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Section S4.55(1a)
Development Modification – SSD 5300
Kembla Grange Resource Recovery Facility
Statement of Environmental Effects

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We declare that:
The statement has been prepared in accordance with clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation* 2000.

The statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and the information contained in the statement is neither false nor misleading.

Report version	Authors	Date	Reviewer	Approved for issue	Date
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1. Executive Summary

Kembla Grange Recycling Pty Ltd is the operator of the construction and demolition waste recycling facility located at 50 Wyllie Rd, Kembla Grange. This site is referred to as the 'Kembla Grange Resource Recovery Facility'. The site is licensed by the NSW Environment Protection Authority (EPL 20601) and has been successfully operating since 2013. It was originally operated by Wollongong Recycling and Building Supplies Pty Ltd and in May 2017, Bingo Property Pty Ltd took ownership of the facility. The facility is operated by Kembla Grange Recycling Pty Ltd.

On 7 March 2016, approval to expand the capacity of the facility was provided under State Significant Development SSD5300 by the Minister for Planning to receive up to 230,000 tonnes per annum of construction and demolition and commercial and industrial wastes. A modification to the consent under SSD5300 Mod 1 was approved by the Department of Planning and Environment under Ministerial delegation on 8 June 2017 to relocate the second weighbridge and enable installation of a larger weighbridge office. The construction works for Stage 1 were completed in December 2017, with the final Occupation Certificate issued on 23 January 2018 on satisfactory completion of the construction works.

The Applicant has been in communication with DPE and as a consequence of those discussions, Kembla Grange Recycling Pty Ltd is now seeking a retrospective development modification approval under section 4.55(1a) of the *Environmental Planning and Assessment Act* 1979 to permit approval for the followings works that have been undertaken to date and the continuation of their use:

- Installation of rainwater storage tanks on the premises in a location which differs from the approved plans under SSD 5300 Mod 1;
- Installation of firewater storage tanks and a pump room on the premises; and
- An outdoor picking station and associated processing equipment (including de-stoning screen and generator) in the central processing area of the site, installed above a push wall structure built on the premises.

Kembla Grange Recycling Pty Ltd is also seeking a development modification under section 4.55(1a) of the *Environmental Planning and Assessment Act* 1979 to permit the following changes to the facility, which have been designed to improve operational efficiency of the site:

- Indoor processing plant (to be located within the processing shed).

The above changes are considered consistent with the original SSD 5300 consent, as justified below.

- The location of the rainwater storage tanks is proposed to be changed due to interferences with site operations and vehicle movements and will be located at the northern end of the processing shed;
- The installation of the firewater storage tanks and pump room are essential services and required as part of the Occupation Certificate for SSD5300 (firewater storage tanks and pump room) and are considered Exempt Development under Clause 8.2, Part 8 Fire Safety Code of the *SEPP (Exempt and Complying Development)* 2008;
- The installation of the outdoor picking station and associated processing equipment (including de-stoning screen and generator) is consistent with section 4.3.11 of the original EIS submitted with the State Significant Development application. Under section 4.3.11 of the EIS, a mobile picking station was approved. For efficiency purposes, this equipment will be replaced by a fixed plant.
- Indoor processing plant and equipment with a capacity of 225 tonne/hr is to be installed in the processing shed. Under section 4.3.11 of the EIS, a Material Recycling Facility including shredders, picking station and a separate indoor composting facility was proposed. To meet waste processing and consumer demands, the equipment requirements have changed and an indoor composting facility is no longer required.

At the request of the NSW Fire and Rescue, a review of the installed fire services at the site was conducted to assess how the fire service could be upgraded to meet some of the requirements for the new guideline *Fire Safety Guidelines – Fire Safety in Waste Facilities*. The Fire Services Review is contained in Appendix 9. The following recommendations were made to upgrade the fire services at the site to better protect the facility and its occupants from fire risks:

- Additional 150kL fire tank to upgrade the site from warehouse only protection to yard hydrant protection;
- Replacement of the fire pumps to provide 30L/s @ 900kPa to the system;
- Provision of 4 new external fire hydrants;
- Provision of one new booster facility and block plan;
- Provision of a flame detection system in the warehouse to assist in early detection or when the space is unoccupied;
- Provision on an occupant warning system coupled with the flame detection system. Manual call points will be provided adjacent exit doors to notify other occupants; and
- a flame detector be provided to address the plastics storage bay under the Outdoor Picking Station sorting area with associated alarms.

A noise impact assessment of the planned operational changes to the Kembla Grange Resource Recovery Facility has been undertaken by GHD. The noise assessment indicates that operational noise environment is not expected to change as a result of the proposal. The predicted noise levels are below the consent criteria.

In addition to the above development modifications, the following minor modification is also being sought by Kembla Grange Recycling Pty Ltd to the SSD5300 consent:

- Modification to Condition A6 to change 'calendar year' reference to 'annual reporting period in relation to Environment Protection Licence 20601' (i.e. from 15 March to 14 March); and
- Modification to Condition C11 to align the annual review with the 'annual reporting period in relation to EPL 20601'.

The Capital Investment Value associated with the site modification is $5.026M (ex. GST), being a significant additional investment into an important regional recycling facility for construction and demolition waste materials in the Illawarra.

The proposed modifications to the development will not result in any additional environmental impact, are consistent with the original SSD5300 approval and is recommended for approval.

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1. Introduction

Kembla Grange Recycling Pty Ltd is the operator of the Kembla Grange Resource Recovery Facility, located at 50 Wyllie Rd, Kembla Grange. The site is licensed by the NSW Environment Protection Authority (EPL 20601) and has been successfully operating since 2013. It was originally operated by Wollongong Recycling and Building Supplies Pty Ltd and in May 2017, Bingo Property Pty Ltd took ownership of the land. The facility is operated by Kembla Grange Recycling Pty Ltd.

On 7 March 2016, approval to expand the capacity of the facility was provided under State Significant Development SSD5300 by the Minister for Planning to receive up to 230,000 tonnes per annum of construction and demolition and commercial and industrial wastes. A further modification to the consent under SSD5300 Mod 1 was approved by the Department of Planning and Environment under Ministerial delegation on 8 June 2017 to relocate the second weighbridge and enable installation of a larger weighbridge office.

The facility receives building and demolition and other wastes for recycling as value added materials. Materials are delivered by a customer base which includes waste collection services, building and construction, small and medium sized businesses and trades.

The facility aims to achieve an 85% recovery rate from processing incoming materials that include concrete, asphalt, tiles, timber, masonry, clay, soils and garden organics. Mobile plant, including excavators and front-end loaders, are used to remove contaminants and separate incoming building and construction wastes for containment in storage bunkers prior to processing.

1.1. Overview of the approved State Significant Development

On 7 March 2016, State Significant Development SSD5300 was approved by the Planning Assessment Commission to enable an expansion to the Kembla Grange Resource Recovery Facility. The site currently supplies important recycling services for householders, builders and developers in the Wollongong Region, and is making an important contribution to helping the NSW Government meets its recycling target of 80% for construction and demolition waste by 2021[1].

The development consent has provided approval for the development, as follows:

- Increasing the processing capacity of the facility from 30,000 tonnes per year to 230,000 tonnes per year;
- Providing recycling services for building and demolition waste, including brick, concrete, soils, timber, general/solid waste, and non-putrescible organic waste;
- Construction of a new building material storage, waste storage, and processing/stockpiling areas;
- Use of ancillary infrastructure including plant and equipment such as crushers, screens and front-end loaders;
- Construction of a Materials Recycling Facility and Indoor Composting Plant;
- Redesign and expansion of the footprint of storage areas on site, thereby providing a more functional operational arrangement;
- Upgraded stormwater management system;
- Provision of buildings on the site including office/amenities, OHS training room and workshop;
- New weighbridge;
- Provision of additional and/or relocated car parking spaces;
- Provision of a truck parking area, skip bin storage area and an additional equipment storage area.

[1] NSW EPA (2014). NSW Waste Avoidance and Resource Recovery Strategy: 2014 – 2021. Published by the NSW EPA. Internet publication: http://www.epa.nsw.gov.au/wastestrategy/warr.htm

1.2 The proposed modification

The construction works for Stage 1 were completed in December 2017, with the final Occupation Certificate issued on 23 January 2018.

The followings works have been undertaken to date and to which retrospective approval to modify the development consent SSD5300 is being sought

- Installation of rainwater storage tanks on the premises in a location which differs from the approved plans under SSD 5300 Mod 1;
- Installation of firewater storage tanks and a pump room on the premises;
- An outdoor picking station and associated processing equipment (including de-stoning screen and generator) in the central processing area of the site, installed above a push wall structure built on the premises; and

In addition to the above, the following modifications are also being sought by Kembla Grange Recycling Pty Ltd:

- An Indoor processing plant (to be located within the processing shed);
- Modification to Condition A6 to change 'calendar year' reference to 'annual reporting period in relation to EPL 20601' (i.e. from 15 March to 14 March); and
- Modification to Condition C11 to align the annual review with the 'annual reporting period in relation to EPL 20601'.

In response to the requirements set out by Fire and Rescue NSW, the proponent is also seeking approval for the following fire safety works to ensure the facility is compliant with the new guidelines *'Fire Safety Guideline: Fire Safety in Waste Facilities'* (Fire and Rescue NSW, 20019):

- Additional 150kL fire tank to upgrade the site from warehouse only protection to yard hydrant protection;
- Replacement of the fire pumps to provide 30L/s @ 900kPa to the system;
- Provision of 4 new external fire hydrants;
- Provision of one new booster facility and block plan;
- Provision of a flame detection system in the warehouse to assist in early detection or when the space is unoccupied;
- Provision on an occupant warning system coupled with the flame detection system. Manual call points will be provided adjacent exit doors to notify other occupants; and
- A flame detector be provided to address the plastics storage bay under the Outdoor Picking Station sorting area with associated alarms.

1.2 Planning and assessment pathway for the modification

Given that the proposed site modifications are minor and not associated with any additional environmental impacts, Kembla Grange Recycling Pty Ltd seeks a development modification under s4.55(1A) of the *Environmental Planning and Assessment Act* 1979. The application for modification to the consent contains the following details:

- Name and address of applicant;
- Description of current approved development;
- Address of site;
- Landowner consent;
- Description of proposed modification to the development consent;
- Short statement outlining:
  - Minor nature of proposed changes
  - Description of expected impacts from the modification

- Amended design plans for the development
- A Capital Improvement Value (CIV) estimate for the development.
- A statement outlining that the proposed change to the consent will result in the original consent being substantially the same.

This information has been provided in the following sections of this report.

2. S4.55(1a) Planning Application

2.1 Name and address of applicant

The name of the applicant is Kembla Grange Recycling Pty Ltd.

2.2 Address of site

The address of the site is 50 Wyllie Rd, Kembla Grange NSW 2526. The site is located on Lot 10, DP 878167.

2.3 Description of current approved development

On 7 March 2016, development consent under Section 98E of the *Environmental Planning and Assessment Act* 1979 was provided by the Planning Assessment Commission of NSW, as a delegate of the Minister of Planning for *'Increasing the capacity of the existing construction and demolition waste and commercial and industrial waste resource recovery facility'*. The development consent (SSD5300 and SSD5300 Mod 1) is provided in Appendix 1.

Stage 1 of the approved development under SSD5300 involves developing the western part of the facility, as follows:

- Construction of soil and waste management measures and new drainage works associated with expansion of the operational area, including installation of batter catch drains; construction of retaining walls; stripping topsoil and bulk earthworks associated with cut and fill activities to expand the operational pad;
- Installation of new weighbridge;
- Installation of stormwater pits, pipes, leachate tanks, alarm system, Humeceptors and respreading of topsoil;
- Shaping and trimming of stormwater treatment ponds;
- Construction of the greenwaste shredding pavement area;
- Complete landscaping associated with the project;
- Respreading of topsoil;
- Complete access roads and sealing with asphalt;
- Construction of additional car parking areas,
- Construct kerbs and table drains;
- Install bollards to gas easement boundary;
- Install biofilters and walls inside composting shed; and
- Install crushed concrete pavement to operational area.

It is noted that following the approval of management plans required under Conditions B5, B6, B7, B12, B13, B29, B30, C1, C2 and C3 of the development consent by the Department of Planning and Environment on 19 August 2016, construction works for Stage 1 commenced on the site in accordance with the approved construction plans and the Construction Environment Management Plan.

It is also noted that the site's Environment Protection Licence was successfully varied to enable scheduled development activities to be performed on the site. The NSW EPA issued the varied licence (EPL 20601) on 20 September 2016.

A modification to the consent under SSD5300 Mod 1 was approved by the Minister for Planning on 8 June 2017 to relocate the second weighbridge and enable installation of a larger weighbridge office.

The construction works for Stage 1 were completed in December 2017, with the final Occupation Certificate issued on 23 January 2018. A varied EPA licence for the completion of the development (Stage 1) and scale up in waste tonnages up to 230,000 tonnes per annum was approved on 6 April 2018.

2.4 Landowner consent

Please refer to the landowner consent from Bingo Property Pty Ltd is provided in Appendix 2.

2.5 Description of proposed modification to the development consent

The proposed modifications to development consent SSD5300 are summarised below.

2.5.1 Rainwater Storage Tanks

Under SSD 5300, two (2) 100,000 litre rainwater storage tanks were to be installed at the site; one located at the northwest corner and one located at southwest corner of the Indoor Processing and Storage Shed. Due to interferences with site operations and vehicle movements, four (4) 46,500 litre rainwater storage tanks have been installed and one (1) 14,000 litre rainwater storage tanks is proposed to be installed at the northern end of the processing shed (refer to Appendix 3).

To carry out the proposed modifications, a concrete slab measuring 32.5m by 6.0m was required to site the rainwater storage tanks. Appendix 4 provides a Structural Report and BCA Compliance Certificate to demonstrate the concrete structures are structurally sound and comply with the relevant standards including the National Construction Code (NCC).

2.5.2 Firewater Storage Tanks and Pump Room

Under Statement of Commitments 4.6, the development is to be serviced by a static water supply to meet the *Planning for Bush Fire Protection* requirement for a minimum amount of 20,000 litres for firefighting purposes. The supply does not need to be dedicated to fire fighting and can double as the potable water supply or other use such as irrigation. The water supply must be visible and readily accessible to fire fighting vehicles and a suitable connection for Rural Fire Service purposes must be made available.

It was initially intended to use a 30,000L water truck, supplemented by the use of a stormwater treatment ponds, as a means of fire suppression, however, due to increased water demands at the site for other uses such as dust suppression, two (2) 150,000 litre firewater storage tanks and a pump room were installed in the northwest corner of the premise (refer to Appendix 3).

To carry out the proposed modifications, a concrete slab was required to site the firewater storage tanks and pump room. The tanks were constructed from panel steel and the shed will be constructed from Klip-Lok metal sheeting. The tanks are to remain full at all times and after use, refilled via a water tanker with potable water trucked into the site. Appendix 4 provides a Structural Report and BCA Compliance Certificate to demonstrate the structures are structurally sound and comply with the relevant standards including the National Construction Code (NCC).

2.5.3 Outdoor Picking Station

An outdoor fully enclosed picking station and associated processing equipment including a conveyor belt, air blower, de-stoning screen (for separating >80mm aggregate from plastics), Terex screen and a diesel generator were installed in the central processing area of the site, above a push wall structure built on the premises (refer to Appendix 3).

Section 4.3.11 of the Environmental Impact Statement prepared for SSD 5300 (EIS) lists the approved plant and equipment to be utilised on the site at full capacity. This includes a mobile picking station with screens and crushers. The modification replaced the above listed mobile plant with fixed plant for efficiency and maintains the processing capacity of the site and equipment as per the EIS.

2.5.4 Indoor Processing Plant

Section 4.3.11 of the Environmental Impact Statement prepared for SSD 5300 lists the approved plant and equipment to be utilised on the site within the Shed. This includes the following equipment:

- Mobile low speed shredder to shred timber and waste to size;
- Mobile high-speed shredder to fine shred timber and waste to size; and
- Picking station with 12 persons to sort and separate waste to products.

To meet waste processing and consumer demands, the equipment approved for use in the Shed listed above is proposed to be replaced by:

- 225 tonne per hour Horizontal impactor crusher;
- Deck horizontal screen;
- 2 Electro magnets on stands;
- 2 x 20kw Blowers mounted on conveyors;
- Apron feeder with protection wall;
- 8 conveyors; and
- 14m radial stacker.

The proposed development will also include concrete bay walls and pads to the external western side of existing shed to store separated materials (refer to Appendix 3).

2.5.5 Moveable concrete block bays

In Appendix 3, the site plans show the use of concrete block bays for the storage of waste awaiting processing and for storage of recovered product. It is noted that these structures are not permanent, and are moved to adjust to operational requirements, consistent with the EIS approved under SSD5300.

2.6 Environmental assessment of the proposed modification

A review of the environment issues of the proposed modifications as described in Section 2.5 is provided below.

2.6.1 Rainwater Storage Tanks

The location of the rainwater storage tanks was changed due to potential interferences with site operations and vehicle movements. The new location of the rainwater storage tanks in the northern end of the processing shed will have no environmental impact.

2.6.2 Firewater Storage Tanks and Pump Room

The installation of the firewater storage tanks and pump room are essential services and required as part of the Occupation Certificate for SSD (firewater storage tanks and pump room) and are considered Exempt Development under Clause 8.2, Part 8 Fire Safety Code of the *SEPP (Exempt and Complying Development)* 2008. The proposed modifications have no environmental impact.

2.6.3 Outdoor Picking Station

The proposed modification involved the installation of the fully enclosed outdoor picking station and associated processing equipment including de-stoning screen and generator. This outdoor picking station is consistent with section 4.3.11 of the original EIS submitted with the State Significant Development application. Under section 4.3.11

of the EIS, a mobile picking station with screens and crushers was approved. For efficiency purposes, this equipment was replaced by fixed plant involving:

- Terex screen (TRS550);
- Conveyors (x2);
- Air blower (for plastics separation and a cage for capturing plastic films);
- De-stoning screen (for separating >80mm aggregate from plastics);
- Diesel generator; and
- Fully enclosed picking station.

Up to 47,500 tonnes per year of eligible mixed C&D waste and household waste from municipal clean-up will be processed by the Outdoor Picking Station. A breakdown of the output product types and estimate of tonnes is provided in Table 2.1 below noting that product mix is a factor of the inbound material mix.

Table 2.1. Approximate waste to be processed through the outdoor picking station. This is based on the processing of mixed building waste, household clean-up waste and mixture of material estimates given in the EIS approved under SSD5300 (Table 7 of the EIS, pages 40-41).

Inputs		Outputs		
Waste Material	**Tonnes Per Annum**	**Output Products**	**Tonnes Per Annum**	**Destination**
Mixed building & demolition waste	30,000	Concrete, brick and aggregates	12,000	Redistributed to relevant recycling area for further processing / recycling
		Timber	7,500	
		Fines	11,000	
Household waste from municipal clean-up	7,500	Metals	2,500	
		Plastic	1,000	
		Waste	3,500	Landfill
Mixtures of materials (as defined in Table 7 of the EIS)	10,000	Metal	2,500	Redistributed to relevant recycling area for further processing / recycling
		Plastic	1,500	
		Timber	3,000	
		Waste	3,000	Landfill
TOTAL	**47,500**	-	**47,500**	-

The Terex screen is fed raw heavy-feed material by a 30-50 tonne excavator. The screen separates material into recovered fines and <10mm aggregate stockpiles on either side of the screen. The remaining oversized material is conveyed past an air blower which separates the light plastics.

The air blower creates a high velocity air stream through which the falling oversized material has to travel. The lighter material fractions are blown or separated from the falling material and are captured by in a cage. Separated plastic is removed daily and sent for further processing off-site at a plastic recycling facility.

The remaining material is passed through a de-stoning screen which separates out >80mm aggregate. This material is then collected by front-end loader and taken to the Indoor Processing Plant (refer to Section 2.6.4 below) for further processing.

The remaining material is then conveyed up to the fully enclosed picking station. The picking station consists of a central conveyor belt with a walkway on both sides. Chutes are located at regular intervals which are used to drop picked product into the bunkers below. The conveyor is stopped at regular intervals to allow for thorough investigation of materials and proper sorting.

Material within the fully enclosed picking station is separated into the following:

- Timber and green waste;
- Waste;
- Metals; and
- Concrete, brick and aggregates.

Separate bays beneath the picking station are used to hold the materials. There are 4 bays in total, each measuring 4m (L) x 3m (W) x 3m (H) providing a capacity of 36m^3 per bay. One bay is used for timber and green waste (storing approximately 25 tonnes); two bays for general waste (storing approximately 25 tonnes); and one bay for metals (storing approximately 30 tonnes).

Waste is removed from the bays daily or more frequently when required. Timber and green waste is transferred to the timber and green waste stockpile area where it is further processed, sheared and shredded to size and screened. General waste material is stockpiled with other non-putrescible waste and later transported off-site to a licenced landfill facility. The metals are stockpiled with other metals and later transported off-site to a metal recycler.

The remaining material consisting of concrete, brick and aggregates is conveyed to the end of the picking line where it is stockpiled in a fifth 36m^3 bay (storing approximately 50 tonnes). This material is then collected by front-end loader and taken to the Indoor Processing Plant (refer to Section 2.6.4 below) for further processing.

2.6.3.1 Potential Environmental Impact

The principal environmental impact of the changed plant is considered to be noise.

GHD was engaged by Jackson Environment and Planning Pty Ltd to undertake a noise impact assessment of the planned operational changes to the Kembla Grange Resource Recovery Facility (Appendix 5). The assessment identified the sensitive noise receivers surrounding the facility (the sensitive receptors that were identified as part of the 2014 assessment are still current). It is noted that background noise monitoring was done and the assessment updated to ensure that the impact assessment is fully compliant with the EPA's new *Noise Policy for Industry* (2017).

Noise predictions were undertaken to assess compliance with the noise criteria, from SSD 5300 Condition B20 and from the 2015 GHD assessment, and to assess potential impacts on sensitive receivers.

The noise modelling was undertaken using the worst-case scenario of all machinery operating simultaneously for the entire time period. Table 2.2 provides a comparison of noise levels between the original mobile picking station equipment and the proposed fixed mobile picking station.

Table 2.2. Noise levels associated with the original mobile picking station approved in the EIS under SSD5300 and that proposed in this development modification.

Plant component	Noise levels (dB(A))
Mobile picking station including processing and screening plant approved under SSD5300	112 (screen)[1] 115 (crusher)[1] Picking station and noise not specifically considered relative to the principal sources of noise generated by the screen and processing plant)
Fixed picking station and associated plant proposed as part of the Development Modification	111.4 (Terex screen) 104 (De-stoning screen) 79.1 (Cummins Diesel generator) Noise emission data from the fully enclosed picking station, conveyors and air blower expected to be low. Data not available.

(1) Noise levels cited are from Table 5.1 in GHD (2014). Wollongong Recycling Kembla Grange Waste Recovery Facility Noise Assessment, April 2015 (as approved under SSD5300).

Based on the modelling, noise levels are predicted to decrease and will be below the noise criteria at all sensitive receivers. The noise assessment indicates that operational noise environment is not expected to significantly change as a result of the proposal. The predicted noise levels are below the consent criteria (see Appendix 5).

A Water Impact Assessment (letter report) on the proposed development modification was conducted by KF Williams & Associates Pty Ltd (Attachment 6). The assessment found that, as a result of the development, there is a total increase in impervious area of 289 m^2 which represents a cumulative increase in the overall site impervious area of 1.68%. This overall increase in impervious area remains insignificant. The Picking Station roof, hardstand under the rainwater tanks and the hardstand areas built for the firewater tank and pump room will not perceptibly increase the peak runoff from the site as indicated by the following:

- Peak local runoff at pit 1G increases from 0.153 m^3/s to 0.154 m^3/s during a 100yr ARI storm burst;
- Peak local runoff at pit 1J increases from 0.361 m^3/s to 0.363 m^3/s during a 100yr ARI storm burst; and
- The additional 0.003 m^3/s runoff (Pit 1G and Pit 1J) is routed through the detention basin and has no significant effect on site discharge.

Furthermore, there is no perceptible increase in residual pollutant load. Water reuse demand met from the permanent pool is largely unaffected. The apparent reduction (ie 75.1% to 74.8%) is due to the weighbridge rainwater tank intercepting runoff which would have otherwise been captured by the permanent pool. The installation of a 500 litre rainwater tank will provide a small but additional source of water for site operations and mitigate the increase in runoff volume.

There are no impacts on stormwater and leachate management as a result of the proposed modification. The waste bays below the Outdoor Picking Station are covered by the picking station itself, and therefore waste does not come in contact with rainfall and therefore there is minimal risk of leachate generation.

No ambient dust is created by the picking station as it is effectively an enclosed conveyor. Waste materials are removed manually by hand which do not generate dust. The

As the outdoor picking station waste bays are covered, there is no exposure to water and therefore no leachate is generated. Odour is not generated during picking and storing of of clean dry timber waste.

2.6.3.2 Pollution Control Equipment and Mitigation Measures

No additional pollution control equipment is necessary to operate the Outdoor Picking Station. Stormwater runoff from the outdoor picking station will be diverted to the stormwater management system via pipes. The waste bays below the picking are covered by the picking station itself, and therefore waste does not come in contact with rainfall and therefore there is minimal risk of leachate generation. Leachate is to be managed in accordance with Chapter E14: Stormwater Management and Section 4.3.16 Leachate Control of the EIS as well as the existing mitigation measures provided in Section 3.3 of the Soil and Water Management Plan (refer to OEMP-010 App C dated February 2018) (Appendix 8).

To manage and suppress dust within the Outdoor Picking Station the following control measures will be implemented:

- Ceasing works when conditions are excessively dusty until dust suppression can be adequately carried out in accordance with relevant conditions of the project;
- Ensure plant and equipment is operated in a competent way;
- Apply water to exposed surfaces that are causing dust generation. Surfaces may include unpaved roads, stockpiles; hardstand areas other exposed (for example recently graded areas); and
- Air-conditioned picking station to provide fresh clean air during picking process for employees etc.

2.6.4 Indoor Processing Plant

The proposed modification involves the installation of an indoor processing plant with a capacity of 225 tonne/hr which is to be installed in the shed. It is expected that the annual throughput of the plant is approximately 78,000 tonnes per annum with the outputs consisting of segregated concrete, brick, ceramics, Virgin Excavated Natural Material (VENM), asphalt waste, railway ballast, and cured concrete waste as well as sorted bricks and concrete from the Outdoor Picking Station. A breakdown of the output product types is provided in Table 2.3 below.

Table 2.3. Approximate waste to be processed through the indoor processing plant only. This is based on the processing of brick, concrete, ceramics, soil, asphalt and railway ballast and cured concrete estimates given in the EIS approved under SSD5300 (Table 7 of the EIS, pages 40-41). Note that tonnages of sorted bricks and concrete from the Outdoor picking station are included in this table.

Inputs		Outputs		
Waste Material	**Tonnes Per Annum**	**Output Products**	**Tonnes Per Annum**	**Destination**
Brick	15,000	Small aggregates (40mm)	60,000 (Individual quantities adjusted based on market demand)	Redistributed for resale
Concrete	20,000	Large Aggregates (70mm)		
Ceramics	1,000	Soil and Fines (10-20mm)		
Soil	20,000	Metals	4,500	
Asphalt waste and Railway Ballast	5,000	Plastic	1,000	
Cured concrete waste	5,000	Waste	500	Landfill
Sorted bricks and concrete from the Outdoor picking station	12,000	Small aggregates (40mm)	12,000	Redistributed for resale
		Large Aggregates (70mm)		
TOTAL	**78,000**	-	**78,000**	-

Under section 4.3.11 of the EIS, a Material Recycling Facility including shredders and a picking station was proposed. To meet waste processing and consumer demands, the MRF equipment will be replaced with other indoor plant.

Material will be feed into a hopper and apron just outside the north eastern end of the shed. Material is then conveyed into the shed to a 225 tonne/hour horizontal impactor crusher to reduce the size of the input materials and liberate ferrous metals within concrete.

This material is then passed through a series of magnets whereby ferrous metals are removed and deposited in a 10m^3 metals skip bin below. The metals skip bin is collected regularly and transported to the metal waste stockpile in the processing area.

A deck horizontal screen is then used to separate crushed materials into large aggregates (70mm), small aggregates (40mm) and fines / roadbase (10-20mm). Large and small aggregates are conveyed through openings on the western side of the shed to be deposited in separate storage bays measuring 8m (L) x 6m (W) x 3.5m (H). A 3.6m wide bunker is provided for capturing wind-blown debris.

Fines / roadbase material are conveyed through an opening on the western side of the shed to be deposited in separate stockpile via a 14m radial stacker.

Materials are transported to product storage bays for testing and re-sale.

The original doors on the eastern side of the enclosed shed remain useable for vehicles / trucks to maintain and service the equipment indoor processing shed, this includes maintenance vehicles as well as skip bin services trucks.

2.6.4.1 Potential Environmental Impact

The principal environmental impact of the changed plant in the processing shed is considered to be noise.

GHD was engaged by Jackson Environment and Planning Pty Ltd to undertake a revised noise assessment of the planned operational changes to the Kembla Grange Resource Recovery Facility (Appendix 5). The assessment identified the sensitive noise receivers surrounding the facility (the sensitive receptors that were identified as part of the 2014 assessment are still current). It is noted that background noise monitoring was done and the assessment updated to ensure that the impact assessment is fully compliant with the EPA's new *Noise Policy for Industry* (2017).

Noise predictions were undertaken to assess compliance with the noise criteria, from SSD 5300 Condition B20 and from the 2015 GHD assessment, and to assess potential impacts on sensitive receivers.

The noise modelling was undertaken using the worst-case scenario of all machinery operating simultaneously for the entire time period. Table 2.4 provides a comparison of noise levels between the original MRF and the proposed indoor processing plant.

Table 2.4. Noise levels associated with the MRF (including shredder and picking station) approved in the EIS under SSD5300 and that proposed in this development modification.

Plant component	Noise levels (dB(A))
Mobile low speed shredder to shred timber and waste to size; mobile high-speed shredder to fine shred timber and waste to size; and picking station with 12 persons to sort and separate waste to products as approved under SSD5300	101 (Slow speed shredder)[1] 118.5 (High speed shredder)[2] 90 (internal noise from equipment in building associated with high speed shredder, low speed shredder and fixed picking station plant)[3]
Fixed processing plant proposed in this development modification	105.4 (225 tonne per hour Horizontal impactor crusher) 111.4 (Deck horizontal screen) Noise emission data from the lower noise generating plant and equipment is not available: 2 Electro magnets on stands; 2 x 20kw Blowers mounted on conveyors; Apron feeder with protection wall; Enclosed pick room with Air Conditioning; 8 conveyors; 14m radial stacker.

(1) Noise levels of the low speed shredder is based on manufacturer data for Edge Slayer XL (http://ecosolusindo.com/gambar/product/pdf/EDGE%20Slayer%20Features&%20Benefits.pdf); (2) Noise levels of high speed shredder is based on UK Government (2008). Noise emissions and exposure from mobile wood chippers. http://www.hse.gov.uk/research/rrpdf/rr618.pdf. (3) Noise levels cited are from Table 5.1 in GHD (2015). Wollongong Recycling Kembla Grange Waste Recovery Facility Noise Assessment, April 2015 (as approved under SSD5300).

Based on the modelling, noise levels are predicted to decrease and will be below the noise criteria at all sensitive receivers. The noise assessment indicates that operational noise environment is not expected to significantly change as a result of the proposal. The predicted noise levels are below the consent criteria.

2.6.4.2 Pollution Control Equipment and Mitigation Measures

An automated spray system will be used to manage dust from stockpiled materials on the western side of the shed. A wet suppression system (spray nozzles) will also be used on the indoor plant to manage dust. As this processing will be carried out indoors, dust will be contained. As noted above, noise levels will be below the noise criteria at all sensitive receivers and below the consent criteria.

The control measures provided in the approved Operational Environmental Management Plan will also apply. The OEMP provides the necessary control measures to minimise any potential environmental risks from the operation of the Indoor Processing Plant.

2.7 Traffic and Parking Impacts

While the indoor processing plan will include a picking station with 12 persons to sort and separate waste, the change does not require an increase in staff numbers. Therefore, vehicle numbers and parking requirements are not impacted by the proposed changes.

2.8 Fire Services Review

The Indoor Processing Plant is used to process non-combustible and inert waste such as concrete, brick and tile. No combustible materials are processed or stored within the enclosed shed.

The enclosed shed has a floor area of 1,500m^2 and is classified as a building class 8 as set out in the National Construction Code. In accordance with the National Construction Code, class 8 buildings with a floor area of <2,000 m^2 do not required a fire sprinkler system.

It is recognised that under clause 7.5.1 of the *Fire Safety Guidelines – Fire Safety in Waste Facilities* published by NSW Fire and Rescue in August 2019, waste facilities with a floor area >1,000m^2 or contain >200m^3 of combustible waste require an automatic fire sprinkler system. Although the enclosed shed has a floor area of 1,500m^2, no waste is stored in the building, and the waste processed (concrete and brick) is not combustible. However, at the request of the NSW Fire and Rescue, a review of the installed fire services at the site was conducted to assess how the fire service could be upgraded to meet the requirements of the new guideline *Fire Safety Guidelines – Fire Safety in Waste Facilities*. The Fire Services Review is contained in Appendix 9.

The Fire Services Review determined that full compliance with new guidelines would be difficult to achieve within an existing facility. This facility largely receives concrete and other non-combustible building material wastes which have a low risk of fire ignition. The Fire Services Review has recommended the following additional fire measures to bring the facility largely in-line with the intent of the *Fire Safety Guidelines – Fire Safety in Waste Facilities*:

- Additional 150kL fire tank to upgrade the site from warehouse only protection to yard hydrant protection;
- Replacement of the fire pumps to provide 30L/s @ 900kPa to the system;
- Provision of 4 new external fire hydrants;
- Provision of one new booster facility and block plan;
- Provision of a flame detection system in the warehouse to assist in early detection or when the space is unoccupied;
- Provision on an occupant warning system coupled with the flame detection system. Manual call points will be provided adjacent exit doors to notify other occupants; and
- A flame detector be provided to address the plastics storage bay under the Outdoor Picking Station sorting area with associated alarms.

Figure 2.1 provides a summary of the recommendations that will be adopted by the Proponent.

The site has an unusual situation of not having a town main water supply to the site. This difficulty can be mitigated by having four hours of water storage onsite to enable three fire hydrants to flow simultaneously. During this time if further water is required the Hytrans High Volume Mobile Water Supply System Pod will be required to attend site to draw water from West Dapto road 700m to the south. This requirement will be listed on all block plans and communicated to the local NSW Fire and Rescue brigade.

The fire hydrant system will be upgraded to provide yard hydrants to the site, not just internal protection to the warehouse building. This would allow fire fighters to attack any of the piles onsite directly from a local attack hydrant. The upgrades will provide a secondary booster location for connection of the Hytrans truck at the main entry.

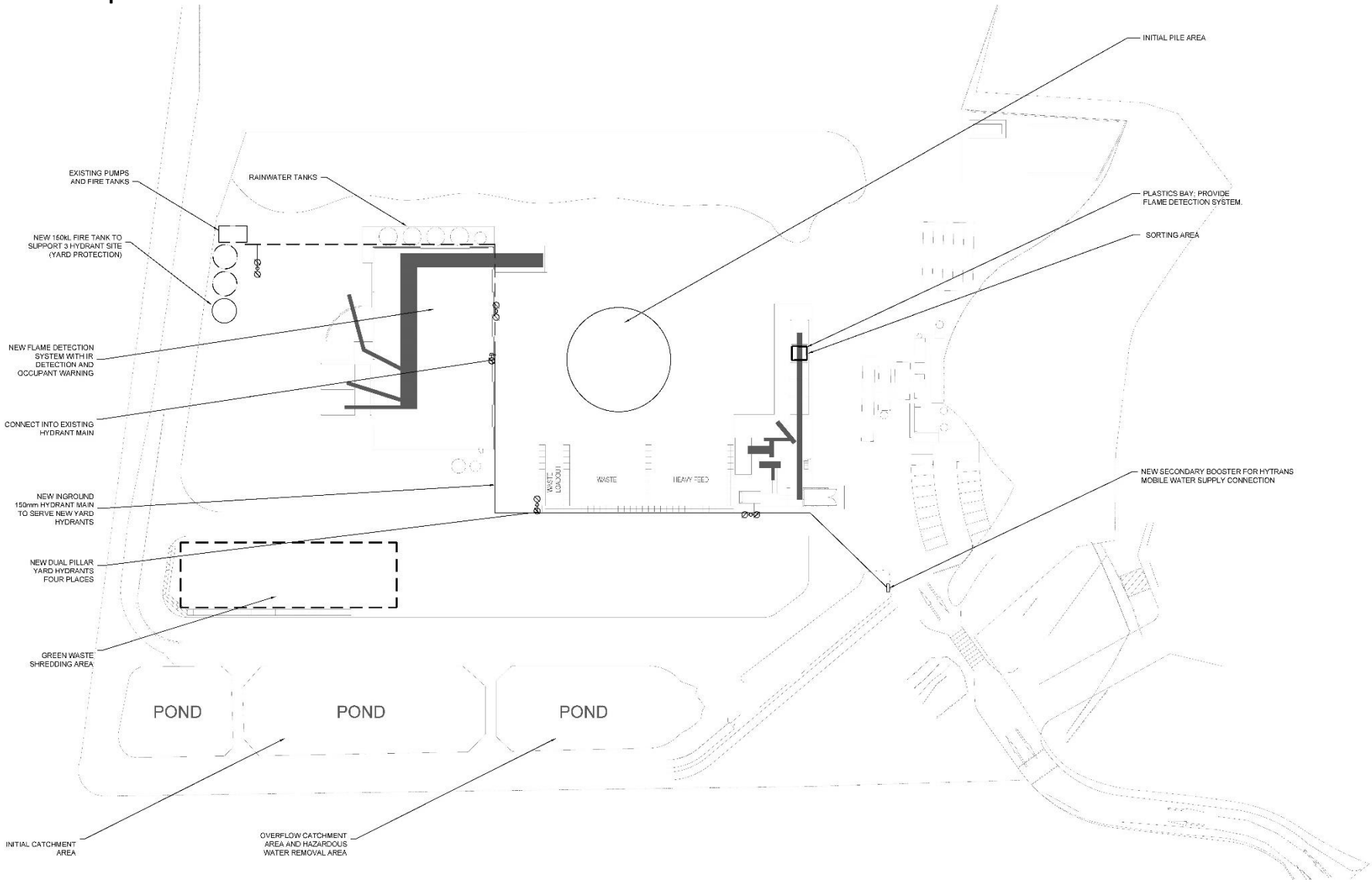
The fire hydrant system will be further upgraded to include an additional 150kL fire tank and replacement of the existing pumps to provide full flow supply in line with AS 2419.1:2017 - *Fire hydrant installations System design, installation and commissioning*.

The Fire Services Review also recommends that a new detection system is installed in the warehouse building to provide early detection in a fire event. If the facility is unmanned this will limit the ability of a fire to grow unmitigated. The system will also include an occupant warning system and manual pull stations to initiate fire mode operations.

A new flame detection and alarm system be installed in the plastic sort area under the hand-picking station.

Any combustible materials will be managed in accordance with the *Fire Safety Guidelines – Fire Safety in Waste Facilities* recommendations for pile size and length as well as access requirements. The non-combustible piles will meet the requirements for access and egress.

Figure 2.1. Proposed additional Fire Services Plan.



2.9 Amended plans

The amended plans for the development are given in Appendix 3, with proposed modifications shown. Note that the full plan set approved under SSD5300 Mod 1 (DA and CC plan sets) have been updated to reflect the proposed site modifications. Additional plans have been provided for the outdoor picking station and the indoor processing plant.

2.10 Noise Impact Assessment

GHD was engaged by Jackson Environment and Planning Pty Ltd to undertake a noise impact assessment of the planned operational changes to the Kembla Grange Resource Recovery Facility. The original noise modelling scenario was revised based on the modifications to operations, namely the outdoor picking station and an indoor processing plant. The Revised Noise Assessment is provided in Appendix 5.

The assessment demonstrates that operational noise from the facility is predicted to comply with the NSW EPA *Noise Policy for Industry* (2017) and fully comply with consent conditions under SSD5300 and SSD5300 Mod 1.

2.11 Water Impact Assessment

KFW was engaged by Jackson Environment and Planning Pty Ltd to update the water impact assessment of the planned operational changes to the Kembla Grange Resource Recovery Facility. The Revised Water Impact Assessment is provided in Appendix 6. The study found that the site works involved are of a very minor nature and will have the following effects:

- Increase in impervious area of 110 m^2 from the picking station roof (100% impervious);
- Increase in impervious area of 105 m^2 due to the fire fighting water tanks and pump room (100% impervious); and
- Increase in impervious area of 74 m^2 due to the rainwater base slabs (100% impervious).

The study reasonably concluded without further modelling that the impact of Modification #2 and associated site works is insignificant and imperceptible.

2.12 Minor nature of proposed changes and consistency with the original consent

Given the minor nature of the proposed site modifications to the Kembla Grange Resource Recovery Facility, it is considered that the modifications are consistent with the original development consent (SSD5300).

Furthermore, as the environmental impacts from the change to the site will not contribute to any additional environmental impact, it is considered appropriate that development approval be considered under Section 4.55(1a) of the *Environmental Planning and Assessment Act* 1979.

2.13 Capital investment value of the modification to the development

An assessment of the capital investment value of the development has been prepared by a Quantity Surveyor (Muller Partnership), as the expected cost of the development is greater than $100,000[2]. An overview of the capital investment value is provided in Appendix 7. The total cost and likely capital investment value of the proposed

[2] NSW Department of Planning and Infrastructure (2013). Planning Circular PS13-002 – Calculating the Genuine Estimated Cost of Development. Internet publication: http://www.planning.nsw.gov.au/Policy-and-Legislation/~/media/DA2EB3DCF96540B68557B924F9C628DF.ashx

modification to the development is $4.88M (ex. GST). Note that the additional costs of fire safety works have been costed by EWFW at $146,000. The total cost of the modification is therefore estimated to be $5.026M.

3. Conclusions

Kembla Grange Recycling Pty Ltd is the operator of the construction and demolition waste recycling facility located at 50 Wyllie Rd, Kembla Grange. This site is referred to as the 'Kembla Grange Resource Recovery Facility'. The site is licensed by the NSW Environment Protection Authority (EPL 20601) and has been successfully operating since 2013. It was originally operated by Wollongong Recycling and Building Supplies Pty Ltd and in May 2017, Bingo Property Pty Ltd took ownership of the land. The facility is operated by Kembla Grange Recycling Pty Ltd.

A retrospective Section 4.55(1a) development modification under the *Environmental Planning and Assessment Act* 1979 is currently being sought to lawfully permit the followings works that have been undertaken to date and the continuation of their use:

- Installation of rainwater storage tanks on the premises in a location which differs from the approved plans under SSD 5300 Mod 1;
- Installation of firewater storage tanks and a pump room on the premises; and
- An outdoor picking station and associated processing equipment (including de-stoning screen and generator) in the central processing area of the site, installed above a push wall structure built on the premises.

A Section 4.55(1a) development modification under the *Environmental Planning and Assessment Act* 1979 is currently being sought to lawfully permit the following change to the facility, which have been designed to improve operational efficiency of the site:

- An Indoor processing plant (to be located within the processing shed).

The above changes are considered are consistent with the original SSD 5300 consent, as justified below.

- The location of the rainwater storage tanks is proposed to be changed due to interferences with site operations and vehicle movements and will be located at the northern end of the processing shed;
- The installation of the firewater storage tanks and pump room are essential services and required as part of the Occupation Certificate for SSD (firewater storage tanks and pump room) and are considered Exempt Development under Clause 8.2, Part 8 Fire Safety Code of the *SEPP (Exempt and Complying Development)* 2008;
- The installation of the outdoor picking station and associated processing equipment (including de-stoning screen and generator) is consistent with section 4.3.11 of the original EIS submitted with the State Significant Development application. Under section 4.3.11 of the EIS, a mobile picking station was approved. For efficiency purposes, this equipment will be replaced by a fixed plant.
- An indoor processing plant with a capacity of 225 tonne/hr is to be installed in the shed. Under section 4.3.11 of the EIS, a Material Recycling Facility including shredders and a picking station was proposed. To meet waste processing and consumer demands, the MRF equipment will be replaced by an indoor processing plant.

At the request of the NSW Fire and Rescue, a review of the installed fire services at the site was conducted to assess how the fire service could be upgraded to meet some of the requirements for the new guideline *Fire Safety Guidelines – Fire Safety in Waste Facilities. The* Fire Services Review is contained in Appendix 9. The following recommendations were made to upgrade the fire services at the site to better protect the facility and its occupants from fire risks:

- Additional 150kL fire tank to upgrade the site from warehouse only protection to yard hydrant protection;
- Replacement of the fire pumps to provide 30L/s @ 900kPa to the system;
- Provision of 4 new external fire hydrants;
- Provision of one new booster facility and block plan;

- Provision of a flame detection system in the warehouse to assist in early detection or when the space is unoccupied;
- Provision on an occupant warning system coupled with the flame detection system. Manual call points will be provided adjacent exit doors to notify other occupants; and
- A flame detector be provided to address the plastics storage bay under the Outdoor Picking Station sorting area with associated alarms.

A noise impact assessment of the planned operational changes to the Kembla Grange Resource Recovery Facility was undertaken by GHD. The noise assessment indicates that operational noise environment is not expected to significantly change as a result of the proposal. The predicted noise levels are below the consent criteria.

In addition to the above, the following minor modification are also being sought by Kembla Grange Recycling Pty Ltd:

- Modification to Condition A6 to change 'calendar year' reference to 'annual reporting period in relation to EPL 20601' (i.e. from 15 March to 14 March); and
- Modification to Condition C11 to align the annual review with the 'annual reporting period in relation to EPL 20601'.

The Capital Investment Value associated with the site modification is $5.026M (ex. GST), being a significant additional investment into an important regional recycling facility for construction and demolition waste materials in the Illawarra.

The proposed modifications to the development will not result in additional environmental impact, are consistent with the original SSD5300 approval and is recommended for approval.

Appendix

Appendix 1: SSD5300 and SSD5300 Mod 1 Development Consent

Appendix 2: Landowner consent

Appendix 3: Updated Plan Set

Appendix 4 – Structural and BCA Compliance Certificates

Appendix 5: Revised Noise Assessment

Appendix 6: Water Impact Assessment

Appendix 7: CIV Estimate

Appendix 8: Soil and Water Management Plan

Appendix 9: Fire Services Review