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PLANNING STATEMENT

Land & Environment Court
Proceedings 2019/13009 -
SSD-6236: Eastern Creek
Energy from Waste Facility

Prepared for

THE NEXT GENERATION

16 July 2021

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Report Number	FINAL

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1. INTRODUCTION

1.1. OVERVIEW

1.1.1. Project Background

A development application for State significant development (SSD-6236) was lodged with the former NSW Department of Planning and Environment (now **DPIE**) in April 2015 with an accompanying environmental impact statement (**EIS**) for an Energy from Waste (**EfW**) Facility with the capacity to process up to 1.35 million tonnes of residual waste fuel per annum. EfW refers to the thermal treatment of eligible waste materials to generate electricity. The development application was placed on public exhibition between 27 May 2015 and 27 July 2015.

An amended EIS and response to submissions report (**RTS**) were submitted to the DPIE in November 2016. These documents were placed on public exhibition between 9 December 2016 and 1 March 2017. In March 2017, the DPIE formally requested the Applicant The Next Generation (**TNG**) to provide a further RTS, this was lodged in July 2017.

Through the RTS report the scope of the EfW proposal was formally amended reducing the scale and operation of the EfW Facility for processing of a maximum 552,500 tonnes of waste per annum (**tpa**). The proposal has been designed with an engineering capacity of between 405,000 and 675,500 tpa with an optimum expected throughput of 552,500 tpa.

The DPIE sought additional information in August 2017 and TNG lodged an amended development application and RTS in September 2017 which was made publicly available by the DPIE for comment. Subsequent to this the Applicant submitted supplementary information and a final RTS in February 2018.

The DPIE prepared an assessment report dated April 2018 for the Independent Planning Commission (**IPC**) that recommended refusal, citing that in this instance the wider benefits of the proposal in the short term did not outweigh the potential long-term impacts. This recommendation was ultimately supported by the IPC and on 19 July 2018 the development application was refused.

Following this decision, TNG filed a Class 1 Appeal in the Land and Environment Court of NSW (**NSW LEC**) against the IPC's refusal of the development application and the proceedings are identified as matter No. 2019/13009 (*The Next Generation (NSW) Pty Ltd v Independent Planning Commission and Blacktown City Council*).

1.1.2. Project Amendments

To address issues raised in the NSW LEC proceedings one operational change is proposed to the EfW Facility that considered by the IPC and that is the removal of floc waste as part of the waste stream to be processed by the proposed EfW Facility.

There are no physical changes to the built form or layout of the EfW Facility considered by the IPC.

Floc waste made up of steel waste, typically derived from car and metal shredding and resource recovery carried out by others.

Fuel waste will continue to be sourced from the neighbouring Genesis Materials Processing Centre (**MPC**) and in part from facilities where appropriately regulated resource recovery processes have been undertaken in accordance with the NSW EfW Policy guidelines and where fuel quality is consistently demonstrated. The residue waste fuels will enter the proposed EfW Facility via conveyor from the MPC or via truck using the adjacent service road.

An assessment has been undertaken by Mike Ritchie and Associates (**MRA**) to confirm the availability of the fuel feed stock excluding floc waste. The results demonstrate that the quantity of waste required to fuel the EfW Facility as proposed, namely 552,500 tonnes of waste per annum, can be sourced within the Metropolitan Levy Area (**MLA**). This assessment has been undertaken in accordance with the Resource Recovery Criteria specified in the NSW Energy from Waste Policy. The waste source availability results confirm that:

- There is sufficient waste available to supply the EfW Facility;
- There is predicted population growth in the MLA which will result in increased waste sources; and

- The ongoing operation of the EfW Facility will not monopolise the waste market nor will it negatively impact the growth of other resources and energy recovery initiatives.

A high-level summary of the material elements of the EfW proposal considered by the IPC is presented below together with a comparison of the proposed amended EfW proposal and the nature of any change to the elements that will arise as a result of the removal of floc waste from the waste stream. As can be seen, the only change to the material elements of the proposal is the change to fuel feed stock with the exclusion of floc from the waste stream.

Table 1 Summary of Project Amendments

Project Item	EFW proposal considered by IPC	Proposed Amended Application	Change
Land description	Part Lot 1, part Lot 2 and Lot 3 in DP 1145808	Part Lot 1, part Lot 2 and Lot 3 in DP 1145808	No change
Subdivision	Three (3) lots.	Three (3) lots.	No change
Technological Design Capacity	Thermal treatment of a residual waste fuels with an engineering capacity of between 405,000 and 675,500 tpa.	Thermal treatment of a residual waste fuels with an engineering capacity of between 405,000 and 675,500 tpa	No change
Facility Processing Volumes (per annum)	Processing of a maximum 552,500 tonnes of waste per annum.	Processing of a maximum 552,500 tonnes of waste per annum.	No change
Technology Engineering	Project Definition Brief prepared by Ramboll	Project Definition Brief prepared by Ramboll	No change
Fuel Feed Stock	<ul style="list-style-type: none"> • Construction and Demolition Waste • FLOC waste • Inert Commercial and Industrial Waste. 	<ul style="list-style-type: none"> • Construction and Demolition Waste • Inert Commercial and Industrial Waste 	Floc excluded from feed stock to the EfW Facility
Waste Outputs	Ramboll/Project Definition Brief: <ul style="list-style-type: none"> ▪ Bottom ash (wet): 400,000 tpa ▪ APC: No change. 	Ramboll/Project Definition Brief: <ul style="list-style-type: none"> ▪ Bottom ash (wet): 400,000 tpa APC: No change. 	No change
Waste output – reuse.	Does not propose the reuse of any ash or residue material	Does not propose the reuse of any ash or residue material	No change
Greenhouse Gas Emissions	600,000 tonnes of carbon dioxide equivalent (t CO ₂ -e)	600,000 tonnes of carbon dioxide equivalent (t CO ₂ -e)	No change.

Project Item	EfW proposal considered by IPC	Proposed Amended Application	Change
	diverted annually. Cumulative emissions reduction over 25 years of 15.3 tonnes t CO ₂ -e	diverted annually. Cumulative emissions reduction over 25 years of 15.3 tonnes t CO ₂ -e.	
In-stack emissions (as the basis for Air Quality Assessment).	Used in-stack emissions data for existing operating EfW facilities. Atmospheric dispersion modelling completed within the AQGG Assessment is based on the assumption that regulatory emission limits are met regardless of feedstock composition.	Used in-stack emissions data for existing operating EfW facilities. Atmospheric dispersion modelling completed within the AQGG Assessment is based on the assumption that regulatory emission limits are met regardless of feedstock composition.	No change
Flue Gas Treatment	Optimised SNCR design to reduce NO _x emissions	Optimised SNCR design to reduce NO _x emissions	
Odour	All feedstock will be delivered and stored within the waste receival hall which is kept under negative pressure during operations. All air within the receival hall is drawn to the furnaces. Odours are incinerated in the furnace at 850 C.	All feedstock will be delivered and stored within the waste receival hall which is kept under negative pressure during operations. All air within the receival hall is drawn to the furnaces. Odours are incinerated in the furnace at 850 C.	No change
Proof of Performance Framework	Proof Performance Framework developed to support implementation and testing of EfW facility before full operation commences.	Proof Performance Framework developed to support implementation and testing of EfW facility before full operation commences	No change

It is noted that a number of the contentions raised in the within the NSW LEC 2019/13009 proceedings are directly related to the inclusion of floc in the waste stream. The following table summarises the contentions in the proceedings that are identified as addressed with the removal of floc from the proposal.

Table 2 Addressed Contentions

Statement of Facts and Contentions	Contentions Sought to be Addressed by the Proposed Amendment
1 st R's SOFAC	<ul style="list-style-type: none"> • B.1 on the risk of hazardous emissions • B.2 on the chemical composition of FLOC waste • B.4 on the human health risks • B.5 on consistency with the objects of the <i>EP&A Act</i> • B.6 on the public interest • B.7 on reference facilities that use FLOC waste
2 nd R's SOFAC	<ul style="list-style-type: none"> • B.1 on waste supply • B.3 on ash management • B.4 on combustion temperature • B.6 on health risk assessment and methodology • B.7 on health impact data associated with the proposed fuel mix • B.8 on social impacts • B.10 on suitability of the site
3 rd R's SOFAC	<ul style="list-style-type: none"> • B.2 on owner's consent • B.5 on pollutants • B.6 on human health risks • B.7 on assessment of risk to human health • B.8 on compliance with the NSW Energy from Waste Policy Statement • B.9 on use of FLOC waste as feedstock • B.10 on use of international best practice techniques • B.11 on eligible feedstock • B.17 on odour impacts

1.2. THE SITE

The site at Eastern Creek was selected for the proposed development due to its proximity to the M4 and M7 Motorways and the direct synergies between the proposed EfW Facility and the adjoining Genesis Xero Waste Facility currently in operation which will provide a significant percentage of the waste fuels. Other reasons why the site has been selected include:

- It proximate location in relation to residual waste fuel sources available in the region and from the neighbouring waste facility;
- The topography of the land allows for the tipping hall to be considerably higher than the floor waste storage bunker without requiring volumes of fill material to achieve this;
- Availability of existing supporting infrastructure, including:
 - Connection to the grid which is less than 1.5kms,
 - Availability of water,

- Availability of high-pressure natural gas,
- Excellent road links and possible future availability of rail links;
- Access to a pool of skilled labour for operational maintenance;
- Demonstrated ability and record by Genesis Xero Waste Facility to procure appropriate waste materials and to extract valuable resources for re-use, and to deliver a consistent and complying residual waste fuel stream; and
- Separation from sensitive residential receivers.

Given the proximity, availability and capacity of road links associated with the precinct, the location is ideally suited to utilise a range of potential waste sources across Western Sydney in addition to the adjacent Genesis Xero Waste Facility.

1.3. PURPOSE OF THIS REPORT

This is to identify the revisions to the proposed EfW Facility and provide confirmation that the modified proposal will comply with all relevant standards in terms of emissions and in terms of human health risk and is a development able to be approved.

This Planning Statement is supported by supplementary reports including:

- Appendix A – TNG Feedstock Review by MRA
- Appendix B – HZI Review
- Appendix C - Air Quality Assessment
- Appendix D - Greenhouse Gas Assessment
- Appendix E - Human Health Risk Assessment

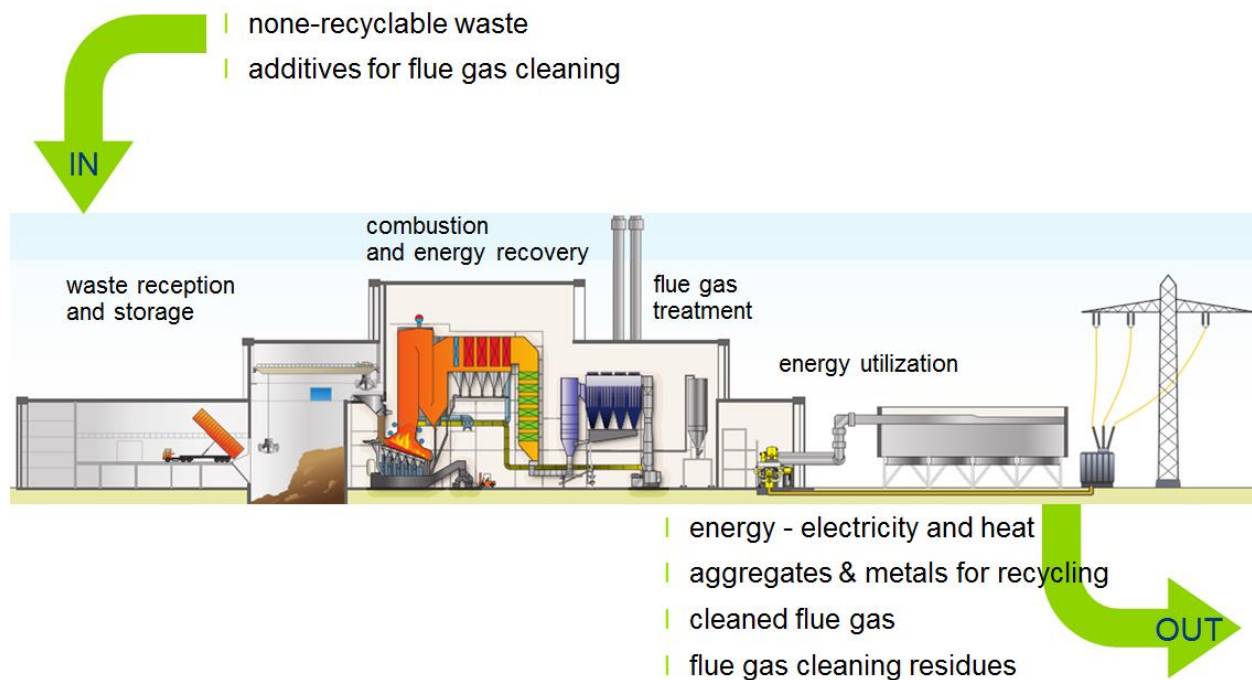
2. THE PROPOSAL

2.1. DESCRIPTION OF AMENDED PROPOSAL

The construction and operation of an EfW Facility The process is diagrammatically depicted at **Figure 1**. The process and technology proposed remains consistent with the SSDA proposal as detailed in the RTS report considered by the IPC.

The amendments to the feed stock composition will not change the operating parameters or processes associated with the Energy from Waste Facility functions as described in the Project Definition Brief (September 2017) with the exception of the implementation of additional sorting processes.

Figure 1 Schematic Diagram of EfW Facility Operation



Source: HZI, 2016

The EfW Facility has a design capacity to treat up to 552,000 tonnes of residual waste.

2.1.1. Overview

The EfW Proposal is for the construction and operation of an EfW Facility for the treatment of 552,500 tonnes per annum of residual waste fuels (engineering capacity for approximately 405,000 to 675,500 tpa with an optimum expected throughput of 552,500 tpa). This will involve the following plant and systems as illustrated in **Figure 2-7** and specifically includes:

- Tipping Hall and fuel storage;
- Waste Bunker;
- Combustion Line 1;
- Combustion Line 2;
- Two independent boilers;
- Flue Gas Treatment systems;
- One stack;
- One turbine;
- One air cooled condenser; and

- Associated auxiliary equipment (including two emergency generators);
- Control room workshop, offices and amenities; and
- Laydown areas.

The proposed EfW Facility will utilise moving grate incinerator technology fed by two combustion lines and associated boilers, utilising air-cooled condenser (**ACC**) units, flue gas treatment systems (optimised SNCR) and associated residue and reagent storage silos and tanks, emissions stack and associated emissions monitoring systems and steam turbines and generator housed within a turbine hall powered by two auxiliary diesel generators.

Moving grate technology has been selected based on its capacity to handle a wide range of fuel types. While other elements of the technology have been selected to respond to and achieve the highest possible level of environmental performance.

The construction and operation of the EfW Facility is to be undertaken in two broad phases of construction works:

- Site Preparation and Enabling Works: Site/ground preparation, bulk earthworks, piling and foundations, services location and reticulation, internal and external road works, car parking and other civil infrastructure; and
- Main Construction Works: Structural Works.

The main construction works include the following built elements. This **has not** changed from the proposal considered by the IPC.

Table 3 Construction Works

Element	Width	Length	Height
Tipping Hall	108	50	20
Waste Bunker	98	31	46 (included 8m below ground level)
Boiler House	50	58	43
Flu Gas Treatment	50	57	34
Stack with Two Inner Flues	Outer diameter 3.1		100
Turbine Hall	34	46	25
ACC	51	51	24
Bottom Ash Collection Area	50	16	17
Sub Station (4000sqm)	63	50	20
Office Block	15	31	11
Workshop	32	35	16.5
Control Room	10	38	38
Weighbridge (in)	40	16	10

Element	Width	Length	Height
Weighbridge (out)	38	15	10
Fire Water Tank	14.7	13.7	9
East Amenities	32	6.5	8
West Amenities	19	6	4.5

In the site preparation works phase of the construction works the substation, detention basins and back-up systems will be constructed, along with all site preparatory works to enable the operation of the facility including vehicle access, laydown areas and site landscaping.

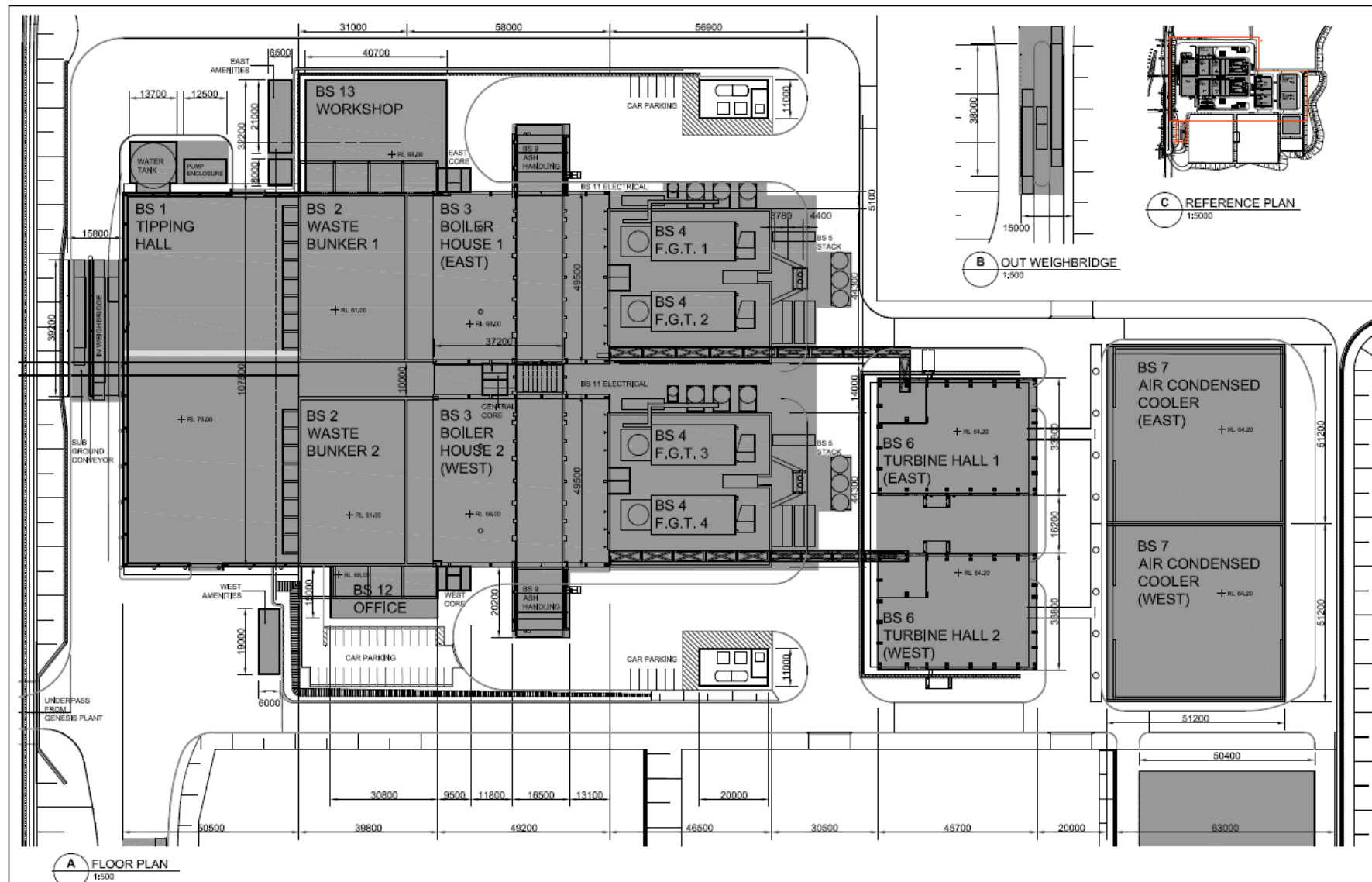
Figures 2 – 6 below detail the site and EfW Facility layouts and the general site arrangements.

The site plan illustrates the layout of the proposed 1000-bed temporary shelter facility. The central building complex is divided into several functional areas:

- SS 13 WORKSHOP:** 1200 sqm
- SS 1 TRASH HALL:** 8400 sqm
- SS 2 WASTE BUNKER 1:** 1700 sqm
- SS 3 BOILER HOUSE 1 (EAST):** 2400 sqm
- SS 2 WASTE BUNKER 2:** 1700 sqm
- SS 3 BOILER HOUSE 2 (WEST):** 2400 sqm
- SS 4 P.G.U. 1:** 850 sqm
- SS 4 P.G.U. 2:** 850 sqm
- SS 5 AIR-CONDITIONED COOLER (EAST):** 2400 sqm
- SS 6 AIR-CONDITIONED COOLER (WEST):** 2400 sqm
- SS 7 AIR-CONDITIONED COOLER (EAST):** 2400 sqm
- SS 8 AIR-CONDITIONED COOLER (WEST):** 2400 sqm
- SS 9 P.G.U. 1:** 850 sqm
- SS 10 P.G.U. 2:** 850 sqm
- SS 11 P.G.U. 3:** 850 sqm
- SS 12 P.G.U. 4:** 850 sqm
- SS 13 P.G.U. 5:** 850 sqm
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- SS 136 P**

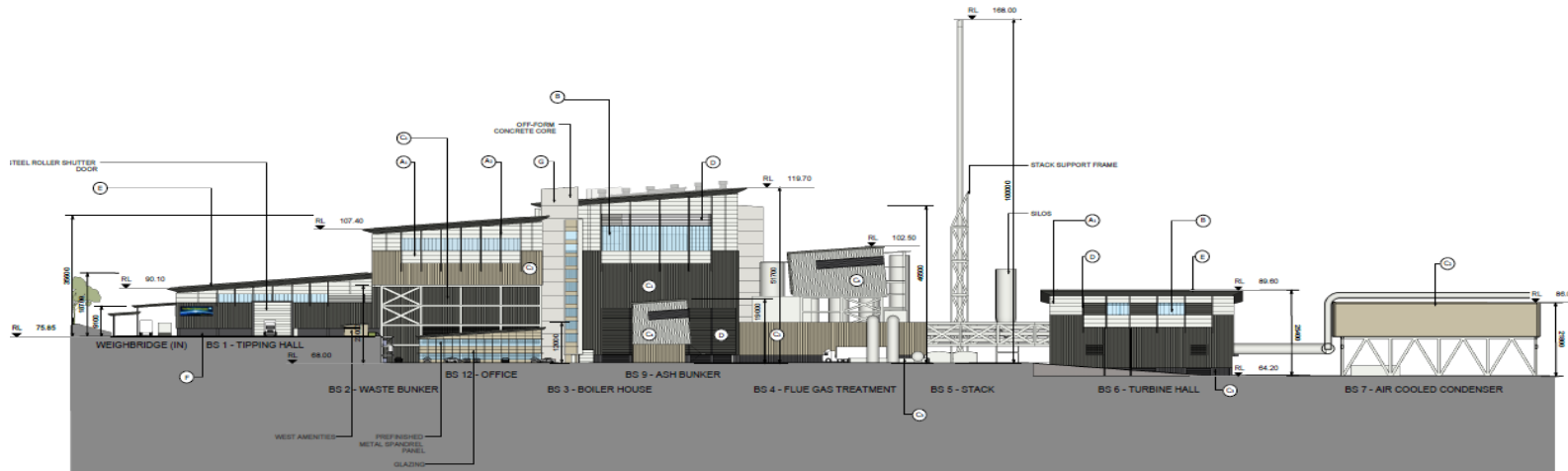
12 THE PROPOSAL

Figure 3 Building Layout & Land Use



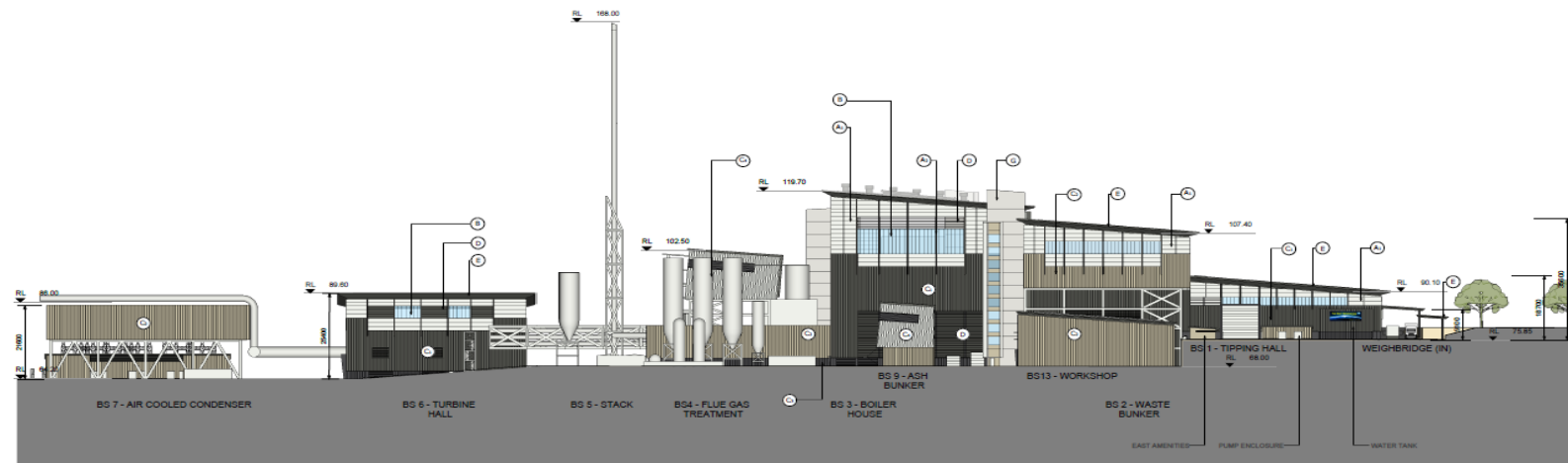
Source: Kriskis Taylor Architects, 2017

Figure 4 EfW Facility Elevations



Picture 1 Western Elevation

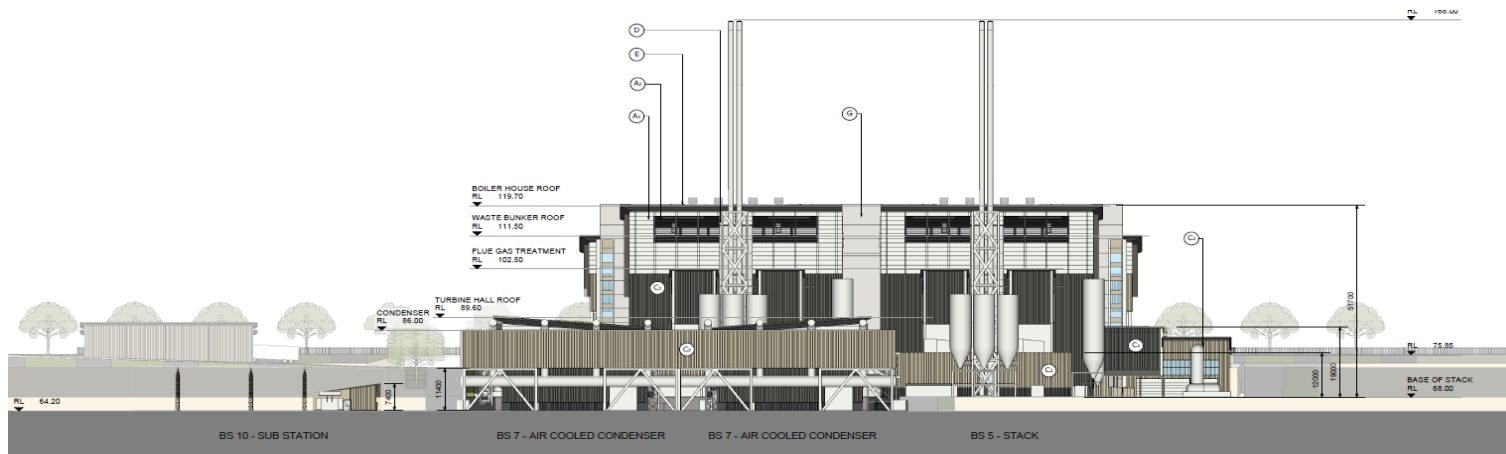
Source: Kriskis Taylor Architects, 2017



Picture 2 Eastern Elevation

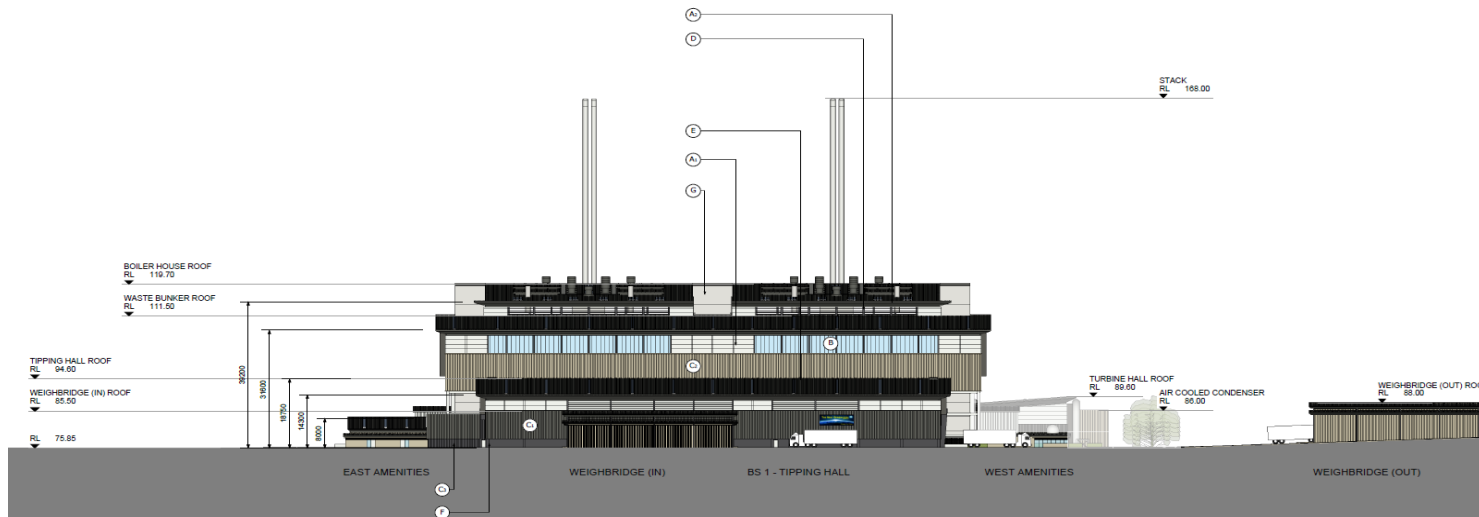
Source: Kriskis Taylor Architects, 2017

Figure 5 EfW Facility Elevations



Picture 3 South Elevation

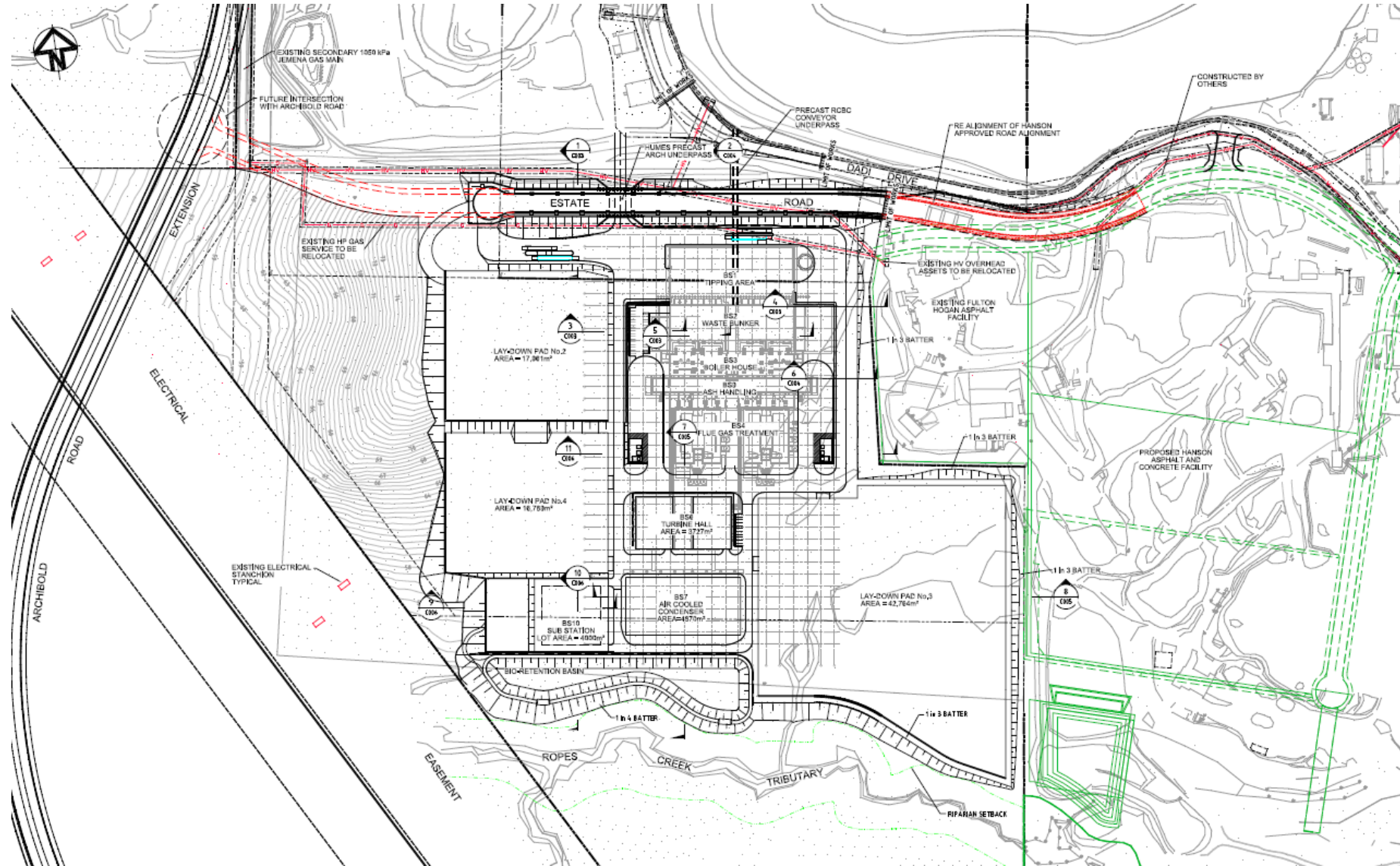
Source: Kriskis Taylor Architects, 2017



Picture 4 North Elevation

Source: Kriskis Taylor Architects, 2017

Figure 6 General Arrangement Plan



Source: AT&L, 2016

2.2. ECOLOGICAL OFFSET STRATEGY

An Ecological Offset Strategy has been developed by Abel Ecology in consultation with OEH and is set out in Appendix G of the RTS. **This strategy remains unchanged.**

The construction of the EfW proposal will result in the following vegetation removal:

- Cumberland Plain Woodland, north eastern section of the site: 0.27 hectares
- River Flat Eucalypt Forest, south eastern section of the site: 0.57 hectares

2.3. CIVIL & STORMWATER MANAGEMENT

The Civil & Stormwater Management **remains unchanged**, the concept is shown above in **Figure 6**.

2.4. SUBDIVISION

The SSDA incorporates a proposal to subdivide the site for the creation of an allotment on which the proposed EfW Facility will be located and the creation of future public roads. **The subdivision element remains unchanged.**

2.5. WASTE SOURCE & COMPOSITION

This section sets out an overview of the waste streams and the composition of the feedstock to be processed at the proposed EfW Facility.

MRA has prepared a supplementary report TNG Feedstock Review dated May 2021 (**Appendix A**) addressing the impact of removing floc from the feedstock of the proposed EfW Facility. MRA undertook an analysis of the volume and composition of available feedstock in the MLA and considered the potential feedstock available for the MSW, C&I and C&D waste streams in the MLA. To estimate the quantity of eligible feedstock as prescribed in the NSW EfW Policy Statement the source separation, collection and processing information for all waste in the MLA.

Based on this analysis the MRA report concluded the following:

- The NSW MLA currently landfills 5.5 million tpa;
- The feedstock to TNG complies with the Resource Recovery Criteria set out in Table 1 of the NSW EfW Policy;
- All of the 552,500 tonnes of feedstock are contracted to TNG providing security of supply;
- The feedstock provided to TNG is “like” the feedstock supplied to Ferrybridge;
- The Bingo network recycles between 80-90% of the input tonnages means that the proposed EfW Facility can demonstrate the highest resource recovery outcomes of any and all proposed EfW facilities in Australia; and
- The feedstock has a calorific value between 8,500-16,485 kJ/kg which meets the HZI combustion requirements for the proposed EfW Facility as set out in **Figure 7**.

The review of the potential feedstock to supply the proposed EfW Facility has detailed that there is sufficient waste feedstock sources available to TNG within the MLA to operate the proposed EfW Facility.

The proposed EfW Facility could draw feedstock from the following three sources of eligible feedstock:

- Stream 1 – Bingo Network Processing Facilities - 203,507 tpa of residual waste from processing of mixed C&D waste processed at Bingo C&D facilities other than MPC1 and MPC 2 which is currently landfilled;
- Stream 2 - Bingo MPC1 (and in future MPC2) - 279,693 tpa of residual waste from processing of mixed C&D waste processed at MPC1 (and in future MPC2) which is currently landfilled; and
- Stream 3 - Mixed C&I Waste – 69,300 tpa of residual waste from processing of mixed C&I waste processed at MPC1 (and in future MPC2) which is currently landfilled.

2.6. SUITABLE FUEL TYPES FOR PROPOSED EFV FACILITY

There is **no change** to the technology to be implemented in the proposed EfW Facility from that presented and assessed in the amended EIS and RTS report.

Section 4 of the NSW Energy from Waste Policy provides inter alia that:

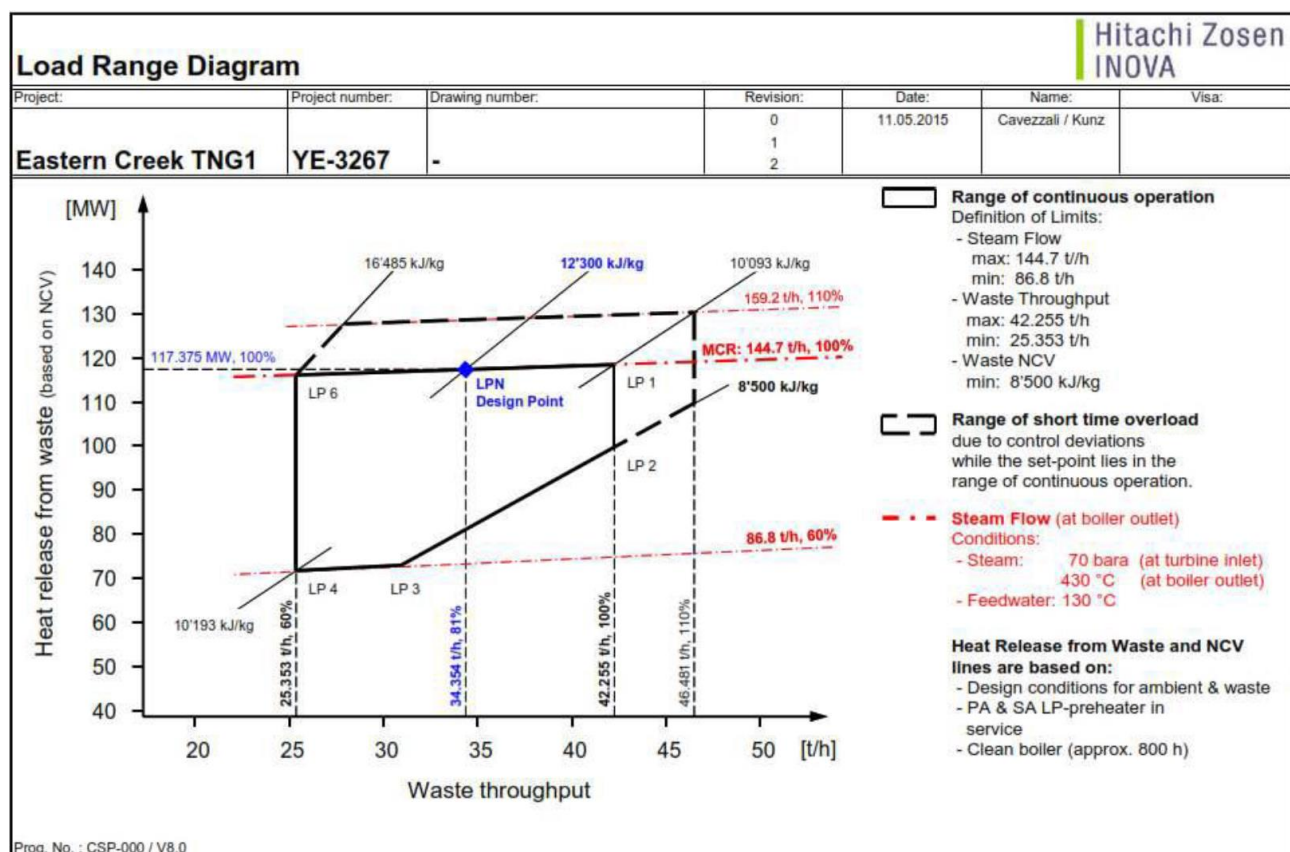
Energy recovery facilities must use technologies that are proven, well understood and capable of handling the expected variability and type of waste feedstock. This must be demonstrated through reference to fully operational plants using the same technologies and treating like waste streams in other similar jurisdictions

Hitachi Zosen Inova Australia Pty Ltd (**HZI**) have reviewed the proposed fuel types (**Appendix B**) presented in the MRA TNG Feedstock Review report. The purpose of the review was to determine the calorific value of the fuel types and determine whether they were suitable for the operation of the proposed EFV Facility and whether or not the fuel types were consistent with those used in the nominated reference facility, Ferrybridge.

HZI identified that the nominated fuel stock mix would have a calorific value of 11,584 kJ/kg at a waste throughput of 34.5 t/h which is between the minimum and maximum calorific value of 8,500 kJ/kg to 16,485 kJ/kg of the HZI combustion diagram (shown below as **Figure 7**).

While the combined feedstock is located slightly below the LPN/Design point (blue point in the diagram below) it is well inside the allowable "Range of continuous operation".

Figure 7 Range of Continuous Operation



Source: HZI, 2021

2.6.1. Review of Fuel Types

HZI in undertaking the review has confirmed that all fuel types are suitable for the HZI plant design, either on their own, in combination thereof, or the particular composition nominated by MRA.

Fuel type flexibility is the essence of the HZI Energy from Waste design, which can handle various compositions cognisant that waste constantly changes.

HZI has given guarantees to this effect based on demonstrated experiences with more than 700 delivered EfW projects worldwide and has confirmed that all those plants:

- Have differing waste inputs subject to the originating industry sector and pre-treatment;
- Have variations, and if ever the exact design fuel composition to that nominated by MRA is burned, then it will be only momentarily as waste constantly varies over time even if coming from the same source; and
- Can safely operate under the constantly varying waste characteristics and below the specified emission limits.

2.6.2. Reference Facility

For the purpose of the amended EIS and the RTS report the HZI Ferrybridge Multifuel FM1 facility was nominated as a reference site for the purpose of the NSW EPA Energy from Waste policy. The HZI Ferrybridge Multifuel FM1 facility (**Ferrybridge**) remains as the reference facility for the purpose of this Planning Statement.

The HZI review (**Appendix A**) examined the permitted waste types accepted by Ferrybridge and compared that to the proposed waste feed stock presented in the MRA Report (**Appendix B**) and considered the outcomes of removing floc waste from the waste feed stock. HZI found that:

- The waste types burnt in Ferrybridge are qualitatively identical to the proposed Streams 1, 2, and 3 for the proposed EfW Facility consistent with the European Waste Code (EWC),
- There is a slight quantitative difference in the percentages between the waste types, e.g.
 - 63% of the proposed EfW Facility versus 81% for Ferrybridge
 - 37% for the proposed EfW Facility versus 19% for Ferrybridge
- These differences are irrelevant as Ferrybridge is able to burn 100% of either waste type on its own which is also fully guaranteed by HZI as the technology provider,
- The proposed Streams 1, 2, and 3 nominated by MRA are “like for like” with the waste burnt in the Ferrybridge facility between 2016 and 2019.

The proposed EfW Facility is of the same design in size and technology as Ferrybridge and as such the proposed EfW Facility is considered to be “like for like” the Ferrybridge FM1 operation consistent with the NSW EPA Energy from Waste Policy

The removal of floc from the waste streams for the proposed EfW Facility means that the average waste input will have a lower concentration in chlorine, sulphur, and heavy metals. HZI has confirmed that the performance and the guarantees of the proposed EfW Facility will be met with this change.

2.6.3. Best Available Technology

The combustion and flue gas treatment technology to be installed and operated in the proposed EfW Facility has been design by HZI is classified as Best Available Technology (**BAT**). This is confirmed as the other operations designed by HZI have permitted, contracted, delivered, and tested in operation as BAT.

2.6.3.1. MPC Best Available Technology

BINGO's Materials Processing Facility 2 (MPC2) at its Eastern Creek Recycling Ecology Park in Western Sydney is the world's largest and most advanced dry mixed waste recycling facility.

Fitted with some of the world's most advanced resource recovery and manufacturing technology, when fully operational the \$100 million plant will be capable of diverting approximately 90% of materials from landfill.

The 9,000 square metre plant will process up to 7,000 tonnes of materials a day or 300 tonnes per hour. The new plant is capable of processing both building & demolition (B&D) and commercial & industrial (C&I) waste. The advanced screening, sorting and processing technology installed in the new plant will produce a high-quality end-product, most of which will be turned into BINGO's ECO Product range of recycled building and landscaping products such as aggregate, road base, sand, soil, mulches, paper, cardboard, plastics and metals

3. UPDATED IMPACT ASSESSMENTS

3.1. AIR QUALITY ASSESSMENT

Zephyr Environmental undertook a review (**Appendix C**) of the Air Quality and Greenhouse Gas Assessment (**AQQGG Assessment**) prepared by Pacific Environmental dated 20 November 2017 to identify the outcome of removing floc from the feedstock to determine consequences for the air quality assessment.

The Review noted that:

- *The air pollution control technology at any modern EfW facility is designed to handle a range of waste derived fuel, including the chemical constituents within floc, without significant impact upon the post-abatement technology.*
- *However, any change to the feedstock that removes floc will remove the perception that this waste stream increases uncertainty around performance of the proposed air pollution control technology.*

The atmospheric dispersion modelling prepared for and reported in the AQQG Assessment is based on the assumption that regulatory emission limits are met regardless of feedstock composition. This assumption is consistent with the discussion on the best available technology in section 2.6 above and is considered reasonable for the waste streams proposed.

As such there is no uncertainty around the performance of the air pollution technology and the removal of floc does not change the conclusions of the AQQG in relation to air quality.

As such, the above proposed change does not change the conclusions of this work.

3.2. GREENHOUSE GAS ASSESSMENT

Zephyr Environmental undertook a review of the AQQG Assessment prepared by Pacific Environmental dated 20 November 2017 to identify the outcome of removing floc from the feedstock to determine the consequences for the greenhouse gas assessment (**Appendix D**).

The AQQG found that the proposed EfW Facility when including floc in the waste stream would achieve an annual greenhouse gas reduction of more than 600,000 tonnes of carbon dioxide equivalent which equates to 15.3 million tonnes over a 25-year period.

The removal of floc represents the removal of a largely inert waste stream (typical constituents being plastics, leather, textiles, metals). The replacement of floc with a feedstock of the nature nominated by MRA Consulting would result in a further reduction of greenhouse gas by diverting from landfill material that has a greater potential to generate methane than floc.

The removal of floc has the potential to deliver an improvement in the above stated greenhouse gas benefits of the proposed EfW Facility.

3.3. ODOUR

Zephyr Environmental undertook a review of the Odour Assessment, prepared by Pacific Environment, dated 8 September 2017 to identify potential consequences of removing floc from the feedstock in terms of potential odour (**Appendix E**).

The review found that I anticipate that the removal of floc from the feed stock would not negatively impact upon the conclusions of the Odour Assessment, namely that it is anticipated that the operation of the proposed EfW Facility would not have a negative impact upon the local odour environment.

This conclusion was based on the following factors:

- All feedstock will be delivered and stored within the waste receival hall. During operations, the receival hall is kept under negative pressure as all air within the receival hall is drawn to the furnaces;
- Incineration of any odorous air within the furnaces (i.e., at 850 C) is a highly effective odour mitigation strategy;
- The waste receival hall is able to contain fugitive odour emissions when the facility is under shutdown or maintenance conditions (i.e., air is not being drawn to the furnaces); and

- The proposed waste stream is non-putrescible, and in the main C&I / C&D waste, which is not highly odorous.

3.4. HUMAN HEALTH RISK ASSESSMENT

AECOM undertook a review of the proposed EfW Facility (**Appendix F**) and considered the consequence of removing floc from the waste feed stock consider any implications for the outcomes of the Human Health Risk Assessment (**HHRA**) dated 28 September 2017 prepared for the proposal.

The HHRA in considering the implications of the removal of floc from the feedstock has reviewed the Zephyr AQGG Assessment.

The review of the HHRA found that the *...ground level concentrations resultant from atmospheric dispersion modelling undertaken as part of AQGG Assessment were used in the HHRA. Therefore, given that an operational scenario whereby regulatory emission limits were met was considered in the HHRA, similarly the proposal to remove floc from the waste stream would not change the conclusions of the HHRA.*

4. PROJECT BENEFITS

The proposed EfW Facility has been designed to be a major contributor to the diversion of waste from landfill, reduction in potential methane emissions and provision of low carbon, renewable energy to deal with NSW waste challenges.

The proposal is expected to deliver a number of economic, social, and environmental benefits for the community and NSW economy, as outlined below:

- The proposed EfW Facility will introduce to the State of NSW the world's leading technology to break future reliance on landfilling as the sole repository of residual waste.
- The proposed EfW Facility will provide a safe, clean and reliable form of energy generation for Metropolitan Sydney now and in the future, resulting in improved waste management and a reduction in the need for additional landfill sites in the medium term in Metropolitan Sydney.
- The proposed EfW Facility will be capable of delivering baseload electrical power directly into the State's electricity grid.
- The proposed EfW Facility provides a sustainable solution to Sydney's growing levels of waste generation.
- The proposed EfW Facility will result in a net positive greenhouse gas effect, eliminating the emission of approximately 600,000 tonnes of CO₂ per annum from landfill.
- The development is well separated from residential uses, which minimises any perceived adverse impacts.
- The proposed EfW Facility has been designed to respond to minimise the visual impact of the facility from the public domain and nearby sensitive land uses.
- The proposed EfW Facility will generate in the order of 500 direct construction jobs and 55 new jobs during facility operation, it contributes to energy security and diversity by providing additional low carbon, renewable electricity generating capacity, and supports the use of waste materials destined for landfill, thus saving landfill space and reducing greenhouse gas emissions from decomposing landfill matter.

5. CONCLUSION

This Planning Statement presents an assessment of the consequences of removing floc from the waste stream to be processed by the proposed EfW Facility and provides a full description of the proposal as proposed with this amendment.

This Planning Statement incorporates the reviews of key operational elements (which are relevant to the removal of floc from the waste stream). These reviews have found that the removal of floc:

- Will not impact the availability of feedstock to supply the proposed EfW Facility as there is sufficient waste feedstock sources available to TNG within the MLA to operate the proposed EfW Facility;
- Will not change or impact the ecological strategy, civil works and stormwater strategy, or proposed subdivision for the site, nor will it change or alter the visual presentation of the proposed EfW Facility;
- Will not require a change to the technology to be implemented in the proposed EfW Facility;
- Can be accommodated in the proposed EfW Facility as fuel type flexibility is the essence of the HZI Energy from Waste design, which can handle various compositions cognisant that waste constantly changes. The proposed EfW Facility has been designed to safely operate under the constantly varying waste characteristics and below the specified emission limits;
- Means that the proposed Streams 1, 2, and 3 nominated by MRA Consulting are “like for like” with the waste burnt in the Ferrybridge facility between 2016 and 2019 and as such the Ferrybridge facility can be considered a reference facility for the purpose of the NSW Energy from Waste policy;
- Does not give rise to any uncertainty around the performance of the air pollution technology presented by HZI and does not change the conclusions of the AQGGG in relation to air quality;
- Represents the removal of a largely inert waste stream (typical constituents being plastics, leather, textiles, metals). The replacement of floc with a feedstock of the nature nominated by MRA Consulting would result in a further reduction of greenhouse gas by diverting from landfill material that has a greater potential to generate methane than floc;
- Would not negatively impact upon the conclusions of the Odour Assessment, namely that it is anticipated that the operation of the proposed EfW Facility would not have a negative impact upon the local odour environment; and
- Will not result in an operational scenario whereby regulatory emission limits could not be met and as such the conclusions of the HHRA remain unchanged.

In addition to the above, a thorough review of the concerns raised by objectors in relation to LEC proceedings 2019/13009 has been undertaken, it is noted that as a result of the amended proposal the following issues as previously raised are able to be addressed:

- Insufficient evidence of pollution control;
- Uncertainty of chemical composition of floc;
- Impacts on water quality and human health;
- Additional information regarding a reference facility that treats floc waste;
- Uncertainty of supply of eligible waste; and
- Inadequate ash management.

DISCLAIMER

This report is dated 7 July 2021 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of The Next Generation (**Instructing Party**) for the purpose of Planning Statement (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A

MRA FEEDSTOCK REVIEW - 28 MAY 2021

APPENDIX B

HZI REVIEW – 7 JUNE 2021

APPENDIX C

AIR QUALITY ASSESSMENT – 1 JULY 2021

APPENDIX D

GREENHOUSE GAS ASSESSMENT – 1 JULY 2021

APPENDIX E

ODOUR ASSESSMENT – 1 JULY 2021

APPENDIX F

HUMAN HEALTH RISK ASSESSMENT – 13 JULY 2021

