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Stormwater Management Plan

Waste to Energy Facility

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Table of Contents

List of Figures

1 Existing Stormwater Management

The regional topography based on Nearmap elevation data indicates the vicinity of the site is gently sloping towards the south-west, towards Dandenong Creek. Dandenong Creek flows in a southerly direction towards the outfall located at Carrum. The Site is not subject to any flooding overlays and a Land Subject to Inundation Overlay (LSIO) under the Greater Dandenong Council planning provision exists offsite, approximately 50m to the west of the site. This indicates there is a preferential pathway for surface water runoff in this vicinity.

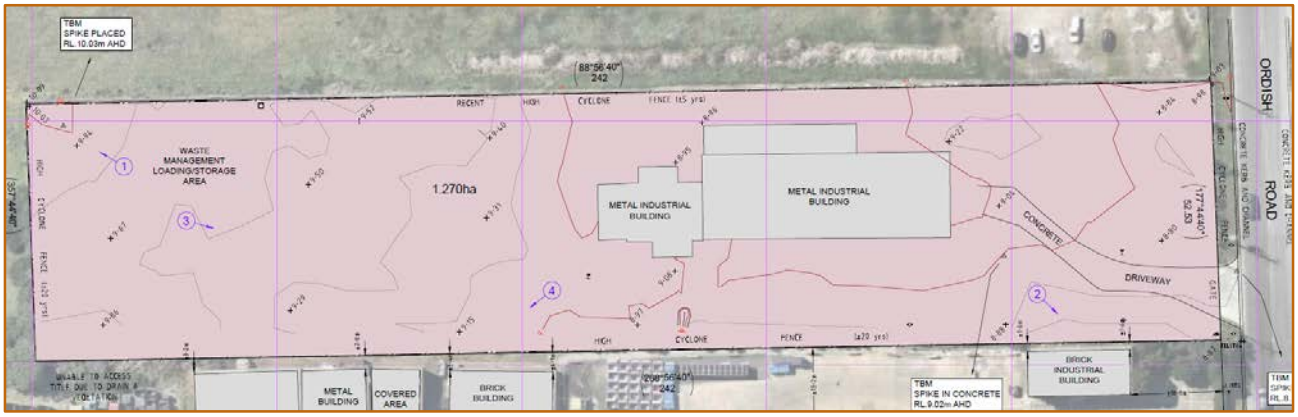

Figure 1- Existing Site Drainage (extract from existing conditions survey [SMEC, February 2018])

The site currently has an average slope of <1% towards Ordish Road to the east as show in Figure 1. Stormwater is conveyed to the stormwater pipes on the eastern side of Ordish Road, which discharges to Dandenong Creek.

Currently approximately 15% of the site, or 1,900 m^2 consists of buildings. The remainder of the site is predominately gravel, with a small hardstand area for parking along the eastern boundary of the site.

1.1 Drainage Scheme

The site is contained within the Ordish Road North Drainage Scheme, which nominates pipework, wetlands and a retarding basin for the greater catchment. As this site is industrial, it does not fall under Clause 56 of the planning scheme, however as part of the drainage strategy will be expected to pay water quality and hydraulic contributions rather than providing these features onsite. and indicate the requirements for the site and calculated contribution towards the drainage scheme. There is potential to include water quality treatment for the site in order to reduce the contributions to only the hydraulic component, however due to the site constraints it is considered more appropriate to pay the offset.

Industrial development (not subject to Clause 56)

	Scheme with water quality works	Scheme with no water quality works	Outside schemes
Hydraulic contribution	Yes	Yes	n/a
Water quality treatment	Developers can pay a water quality contribution for water quality treatment provided by the scheme	**Sites 5 hectares or greater** Developers are expected to provide water quality treatment within the development.	**Sites 5 hectares or greater** Developers are expected to provide water quality treatment within the development.
Water quality options	Reductions in water quality contributions are available for providing on-site water quality treatment.	**Sites less than 5 hectares** Water quality offset contributions are available. **Developments less than 0.4 hectares** are encouraged to treat stormwater but this isn't required. Water quality contributions are also not required.	**Sites less than 5 hectares** Water quality offset contributions are available. **Developments less than 0.4 hectares** are encouraged to treat stormwater but this isn't required. Water quality contributions are also not required.

Figure 2- Industrial Drainage Scheme Conditions (Melbourne Water DSS Website)

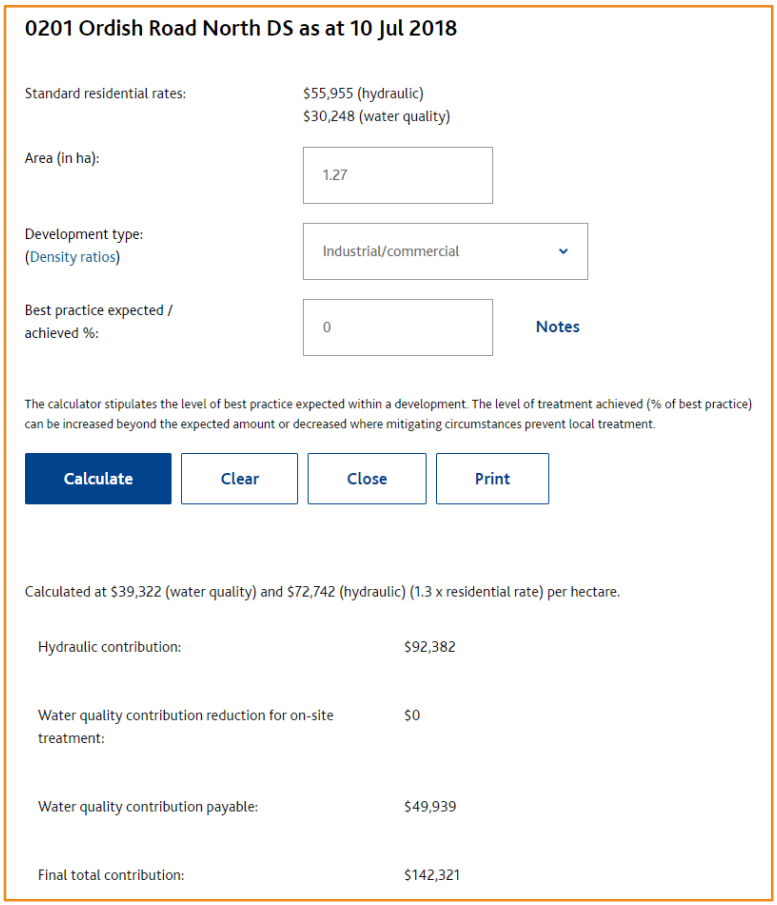

Figure 3- Drainage Scheme Contributions for the site (Melbourne Water DSS Website)

2 Proposed Stormwater Management

In the proposed layout the buildings will cover approximately 5,160 m^2, or 40% of the total site area. Rainwater tanks will be installed to capture runoff from the main building rooftop, with an approximate roof area of 3,746 m^2. Stormwater runoff will discharge from the remainder of the site. The site will consist of hard pavement surrounding the buildings, with a small area of vegetation in the north-eastern corner of the site.

2.1 Potential for Contamination

Runoff from outdoor areas frequently trafficked by vehicles will be discharged offsite. There is some potential for this runoff to be contaminated by suspended solids, hydrocarbons, vehicle oil and grease, at a rate similar to the nearby roadways. There is to be no contamination of runoff with leachate or process water, as an indoor bunded area will be utilised for the unloading of waste trucks.

2.2 Collection and Containment

Runoff from processing and vehicle washdown areas will be contained within an enclosed building. Bunding of the vehicle wash areas will be installed in accordance with EPA Publication 347.1 *Bunding* to segregate contaminated water from uncontaminated stormwater runoff.

Stormwater runoff from outdoor impervious areas will be diverted towards a discharge point at the south-east corner of the site based on localised topography mapping. The stormwater runoff will be conveyed to the Melbourne Water stormwater drains located on the eastern side of Ordish Road.

2.3 Treatment

Process water and leachate will not be discharged to stormwater. Given the payment of the drainage scheme contribution, runoff from paved areas do not require treatment prior to discharge.

2.4 Flood Retention

As a result of the development there will be a minor increase in the runoff, correlating to the increase in impervious area. As the site sits within a drainage scheme the hydraulic offset will be required to be paid, with the flows being retarded offsite.

3 Recommendations

Due to size of the site and the governing drainage scheme, there are no recommended water quality or flood retention features for the site. Instead an offset payment of $142,321 is required to be paid to Melbourne Water as a contribution toward the drainage scheme works. This contribution meets the best practice standards for the site.

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