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Sent to: bart.gane@delwp.vic.gov.au

Re: Response to Request for Further Information
Application for Planning Permit 2010013898-3
890 TAYLORS ROAD DANDENONG SOUTH VIC 3175

Dear Bart,

We write in response to your letter dated 29 August 2022 requesting further information pursuant to Section 54 of the *Planning and Environment Act 1987*, in regard to the application to amend Planning Permit No. 2010013898-3 for 890 Taylors Road, Dandenong South.

1 Further information required

This letter addresses the following further information requested by the Department of Environment, Land, Water and Planning:

1. **Advice and details on any associated agency approvals required, including by the Environment Protection Authority (EPA), and the status and timing on progress of these matters.**

   As outlined in Section 3 of the planning report, a development licence will be required under category A01 of the *Environment Protection Regulations 2021* which will be subject to approval by the EPA. The proposal will be a new permission and the location will be excised from the existing SUEZ Taylors Road site, similar to the existing EarthSure Thermal Treatment Facility.

   A Permission Pathway form was submitted to the EPA on 8 April 2022 outlining the proposal. Following this, the EPA advised that a Development Licence exemption application could be an appropriate course of action.

   The Development Licence Exemption application (APP017616) was submitted on 30 of June 2022. A Request for Further Information (RFI002445) was received on the 12 of August 2022

   It is expected that the development licence application process will occur concurrently to the planning permit process. It is understood that pursuant to Clause 66.02-1 of the Greater Dandenong Planning Scheme, the application has been referred to the Environment Protection Authority.

2. An update of or provision of additional technical reports for the proposal relating to:

a. Geotechnical assessment of the proposal's impacts on the landfill

A preliminary geotechnical report has been submitted to the EPA as part of the Development Licence Exemption application which assessed the geotechnical aspects of the proposal.

To address the total settlement under load and self-weight, the following controls have been identified:

- Segment the foundation arrangement into a series of critical sectors or slab areas, all which may operate independently, perhaps of the order of 15-20 metres in width, which will provide the best bridging over localised anomalies and not induce significant pressures on the lower fill, and in particular the liner.
- Preparation should simply consist of removal of the topsoil layer and stabilisation of the subsoil layer.
- Significant depths of crusher road preparation is not typically necessary.

The assessment identified that conservative design parameters for the design of the facility should be adopted, and these are considered to be as follows:

- Long term Modulus at the surface – 8 MPa
- Short term Modulus at the surface – 12 MPa
- Modulus of Subgrade Reaction – 12 kPa/mm
- Localised peak settlements under a foundation arrangement up to 5.0 metres in diameter – 40 kPa

The preliminary geotechnical report shows that there are available measures that would allow the facility to be constructed on the proposed site. No red flags were identified that would prohibit the facility from being constructed, and a detailed design will be required with site testing to confirm the specific design parameters required to manage the potential settlement. This design process is consistent with that already undertaken for EarthSure's thermal treatment facility located on another capped cell on the site.

We expect that the geotechnical component will be assessed through the Development Licence Exemption application and do not consider it a planning consideration.

b. More detail of the wastewater impacts from the soil washing process and associated treatment of wastewater;

Section 7.3 of the planning report details how wastewater will be managed on the site and confirms that there will be no wastewater impacts from the soil washing process and associated treatment of wastewater.

Wastewater is referred to as contaminated runoff in the planning report. The contaminated runoff generated on the facility's access roads and untreated stockpiles is proposed to be collected and directed towards existing leachate Ponds 4 and 5. Ponds 4 and 5 are geomembrane lined ponds that have a total storage capacity of 6ML, 3ML per pond. These ponds were constructed in 2013 and have been commissioned for use however do not form part of the leachate treatment system, therefore their capacity is fully available for the SWF.

An assessment of the stormwater generated from the SWF has been undertaken for this approval which was completed considering a 1 in 20-year storm event, consistent with the requirements in the Victorian BPEM.

The assessment considered the collection of all contaminated stormwater across the SWF footprint, equating to approximately 4.3ha. The assessment calculated a stormwater volume of approximately 2.9ML over a 72-hour period.

When assessing the capacity of Ponds 4 and 5, the catchment within the ponds needs to be calculated as this is a reduction in the available storage for the site. Using rainfall data from the Bureau of Meteorology (BOM), 124mm of rain is expected over a 72-hour duration and

considering the surface area of Ponds 4 and 5, 5,590m2, the total volume of rainfall collected is 693.16m3 or 693,160 L.

- Total Capacity of Ponds 4 and 5 6,000,000 L
- Volume taken up by rainfall 693,160 L
- Stormwater generated from SWF 2,902,500 L

In addition, Interim Climate Change Factors (ICCF) need to be considered for the generation of stormwater for the SWF, and for the determination of adequate storage of contaminated stormwater. Based on the proposed operation life of the facility, the design needs to consider an increase of 5.4% on the current rainfall volumes. Therefore:

- Total Capacity of Ponds 4 and 5 6,000,000 L
- Volume taken up by rainfall plus ICCF 730,591 L
- Stormwater generated from SWF plus ICCF 3,059,235 L
- ***Total capacity remaining*** ***2,210,174 L***

c. Landfill gas impact assessment of the proposal on the site and surrounding area

Landfill gas impacts will be assessed by the EPA through the Development Licence Exemption application process. The development licence application identifies that the proposal will not alter the production of landfill gas, though it will impact the existing infrastructure. There is existing landfill gas infrastructure in the areas of the Taylors Road landfill that the proposed facility will be located on, including collection infrastructure and the landfill cap which contains fugitive emissions. The infrastructure could be damaged through the construction of the proposal or through the differential settlement of various parts of the site.

To address potential impacts, the installation will be placed on a series of floating slabs so as not to damage the existing site infrastructure, however there will be some impacts which require management. The weight of the plant and stockpiles could pose a risk to the integrity of the landfill gas collection infrastructure, including the potential to push well down and puncture the basal liner. In addition, the cap could become deformed under the plant and allow leakage of landfill gas.

The risks identified will be controlled by undertaking a re-design of the collection infrastructure following these principles:

a. Where possible, plant and stockpile design will be adjusted to avoid impacting existing wells.
b. Wells at risk of puncturing the basal liner will be removed or modified to eliminate this risk.
c. Surface and sub-surface collection infrastructure will be re-routed away from the plant and stockpile areas
d. Collection infrastructure will be placed to mitigate risk of elevated landfill gas at the edges of stockpiles or foundation slabs.

In addition to these design measures, landfill gas monitoring will be conducted to ensure a safe working environment.

The landfill gas impact assessment identifies height limits for stockpile heights to proceed with the outlined development. If the stockpile heights are to be exceeded, further detailed design would be required.

We expect that the landfill gas impact assessment will be assessed through the Development Licence Exemption application and do not consider it a planning consideration.

d. Further details on the number and type of heavy vehicle traffic movements, timing of movements, impacts on the surrounding area and required road network upgrades;

Section 8 of the Transport Impact Assessment prepared by One Mile Grid outlines the traffic impacts of the proposal.

The development is anticipated to generate traffic from truck deliveries up to a truck and dog trailer, and traffic generate by staff.

It is anticipated that peak traffic generation associated with staff movements will occur during the staff change over period with up to half of the space turning over. The changeover is anticipated to generate up to 10 movements associated with the arrival and departure of staff.

It's not expected that staff and truck movements will occur at the same time, however for the purposes of conservative assessment the development is anticipated to generate a maximum of 20 movements during both the AM and PM peak hours (staff and truck arrivals/departures).

The anticipated peak hour traffic generation of 20 movements is equivalent to 1 vehicle movement every 3 minutes and is considered low in traffic engineering terms.

SIDRA Intersection was used to assess the operation of the upgraded intersection with the post-development traffic volumes. The modelling identifies that the Abbots and Taylors Road intersection is expected to operate under excellent conditions during both the morning and afternoon peak hours after the delivery of the signals is complete and the subject site is developed.

In view of the foregoing, One Mile Grid deems the development will have a negligible impact on the surrounding road network and the proposed arrangement is satisfactory.

e. Details on the potential health and wellbeing impacts on nearby land uses and occupants, including businesses, commercial growers, recreational areas and residential areas;

The potential health and wellbeing impacts on nearby land uses and occupants has been addressed through the planning report and supporting documents and is also being addressed in the development licence application to be approved by the EPA.

The following potential impacts have been addressed in the planning report:

- Noise
- Air quality and odour
- Traffic
- Visual

The assessments provided with the planning report each detail the potential impacts and how these will be addressed by the proposal and conclude that there will be no health and wellbeing impacts on nearby land uses and occupants.

An assessment of human health risks has also been undertaken through the development licence application in accordance with the *Environmental Health Risk Assessment: Guidelines for Assessing Human Health Risks from Environmental Hazards* (enHealth, 2012).

It identifies two potential groups of receptors:

- Site staff who are exposed to these emissions while working at the SWP
- Members of the public and employees of nearby industries who may be impacted by offsite emissions

The site will receive Category C contaminated soils and PFAS impacted soils which could include PFAS, hydrocarbons, other VOCs, metals and a range of other contaminants.

The primary chemicals of concern are PFAS compounds, which may also be present in material classified as Category C contaminated soil. There is potential for the soils to also contain a range of hydrocarbons and VOCs. These cannot be quantified at this stage. To address these concerns, the proposed management systems include ongoing review of the hazards and if hydrocarbons (for example, benzene) are identified and require additional controls these will be implemented as required. The primary source of guidance for PFAS compounds adopted is the *enHealth Guidance Statements on per- and poly-fluoroalkyl substances* (enHealth, June 2019). The precautionary principle is recommended to apply in the management of PFAS, including minimising exposure where possible while further scientific research is conducted to verify the appropriate controls.

There is no public access to the site and as demonstrated above, the offsite emissions are limited in impact, with the key receptor being an adjacent resident (noise and dust emissions). The noise and dust modelling conducted shows that the offsite exposure is limited and that noise emissions can be further controlled if necessary. There are strong controls ensuring the containment of chemicals of concern in land and groundwater with the site being constructed on top of a landfill cell which has active monitoring and management of both leachate and groundwater, as well as a landfill cap in place.

f. Details of the construction methodology of the storage and processing areas, including dust, contaminated material and odour suppression

A Construction Management Plan will be prepared prior to commencement of development which addresses the details around managing the construction process to ensure that dust, contaminated material, and odour are managed.

A Site Risk Assessment Summary table is provided in the exemption from development licence application to the EPA which identifies key risks and controls during the construction stage. The following table extracts the key information to address these risks:

Segment	Activity	Description	Risk	Assumed Controls
Land and groundwater	Construction	Construction of plant and storage areas	Breach of integrity to landfill liner due to increased load results in contaminated groundwater	Geotechnical study to confirm any stress on clay liner is acceptable. Avoid constructing over leachate / gas wells or remove wells as far as practical and reinstall in unloaded area.
Land and groundwater	Construction	Construction of plant and storage areas	Breach of integrity to landfill liner due to increased load results in off-site landfill gas migration in subsurface	Geotechnical study to confirm any stress on clay liner is acceptable. Avoid constructing over leachate / gas wells or remove wells as far as practical and reinstall in unloaded area.
Air, amenity, ecology, land and groundwater, water	Construction	Construction of pads, storage areas, roads	General construction results in impacts such as noise, dusts etc	Implementation of EMP during construction

Contaminated material and odour will not be a material risk during construction, however during the operational phase as detailed in the planning application proposed control measures include:

- Soil containing PFAS to be fully covered (as per the PFAS National Environmental Management Plan 2.0)
- Polymer spray or hydroseeding on untreated stockpiles
- Water sprays on treated stockpiles
- Soil washing operations involving wet process (and also consisting of distinct process units which are enclosed)

g. Details of how land not required for immediate use will be maintained

The land is a capped landfill cell and will continue to be used as it currently is, managed in accordance with the relevant EPA licence and planning permit.

h. Details of how this use impacts the ultimate transfer of land to open space

This construction and design of the use will have no impact on the ultimate transfer of land to open space. A section 173 agreement applies to the land which covenants that upon and following the owner of the land closing the landfill by capping in accordance with the requirements of the EPA, the owner will take the required measures to ensure the integrity of both the cap and liners of the landfill are maintained.

The proposal is in line with the section 173 agreement as the landfill is still operational. Current approvals on the site for Materials Recycling Facilities include conditions requiring the cessation of the use and removal of buildings and works following the closure and capping of the existing landfill. It is anticipated that a similar condition be applied to this use and development.

i. **Confirmation as to whether a notification under the Occupational Health and Safety Regulations 2017 (OHS Regulations) is required, a licence under the *Dangerous Goods Act 1985* (Dangerous Goods Act) is required, or a fire protection quantity under the Dangerous Goods (Storage and Handling) Regulations 2012 is exceeded.**

A licence under the Dangerous Goods Act is not required.

The Taylors Rd landfill site is operated as a single integrated location under the Dangerous Goods Regulations and OHS Regulations. This includes the EarthSure thermal treatment plant and the Taylors Rd landfill, and the proposed Soil Washing Plant will be managed in the same way. Some chemicals currently used on the site at other facilities are subject to placard or manifest limits in accordance with the Dangerous Goods (Storage and Handling) Regulations 2012 and therefore systems are in place to manage materials as required. Depending on the level of storage of chemicals for the Soil Washing Plant and the total quantity of each material on the site, manifest or placard limits may be triggered, and notifications under the OHS Regulations will be made when necessary.

The staff managing site chemicals and compliance with Dangerous Goods Regulations and OHS Regulations (the Victorian Health and Safety Advisor – Veolia Waste and Resource Recovery) have been notified of the intention for further chemicals to be stored at the site and used by the Soil Washing Plant.

2 Conclusion

We thank you for the opportunity to respond to the further information and trust that the information provided appropriately addresses these matters.

Please do not hesitate to contact Ben Hawkins on 0407 650 331 or via ben.hawkins@ricardo.com with any queries.

Yours sincerely,

Ricardo Energy Environment & Planning Pty Ltd

Ben Hawkins
Associate Director

Ilona Stuart
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