Processed Engineered Feedstock (PEF) Production Facility, Silverwater

Fact Sheet

About the Development

MET Waste Management Pty Ltd (MET Waste Managment) proposes to construct and operate a Processed Engineered Feedstock (PEF) Production Facility at its existing Site, Lot 1 Newton Street North, Silverwater, the site of the former Auburn Council landfill (the Proposal).

The Site is located on land zoned E4 General Industrial under the *Parramatta Local Environmental Plan* 2023 inside the Silverwater Industrial Estate. To the north of the Site is Duck River while the remainder of the site is bordered by the Industrial Estate.

Processed Engineered Feedstock (PEF) is a term used to refer to the processing of residual red bin wastes from households and businesses into a product that can enter the circular economy through the production of sustainable chemicals (eg. methanol, which can be used as sustainable fuel). These residual red bin wastes would otherwise be disposed of in landfill, with the key objective of the Proposal being to provide a sustainable end-of-life solution for these wastes.

The proposal will involve the construction of a warehouse building and two new driveways to provide truck access through the building. Heavy vehicles will enter via Carnarvon St, adjacent to the existing MET Waste management driveway and exit via Newton St North, near Beaconsfield Street.

All waste loading, unloading, storage and processing will take place within the building. Advanced and automated technological processing of wastes will ensure the removal of hazardous wastes (batteries, gas bottles, chemical containers) before sorting to recover recyclable materials such as paper, cardboard, plastics, PVC, ferrous and non-ferrous metals.

All remaining high calorific value wastes will be refined, dried, shredded, baled and sampled for quality control before transported to market in odour sealed shipping containers. PEF bales will be transported via truck or rail to licenced facilities and markets in NSW or overseas. All recovered recyclable materials will be transported to suitable facilities for reuse and manufacturing.

All trucks will travel through the industrial estate on a defined haul route designed to avoid the residential area along Carnarvon St. A traffic study into the impacts of the proposal has shown that there will be minimal impact on the road network between the site and Silverwater Road.

The building will be fitted with advanced air quality control technology such as air scrubbers and activated charcoal filtration systems and will operate under negative pressure. This will ensure that only clean air can be released from the building, with a target to have zero impact on air quality in the local area. An early air quality and odour study has aided with the design of the air quality management systems, with modelling showing negligible odour and dust impacts on the local area.

The building will be protected by fire sprinklers and a containment system. A full rooftop solar array and internal battery energy storage system will power the facility with an aim of net zero emissions, and improvements to the site fencing and landscaping will enhance the visual amenity of the site.

Overview of the proposal

Building design features:

- Relocation of part of the existing landfill gas extraction system around the footprint of the proposed warehouse building and reconnection to the existing landfill gas collection and treatment system;
- Construction of an 18.5m high, 11,792 m^2 warehouse building (193.5m long and 65m wide) for housing the entire PEF production operation, constructed of Colorbond® with neutral and recessive colours. Noise insulation will be provided within the building for enhanced noise control;
- Specialised raft slab construction with below slab gas collection and extraction network to avoid the build-up of ground gases beneath the slab;
- Offices attached to the northern side of the warehouse building, with a floor area of 275m^2, located on a mezzanine level with car parking below;

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- A designated waste receival, inspection and decontamination area on the northern side of the warehouse building, bound on three sided with 5m high concrete panel walls for waste containment;
- A dedicated waste storage area (awaiting processing) in the north-east corner of the warehouse building, bound on three sided with 5m high concrete panel walls for waste containment;
- An advanced PEF Production plant, comprising a series of purpose designed systems for recovery of recyclables and production of PEF, including slow speed shredder and bag opener; conveyor systems; magnets for ferrous metal recovery; long part separator; optical sorters for removal of PVC, cardboard, paper, PET plastic and plastic film recovery; eddy current separators for non-ferrous metal recovery; PEF shredding and baling line and bale wrapping;
- Storage area within the warehouse building for temporary storage of at least ninety-six (96) full sized fully sealable shipping containers (each 40 cubic feet by volume) for storage of PEF prior to transport to market;
- Concrete panel storage bays for recovered materials for recycling beneath the PEF production plant;
- Two dedicated truck loading bays for side loading of trucks with recyclable materials or shipping containers of PEF for transport to markets;
- Advanced fire detection systems, including full fire sprinklers throughout the warehouse building and firewater containment bunding in accordance with best practice;
- A large solar array across the roofline of the warehouse building, with a production capacity of about 2.3 MW to support a large battery energy storage system designed to provide backup power for the plant and to supply the operations with renewable off-grid electricity; and
- Water tanks for rainwater collection and reuse.

Example of wrapped PEF bales to be produced. These will be transported in sealed shipping containers and transported to markets.

Vehicles and access:

- Separate staff and contractor entrance from Carnarvon St will be provided, with off-street parking for up to 23 passenger vehicles under the mezzanine office and on the north-east side of the site;
- Separate truck access from Carnarvon St into the PEF Production Facility, with a new concrete crossover to connect with existing concrete crossover providing vehicular access to the MET Recycling site located on the western side of the premises and a concrete exit driveway from the warehouse, with a new crossover constructed to Newton St North, to provide safe one-way flow of heavy vehicles through the facility. Both new concrete crossovers will be sufficiently wide for 19m semi-trailer trucks and
- An inbound and outbound 26m pit style weighbridge for weighing of all trucks entering and leaving the site, with the exit weighbridge supported by a wheel wash.

Environmental controls proposed:

- Fast acting roller doors with air curtains for truck entry and exit to avoid the fugitive release of odour from the building;
- Advanced environmental controls within the building to avoid odour release. This will involve high-capacity extraction fans (with battery backup systems) to keep the building under negative pressure, with all exhaust air treated through two high-capacity wet scrubbers with activated carbon filtration of air prior to discharge through two separate stacks mounted to the roofline of the warehouse building; and
- A leachate collection and drainage system within the waste receival, inspection, decontamination and storage areas, with 2 x 10,000L pump-out tanks with carbon scrubbers on vents. Leachate to be pumped out and transported to off-site liquid waste treatment facilities as required.

Current status of the project

A scoping report has been prepared to obtain the Secretary's Environmental Assessment Requirements (SEARs) under Section 5.16 of the *Environmental Planning and Assessment Act* 1979. MET Waste Management is seeking Government and Community feedback on the proposed development prior to lodgement of the SEARs.

Any feedback received from Government or the Community will be included in the Environmental Impact Statement and development application. Please see the last page on how to provide comment.

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Why is the facility needed?

The western side of the site is currently used by MET Recycling as a soil and construction waste recycling facility and has the on-site space for an expansion of its activities. Using an existing industrial site for the proposal ensures that the facility is central to waste receival from Councils and businesses, reducing transport costs.

The proposal aims to process up to 450,000 tonnes of residual red bin waste annually to dramatically reduce the amount of waste that is sent to landfill by households and businesses by up to 85% (by weight). Landfill space around Greater Sydney is running out, with an expected shortfall of space of 1.1 million tonnes by 2030, meaning that this proposal will fill a critical gap in waste infrastructure needs.

What will the facility look like?

The PEF Production Facility will operate entirely indoors in a new warehouse building. Access to the warehouse by trucks will be through rapid open and close electric roller doors supported by air curtains at each end of the warehouse, and pedestrian access via doors and walkways along the edge of the warehouse.

Part of the warehouse will be visually screened by landscaping around the perimeter of the proposal. The warehouse will be constructed from Colorbond® in neutral tones, with internal noise insulation. An office will be attached to the warehouse on a mezzanine level, with shaded carparking for staff below.

Is the PEF production process noisy or smelly?

MET Waste Management want to ensure that the operation of this facility will not adversely impact on the local community or neighbouring businesses, and has designed the warehouse to minimise the escape of odours from the site.

An Air Quality and Odour Impact Assessment has already been prepared to inform the design of the facility, demonstrating that the proposed air scrubbers, activated charcoal filtration, and other odour control measures will ensure surrounding areas will not be impacted by odour or other pollutants even under worst case scenario modelling.

All loading, unloading and processing of PEF will occur within the building, minimising noise emissions from the operations. Trucks will access the site through the surrounding industrial areas on a defined haulage route, avoiding the residential area along Carnarvon St to ensure minimal disturbance to the residential area. A Noise and Vibration Impact Assessment will be prepared to assess the potential impacts from traffic and operation of the facility, and to recommend mitigation measures to reduce any potential noise or vibration impacts.

Will neighbours or residents be affected?

The site is located approximately 450m from the nearest residential zone, southeast of the site on Stubbs Street. Given the distance and the design of the haulage route, minimal to no impacts on residents is expected. A Traffic Impact Assessment has been prepared as part of the early design work and has recommended a haulage route to minimise the impacts on the operation and safety of the local road network. The Traffic Impact Assessment also determined through modelling that the existing road network will continue to operate at the current levels of service and that the predicted net increase of heavy vehicle traffic is able to be absorbed easily by the road network.

Measures have already been designed to capture and filter odour and reduce noise emissions from the facility. These measures include:

- Rapid open and close roller doors with backup power supply to ensure that trucks entering and exiting the facility are not allowing for air and odour to escape the warehouse;
- Wet scrubbers with activated charcoal, to clean and filter all air inside the warehouse and direct it to stacks on the roof for release; and
- Negative pressure being maintained throughout the warehouse to ensure that odour and air is prevented from leaving the building.

Further mitigation strategies will be identified during the Environmental Impact Assessment process, with the results of the process further informing building design.

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Duck Creek, located to the west of the site.

How will the proposal protect the local environment?

Several sustainability strategies are proposed to protect the local environment, including:

- Processing and sorting wastes received on-site means less waste directed to landfill;
- Recovering further recyclables from the residual waste stream supports the circular economy. Production of PEF from waste which can't be recycled into sustainable chemicals or energy off-site at dedicated and purpose built facilities will reduce the need for using fossil fuels (eg. coal) and will help drive down greenhouse gas emissions;
- A solar panel array on the roof of the warehouse will provide energy to the facility, supported by a battery storage system inside the warehouse. This will replace the need for grid-supplied electricity;
- Operations will take place entirely indoors on sealed hardstand, preventing any possible contamination to the environment and allowing for all weather operations;
- Bunding around the warehouse will contain any spills or firewater in the case of fire emergency systems being activated;
- All stormwater runoff will be intercepted by new stormwater design features on the site to ensure that no contamination can enter the drainage system or nearby Duck River; and
- Advanced air quality and noise controls will be implemented in the warehouse to avoid impacts on neighbours and the local community.

How will the project benefit the local community?

This facility will provide a local Sydney-based service for the sorting of waste that is normally landfilled, and instead re-direct it to alternative destinations where it can be safely and efficiently re-used as either recycled products for sustainable chemical production or energy generation. Being local, this means that it is cheaper and more efficient for waste companies to move waste from Council areas to the facility, reducing the costs associated with waste disposal. Best of all, reducing the amount of waste that is sent to landfill means less CO_2 emissions contributing to climate change and supports Sydney in the move towards net zero emissions.

The proposal will create more than 50 jobs during the construction phase, followed by 30 new permanent positions, supporting local employment. The proposal will also inject approximately $38 million during the construction phase, and further operations annually.

Who is assessing the application?

The proposal is a State Significant Development. The consent authority for the development will be the NSW Minister of Planning.

Want More Information?

A detailed Scoping Report can be found at the JEP Environment & Planning website, www.jacksonenvironment.com.au

How to Provide Feedback

You can provide your feedback about the Proposal by contacting the MET Waste Management team at:
E: elania@metrecycling.com.au

We would greatly appreciate your feedback at this stage, as the community being involved in early planning stages means better outcomes leading to a more successful project for both MET Waste Management and the community.

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