mitigation measure	Implementation stage
	 weed eradication and monitoring groundwater and leachate monitoring and management acid sulphate soil management waste handling and management hazards and risk fire and incident management 	
0D	The DRWDD Procedures Manual (2011), WDP14.30 will be reviewed and revised as necessary to ensure that odour vermin, litter, dust and noise complaints are recorded. When odour complaints are received, a site investigation would be conducted to identify the concern and the appropriate action will be undertaken.	Construction and Operation
0E	A detailed Landscape Plan would be provided prior to the construction of the Proposal (at construction certificate stage).	Construction
1.	Noise	
1A	All construction works would be undertaken within standard construction hours (between 7:00-6:00pm Monday to Friday, and 8:00am-1:00pm Saturday, with no work on Sundays or public holidays) with the exception of non-intrusive and non-audible activities which can be undertaken outside of these hours.	Construction
1B	Where practicable any considerably noisy works should be staged with consideration to the least sensitive time of day for the closest receivers, providing respite periods as necessary - particularly during works within the northern extent of the Proposal site.	Construction
1C	Where possible, construction would be scheduled to minimise multiple use (within a day) of the noisiest equipment or plant items where practicable.	Construction
1D	Where possible, plant items and work areas would be strategically positioned to reduce the noise emission to noise sensitive receivers.	Construction
1E	Where possible, machinery engine covers would be closed, equipment well maintained and silencers/mufflers used. Routine maintenance of major items of equipment that are significant construction noise contributors would be undertaken.	Construction and Operation

No.	Mitigation measure	Implementation stage
1F	Contractors and staff would be trained accordingly to create awareness and minimise potential noise issues.	Construction and Operation
1G	Community consultation with local residents would be undertaken periodically.	Construction and Operation
1H	A suitable complaints register will be maintained where possible. Should noise complaints be received, they should be immediately investigated and where appropriate, noise monitoring would be undertaken at the locations concerned to determine compliance with the determined construction noise limits. Reasonable and feasible measures would need to be implemented to reduce any noise impacts.	Construction and Operation
11	A 10 km/hr on site speed limit would be imposed for all vehicles.	Construction and Operation
2.	Air Quality	
2A	During adverse weather conditions activities should be assessed and modified if required to suit the weather conditions.	Construction and Operation
2B	Where practical on-site vehicles and plant would be switched off when not in use.	Construction and Operation
2C	Vehicles will be maintained and serviced according to manufacturer's specifications.	
2D	Where practical, sealed roads will be cleaned from dust regularly.	Construction and Operation
2E	Where practical, and drying dry conditions unsealed haul roads will be watered to maximise opportunities for dust suppression.	Construction and Operation
2F	All vehicle loads would be covered when transporting material off-site.	Construction and Operation
2G	Vehicles will be restricted to designated route and will have suitable speed limits imposed.	Construction and Operation
2H	Exposed areas will be minimised, and water suppression will be used on exposed areas and stockpiles where required.	Construction
21	 The following procedures would be undertaken at the Transfer Facility to minimise odour emissions: Putrescible and non-putrescible waste stream(s) would be kept separate The internal floor area would be cleaned daily 	Operation

No.	Mitigation measure	Implementation stage
	The amount of putrescible waste would be minimised and no waste will be kept overnight at this location	
2J	The following procedures would be undertaken at the Organics Processing Facility and windrows to minimise odour emissions:	Operation
	 The facility doors would be kept closed when not receiving material to limit the escape of fugitive odour from the building 	
	 The odorous air in the tunnel composting system would be recycled to minimise air volume into the deodorisation process 	
	 Ensure monitoring and review of the odour control system (biofilter) to ensure they are operating within the assumed operating specification 	
	 Material would generally only be transferred to the windrows during periods of good atmospheric dispersion 	
	 Material in the windrows would only be turned during periods of good atmospheric dispersion. 	
2К	A DRWDD site complaint logbook would be maintained. When odour complaints are received, a site investigation would be conducted to identify any unusual odour sources within the site boundary and take appropriate action as required.	Operation
2L	After the commencement of operations odour emission monitoring would be undertaken to confirm the assessment and modelling provided in the EIS. If any non-compliance with the criteria ('Approved Methods for the Modelling and Assessment of Air Pollutants in NSW', DEC 2005) is detected then a review of the operations and management options would be undertaken to ensure that odour emitted reaches acceptable levels.	Operation
2M	 The SMP should be updated to include operational dust management measures: Dust suppression – covering dusty materials or applying a light water spray and regular sweeping of sealed surfaces to minimise dust If organic material arrives at the site in an excessively dry state, a water spray truck would be used on the material. The shredder would also include a water mist spray that would be activated to minimise dust generation. 	Operation
2N	The current Site Management Plan will be updated for the Proposal Site. It is anticipated that this would include suitable odour management strategies and good housekeeping practices to ensure the potential for any odour impacts are reduced. The odour management strategies would include:	<u>Operation</u>

No.	Mitigation measure	Implementation stage
	 Maintaining an odour complaint logbook. When odour complaints are received, a Site investigation would be conducted to identify any unusual odour sources within the Site boundary and take appropriate action as required; 	
	 Keeping putrescible and non-putrescible waste stream(s) separate at the transfer station; 	
	 Ensuring the floor area of the transfer station is cleaned daily; 	
	 Minimising the amount of putrescible waste left on-site at the transfer station and ensuring no waste is kept overnight; 	
	 Keeping the FOGO facility doors closed when not receiving material to limit the escape of fugitive odour from the building; 	
	 Recycling of odorous air in the tunnel composting system to minimise air volume into the deodorisation process; 	
	 Transferring material to the windrows during periods of good atmospheric dispersion; 	
	 Turing material in the windrows during periods of good atmospheric dispersion; 	
	 Maintaining aerobic conditions through regular turning of the windrows; 	
	 Balancing the Carbon to Nitrogen ratio within the windrows; 	
	 Ensure moisture levels are optimum within the windrows; 	
	Ensure windrow heights are manageable;	
	 Immediate covering of all newly formed and turned windrows. 	
	 Conducting odour monitoring for the bio-filter within the first six month of operation to ensure they are operating within the assumed operating specification; and 	
	 Maintaining an odour complaint logbook. When odour complaints are received, a site investigation would be conducted to identify any unusual odour sources within the site boundary and take appropriate action as required 	

No.	Mitigation measure	Implementation stage
3.	Greenhouse gas	
3A	Where practical, all machinery transporting construction materials to and from the site be filled to the maximum amount allowable, to reduce the number of movements required.	Construction and Operation
3B	The contractor is to limit idling time of plant and equipment whilst on-site	Construction and Operation
3C	The contractor will ensure that the only lighting left on overnight around the Proposal site office will be security or emergency/access lighting.	Construction and Operation
3D	Earthmoving equipment and on-site vehicles would be fitted with exhaust controls in accordance with the <i>Protection of the Environment Operations (Clean Air) Regulation 2010.</i>	Construction and Operation
3E	Installation of high-efficiency motors would be undertaken where possible (for up to 3 per cent energy savings).	Operation
3F	Optimisation of operational activities and logistics to minimise diesel consumption	Operation
3G	Use of efficient plant and vehicles	Construction and Operation
ЗH	Continuously aerate FOGO piles using passive ventilation or air forced	Operation
31	Where practical, optimise the mix porosity and structure and the size of compost piles to allow air circulation and prevent overheating	Operation
3J	Where practical, moisture levels in composting would be maintained at 40-60 per cent.	Operation
зк	Where practical, Prevent waterlogging of the base of composts and underlying hardstand areas.	Operation
4.	Traffic and Transport	
4A	Measures to improve the approach sight distance for vehicles approaching the intersection on Buckleys Road with Dunmore Road would be undertaken, including: Installation of signage to designate left turn lane only on the Dunmore Road north approach outer lane	Construction and Operation

No.	Mitigation measure	Implementation stage
	 Delineate hold (stop) line <u>at the exit to the Proposal site, turning left onto Buckleys Road</u> extending inwards towards the intersection. 	
4B	All relevant traffic mitigation measures will be incorporated into traffic management plan that has been developed for the Proposal.	Construction and Operation
5.	Biodiversity	
5A	All relevant flora and fauna mitigation measures will be incorporated into the Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP).	Construction and Operation
5B	Clearing of vegetation and excavation activities would not be undertaken during overland flow events.	Construction
5C	Stabilisation of disturbed areas adjacent to retained native vegetation, including revegetation where appropriate, would be undertaken as soon as feasible and reasonable after disturbance.	Construction
5D	If potential contaminated soil is to be excavated, including soil around the leachate pond, leachability testing would be undertaken.	Construction
5E	Depth of excavation would be minimised wherever possible.	Construction
5F	Adjacent areas of native vegetation to the south and south-east of the Proposal site will be protected by a planted buffer zone of Swamp Oaks and local native groundcover species. This buffer zone will extend and widen the existing natural and planted areas of Swamp Oaks currently bordering the north-east and part of the south-eastern boundary of the Proposal Site, and will also act as a visual buffer.	Construction
5G	Pre-clearance surveys for Green and Golden Bell Frogs will be undertaken on the site. Should the species be detected during these surveys, a management plan for GGBF populations on and adjoining the site would be developed and strategies for translocation and exclusion of frogs would be prepared in consultation with OEH who would also approve any translocation plan	Construction
5H	Staff working on site would be made aware of the potential presence of GGBF through site inductions. This would include identification guidelines and notification processes should the species be encountered.	Construction
51	Soil stripped and stockpiled from areas containing known noxious and high priority weed infestations are to be stored separately and are not to be moved to buffer areas.	Construction

No.	Mitigation measure	Implementation stage
5J	Actions for weed management would be developed as part of the CEMP documentation. These actions would include, but not be limited to, the following:	Construction
	 Type and location of weeds of concern (including noxious weeds and high priority weeds as identified in the Illawarra Biodiversity Strategy) within the Proposal site. 	
	 Identify sensitive receivers (such as native vegetation and waterways) within or adjacent to the Proposal site. 	
	 Management and disposal of weeds (including Declared noxious weeds) which would be in accordance to requirements under the Noxious Weeds Act 1993 	
	 Communication strategies to improve contractor awareness of weeds and weed management. 	
5K	Any application of herbicide for weed management would be undertaken in accordance with the requirements of the <i>Pesticides Act 1999</i> and an herbicide that is appropriate to the sensitivity of the area would be used.	Construction and Operation
5L	Fauna microhabitat such as logs would be removed from areas to be cleared and relocated to suitable nearby habitat.	Construction
5M	Extent of clearing would be fenced with highly visible temporary fencing to ensure that clearing does not extend beyond the area necessary.	Construction
5N	Site inductions would include a briefing regarding the local fauna of the site and identification of protocols to be undertaken if fauna are encountered. Contact details would be kept on site for the local WIRES group and veterinarian if any fauna are injured on site or require capture and/or relocation.	Construction
50	Clearance of native vegetation, particularly trees, would be minimised as far as is feasible and reasonable.	Construction
5P	The extent of vegetation clearing would be clearly identified on construction plans.	Construction
5Q	Any additional construction areas, such as site offices, construction stockpile locations and machinery/equipment laydown areas would be located within cleared or disturbed areas.	Construction
5R	Site rehabilitation would commence as soon as feasible and reasonable.	Construction
5S	Emergency response protocols and procedures for implementation in the event of a contaminant spill or leak would be clearly articulated in the Environmental Management Plans.	Construction

No.	Mitigation measure	Implementation stage
5T	Spill kits would be readily available during construction activities to allow for timely response to uncontained spills. Site inductions would include a briefing on the use of spill kits and spill response.	Construction
5U	Refuelling would be undertaken at least 40 metres away from any waterbody.	Construction
5V	Chemicals and fuels would be stored in bunded containers in site buildings.	Construction and Operation
5W	Frequent maintenance of construction machinery and plant would be undertaken to minimise unnecessary noise.	Construction and Operation
5X	Dust suppression activities would be undertaken where appropriate.	Construction and Operation
5Y	If any animal is injured, a local wildlife rescue agency (e.g. WIRES) and/or veterinary surgery would be contacted immediately.	Construction and Operation
5Z	 Until the animal can be cared for by a suitably qualified animal handler, if possible minimise stress to the animal and reduce the risk of further injury by: Handling fauna with care and as little as possible. Covering larger animals with a towel or blanket and placing in a large cardboard box. Placing small animals in a cotton bag, tied at the top. Keeping the animal in a quiet, warm, ventilated and dark place 	Construction and Operation
5AA	Site Management Plan documentation will include details relating to the monitoring, management and where necessary eradication of weeds, disposal of garden organics, and vehicle/plant weed wash down protocols if required.	Construction and Operation
5AB	Noxious and high priority weeds (as identified in the Illawarra Biodiversity Strategy) are to be targeted in weed control programs.	Construction and Operation
6.	Surface water	
6A	All relevant drainage, flooding and water quality mitigation measures will be incorporated into the Stormwater Management Plan (SWMP)	Construction and Operation
6B	The following structures would be established during site preparation	Construction and Operation

No.	Mitigation measure	Implementation stage
	 Runoff will be directed south and west towards the perimeter access road. The new dirty water system will collect and control this runoff. Flows will be discharged by this system into the upgraded sedimentation pond to the south. 	
	 Runoff is captured from the roof of the transfer station by the new clean water drainage system. Overflows from this system are collected and controlled by existing drainage channel "A". A causeway and culverts over the realigned channel between the new extraction pit and the existing extraction area 	
	 Runoff derived from the garden organics stockpile area will be directed south and west towards the perimeter access road. The new leachate water system will collect and control this runoff. Flows will be discharged by this system into the existing leachate collection system. 	
	 The existing drainage system currently in place for the Revolve Centre will continue to be utilised under this proposal. 	
6C	The CEMP will include suitable controls to minimise dirty water run-off and to reduce the impacts of erosion and sediment movement.	Construction
6D	An upgrade to the SMP must be undertaken, prior to operation, to address the SWMP and proposed drainage system.	Operation
6E	Site operators and contractors will be required to ensure that all surface water management works for both construction and operation are undertaken in accordance with the guidelines set out in Landcom (2004) <i>Managing Urban Stormwater: Soils and Construction'</i> . This includes implementation of proposed infrastructure and procedures/management as well as the required inspection, maintenance, staff training, monitoring and reporting.	Construction and Operation
7.	Groundwater	
7A	The CEMP would be prepared prior to the commencements of works and would include suitable controls to manage impacted groundwater during re-development works to ensure no impact to human or environmental receptors.	Construction

No.	Mitigation measure	Implementation stage
7B	As a number of the existing monitoring bores on the Proposal site are likely to be decommissioned in order to undertake construction activities, the bore network will be reviewed post-construction and redesigned according to <i>Australian Guidelines for Water Quality Monitoring and Reporting 2000</i> (ANZECC, 2000a), which provides a comprehensive framework and guidance for the monitoring and reporting of the quality of groundwater. Water quality onsite will be assessed against the <i>Australian and New Zealand Guideline for Fresh and Marine Water Quality 2000</i> (ANZECC, 2000b). The SMP, and EPLs (5984 and 12903) as necessary, would be updated accordingly, to capture these new recording locations.	Construction and Operation
7C	On-going monitoring of groundwater should be undertaken in accordance with the SMP and EPLs (5984 and 12903).	Operation
8.	Soil and contamination	
8A	Mitigation measures for construction, and potentially remediation would be incorporated into the CEMP. The CEMP prepared would include suitable measures to manage, handle and dispose of any contamination which is found on-site.	Construction
8B	If the area around BH9 is to be excavated and the material disposed of to landfill, further leachability testing would be undertaken.	Construction
8C	 In relation to the presence of asbestos containing material in the vicinity of BH1, the following management options would be followed: If there is no proposed disturbance during the redevelopment, this material would remain undisturbed in situ. The location would be recorded on site management plan for future reference. If the material is to be disturbed, further testing would be undertaken in this area to confirm the presence of asbestos and delineate the extent prior to construction works commencing. Alternatively, the material within the fill layer from 1.5 to 1.9 metre below ground level can all be treated as asbestos impacted and managed accordingly during the Proposal. 	Construction
8D	An acid sulphate soil management plan will be prepared as part of the CEMP for the Proposal.	Construction

No.	Mitigation measure	Implementation stage
8E	Should the acid sulphate soil management plan, prepared as part of the CEMP, identify any concerns that would need to be managed during operation, the SMP would be updated accordingly.	Operation
9.	Waste management	
9A	All relevant waste mitigation measures for the management of waste streams associated with the construction and operation phases will be implemented as per the waste management plan developed for the Proposal	Construction and Operation
9B	 Measures to mitigate the effect of the construction waste streams should be incorporated into the Proposal's CEMP, including the following information: Characterisation of construction waste streams Procedures to manage construction waste streams, including handling, storage, classification and tracking Mitigation measures for avoidance and minimisation of waste materials Procedures and targets for reuse and recycling of waste materials Roles and responsibilities for ensuring compliance with the WMP Training, monitoring, reporting and reviewing requirements to ensure compliance with the WMP. 	Construction
10.	Hazard and risk	
10A	Hazards associated with construction of the Proposal will be managed through the Hazard and Operability Study (HAZOP), which will be undertaken as part of the detailed design. Construction will be undertaken in accordance with the <i>Work Health and Safety (WHS) Act 2011</i> .	Construction
10B	Demolition of the structures identified in Section 5.4, will be undertaken in accordance with the National Code of Practice for the Safe Removal of Asbestos (NOHSC, 2005).	Construction
10C	 Prior to commencement of construction, a risk assessment must be undertaken by a competent person of the Proposal site prior to removal of any asbestos material from site. In accordance with the <i>Model Code of Practice – How to Manage and Control Asbestos in the Workplace</i> (Safe Work Australia, 2011), the assessment must comprise review and summation of all available information for the Proposal site, including the: Asbestos risk assessment/risk register Asbestos management plan 	Construction

No.	Mitigation measure	Implementation stage
	 Implementation of the asbestos management plan to date A confirmation of controls to be implemented where construction works will impact on asbestos materials 	
10D	An asbestos management plan will be developed for the Proposal containing a risk assessment undertaken in accordance with WorkCover NSW Code of Practice for the Storage and Handling of Dangerous Goods (Code of Practice) 2005. Where the management plan recommends the removal of asbestos from site all works will be undertaken in accordance with the Model Code of Practice – How to Manage and Control Asbestos in the Workplace (Safe Work Australia, 2011), including the development of an asbestos removal control plan and an emergency plan.	Construction and Operation
10E	 In the event of an emergency or incident, the general management strategy that will be adopted to minimise the risk to the public and all personnel in the event of an emergency would include: Providing adequate resources including staffing and fire-fighting equipment Training of staff so that a high level of preparedness is maintained by all people who could be involved in an emergency Periodic review and update of emergency procedures for the Proposal site. 	Operation
10F	 Emergency response and incident management protocols for the construction and operation of Proposal site would be developed collaboratively with the construction contractor and site operator and in consultation with the NSW police force, NSW Fire Brigade and the Ambulance Service of NSW. Emergency response and incident management protocols will cover the following types of emergency or incident: Workplace health and safety On-site spills or leaks Off-site discharges Hazardous materials/dangerous goods Flooding Fire and bushfire Road incidents. 	Construction and Operation

No.	Mitigation measure	Implementation stage
10G	In the event that there is a liquid or solid spill in the transport of the waste to the facility, or at the facility itself, the emergency response, outlined in the Emergency Management Plan for the site, would be followed.	Construction and Operation
10H	In the event of contamination being detected a Groundwater or Surface Water Contingency Plan will be developed based on the nature and degree of contamination detected.	Construction
101	Currently solid spills from overloaded heavy vehicles are managed through the procedure WDP9.04 Overloaded Heavy Vehicles Entering and Leaving the Depot. This will be reviewed and updated for the Proposal site.	Operation
10J	Appropriate fire alarms and firefighting equipment will be provided onsite for an initial emergency response and will include a deluge system, fire extinguishers, hoses and reels. The design and installation of on-site fire hydrants will be in compliance with AS 2419.1-2005 <i>Fire hydrant installations - System design, installation and commissioning.</i>	Operation
10K	At the Proposal site, an area will be designated for the management of 'hot loads' and fire contained. A procedure will be developed for the management of hot loads.	Operation
10L	Currently the DRWDD <i>Procedures Manual</i> (2011) details the procedure for fire prevention, control and reporting (WDP14.37). This procedure would be reviewed, and updated as necessary, to meet the needs on the Proposal site.	Operation
10M	All operations and activities occurring at the Proposal site will be carried out in a manner that will minimise the emission of dust from the premises. Trucks entering and leaving the site that are carrying loads will be covered at all times, except during loading and unloading. In addition, all the roads on the Proposal site will be sealed, except for a short section between the tunnel composting building and the windrow composting, and adjacent to the self haul storage areas.	Operation
10N	Identification and attention to odorous waste loads will be managed by the transfer facility attendants. The DRWDD <i>Procedures Manual</i> (2011), which details the procedure dust control (WDP14.38), will be revised to address the process for the Proposal site.	Operation

No.	Mitigation measure	Implementation stage
100	The DRWDD <i>Procedures Manual</i> (2011), which details the procedure for processing complaints (WDP14.30), will be reviewed and a complaints log will be maintained to address potential community concerns regarding the Proposal site.	Construction and Operation
10P	 A number of measures will be implemented to minimise the risk of vehicular incidents on the Proposal site. These include: Clear signposting and road marking of vehicle movement routes and non-permissible areas Signposting of slow speed limits The placement of physical barriers at the loading bays and push pit in the Transfer Facility Separation of heavy vehicle (truck) movements from private vehicles movements, where possible Oversight of vehicle movements in the transfer facility by attendants. 	Operation
10Q	The DRWDD <i>Procedures Manual</i> (2011) which specifies the procedures in relation to small vehicles (WDP9.00) and heavy vehicles (WDP9.02) entering and leaving the depot will be reviewed and updated as necessary.	Operation
10R	Any general solid waste (putrescible) and/or general solid waste (non-putrescible) received for storage or recovery or processing at the premises will be assessed and classified in accordance with the <i>Waste Classification Guidelines Part 1: Classifying Waste</i> (DECC, 2008).	Operation
10S	 Waste will be screened in accordance with the reviewed and revised Waste Screening and Tipping Supervision procedures presented in the Operational Procedures Manual of the SMP. Unacceptable waste may be detected and intercepted: at the weighbridge during the unloading of waste within the transfer facility by either the attendants or via CCTV. 	Operation
10T	 The DRWDD Procedures Manual (2011) currently includes a number of procedures to ensure only permissible waste is accepted at the depot, including: WDP9.03 Acceptance of Commercial Waste WDP9.07 Acceptance of Construction and Demolition Waste WDP9.09 Approval of Applications for Disposal of Waste from Industrial Sources 	Operation

No.	Mitigation measure	Implementation stage
	 WDP9.10 Acceptance of Waste from Industrial Sources WDP9.11 Approval of Applications for the Disposal of Asbestos Sheeting WDP9.12 Acceptance of Asbestos Sheeting WDP9.15 Acceptance of Pesticides and Chemical Drums WDP14.45 Orphan Hazardous Waste. All the above procedures will be reviewed and updated for the Proposal site. 	
10U	Diesel fuel (C1- Combustible liquid) will be stored away from class 3PGI, II or III flammable materials in a self- bunded diesel tank compliant with AS 1940-2004 The storage and handling of flammable and combustible liquids.	Operation
10V	The transportation of hazardous waste to or from the site will be undertaken in compliance with the Protection of the Environment Operations (Waste) Regulation 2005. Accordingly, a consignment number will be obtained, waste data forms completed and copies provided to the waste transporter.	Operation
11.	Aboriginal heritage	
11A	If unexpected Aboriginal sites or objects are located during the proposed works, all work in the area must stop immediately and the OEH, Local Aboriginal Land Council, and a qualified archaeologist must be contacted. Further assessment and approvals may be required before works can commence.	Construction
11B	If human remains are found, work should cease, the site should be secured and the NSW Police and the OEH should be notified.	Construction
12.	Non-Aboriginal heritage	
12A	Should unexpected relics which are identified as having European heritage significance by the excavation director, be exposed, work would be required to cease and the Heritage Branch (of OEH) would be informed, to determine the appropriate management strategy. The duration of this would depend on the integrity and significance of the relic.	Construction
12B	Should items need to be disturbed (exposed, moved, damaged or destroyed), this would not be undertaken until an excavation permit is received under Section 139 of the Heritage Act.	Construction

No.	Mitigation measure	Implementation stage
12.	Visual amenity	
12A	Tree cover would be planted and maintained along the eastern boundary of the Proposal site to visually screen the Proposal from the surrounding area.	Construction
12B	Suitable material and finishes, including those which are no reflective and blend with the surrounding landscape, would be selected for the buildings and structures which are part of the Proposal.	Construction
13.	Social and economic	
13A	On-going consultation will be undertaken with the surrounding community and commercial sector during both construction and operation.	Construction and Operation
13B	The existing DRWDD Procedures Manual (2011), in association with the CEMP will be used to record complaints or feedback during the construction period. Prior to operation, this Procedures Manual (2011), WDP14.30 will be reviewed and revised as necessary to ensure that odour vermin, litter, dust and noise complaints are recorded. When odour complaints are received, a site investigation would be conducted to identify the concern and the appropriate action will be undertaken.	Construction and Operation