NSW GOVERNMENT

Woodlawn Waste Management Facility

Part 3A Modification Application Assessment (MP 06_0239 MOD 2 & MP 10_0012 MOD 3)

March 2019

Cover photo
Woodlawn Bioreactor
Source: https://www.theswitchreport.com.au/business/ongoing-evolution-veolias-woodlawn-eco-precinct/

Glossary

Abbreviation	Definition
Bioreactor	Woodlawn Bioreactor
CEMP	Construction Environmental Management Plan
CIV	Capital Investment Value
Consent	Development Consent
Crisps Creek IMF	Crisps Creek Intermodal
CTMP	Construction Traffic Management Plan
Department	Department of Planning and Environment
DoI Lands & Water	Department of Industry – Lands & Water
EA	Environmental Assessment
ED	Evaporation Dam
EIS	Environmental Impact Statement
EPA	New South Wales Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EP&A (ST&OP) Regulation	Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ERF	Energy Recovery Facility
ESD	Ecologically Sustainable Development
FRNSW	Fire and Rescue NSW
GHG	Greenhouse Gas
GHGA	Greenhouse Gas Assessment
GLEP	Goulburn Mulwaree Local Environmental Plan 2009
GMC	Goulburn Mulwaree Council
ICNG	NSW Interim Construction Noise Guideline 2009
IMF	Intermodal Facility
INP	NSW Industrial Noise Policy 2000
LEP	Local Environmental Plan
LLS	Local Land Services
MBT	Mechanical Biological Treatment
Minister	Minister for Planning
MSW	Municipal Solid Waste

Abbreviation	Definition
NCC	National Construction Code
NCW	Non-Conforming Waste
OEH	Office of Environment and Heritage (NSW)
ONVMP	Operational Noise and Vibration Management Plan
OTMP	Operational Environmental Management Plan
PAC	Planning Assessment Commission
Proponent	Veolia Environmental Services (Australia) Pty Ltd
PVC	polyvinyl chloride
RFS	NSW Rural Fire Services
RMS	Roads and Maritime Services (NSW)
RtS	Response to Submissions
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning and Environment
SEPP	State Environmental Planning Policy
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SRF	Solid Recovered Fuel
SSD	State Significant Development
TADPAI	Tarago Progress Association Incorporation
TfNSW	Transport for NSW
tpa	tonnes per annum
TIA	Traffic Impact Assessment
VIA	Visual Impact Assessment
WARR Act	*Waste and Resource Recovery Act 2001*
WARR Strategy	NSW Waste Avoidance and Resource Recovery Strategy 2014-21
WEP	Woodlawn Eco Precinct
WF	Woodlawn Farm
WM	Woodlawn Mine
WWMF	Woodlawn Waste Management Facility

Executive Summary

Veolia Environmental Services (Australia) Pty Ltd (the Proponent) has lodged a section 75W modification request and accompanying Environmental Assessment (EA) seeking approval to construct and operate a Solid Recovered Fuel (SRF) facility at the Woodlawn Eco Precinct (WEP) in the Goulburn Mulwaree Local Government Area (LGA).

The site is located 10 kilometres (km) south-west of Tarago and 40 km south of Goulburn and borders the Queanbeyan-Palerang Regional LGA to the west and south. The WEP comprises the Woodlawn Waste Management Facility (WWMF) (Woodlawn Landfill/Bioreactor and Crisps Creek Intermodal Facility), Woodlawn Mechanical Biological Treatment (MBT) facility, Woodlawn Farm, Woodlawn Aquaculture and Horticulture Farm and Woodlawn Wind Farm.

In 2007, the then Minister for Planning granted project approval (MP 06_0239) for the MBT development which converts waste into compost which is used to rehabilitate the former Woodlawn Mine site. Currently the MBT generates residual wastes during processing that are not suitable for composting, including plastics, textiles, paper, metals, wood and cardboard.

The Proponent proposes to construct and operate an SRF facility with a processing capacity of up to 50,000 tonnes per annum (tpa). The SRF facility will divert approximately 37,400 of tpa residual waste generated at the MBT from landfill and produce SRF material that will be used for energy recovery facilities off-site. A modification to the Crisps Creek Intermodal Facility (Crisps Creek IMF) (MP 10_0012) is also proposed to facilitate the transfer of containers with SRF material being transported from the Crisps Creek IMF to an intermodal facility at Port Kembla or Port Botany for export.

The proposed SRF facility is consistent with the NSW Government's policy by contributing to the targets in the Waste Avoidance and Resource Recovery Strategy 2014-2021. The development would assist in increasing the waste diverted from landfill from 63% (in 2010-11) to 75%.

The development has a capital investment value of $12 million and is expected to generate 25 construction jobs and 3 new operational jobs.

The project was originally approved under Part 3A of the EP&A Act. The project is a transitional Part 3A project under Schedule 2 to the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017* (EP&A (STOP) Regulation). The power to modify transitional Part 3A projects under the former section 75W of the Act as in force immediately before its repeal on 1 October 2011 is being wound up – but as the request for this modification was made before the 'cut-off date' of 1 March 2018, the provisions of Schedule 2 (clause 3) continue to apply. Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or his delegate) may approve or disapprove the modification of the project under the former section 75W of the EP&A Act.

Under the Minister's delegation of 11 October 2017, the Executive Director, Key Sites and Industry Assessments can determine the modification request as there were less than 25 public submissions in the nature of objections, Goulburn Mulwaree and Queanbeyan-Palerang Regional Councils did not object to the modification request and no political donations were made in the last two years.

The Department of Planning and Environment (the Department) exhibited the modification request and EA from Friday 27 July 2018 until Friday 17 August 2018. A total of 14 submissions were received on the modification request during the exhibition period, including:

- nine submissions from public authorities (seven State government agencies and two Councils)
- one from private business
- two from special interest groups
- two from the general public.

Of the five submissions received from the general public, local businesses and special interest groups, two objected to the modification request and three provided comments.

The key issues raised in the public submissions related to traffic impacts including additional heavy vehicle movements every fortnight on Saturdays and queuing on Collector and Bungendore Roads, potential odour impacts, and water management associated with container cleaning. Government agencies raised concerns regarding water requirements for construction and operation of the SRF facility, compliance with the NSW Energy from Waste Policy Statement 2015 (EfW Policy), on-site fire management and capacity of the sewerage treatment plant.

The Proponent submitted a Response to Submissions (RtS) report on 2 October 2018 to address and clarify matters raised in the submissions. The Department reviewed the RtS in consultation with the government agencies and deemed further information and clarification was required regarding consistency with the EfW Policy, traffic impacts and logistics, noise impact, air quality impact, fire management and water management. A further RtS report, which responded to these issues was submitted on 16 November 2018. After reviewing the revised RtS, the EPA, FRNSW and Water NSW raised no further concerns and recommended conditions of consent.

The Department's assessment of the modification request has fully considered all relevant matters under Section 4.15 of the EP&A Act and the objects of the EP&A Act. The Department's assessment has identified the following key issues for assessment include consistency with the EfW Policy and traffic impacts.

The Department's assessment concluded that impacts of the proposed SRF facility and modifications to the Crisps Creek IMF can be mitigated and/or manged to ensure an acceptable level of environmental performance, subject to the recommended conditions of consent. In summary, the development would:

- be capable of processing up to 50,000 tpa of waste previously landfilled
- be consistent with the EPA's Energy from Waste Policy Statement
- positively contribute to the State's WARR Strategy performance
- generate traffic that could be accommodated on the local and regional road networks without any significant impacts on safety, efficiency and capacity
- meet the relevant air quality and noise criteria with appropriate mitigation measures in place
- provide a range of environmental and economic benefits for the region, through resource recovery and the provision of 25 construction jobs and 3 new operational jobs.

Consequently, the Department considers the modification request is in the public interest and is recommended for approval, subject to conditions.

Contents

1. Introduction

This report assesses a modification request (modification request) by Veolia Environmental Services (Australia) Pty Ltd (the Proponent) to construct and operate a Solid Recovered Fuel (SRF) facility with a processing capacity of up to 50,000 tonnes per annum (tpa) as part of the Woodlawn Mechanical Biological Treatment (MBT) development (MP 06_0239) (which converts waste to compost). A modification to the Crisps Creek Intermodal Facility (Crisps Creek IMF) (MP 10_0012) is also proposed to facilitate the transfer of containers with SRF material from the Crisps Creek IMF to an intermodal facility at Port Kembla or Port Botany for export. Both requests have been lodged pursuant to the former section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The modification request to the MBT includes recycling residual general solid waste (non-putrescible) from the MBT to produce an alternative fuel source to fossil fuels which would be used as feedstock in the cement kiln and energy from waste industries. The waste processed at the SRF facility would have a high calorific value and would primarily comprise non-putrescible materials such as plastics, textiles, paper, metals, wood and cardboard. The fuel produced at the SRF facility would not be thermally used on-site, rather it would be transported off-site by rail and utilised elsewhere in domestic and international markets. There will be no changes to the overall processing capacity or waste streams at the MBT, as the processing of SRF would be an additional step in the resource recovery process of the MBT.

The MBT and Crips Creek IMF projects were originally approved under Part 3A of the EP&A Act. The project is a transitional Part 3A project under Schedule 2 to the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017* (EP&A (STOP) Regulation). The power to modify transitional Part 3A projects under the former section 75W of the Act as in force immediately before its repeal on 1 October 2011 is being wound up – but as the request for this modification was made before the 'cut-off date' of 1 March 2018, the provisions of Schedule 2 (clause 3) continue to apply. Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or his delegate) may approve or disapprove the modification of the project under the former section 75W of the EP&A Act.

1.1 Background

1.1.1 Woodlawn Mine

The Proponent operates an MBT facility at 619 Collector Road, Tarago within the former Woodlawn Mine (WM) (see **Figure 1**) site which comprises:

- an open cut mine void with an access to the underground mine workings
- 3 large tailing dams – Tailings Dam South (TDS), Tailings Dam North (TDN) and Tailings Dam West (TDW)
- an extensive water management system, including clean water diversions around the mine and 3 large evaporation dams (ED 1, ED 2 and ED 3)
- a waste rock dump area
- a range of surface infrastructure off Collector Road
- surrounding rural land and pine plantations.

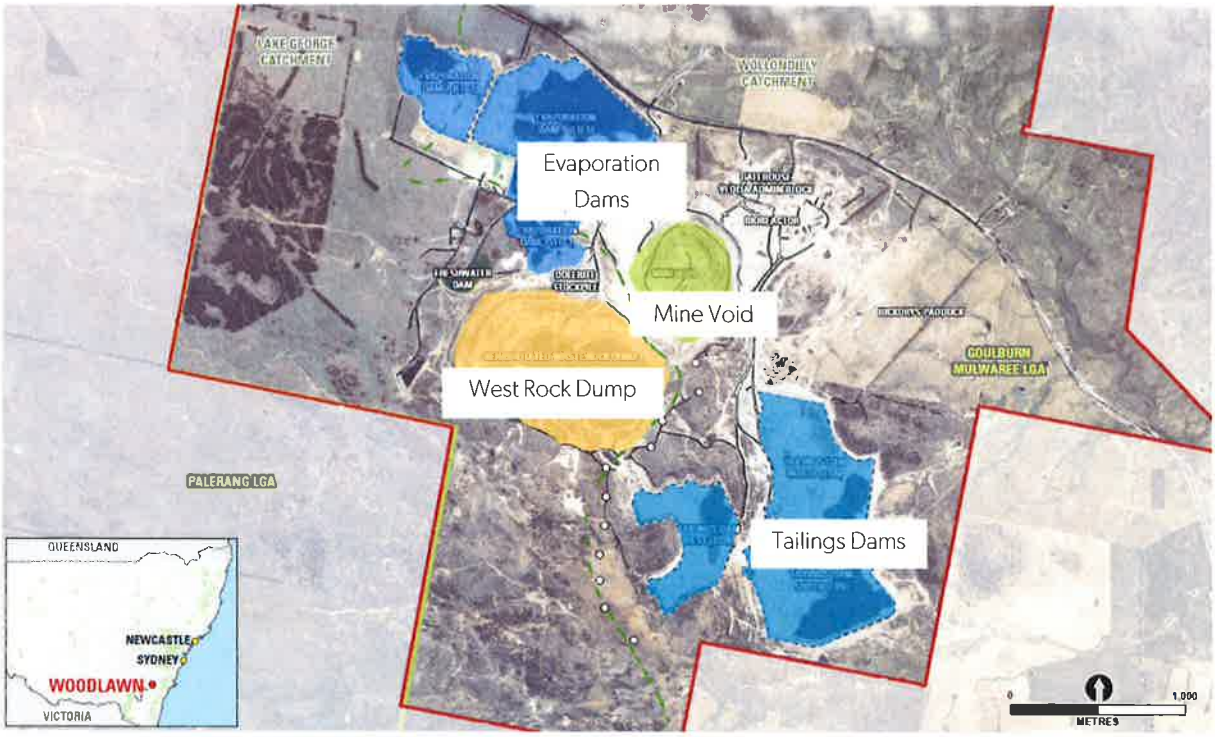

Figure 1 | Former Woodlawn Mine Site Plan

Open cut mining operations commenced at the site in 1978 and ceased in 1990, whilst underground mining operations through access tunnels excavated into the walls of the mine void commenced in 1987 and ceased in March 1998.

The Proponent purchased the Woodlawn Mine (WM) and surface rights in 1998 to construct and operate waste treatment facilities. In 2013, mining company Heron Resources Ltd (former TriAusMin) received project approval (MP 07_0143) to re-establish mining operations within the former open cut mine site, including the Woodlawn Tailings Retreatment Project and the Woodlawn Underground Project (production of up to 150,000 tonnes of copper, lead and zinc ore concentrate per year). It is anticipated that the Woodlawn Underground Project will commence production in early 2019.

1.1.2 Woodlawn Eco Precinct

The proposed SRF facility is located within the Woodlawn Eco Precinct (WEP) site (see **Figure 2**). The WEP is 6,000 hectares (ha) in area and is located within the Goulburn Mulwaree Local Government Area (LGA). The site is located approximately 10 kilometres (km) south of Tarago and 40 km south of Goulburn. The WEP includes:

- Woodlawn Waste Management Facility (WWMF), including:
  - Woodlawn Bioreactor (the Bioreactor) and Woodlawn Bioenergy Power Station (the Power Station)
  - the Crisps Creek IMF
- Woodlawn MBT
- Woodlawn Farm
- Woodlawn Aquaculture and Horticulture Farm
- Woodlawn Wind Farm (operated by Infigen Energy).

Woodlawn Bioreactor and Woodlawn Bioenergy Power Station

The Bioreactor is a large putrescible landfill that principally services the Sydney region and is located within the void of the former Woodlawn Mine (shown as mine void in **Figure 1**). Waste in the Bioreactor is kept under optimal conditions to maximise landfill gas production. Gas is captured via a horizontal and vertical gas collection system

and then transferred through a series of transformers within the Woodlawn Bioenergy Power Station (the Power Station) and converted to energy at a substation where power is exported to the Woodlawn Aquaculture and Horticulture Farm and the national grid.

Crisps Creek IMF

The Crisps Creek IMF is a dedicated intermodal facility which accepts up to 1.18 million tonnes of putrescible waste by rail from Sydney's Clyde and Banksmeadow Waste Transfer Terminals (also operated by the Proponent). Two trains (four movements) in total are permitted at the Crisps Creek IMF per day, Monday to Saturday.

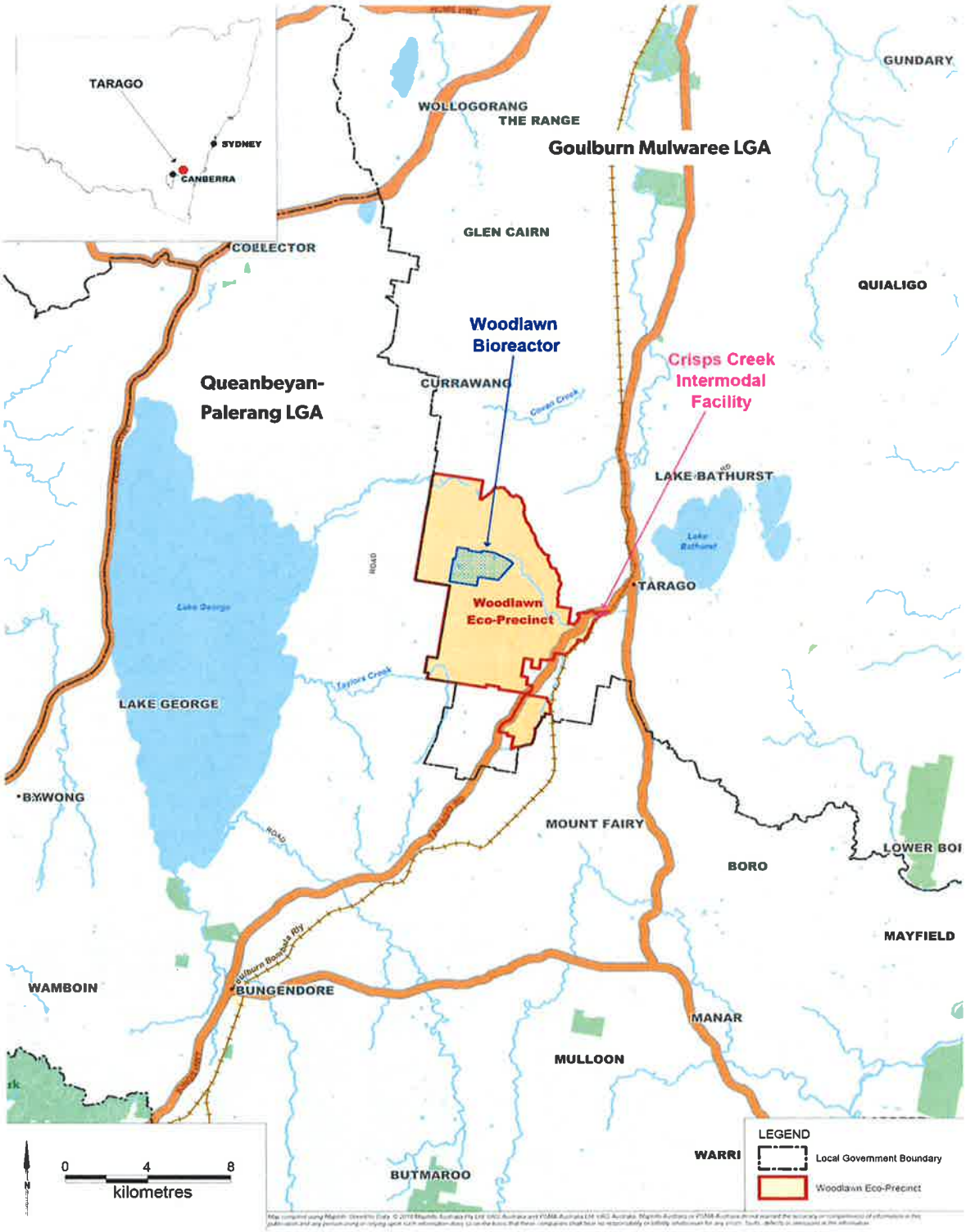

Figure 2 | Site Location (Woodlawn Eco Precinct)

Woodlawn MBT Facility

The MBT facility is located 1.2 km and 2 km to the north-west of the Bioreactor and the proposed SRF facility respectively. The MBT facility is approved to process up to 280,000 tpa of waste including Municipal Solid Waste and garden waste. Waste is transported from Sydney by rail in containers to the Crisps Creek IMF and delivered to the MBT facility by trucks. Processed organic waste is reused to produce composts. Residual waste from MBT processing that cannot be recycled is transported to the Bioreactor for landfilling.

1.2 Approval History

Three development approvals relate to the site and include:

- Development Consent DA 31-02-99: Woodlawn Waste Management Facility (the Bioreactor and Crisps Creek IMF) approved by the then Minister for Urban Affairs and Planning on 30 November 2000
- Project Approval MP 10_0012: Woodlawn Waste Expansion Project (the Bioreactor and Crisps Creek IMF) approved by the former Planning Assessment Commission as delegate of the Minister for Planning on 16 March 2012
- Project Approval MP 06_0239: Woodlawn Mechanical Biological Treatment Facility approved by the former Minister for Planning on 6 November 2007.

1.2.1 Woodlawn Waste Management Facility (DA 31-02-99)

On 30 November 2000, development consent (DA 31-02-99) was granted by the then Minister for Urban Affairs and Planning for the construction and operation of the WWMF. The consent was granted following a Commission of Inquiry and includes the Crisps Creek IMF and the Bioreactor. The consent permitted for the receipt of up to 500,000 tpa of putrescible waste, solely from Sydney. The development consent has been modified on three occasions as follows:

- MOD 1 was approved on 11 August 2010 by then Executive Director of Major Projects Assessment, as delegate of the Minister for Planning (DA 31-02-99 MOD 1) to receive up to an additional 50,000 tpa of waste from regional areas within the vicinity of the facility by road
- MOD 2 was approved on 9 September 2016 by the Acting Executive Director, Key Sites and Industry Assessments, as delegate of the Minister for Planning (DA 31-02-99 MOD 2) to include an interim leachate management measure by increasing the leachate storage capacity within Evaporation Dam 3 South-South as more leachate was being generated than anticipated resulting in odour impacts on the local community
- MOD 3 was approved on 22 December 2017 by the Director, Industry Assessments, as delegate of the Minister for Planning (DA 31-02-99 MOD 3), for the construction and operation of a leachate treatment plant to treat leachate from the Bioreactor, the construction of a leachate treatment dam and changes to the operating hours to ensure consistency across DA 31-02-99 and MP 10_0012.

1.2.2 Woodlawn Bioreactor Expansion Project (MP 10_0012)

On 16 March 2012, the former Planning Assessment Commission (the Commission), as delegate of the then Minister for Planning and Infrastructure, granted Project Approval (MP 10_0012) under Part 3A of the EP&A Act for the Woodlawn Waste Expansion Project, to allow an increase in the maximum input rate for the Bioreactor from 500,000 tpa to 1.13 million tpa (including up to 900,000 tpa from Sydney Region, up to 100,000 tpa from MBT residual waste stream and up to 130,000 tpa from regional LGAs).

The Department recommended that DA 31-02-99 be surrendered under MP 10_0012. However, the Commission did not permit DA 31-02-99 to be surrendered as no justification for the surrender was provided and the

Proponent's obligation to rehabilitate the former mine site would be lost if DA 31-02-99 was surrendered. As such, both development consents continue to operate.

Project approval MP 10_0012 has been modified on two occasions:

- on 9 September 2016, a former section 75W modification to the Woodlawn Waste Expansion Project (MP 10_0012 MOD 1) was granted by the then Acting Executive Director, Key Sites and Industry Assessments, as delegate of the Minister for Planning. The modification permitted amendments to the site's stormwater and leachate management system
- on 22 December 2017, a former section 75W modification to the Woodlawn Waste Expansion Project (MP 10_0012 MOD 2) was granted by the Director, Industry Assessments, as delegate of the Minister for Planning. The modification permitted the construction and operation of a leachate treatment plant to treat leachate from the Bioreactor, the construction of a leachate treatment dam and changes to the operating hours to ensure consistency across DA 31-02-99 and MP 10_0012.

1.2.3 Woodlawn Mechanical Biological Treatment Facility (MBT) (MP 06_0239)

On 6 November 2007, project approval MP 06_0239 was granted by the then Minister for Planning under the former Part 3A of the EP&A Act to construct and operate an MBT facility including a waste processing building and open window composting area. The approval permits the processing of up to 280,000 tpa of waste made up of 240,000 tpa of mixed waste and 40,000 tpa of garden waste which is recycled to produce compost and used to rehabilitate the adjoining former Woodlawn Mine site. Approximately 100,000 tpa of residual waste from MBT processing that cannot be recycled is transported by truck to the Bioreactor for landfilling.

Project approval MP 06_0239 has been modified on one occasion. On 17 June 2014, the then Planning Assessment Commission as delegate of the Minister for Planning granted approval (MP 06_0239 MOD 1) under former section 75W of the EP&A Act. The modification included changes to the site layout, waste processing technology and hours of operation.

A schematic representation of the approved waste quantities, sources and destinations for the Woodlawn facility is illustrated in **Figure 3** below.

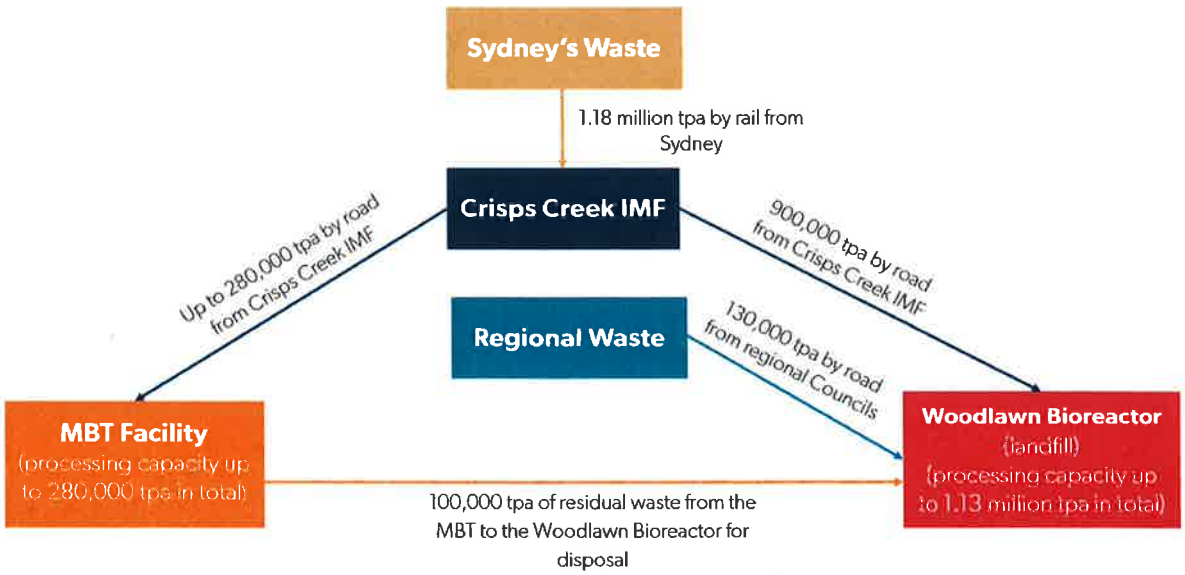

Figure 3 | Schematic Representation of Approved Waste Quantities

2. Proposed Modifications

The Proponent has lodged a modification request under former section 75W of the EP&A Act to modify Project Approval MP 06_0239 to construct and operate an SRF facility to process up to 50,000 tpa of residual waste from the MBT facility and to modify Project Approval MP 10_0012 to facilitate the loading and transfer of SRF material from the Crisps Creek IMF to Port Kembla or Port Botany.

The modification request is described in full in the Environmental Assessment (EA) and Response to Submissions (RtS) report included in **Appendix B** and summarised as follows:

- construction and operation of an SRF facility adjacent to the Woodlawn Bioenergy Power Station to produce an alternative fuel source from residual waste processed at the existing MBT
- fortnightly transfer of 55 containers of baled SRF products via trucks to the existing Crisps Creek IMF for rail to an intermodal facility at Port Kembla or Port Botany prior to dispatching to end users either locally or internationally. Each year, there will be approximately 37,400 tpa of SRF products to be transported to Port Kembla or Port Botany
- use an approved and underutilised train movement (under MP 10_0012) between the Crisps Creek IMF and Port Kembla or Port Botany every fortnight on a Saturday
- transfer of approximately 12,600 tpa of remnant waste from the SRF facility to the Bioreactor for landfilling
- storage of up to 112 containers adjacent to the SRF building which would contain baled SRF material prior to its transfer to the Crisps Creek IMF.

The SRF facility will be located adjacent to the Woodlawn power station so the energy generated from it can be used in the SRF drying process (see **Figure 4**). The SRF building will have a total floor area of 2,303 square metres (m^2) and a maximum building height of 12.3 m.

Within the SRF building, there is a drive-through loading area, SRF plant and baling area. Externally, there is an enclosed container storage area to the north of the SRF building and adjacent container loading area, truck loading area and an additional contingency container storage area (see **Figure 5**).

There will be no changes to the processing capacity or waste streams at the MBT, rather the SRF would constitute an additional step in the resource recovery process. It would result in residual waste from the MBT with a high calorific value being processed to produce an alternative fuel source suitable for use in cement kilns or as feedstock for waste facilities rather than being landfilled. The residual waste processed at the SRF facility would primarily include plastics, textiles, paper, metals, wood and cardboard with a high calorific value that can be used as a fuel source.

A concurrent modification to Crisps Creek IMF (MP 10_0012) is also proposed to facilitate the loading and transfer of SRF material from Crisps Creek IMF to an intermodal facility at Port Kembla or Port Botany.

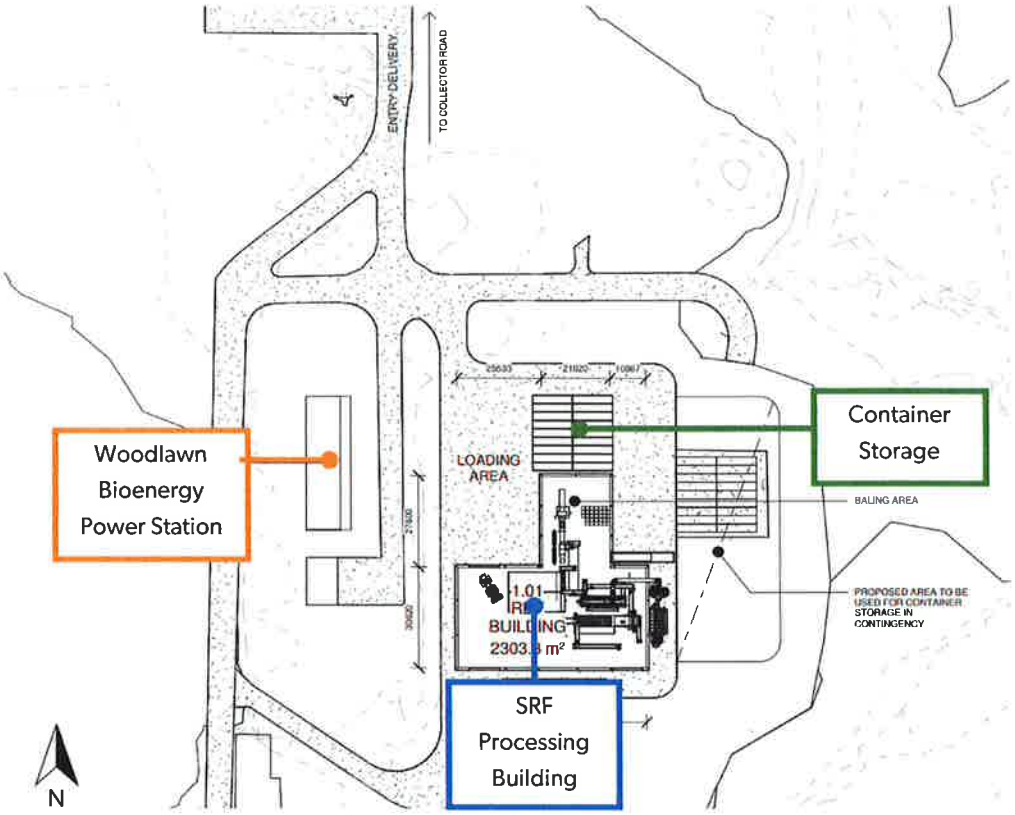

Figure 4 | Overview of the Proposed Site Layout

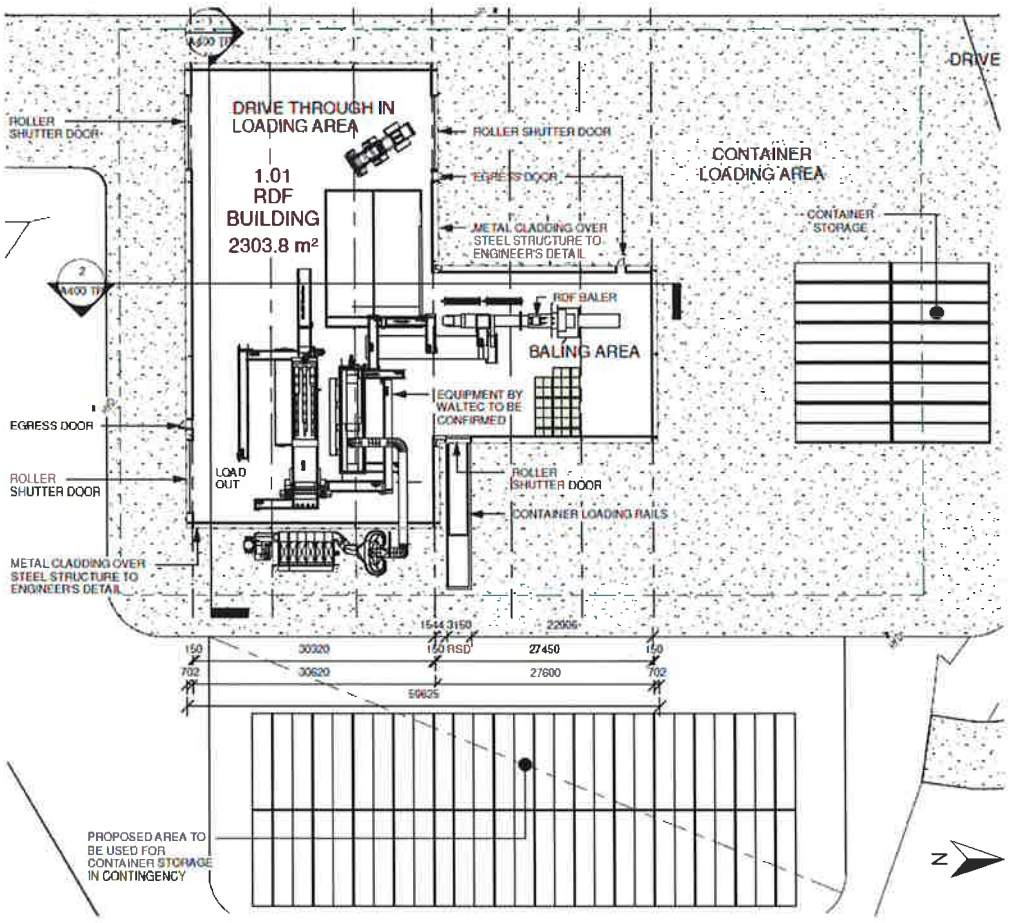

Figure 5 | Proposed SRF processing building configuration

The key components of the SRF facility are detailed in **Table 1** below. The SRF process is described in detail in **Section 2.2** of this report.

Table 1 | Summary of Modifications

Aspect	Description
Volume of Materials Processed	• 50,000 tpa of residual waste from the MBT previously directed to the Bioreactor
Waste Streams	• residual general solid waste (non-putrescible) from the MBT including plastics, hard plastics, textiles, unrecyclable paper and cardboard which are not suitable to produce compost or be recycled.
Waste to Landfill	• of the 100,000 tpa currently landfilled, up to 50,000 will be diverted to the SRF • approximately 37,400 out of 50,000 tpa will be recovered at the SRF and the remainder (12,600 tpa) of waste will be delivered to the Woodlawn Bioreactor • the modification request thereby reduces the overall landfilling requirements of the MBT to 62,600 tpa.
Construction Hours	• Monday to Friday, 7 am to 6 pm • Saturday, 7 am to 1 pm.
Operating Hours	• Monday to Saturday, 6 am to 10 pm • emergency operations, Monday to Sunday, anytime.
Parking	• utilisation of existing car parking facilities for the Bioreactor.
Access Route	• utilisation of existing access road off Collector Road and internal haulage roads.
Truck Movements	• currently the Proponent transports containerised waste from Crisps Creek IMF to the WWMF between Mondays and Fridays, with no transportation on Saturdays • the modification request includes 55 trucks round trips (110 truck movements) every fortnight on Saturday (7 am and 1 pm) between the SRF facility and the Crisps Creek IMF.
Daily Train Movements	• the Proponent proposes to use the approved Saturday train movements under MP 10_0012 to transport the SRF material between the Crisps Creek IMF and Port Kembla or Port Botany once every fortnight on a Saturday between 7 am and 1 pm.
Number of Train Wagons	• 55 wagons
Water Management	• one 30 kilolitre (kl) rainwater tank and two 144 kl firewater tanks

Aspect	Description
	• pipelines from the Woodlawn Bioreactor providing raw water (raw water is sourced from the Willeroo Borefield).
Employment	• 25 construction jobs • 3 new operational employees.
Capital Investment Value (CIV)	• $12 million

2.1 Existing MBT Processing Description

MSW and garden waste are delivered to the MBT from the Crisps Creek IMF by heavy vehicles. Waste received at the facility undergoes the following sorting process:

Table 2 | Summary of MBT Processing Procedures

Step	MBT Process
1	Waste is loaded into pits where the first screening phase is undertaken to remove waste that cannot be processed.
2	MSW and garden waste then are loaded into rotating bio-drums where air and water are combined to degrade the waste, followed by anaerobic digestion which breaks the waste down under heat before it is placed into trommel screens and magnets.
3	Trommel screens and magnets are used to filter out inorganic materials for recycling and recovery, including ferrous materials, plastic and paper.
Proposed SRF processing step	
4	Organic materials are stockpiled in sheds for fermentation and maturation to create composts.

Organic material which has been processed at the MBT is transferred to the fermentation building to create compost which will be used for rehabilitation of the former Woodlawn Mine. Recovered ferrous metals are transported off-site for recycling. Currently, all other residual material (approximately 100,000 tpa) which cannot be used for composting or recycling is sent to the Bioreactor for disposal.

2.2 Proposed SRF Processing Description

The proposed SRF Facility would include an additional recycling step (following Step 3 in **Table 2**) to reduce the amount of waste disposed of to the Bioreactor. All organics would be removed through the MBT process and only the dry non-putrescible fractions which are not suitable to be composted or recycled would be transferred to the SRF facility for processing.

The residual non-putrescible waste received at the SRF facility would comprise of plastic, hard plastics, textiles, unrecyclable paper and cardboard that can be processed into a high calorific fuel source as an alternative to fossil fuels for end users. Of the 50,000 tpa of waste proposed to be processed at the SRF facility, 37,400 tpa of waste

is likely to be able to produce alternative fuel with the remaining 12,600 tpa of waste being sent to the Bioreactor for landfilling. A breakdown of the predicted incoming waste streams is provided in **Table 3**:

Table 3 | Percentage of Incoming Waste Stream

Waste Material	Percentage of Waste Stream
Plastics	38.8%
Textiles	21.2%
Heavier Fraction	20.8%
Cardboard	9.8%
Wood	5.0%
Metals	4.4%

The SRF processing activities are illustrated in **Figure 6** and summarised in **Table 4**.

Table 4 | Summary of SRF processing procedures

Step	SRF Process
1	From the unloading bay, waste would be placed onto a conveyor located within an enclosed building where it would then pass along an electromagnet which would remove ferrous metals.
2	The conveyor would transport the remaining waste through an air separator where heavier materials would be removed from the waste stream.
3	The lighter waste material would be blown to a rotating drum into an expansion chamber where heavy plastics such as polyvinyl chloride (PVC) and other unsuitable plastics are identified and removed from the processing line. All residual waste would be diverted to the Bioreactor for landfilling. The suitable waste material would then continue along a conveyor to a shredder where its size would be reduced to 30 mm.
4	The moisture content of the waste is an important component for its combustibility, as such a moisture probe would be used to analyse the moisture content of the waste. If the moisture content is too high, the shredded waste would be diverted to a tumble dryer before being transferred onto another conveyor for baling.
5	The finished SRF material would be baled and wrapped with plastic (polyethylene) to prevent any odour emissions and to protect the waste from any infiltration of moisture. The baled material would then be stored within containers on-site for dispatch. As the SRF material would be fully enclosed in plastic wrappings within containers there would be no risk of leachate generation during wet weather.

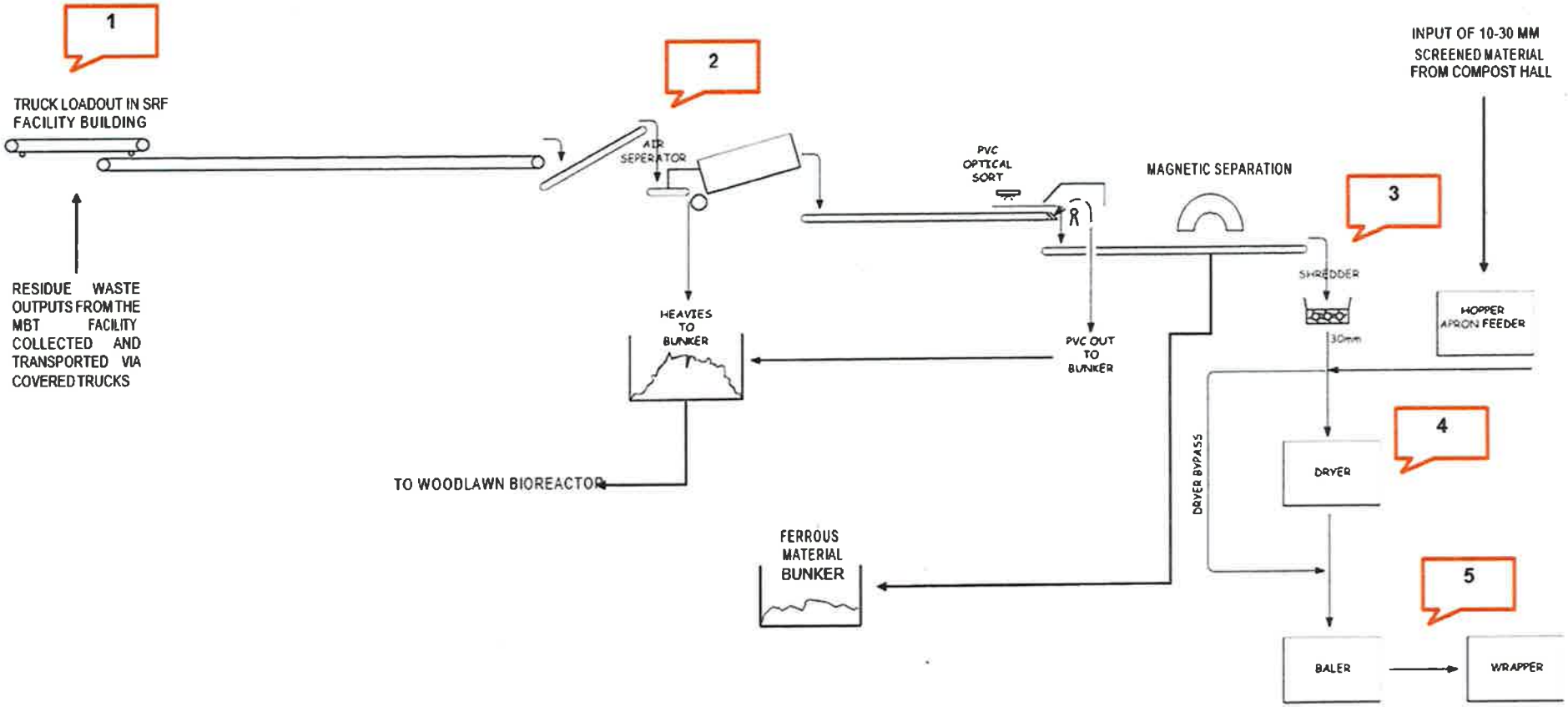

Figure 6 | SRF Processing Flow Chart

Quality Controls

The SRF output from the process would undergo a variety of quality control measures, which have been specifically designed to meet customers' SRF specifications and the NSW Energy from Waste Policy Statement 2015 (EfW Policy). These quality controls comprise:

- removal of inappropriate items through the MBT sorting process
- removal of PVC plastics, aggregates and metal during processing
- physical testing regime of lab sampling of finalised SRF prior to dispatch in accordance with European Standard EN15442:2011 Solid Recovered Fuels – Determination of Caloric Value
- use of an optical sorter to measure parameters of chlorine content, calorific value and moisture.

Any material which is not suitable as SRF material would be redirected to the Bioreactor for landfilling.

Containerised SRF Material Dispatch and Logistics

Containerised SRF material would be transported to the Crisps Creek IMF via semi-trailers (16.65 m length) where it would then be railed to an intermodal facility at Port Kembla or Port Botany.

The dispatch of SRF material containers would occur fortnightly on Saturdays between 7 am and 1 pm. The Proponent predicted that during the dispatch, every hour there would be approximately 15 heavy vehicle trips (30 truck movements) between the SRF facility and the Crisps Creek IMF. At the Crisp Creek IMF, containers of baled SRF material will be loaded from delivery trucks onto freight train containers. It is predicted that the loading will take approximately 3.5 minutes.

The Crisps Creek IMF project approval (MP 10_0012) permitted a total of 2 train round trips (4 train movements) between Sydney and Crisps Creek IMF per day, Mondays to Saturdays. The Proponent advised the current operation no longer requires train round trips on Saturdays which generates a spare logistics capacity. The modification request would utilise the spare capacity to transport containers with SRF material from the Crips Creek IMF to an intermodal facility at Port Kembla or Port Botany for export fortnightly.

2.3 Proponent's Need and Justification for the Development

The Proponent justified the need for the development by highlighting that it would assist in achieving the targets of the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021 (WARR Strategy) through the reduction of waste delivered to landfill. The SRF would enable approximately 37,400 tpa of residual waste not currently recycled or composted from landfill.

The Proponent states the site location is preferable as:

- the heat generated from the adjacent power station would be utilised in the drying process at the SRF facility
- no new internal roads would be required to be constructed for the SRF facility as the site already has a well-connected series of internal haul roads
- the location of the SRF facility is within the former Woodlawn Mine surface processing area which is already highly disturbed.

Provided environmental control measures are properly implemented and monitored, the Proponent maintains that the potential for environmental impacts would be minimal.

3. Strategic Context

The Department has considered the following strategic documentation relevant to the assessment of the modification request:

- South East and Tablelands Regional Plan 2036
- NSW Waste Avoidance and Resource Recovery Strategy 2014-21
- Goulburn Mulwaree Employment Land Strategy 2016.

3.1 South East and Tablelands Regional Plan 2036

In July 2017, the Department released the South East and Tablelands Regional Plan 2036 (Regional Plan). The Regional Plan provides a 20-year blueprint for the future of South East and Tablelands Region.

The Regional Plan recognises the WWMF as being the only landfill in the region. The proposed SRF facility will support the efficient and effective operation of Woodlawn Bioreactor and ongoing employment growth in the Goulburn Mulwaree LGA.

3.2 NSW Waste Avoidance and Resource Recovery Strategy 2014-21

Reducing waste and keeping materials circulating within the economy are priorities for the NSW Government. To meet this important challenge, the Government has prepared a State-wide Waste Avoidance and Resource Recovery Strategy (WARR Strategy). The WARR Strategy sets waste recovery targets for construction and demolition (C&D), commercial and industrial (C&I) and Municipal Solid Waste (MSW) between 2014 and 2021 as follows:

By 2021-22, increase recycling rate for:

- MSW from 52% (in 2010-11) to 70%
- C&I from 57% (in 2010-11) to 70%
- Increase the waste diverted from landfill from 63% (in 2010-11) to 75%.

The proposed SRF facility will divert approximately 37,400 tpa waste from landfill and contribute to the State's resource recovery performance by reducing the landfilled waste rate.

3.3 Goulburn Mulwaree Employment Land Strategy 2016

The Goulburn Mulwaree Employment Land Strategy 2016 (Employment Land Strategy) provides a strategic planning approach for employment lands in the Goulburn Mulwaree LGA. The Employment Land Strategy aims to ensure there are adequate and appropriate employment lands to provide for sustainable growth into the future.

The Employment Land Strategy identifies the WEP as part of the Tarago Industrial Precinct (TIP) where expansion of the current waste management and energy production uses is supported. One of the opportunities for the TIP is to become a renewable energy industrial region supporting spin off industries. The new SRF facility is in line with this strategic direction as it will produce SRF material to be used for energy recovery facilities.

4. Statutory Context

4.1 Consent Authority

The Minister for Planning is the approval authority for the request. Under the Minister's delegation of 11 October 2017, the Executive Director, Key Sites and Industry Assessments, may determine the request under delegation as:

- the relevant local council has not made an objection, and
- a political disclosure statement has not been made, and
- there are less than 25 public submissions in the nature of objections.

The modification request meets the terms of this delegation as Goulburn Mulwaree Council and Queanbeyan-Palerang Council did not object to the modification request, a political disclosure statement has not been made by the Proponent and there were two public objections received by the Department during the exhibition of the modification request.

4.2 Former Section 75W Modification

Under Schedule 2 of the EP&A (ST&OP) Regulation, the power to modify transitional Part 3A projects in accordance with former section 75W of the EP&A Act (as in force immediately before the section's repeal on 1 October 2011) is being wound up, but as the request for this modification was made before the 'cut-off date' of 1 March 2018, the provisions of clause 3BA of Schedule 2 of the EP&A (ST&OP) Regulation continue to apply.

The Department notes that:

- the primary function and purpose of the approved project would not change as a result of the modification request
- the modification request represents an additional step in the MBT recycling process to reuse suitable residual waste as SRF
- the modification is of a scale that warrants the use of former section 75W of the EP&A Act
- the approved production rates of products including SRF would remain unchanged as a result of the modification request
- any potential environmental impacts would be appropriately managed through existing or modified conditions of approval.

Therefore, the Department is satisfied the modification request is within the scope of former section 75W of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the request should be assessed and determined under former section 75W of the EP&A Act rather than requiring a new development application to be lodged.

5. Engagement

5.1 Department's Engagement

Under former section 75W of the EP&A Act, the Department is not required to notify or exhibit the modification request. However, due to the nature of the modification request and the potential for public interest, the Department exhibited the modification request from Friday 27 July 2018 until Friday 17 August 2018:

- on the Department's website
- at Service NSW Centres
- at Goulburn Mulwaree Council (GMC) (Civic Centre, 184-194 Bourke Street, Goulburn)
- at Queanbeyan-Palerang Regional Council (QPRC) (256 Crawford Street, Queanbeyan).

The modification request was also advertised in the Goulburn Post Weekly. In addition, previous submitters were notified of the modification request and invited to make a submission. The modification request was also referred to Commonwealth and Stage government agencies, Pacific National Pty Ltd, Heron Resources Limited and Tarago and District Progress Association Incorporation.

5.2 Summary of Submissions

During the exhibition period, a total of 14 submissions were received on the modification request during the exhibition period, including:

- nine submissions from public authorities (seven State government agencies and two Councils)
- one from private business
- two from special interest groups
- two from the general public.

Of the five submissions received from the general public, local businesses and special interest groups:

- two objected to the modification request
- three provided comments.

5.3 Key Issues – Government Agencies

Department of Industry – Lands and Water Division (DoI L&W) raised no objection to the modification request but requested additional information to confirm the water requirements for construction and operation of the project and whether an adequate and reliable water supply is available. DoI Lands & Water also advised that as the water supply is not an existing licensed source, additional information regarding potential impacts associated with accessing that water supply is required.

The **Environment Protection Authority (EPA)** raised no objection to the request however requested the following additional information.

Management of hazardous materials

The EPA requested the Proponent provide details on the characterisation of the hazardous material content of incoming waste streams and the methods, procedures and processes that will be put in place to manage the hazardous material content.

Halogenated substance content of the SRF material

The EPA also requested the Proponent clarify how the SRF material would meet typical halogenated substance content criteria for SRF materials as depicted in the EA.

Compliance with the NSW Energy from Waste Policy Statement 2015 (EfW Policy)

The EPA advised that the responsibility of meeting the technical and thermal efficiency criteria outlined in the EfW Policy is shared between the SRF supplier and the energy recovery facility. The EPA recommended the Proponent provide a real-world example of an SRF specification for a purpose-built energy from waste facility and to explain whether the proposed SRF facility operations would be able to meet either or both these specifications. The EPA also requested the Proponent identify specific end users of the SRF and confirm what their specifications would be.

NSW Fire & Rescue (FRNSW) raised no objection to the modification request and provided recommended conditions of consent relating to the stockpile size and volume limits, separation of external stockpiles of combustible materials from vehicle access, on-site fire hydrant system, smoke hazard management system, automatic fire suppression system and containment of contaminated firewater runoff.

Office of Environment and Heritage (OEH) raised no objection to the request and stated that at this stage they did not have any issues to raise.

Roads and Maritime Services (RMS) and **Transport for NSW (TfNSW)** raised no objection to the modification and provided no advice or recommended conditions.

Water NSW raised no objection to the modification request, but requested additional information relating to the capacity of the sewage treatment plant (STP) and an amended Soil and Water Management Plan as part of the revised Construction Environmental Management Plan (CEMP) and an amended Statement of Commitments.

5.4 Key Issues – Council/Community/Special Interest Groups

5.4.1 Council key issues

GMC supported the proposed SRF facility as it will divert additional residual waste from the Bioreactor and therefore will extend the potential lifespan of the Bioreactor, as well as the potential to provide additional benefits to the Tarago District and broader Goulburn Mulwaree LGA via the creation of additional jobs.

QPRC provided a submission but did not raise any concerns or recommended conditions of consent as additional heavy vehicle movements will not occur in its LGA.

5.4.2 Community Issues

Two submissions were received from the public, one of which objected to the modification request. Key concerns raised in the public submissions include:

- additional heavy vehicle movements and impacts on the efficiency and safety of local road network
- odour impacts
- water management.

These issues are discussed in **Section 6** of this report.

5.4.3 Special interest groups

The **Tarago and District Progress Association Incorporation (TADPAI)** raised no objection to the modification request but raised concerns regarding traffic impact, odour impact and community consultation.

The **Tarago Sporting Association Incorporated** objected to the modification request based on the odour impact and the Proponent's community consultation regarding the proposed SRF facility.

5.5 Response to Submissions

On 2 October 2018, the Proponent provided a Response to Submissions (RtS) report with supporting specialist reports addressing the issues raised during the exhibition of the modification request.

The RtS and accompanied specialist reports were provided to key agencies and Councils to consider whether it adequately addressed the issues raised. A summary of agencies' further responses is provided below:

DoI L&W raised no issues with the RtS report.

The **EPA** requested the Proponent provide further information regarding the characterisation of the hazardous material content of incoming waste streams and methods, procedures and processes that would be put in place to manage the hazardous material content.

FRSNSW raised issues including that the fire safety systems had not yet been developed and recommended the Proponent consider:

- all comments and recommendations in FRNSW submission made during the public exhibition
- whether the nature of quantity of materials in the SRF processing building would be deemed a special hazard in regard to parts E1.10 and E2.3 of the National Construction Code (NCC)
- consultation with FRNSW prior to issue of a construction certificate
- develop a hydrant system in accordance with part E1.3 of the NCC and AS 2419.1-2005.

RMS and **TfNSW** raised no issues on the RtS report.

Water NSW raised concerns of the increase in employee number and associated exceedance of the STP capacity as well as an increased risk of raw sewage being discharged. Water NSW requested further information in respect of whether the STP would have adequate capacity.

GMC and **QPRC** did not provide submissions on the RtS report.

The Department also raised further concerns regarding the traffic generation, transport of SRF material to Port Botany in Sydney, air quality impacts and mitigation measures and consistency with EfW Policy.

On 16 November 2018, the Proponent provided a revised RtS to the Department. The revised RtS report were provided to key agencies and made publicly available on the Department's website.

6. Assessment

The Department has assessed the merits of the modification request. During this assessment, the Department has considered the:

- EA and assessment report for the original application
- existing conditions of approval and consent (as modified)
- the EA supporting the modification request (**Appendix B**)
- submissions made in accordance with the EP&A Act and the EP&A Regulation (**Appendix C**)
- the Proponent's response to issues raised in submissions
- relevant environmental planning instruments, policies and guidelines
- waste policy and legislation including:
  - *Waste Avoidance and Resource Recovery Act 2001 (NSW)* (WARR Act)
  - NSW Energy from Waste Policy Statement 2015 (the EfW Policy)
  - Eligible Waste Fuels Guidelines 2016
- requirements of the EP&A Act, including the objects of the EP&A Act.

The Department considers the key assessment issues are:

- consistency with the EfW Policy
- traffic impacts.

The Department's assessment of other issues is provided in **Table 7** in Section 6.3.

6.1 Consistency with the EfW Policy

The primary function of the SRF facility is to produce SRF materials that will be used as an alternative fuel to fossil fuels for energy recovery facilities (ERF). The EfW Policy is important for the Department to consider as it is the primary policy in NSW which governs the assessment and consideration of facilities producing alternative fuels for ERF to ensure the protection of air quality and human health and to determine if a proposal is in the public interest. A key issue for the modification request is the SRF materials' consistency with the criteria specified under the EfW Policy.

Consistency with the EfW Policy

The EfW Policy notes the recovery of energy and resources from the thermal treatment of waste has the potential to deliver positive outcomes for the community and environment where further material recovery through reuse, reprocessing or recycling is not financially sustainable or technically achievable. The EfW Policy is underpinned by the waste hierarchy which provides guidelines on the order of preference of approaches to achieve efficient resource use. Energy from waste is included in the waste hierarchy and is positioned above treating and disposing of waste (see **Figure 7**).

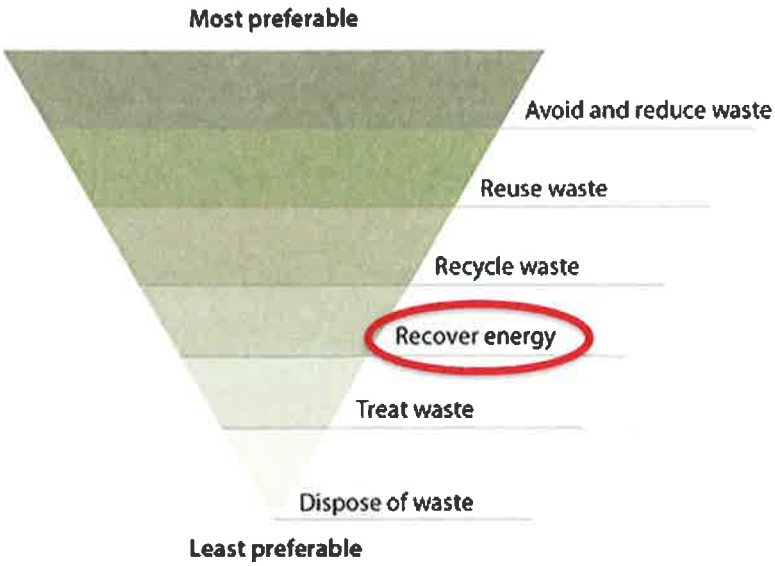

Figure 7 | Waste Hierarchy

The proposed SRF facility includes the processing of residual waste from the MBT into the SRF which would reduce the amount of landfilled waste. The modification request would recover the embodied energy of waste, offset the use of non-renewable energy sources, and reduce methane emissions from landfill. However, the EfW Policy stipulates that achieving these outcomes should also ensure the most efficient use of the resource with no increase in the risk of harm to human health or the environment.

The EfW Policy defines two types of waste fuels as inputs for facilities that thermally treat any waste or waste-derived materials:

1. 'eligible waste fuel': waste or waste-derived materials considered by the EPA to impose a low risk of harm to the environment and human health due to their origin, low levels of contaminants and consistency over time
2. those fuels that are not categorised as 'eligible waste fuels'. Any facility that is proposing to treat a non-eligible waste fuel must demonstrate it meets the requirements for an ERF.

Given the nature of residual waste to be processed into SRF, the Proponent is seeking approval for category 2, which is SRF that would be thermally processed off-site at an ERF.

The EfW Policy requires that ERFs conform to current international best practice techniques with respect to minimising the risk of harm from emissions by process, equipment and emission design, control and monitoring. Facilities recovering energy from waste must also ensure they meet the technical, thermal efficiency and resource recovery criteria prescribed in the EfW Policy.

The SRF facility would only produce SRF material, rather than thermally treat it (i.e. use it) to produce energy on site. As the SRF material is to be sent to an ERF, the composition of the SRF products must meet the EfW Policy criteria for feedstock and composition requirements and the proposed SRF facility would be categorised as bona fide resource recovery operation, otherwise the EFR would not be permitted to receive it. Therefore, the content of the SRF must meet the specifications of the applicable EfW Policy criteria and be continually tested to confirm this.

The EPA initially requested the Proponent provide clarifications about hazardous materials management and halogenated substance content of the SRF materials. In the RtS, the Proponent advised that the SRF facility would process residual waste from the MBT facility which itself did not accept hazardous waste and process Municipal

Solid Waste (MSW) from Sydney Region only. Furthermore, residual waste received from MBT facility would be further sorted in the SRF building to remove any hazardous substance. In respect of halogenated substance content of the SRF materials, the Proponent noted PVC plastics would be the potential source of high halogenated content in SRF materials that would be removed through SRF processes.

After reviewing the Proponent's responses, the EPA advised the Proponent's responses adequately addressed its requests and had no further comments.

The Department acknowledges the importance of the EfW Policy in ensuring waste is processed in accordance with the waste hierarchy. The Department's assessment concludes the proposed SRF facility could meet relevant EfW Policy's technical and resource recovery criteria for energy recovery facility and resource recovery criteria for facilities processing mixed MSW waste.

A summary of the Department's detailed review of the SRF facility's compliance with the EfW Policy criteria is provided in **Tables 5** and **6**.

Table 5 | Assessment of Compliance with Criteria for Energy Recovery Facility

Criteria	Requirements	Compliance
Technical Criteria	1. minimum temperature and time requirements;	N/A – the SRF is not proposed to be thermally treated on site.
	2. air emissions requirements;	Yes – SRF produced at the facility must be of a sufficient specification to allow the receiving ERF to comply with the technical criteria of the EfW Policy. SRF specifications vary according to the ERF that will receive and use the SRF products in future. Quality controls are proposed, such as removal of inappropriate items through the MBT sorting process, removal of PVC plastics, aggregates and metal during processing and physical testing regime of lab sampling of finalised SRF prior to dispatch in accordance with European Standard EN15442:2011 Solid Recovered Fuels – Determination of Caloric Value.
	3. continuous measurement requirements;	N/A – applicable only to the destination ERF only.
	4. Proof of Performance (PoP) trials and regular monitoring requirements;	N/A – applicable only to the destination ERF.
	5. slag and bottom ashes requirements;	N/A – applicable only to the destination ERF.
	6. waste fed interlocks installation requirements; and	N/A – applicable only to the destination ERF.

Criteria	Requirements	Compliance
	7. AQIA requirements.	N/A – this criterion applies to the destination ERF only.
Thermal Efficiency Criteria	8. Electricity or heat capture requirements.	N/A – the modification request does not involve thermal treatment of SRF on site, rather the SRF will be delivered to another ERF for thermal treatment.
Resource Recovery Criteria	9. Feedstock must conform to the requirement of Table 1 of the EfW Policy Statement.	Yes – refer to the assessment of the modification request against the requirement of Table 1 of the EfW Policy statement in **Table 6** of this report.

Table 6 | Assessment of Compliance with Table 1 of EfW Policy – Resource Recovery Criteria for ERFs

Waste Stream	Processing Facility	% Residual Waste Allowed for Energy Recovery	Compliance
Mixed Municipal Waste	Facility processing mixed MSW waste where a council has separate collection systems for dry recyclables and food and garden waste	No limit by weight of the waste stream received at a processing facility	N/A – waste received at the MBT facility is sourced from Councils in Sydney where separate collections for dry recyclables and food and garden waste are not implemented.
	Facility processing mixed MSW waste where a council has separate collection systems for dry recyclables and garden waste	Up to 40% by weight of the waste stream received at a processing facility	Yes – waste received at the MBT facility is sourced from Councils in Sydney including 77% of waste collected from Councils having a 3-bin collection system. In total, 105,336 tpa of MSW is sourced from 3-bin collection systems. Up to 42,134 tpa of waste will be processed to produce SRF materials which accounts for 40% of the total MSW.
	Facility processing mixed MSW waste where a council has a separate collection system for dry recyclables	Up to 25% by weight of the waste stream received at a processing facility	Yes – waste received at the MBT facility is sourced from Councils in Sydney including 23% of waste collected from Councils having a 2-bin collection system.

Waste Stream	Processing Facility	% Residual Waste Allowed for Energy Recovery	Compliance
			In total, 31,464 tpa of MSW are sourced from 2-bin collection systems. Up to 7,866 tpa of waste will be processed to produce SRF material which accounts for 25% of total MSW.

Conclusion

While the EfW Policy is mainly aimed at ERFs, it is important the SRF material meets certain standards to ensure the use of the material meets emission standards and other technical requirements under the Policy. The Department's analysis of the EfW Policy criteria only shows those requirements relating to the source of the raw materials and specifications of the SRF are applicable to the development. The Proponent has supplied information in the EA and RTS demonstrating the intended destination ERFs would be capable of complying with the EfW Policy. The EPA reviewed the submitted information and raised no issues regarding the modification request's compliance of EfW Policy.

The Department is therefore satisfied the destination facilities for the SRF are suitable for receipt of SRF produced at the proposed SRF facility.

6.2 Traffic Impacts

Construction and operation of the SRF facility would generate additional traffic movements to and from the site and have the potential impact on the safety, capacity and efficiency of the local road network.

The EA included a Traffic Impact Assessment (TIA) prepared by Colston, Budd, Rogers & Kafes Pty Ltd, which assessed the potential traffic impact generated by the modification request.

Construction Traffic Impacts

The construction period is anticipated to be between 6 to 12 months. However, as the overall traffic during the construction phase is expected to be less than the operational phase, no specific construction traffic assessment was carried out. Further, GMC, QPRC and RMS did not raise concerns of construction traffic impacts.

For these reasons, the Department is of the view that the construction traffic impacts are negligible.

Operational Traffic Impacts

Traffic Generation

The modification request includes using 16.5 m semi-trailers to transport containers with SRF material from the SRF facility to the Crisps Creek IMF on a fortnightly basis, on a Saturday over a four-hour period. During this four-hour period, there would be approximately 55 truck trips (110 two-way truck movements) between the SRF facility and the Crisps Creek IMF.

Table 7 shows the permitted, current and proposed traffic generations on Saturdays.

Table 7 | Permitted, Current and Proposed Traffic Generations on Saturdays

	Permitted Truck Movements under DA 31-02-99 & MP 10_0012	Current Truck Movements	Proposed Truck Movements
Sydney Region Waste Delivery (between the Crips Creek IMF and the WWMF)	336 truck trips (672 two-way truck movements)	0 truck trips The Proponent advised the current operation does not include delivery of Sydney Region Waste on Saturdays, although it is permitted to occur	No change
Regional Waste Delivery	27 truck trips (54 two-way truck movements)	27 truck trips (54 two-way truck movements)	As existing: 27 truck trips (54 two-way truck movements)
SRF Material Transport	N/A	N/A	55 truck trips (110 two-way truck movements) [1]
Total	363 truck trips (846 two-way truck movements)	27 truck trips (54 two-way truck movements)	82 truck trips (164 two-way truck movements)

Note: [1]SRF material transport would only occur on fortnight Saturdays

As indicated in **Table 7**, operational efficiency under the current operation has meant the Proponent is not using the permitted 336 truck trips on every Saturday. Therefore, once the SRF facility operates, only SRF material movements (every second Saturday) and regional waste delivery (every Saturday) would occur, resulting in a maximum of 82 truck trips on a worst-case Saturday each fortnight. Further the addition of 55 truck trips every second Saturday would not be significantly greater than currently occurs and is well below the permitted 363 truck trips.

Therefore, the modification request would not significantly impact the operational efficiency of the road network to a level above which has not been assessed previously.

Intersection Performance

Access to the WWMF and Crisps Creek IMF are currently gained via Bungendore Road (a regional road) and Collector Road (a local road). Both are two-lane, two-way roads with a speed limit of 100 km/h.

The performance of Bungendore and Collector Roads intersection (the intersection), access points to WWMF and the Crisps Creek IMF is the focus of the Department's assessment. The Proponent's SIDRA analysis showed the intersection and access points are currently providing a good Level of Service (LoS) (A-B). With the predicted truck movements on Saturdays every fortnight caused by the SRF facility, the SIDRA modelling indicated the intersection and access points would continue to operate at the same LoS (A-B).

GMC, QPRC and RMS did not provide any comments in relation to operational traffic impacts.

The Department has assessed the potential impacts of traffic generation and intersection performance. The truck movements associated with the SRF facility would not increase the amount of approved truck trips to and from the Crisps Creek IMF. Therefore, the modification request would not impact intersection performance to a level above which has not been assessed previously.

To ensure any potential traffic impacts are effectively managed, the Department has recommended conditions requiring the Proponent prepare a Driver Code of Conduct and Operational Traffic Management Plan (OTMP).

Truck Manoeuvring and Queuing

The truck movements associated with the modification request have the potential to result in vehicles queuing on Bungendore Road while waiting to unload at Crips Creek IMF. The Department requested the Proponent provide additional information regarding the estimated loading and unloading time and the number of trucks that the Crisps Creek IMF can hold on site.

The Proponent provided the requested information in the revised RtS report which stated that it would take approximately 3.5 minutes (min) to load/unload a container and the Crisps Creek IMF could hold approximately 30 trucks within the intermodal site. There will be only 10 trucks used for transporting containerised SRF materials on Saturdays and the majority of these trucks would be held within the Crisps Creek IMF. As such, there would be no possibility of queuing at the Bungendore Road and Crips Creek site access.

Public submissions raised concerns of heavy vehicles climbing up hills from Crips Creek IMF to Collector Road on Bungendore Road would slow public traffic down and cause queuing on Bungendore Road and Collector Road. The Proponent advised in the RtS that trucks transporting containerised SRF materials would return to WWMF unladed and would therefore have less impact on other road users.

The Department has assessed the potential impacts caused by truck manoeuvring and queuing along Bungendore Road. The Department is satisfied that the Crisps Creek IMF has an adequate capacity to hold trucks on site and will not cause significant truck queuing on Bungendore Road. As the SRF material containers delivery trucks returning to the SRF facility would be unloaded, these trucks would unlikely impact road efficiency.

To ensure any potential traffic impacts are effectively managed, the Department has recommended conditions requiring the Proponent prepare a Driver Code of Conduct and Operational Traffic Management Plan (OTMP).

Conclusion

The Department has considered the potential traffic and logistics impacts from the SRF facility, including potential impacts on the operational performance and safety of the surrounding road and rail network.

The Department's assessment concludes that, compared to existing traffic volumes, the predicted traffic generation on Bungendore Road and Collector Road will have minimal impacts on the local road network's safety and efficiency. The modification request will not change the existing LoS of the key intersections of WWMF site access/Collector Road, Collector Road/Bungendore Road and Bungendore Road/Crisps Creek IMF site access. The development would not cause queuing of heavy vehicles on Bungendore Road. The Department considers that with the implementation of a Drive Code of Conduct and Operational Traffic Management Plan (OTMP), the development will maintain road safety and efficiency and mitigate potential vehicles queuing on Bungendore Road.

6.3 Other Issues

The Department's assessment of other issues is provided in **Table 8**.

Table 8 | Summary of other issues raised

Findings	Recommended Condition
Noise and Vibration	
• The proposed SRF facility has the potential to cause noise and vibration impact during construction and operational phases of the development. • Wilkinson Murray prepared a Noise Impact Assessment (NIA) in accordance with the EPA's Industrial Noise Policy (2000) (INP) and Interim Construction Noise Guideline (2009) (ICNG). • In response to the Department's request, Wilkinson Murray submitted a revised NIA as part of the RtS. **Construction Noise** • The NIA adopted the quantitative method recommended by the ICNG which assessed average noise levels for 15 minutes (LAeq (15 minute)) at sensitive receivers against Noise Management Levels (NMLs) in the locality. • The NIA identified four sensitive receivers in the vicinity and predicted only minor exceedance in the NMLs (which were below the criteria in the INP) would be experienced at two receivers, both of which are owned by the Proponent and resided in by workers of the site. • The NIA concluded that with all appropriate measures in place, the modification request would have minimal construction noise impacts on sensitive receivers. **Operational Noise** • The NIA was informed by the INP and condition 19 of development consent DA 31-02-99 to assess the potential operational noise impacts. • The NIA predicated the operational noise levels at all sensitive receivers were all well below the noise criteria in condition 19 of DA 31-02-99. • There were no submissions raising concerns of noise and vibration impacts of the SRF facility. • The Department's assessment concludes that with appropriate management measures in place, the modification request would have minimal noise and vibration impacts on sensitive receivers during construction and operation of the SRF facility.	Require the Proponent to: • minimise noise from the development utilising best practice noise management measures • comply with the approved hours of operation • ensure that noise generated during construction and operation does not exceed the noise limits stipulated in the development consent and project approval.
Air Quality and Odour Impacts	
• The proposed SRF facility has the potential to generate air quality impacts during both construction and operation. The SRF drying process was identified as the major source of odour emissions. • The Odour Unit Pty Ltd conducted a qualitative desktop Odour Assessment (OA). The OA concluded that the SRF processing area is likely to have low odour emissions due to the following factors:	Require the Proponent to: • implement all reasonable and feasible measures to minimise dust emissions during construction and

Findings	Recommended Condition
– the characteristics of materials processed at the SRF is relatively dry containing a low level of organics – application of a double cyclone exhaust system to reduce odour emissions – the SRF processing building is designed to be enclosed and the SRF process is a highly automated and controlled operation. • Except the EPA, government agencies' submissions did not raise concerns regarding air quality and odour. Public submissions raised concerns with odour impacts, including the adequacy of the Proponent's desktop approach for OA and cumulative odour impact. • The EPA did not raise concerns relating to air quality and recommended relevant conditions requiring carrying out of an Air Quality and Odour Audit, preparation and implementation of an Air Quality Management Plan (AQMP). • The Department requested the Proponent provide additional information including an assessment of potential air quality and dust impacts, evidence that the MBT's Air Quality Monitoring Program would be suitable for the SRF facility and how the odour control system can be retrofitted if required. • The Proponent responded to the Department's request in the RtS that the MBT's air quality monitoring program would be updated to include the proposed SRF facility. New dust gauge would be installed to the west of the SRF facility monitoring the dust generation during construction and operation of the development. • The Proponent also committed to undertake an odour validation assessment (OVA) to determine the actual odour emission levels of the SRF facility. Should the OVA indicate the need for additional air quality controls, the Proponent will investigate, assess and implement the most suitable control devices to mitigate potential air quality impacts. • The Department's assessment concludes that with appropriate measures in place including the preparation and implementation of an Air Quality Management Plan (AQMP), the development would have minimal dust and odour impact on surrounding receivers.	operation of the SRF facility • prepare and implement an AQMP to the satisfaction of the Planning Secretary • carry out an Air Quality and Odour Audit of the SRF facility within 6 months of the commencement of operation • ensure the SRF facility does not cause or permit emission of offensive odour.
Water Management • The development has the potential to cause impacts on water quality including stormwater, leachate and firefighting water. **Stormwater Management** • The Environment Protection Licence (EPL) applying to site sets a zero-discharge control where stormwater is required to be captured, stored and used within the Woodlawn Eco Precinct.	Require the Proponent: • prepare and implement an Erosion and Sediment Control Plan • design and implement a fire safety system for the

Findings	Recommended Condition
• Stormwater runoff from the SRF processing area would be collected in the proposed rainwater tanks for storage. Overflow from the rainwater tank would be discharged to existing drainage system and discharge to the existing Evaporation Dam 1 (ED 1) adjacent the MBT facility. • The Department is satisfied that stormwater can be properly managed and would comply with the EPL's zero-discharge requirements by preparing and implementing an Erosion and Sediment Control Plan. **Sewage Treatment Plant Capacity** • There are no changes to the existing sewage treatment plant (STP) as part of the modification request. • Water NSW requested the Proponent provide additional information relating to the STP capacity. • The RtS report advised that the STP was originally designed with capacity of 3,500 L/day and the current average daily pumping rate was 1,031 L/day, thus the STP has an adequate capacity to accommodate increased employee numbers. • Water NSW reviewed the revised RtS report and raised no further concerns. **Leachate and Firefighting water** • No wastewater or leachate would be produced during the SRF process as it would be a dry process and does not require any processing water. Water supply for firefighting purposes would be sourced by extending the raw water pipe from the Woodlawn Bioreactor. • FRNSW reviewed the EA and RtS and recommended conditions regarding firefighting water containment and discharge rate of the facility's hydraulic fire systems. • The Department is satisfied that limited leachate is anticipated to be produced by the SRF operation. • The Department has recommended conditions requiring the Proponent design and implement a fire safety system in consultation with FRNSW. **Conclusion** The Department's assessment concludes the modification request includes adequate water quality and drainage control measures to ensure the SRF facility does not create unacceptable water impacts, subject to the recommended conditions.	SRF facility in consultation with FRNSW.
Waste Management • Inappropriate waste management on-site has the potential to cause adverse impacts on the surrounding area. • The EIS and RtS provided information regarding the receiving, handling, separating and dispatching of incoming waste streams.	Require the Proponent: • prepare and implement a Waste Monitoring Program

Findings	Recommended Condition
• The EPA raised concerns regarding how contaminants and hazardous substances would be managed during SRF processing including the characterisation of the hazardous material content of incoming waste streams and the methods, procedures and processes proposed to manage non-conforming waste (NCW) in its initial submission. • The Proponent provided additional information in the RtS advising that waste audit data from Councils in Sydney indicated that it would expect that 0.5% of hazardous material and 1.2% of E-waste were contained in mixed municipal waste. • The portion of these substances would be reduced and controlled through: – screening and removing NCW at Clyde and Banksmeadow Transfer Terminals in Sydney prior to transporting waste to WWMF – inspection and removal of NCW at the MBT facility reception building – using ballistic separators at the MBT to further remove NCW – using electromagnet belt, air separator and optical sorter to remove NCW at the SRF facility. • After reviewing the Proponent's RtS, the EPA advised that the proposed NCW management procedures were satisfactory. The public submissions did not raise concerns of waste management. • The Department has assessed the proposed waste handling and disposal procedures detailed in the EIS and RtS and is generally satisfied that these are robust and appropriate.	• prepare and implement a Waste Receipt and Vehicle Flow Control Plan in consultation with the EPA.

7. Evaluation

The Department has reviewed the EA, RtS report and assessed the merits of the modification request, taking into consideration the relevant matters under section 4.15 of the EP&A Act, the objects of the EP&A Act, submissions from the government agencies, the general public and special interest groups as well as all environmental issues associated with the proposed SRF facility.

The new SRF facility would convert residual waste from the MBT facility into SRF material for thermal treatment off-site and divert waste from landfill and as result would help to extend the lifespan of the Woodlawn Bioreactor and minimise environmental impacts. In economic terms, recycling also reduces waste disposal costs for both government and industry.

The Department has assessed the proposed SRF facility and modifications to the Crisps Creek IMF in accordance with the relevant requirements of the EP&A Act. The key issues associated with the modification request relate to consistency with the EfW Policy and traffic impacts. Overall, the Department's assessment concluded:

- the site is strategically located within an established waste management facility with ample distance from sensitive receivers. As such, the proposed SRF facility is not expected to have a significant impact on the amenity of the locality
- the proposed SRF facility would positively contribute to the State's performance regarding the WARR Strategy and support energy recovery facilities
- traffic generated by the SRF facility could be accommodated on the local and regional road networks without any significant impacts on safety or efficiency and LoS
- the operation of the facility would meet the relevant air quality and noise criteria at sensitive receivers
- the SRF facility would provide a range of environmental and economic benefits for the region, through resource recovery and the provision of 25 construction jobs and 3 new operational jobs.

The Department has recommended a number of conditions to manage any potential impacts as a result of the development, including:

- restricting waste processing capacity to 50,000 tpa including 37,400 tpa of processed SRF products and 12,600 tpa of residual waste to be delivered to the Woodlawn Bioreactor
- preparation and implementation of a Construction Traffic Management Plan and an Operational Traffic Management Plan to manage potential traffic impacts during construction and operation of the development
- undertaking an Air Quality and Odour Audit and development of an Air Quality Management Plan to validate and mitigate potential odour and dust impacts
- preparation and implementation of management plans for erosion and sediment control and waste management.

The Department concludes the impacts of the development are acceptable and can be appropriately managed through implementation of the recommended conditions. Consequently, the Department considers the development is in the public interest and should be approved, subject to conditions.

8. Recommendation

It is recommended that the Executive Director, Key Sites and Industry Assessments, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report
- **Determines** that the request to modify MP 06_0239 and MP 10_0012 falls within the scope of former section 75W of the EP&A Act
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the modification request
- **modify** the Project Approvals MP 06_0239 and MP 10_0012
- **signs** the attached approval of the modification (**Attachment F**).

Prepared by:
Bruce Zhang
Industry Assessments

Recommended by:

28/03/19

Kelly McNicol
Team Leader
Industry Assessments

Recommended by:

29/3/19.

Chris Ritchie
Director
Industry Assessments

9. Determination

The recommendation is: **Adopted by:**

Anthea Sargeant
Executive Director
Key Sites and Industry Assessments

Appendices

Appendix A – List of Documents

- Environmental Assessment – Modification to Enable the Construction and Operation of a Solid Recovered Fuel (SRF) Processing Area within the Woodlawn Eco Precinct, prepared by CW Strategic Planning Services and SG Haddad Advisory, dated July 2018
- Traffic Impact Assessment for Proposed Solid Recovered Fuel Facility at Woodlawn, Tarago, prepared by Colston Budd Rogers & Kafes Pty Ltd, dated December 2017
- Odour Assessment for Proposed Solid Recovered Fuel Facility Augmentation at the Woodlawn Eco-Precinct, prepared by The Odour Unit Pty Ltd, dated 14 March 2018
- Woodlawn Eco Precinct Modification to Enable the Construction of a Solid Recovered Fuel Facility Operational Noise Impact Assessment, prepared by Wilkinson Murray Pty Limited, dated 29 September 2017
- Department of the Environment and Energy Letter to Veolia Environmental Services (Australia) Pty Ltd, dated 12 April 2018
- Architectural Plans prepared by Davidson Architecture, dated 30 April 2018 and 29 May 2018
- Response to Submission Report – Construction and Operation of a Solid Recovered Fuel (SRF) Processing Area, prepared by Veolia Environmental Services (Australia) Pty Ltd dated November 2018
- Noise Impact Assessment – Woodlawn Expansion Project, prepared by Heggies Pty Ltd, dated 14 July 2010, Revision 3
- Woodlawn Bioreactor Environmental Assessment, Transport Impact Assessment, prepared by URS, dated 26 July 2010
- Project Approval MP 06_0239, dated 6 November 2007 and MOD 1 dated 17 June 2014
- Project approval MP 10_0012, dated 16 March 2012, MOD 1 dated 9 September 2016 and MOD 2 dated 22 December 2017.

Appendix B – Environmental Assessment

See the Department's website at:

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9481

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9482

Appendix C – Submissions

See the Department's website at:

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9481

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9482

Appendix D – Response to Submissions Report

See the Department's website at:

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9481

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9482

Appendix E – Consolidated Consent

Appendix F – Notice of Modification

A copy of the project approvals for MP 06_0239 MOD 2 and MP 10_0012 MOD 3 can be found on the Department's website, at the following link:

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9481

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9482