



WORKS APPROVAL APPLICATION ASSESSMENT SUMMARY

Application No.	1002442
Applicant Name	Grosvenor Lodge Pty Ltd
Address of Premises	435 Balnarring Road, Tuerong, 3915
Proposal	Extension of landfill operations for disposal of solid inert waste
Scheduled Category	A01 PIW Management A05 Landfill

SUMMARY

Grosvenor Lodge Pty Ltd (the “applicant” “Grosvenor Lodge”) currently owns and operates a landfill (Type 3 - solid inert) under Environment Protection Authority Victoria (EPA) Licence No. 45248 at 435 Balnarring Road, Tuerong 3915 (the “premises”).

Grosvenor Lodge has applied for a Works Approval from EPA for an extension of the Rockleigh Landfill involving the modification of existing landfill cells to increase airspace, construction of three new cells, tie-in of new and existing cells and the extension of the western sideliner. The proposal increases the approved airspace at the facility by an additional 650,000 m³ distributed across existing and new cells. The approval will extend the lifespan of the landfill from the approved final closure date of 2019 to 2025.

The proposed activities subject to this Works Approval application relate to the:

- Increase in airspace over existing landfill Cells 4, 5A, 5B-1, 5B-2 and 1A (~149,000 m³ additional airspace).
- Extension of three new landfill cells (Cell 6A, 6B and 6C) north of the existing waste placement boundary (~456,000m³ additional airspace).
- Tie-in of new cells with existing cells 4, 5A, 5B-1, 5B-2 and 1A.
- Extension of the western sidewall liner adjacent to Cell 4 (45,000 m³ additional airspace).
- Construction of a second leachate pond.
- Progressive installation of a final capping layer and vegetated soil cover over the final completed profile of the Rockleigh Landfill and landfill extension.
- Continuous aftercare management and monitoring of capped cells as a passive open space (i.e. parkland type amenity) or for grazing.

The application was advertised for community comment on 19th April 2017 in the Herald Sun and Mornington Peninsula Leader. An information session was held on 3rd May 2017. The application was also referred to the following authorities for comment: the Department of Health and Human Services, Mornington Peninsula Shire Council, Metropolitan Waste and Resource Recovery Group (MWRRG), Sustainability Victoria (SV), Melbourne Water, and Southern Rural Water.

Four community submissions were received. All authorities who responded during the assessment period supported the proposal. Following the formal submission period, EPA held another community session jointly with the Mornington Peninsula Shire Council and any interested submitters. The issues raised by the community in meetings and submissions were considered in the assessment of the application and the conditioning of the works approval.

During the assessment period four notices were issued under section 22(1) of the Environment Protection Act 1970 (EP Act). These notices were issued on 21st July 2017, 24th August 2017, 28th September 2017 and 2nd November 2017. The notices sought additional information and clarity on: understanding of the baseline

environment; defining potential impacts to the receiving environment; design details; final pre-settlement contours and areas of waste placement; demonstration of how the alteration in existing cell height affects risks; predicted landfill gas (LFG) generation rates and how the proposed LFG management system meets the requirement of the landfill gas management hierarchy; evidence to support the proposed stormwater network; information and technical assessments to support the alteration to existing cells including Cell 1; .

The Works Approval application assessment process identified and considered the following key issues which are summarised below:

Track Record and Fit and Proper Person Test

There have not been any known findings of guilt against Grosvenor Lodge for relevant offences at the time of assessment. EPA considers Grosvenor Lodge meets the 'fit and proper person' requirements of S20(3)(b) of the EP Act. It should be noted that four Pollution Abatement Notices were issued.

Emissions to Air

Landfills can pose a risk to air quality through generation and transportation off-site of landfill gas, odour and dust.

The nature of the solid inert waste to be accepted at the premises is expected to produce minimal odour, as such, primary odour sources at the premises can be considered to be low risk. The consistent implementation of appropriate monitoring and adaptive management controls can be expected to reduce the risk from odour emissions to an acceptable level.

Considering the premises setting and nature of waste deposited at the premises, the potential for intermittent dust and airborne particle emissions is considered to be low to moderate. Primary sources of dust may include waste deposition, traffic movement across unsealed internal road, earthworks (capping/excavations), earthwork movements and stockpiles. Adequate monitoring and consistent implementation of dust control measures can be expected to reduce the risk from dust emissions to an acceptable level.

The proposed landfill gas management system includes passive gas collection trenches and gas collection geosynthetic strip drains connected to a passive gas vent, low-calorific flare or high-temperature flare. In addition, the EPA requires the landfill gas extraction system include drilled vertical gas extraction wells to apply vacuum across the depth of the waste mass installed between 40 to 50 metres apart. This design, proportionally scaled to the predicted landfill gas generation volumes for the site, can be expected to meet the requirements of the policy.

Groundwater

Clause 16(2) of the Landfill Waste Management Policy requires that all new landfill sites must deposit waste at least two metres above the long-term undisturbed depth to groundwater, unless the Landfill operator satisfies the Authority that sufficient additional design and management practices will be implemented.

The application proposes waste will be deposited a minimum of 2 metres above the long-term undisturbed top of groundwater elevation for Cells 6A, 6B, and 6C, with the exception of the recessed leachate collection sumps. EPA performed an independent analysis of groundwater data contained in the application and determined that waste will be deposited within 2m of the groundwater level across each of the proposed cells (Cells 6A, 6B and 6C). EPA engaged the Independent Landfill Expert Advisory Panel to consider the separation distance between long-term undisturbed groundwater and provide comment. The panel assessment considered "*that there is insufficient information to estimate the separation distance between long-term undisturbed groundwater and the lowest point of the proposed top of base line*".

Given the current uncertainty of long-term undisturbed groundwater level, Grosvenor Lodge has provided additional design and management practices to be applied to Cells 6A, 6B and 6C to satisfy clause 16(2)(a) of the Waste Management Policy. The design and management practices include an integrated (anchored) HDPE geomembrane overlain by a non-woven cushion geotextile; above the compacted clay liner and groundwater collection trenches in a grid pattern installed at regular spacing, graded to groundwater collection sumps. These measures are to be implemented across the full extent of any area where a minimum 2 metres separation between waste (including lowest point of the liner of any leachate sumps) and

the long-term undisturbed groundwater elevation is either not achieved or not able to be verified by the EPA appointed auditor. EPA considers these additional design and management practices suitable to meet the requirements of clause 16(2)(a).

Prior to the cell approval stage EPA will require a comprehensive groundwater investigation to provide additional evidence and justification of long-term undisturbed groundwater level across Cells 6A, 6B and 6C.

Surface water

The proposal is within the recommended 100m buffer distance to surface waters and must therefore demonstrate there is not a risk of contamination to surface water and adequate protective measures are in place. An unnamed surface waterway (drainage line/ephemeral creek) is located approximately 20m from the northern premises boundary. The waterway is immediately, hydraulically downgradient from the premises.

The proposed secondary leachate pond is positioned ~160m hydraulically up-gradient of a surface water dam positioned beyond the southern premises boundary. Considering the hydraulic gradient between the source and receptor there is a moderate risk of impact. Two further surface water dams are also located adjacent to the western premises boundary, each are less than 100m from the site. The dams are fed by surface runoff from the surrounding catchment. It is noted that these water bodies are likely positioned hydraulically cross-gradient of the site and are unlikely to be affected by impact from the premises.

A Surface Water Management Plan (SWMP) has been proposed which includes design and management practices to protect surface water bodies from contamination. The SWMP conceptual design has been assessed as being adequate to demonstrate policy compliance. Surface water management and monitoring plans to assess the quality of surface waters, identify impact and offer clear remedial actions should be prepared, approved and implemented as required by appropriate works approval conditions.

Noise and vibration

Noise is recognised as a principle issue of concern for residents adjacent to the premises. Requirements for the active monitoring of noise and compliance to a fixed noise limit is contained in Planning Permit P11/0456. The noise assessment report accompanying the application proposes that following the implementation of recommended noise abatement actions (being a 4.5 m high noise bund along the northern section of the western boundary), the proposed landfill will meet the permissible noise levels of both the planning permit and recommended maximum noise levels contained in EPA guideline for Noise from Industry in Regional Victoria. A works approval condition has been included requiring the implementation of a Noise Management and Monitoring Programme for the premises. This programme must be designed to identify sources of noise, quantify and monitor noise emissions and recommend and implement remedial actions in the event of exceedance.

Vibration has been identified by submitters as of potential concern given the proximity of the proposed extension and sensitive receptors. This includes residential properties and mains water infrastructure. A vibration management and monitoring programme must be implemented to assess expected vibration levels and propose adequate measures to protect sensitive receptors.

Compliance with section 50C of the EP Act

The EPA may refuse to consider an application for a Works Approval in relation to a waste management facility if the operations would be inconsistent with the Statewide Waste and Resource Recovery Infrastructure Plan (SWRRIP) and Metropolitan Waste and Resource Recovery Implementation Plan (MWRRIP). The 'Devil Bend Landfill' (Rockleigh Landfill) is detailed in the SWRRIP as approved with an expected closure of 2020, a provision for additional planned airspace pending approvals is also identified as from 2021-2024, and intended closure in 2025. The landfill has also been identified as being required to meet Victoria's waste disposal needs, and is provided for and is consistent with the MWRRIP Infrastructure Schedule.

The proposed facility is considered to be consistent with both the SWRRIP and MWRRIP and therefore in compliance with section 50C of the Environment Protection Act 1970.

Compliance with Landfill BPEM and Landfill WMP for specific landfill segments

The issue of a planning permit by the MPSC is a requirement of the WA before any activity proposed in the application can occur.

The proposed site can be considered to meet the landfilling siting requirements with the implementation of all environmental protection, management and monitoring measures.

Detailed designs must be provided to the EPA prior to the commencement of works proposed in the WAA accompanied by verification by an environmental auditor that final detailed construction designs are in accordance with all relevant legislation and policy. The auditor will be required to supply a Construction Quality Assurance (CQA) Plan.

Detailed designs should be accompanied by a full geotechnical assessment which supports those designs.

The operational management proposed in the WAA, in conjunction with standard licence conditions, can be considered to represent best practice. There is however a requirement these best practices are consistently implemented by Grosvenor Lodge. Breaches of conditions contained in the WA or licence are subject to prosecution by the EPA.

An updated Site Layout and Filling Sequence Plan is required, containing clearly defined filling sequence of cells throughout the full life of the landfill, delineation of all cell boundaries and demonstration of compliance with the requirements of all planning permit, licence and WA conditions.

The landfill capping profile proposed is in line with Type 3 landfill criteria and is considered appropriate. However, final detailed designs must be provided prior to the commencement of works proposed in the application.

Compliance with environment protection principles the EP Act

The Works Approval application is required to adhere to the environment protection principles contained within the EP Act. As such, the Works Approval application must be supported by such reports, plans and information that indicate how the applicant is proposing to meet the relevant principles. EPA considers the application meets the principles of the Act.

EPA determined that the proposal:

- is identified in the 2016 Metropolitan Waste and Resource Recovery Implementation Plan landfill schedule.
- is consistent with Statewide Waste and Resource Recovery Infrastructure Plan.
- is compliant with the Landfill BPEM, Landfill WMP. This means it has been assessed as meeting international best practice standards and is suitably located.
- is compliant with SEPPs.
- is not expected to adversely affect the interests of any person other than the applicant.
- is not expected to adversely affect the quality of any segment of the environment nor cause pollution or environmental hazard.
- is compliant with the environment protection principles of the EP Act.
- has not been objected to by DHHS.
- has been made by Grosvenor Lodge who is considered to be a fit and proper person.

EPA has assessed the Works Approval application and has issued Grosvenor Lodge with a Works Approval subject to conditions under section 19B(7) of the EP Act 1970.