

Case Officer Report



Subject: IP 0003/23 - Application for the renewal of IP 0001/05/C for the operation of Ta' Zwejra landfill submitted by Wasteserv Malta Ltd.

Date: 19th July 2024

To: ERA Board

From: Regulatory Affairs Directorate

1. Background

This report has been prepared for the determination of IP 00003/23 which is a renewal of IP 0001/05/C to operate a non-hazardous engineered landfill at Ta' Zwejra in Naxxar by Wasteserv Malta Ltd. The application was received on 09th October 2023 and a consolidated application was submitted on 18 July 2024.

2. Case Officer Report

2.1. Proposal

The facility is an engineered landfill utilized for non-hazardous mixed municipal and industrial waste. Currently permitted operations include the following and no changes are being proposed:

Activity listed in Schedule 1 of the Industrial Emissions (IPPC) Regulations / Associated Operations	Description of specified operation	Limits of specified operations
Section 5.4: Landfills receiving more than 10 tonnes per day or with a total capacity exceeding 25,000 tonnes, excluding landfills of inert waste	Waste Management Operation: D1 Tipping above or underground (e.g. landfill, etc.)	Receipt, handling, storage and disposal of non-hazardous wastes having the six-digit European Waste Catalogue codes listed in Schedule 5 of this permit (as published in Commission Decision 2000/532/EC as may be amended from time to time), subject to the net available landfill void space as specified in the Introductory Note.
Associated activity of leachate management	Recirculation of leachate and treatment in accordance with Improvement Program Item No. 29	From leachate generation to on-site recirculation and/or treatment.
Closure, aftercare and associated activity of landfill gas management	<p>Partial capping involving recontouring as per approved document IP0003/23/DOC 1.</p> <p>Gas extraction, collection and treatment</p>	<p>From the introduction of final capping material to after-care monitoring approved by the Authority.</p> <p>From generation of gas to extraction and collection into an offsite central gas management facility, treatment and energy generation.</p>

Proposed Emissions and Mitigation

Point sources of emissions	
Location code	Emission source
PS1	Combined Heat and Power Plant (CHP)
PS2	Regenerative Thermal Oxidizer (RTO)
PS3	Emergency flare
PS4	Emergency backup flare
PS5	Backup Regenerative Thermal Oxidizer (RTO)

2.2. Supporting documents recommended for approval

Documents: IP/0003/23 – Permit document
 IP/0003/23/DOC1 – Landfill Cover Design Report
 IP/0003/23/DOC2 – Gas plant layout plan
 IP/0003/23/DOC3 – Layout plan with restoration levels
 IP/0003/23/DOC4 – Proposal for thermographic monitoring of the landfilled waste mass.

2.3. Applicable law/ policy

The proposal is to comply with:

- CAP. 549 - Environment Protection Act);
- S.L. 549.29 - Waste Management (Landfill) Regulations;
- S.L. 549.63 - Waste Regulations;
- S.L. 549.76 - Industrial Emissions (Framework) Regulations;
- S.L. 549.77 - Industrial Emissions (Integrated Pollution Prevention and Control) Regulations.

2.4. Site Description and Constraints

The facility is adjacent to other waste management facilities within the Ecohive complex most of which operated by the same applicant. There are also several farms and a couple of residential units. (Site Plan in Annex 1)

2.5. Site History

The following permitting history is noted on site:

Number	Title	Status
<i>IP 0001/05/A</i>	To operate a non-hazardous engineered landfill	Permit issued 20 October 2005 for a period of four (4) years
<i>IP 0001/05/B</i>	Renewal and variation of permit <i>IP 0001/05/A</i>	Permit determined 6 March 2014 for a period of four (4) years.
<i>IP 0001/05/C</i>	Renewal and variation of permit <i>IP 0001/05/C</i>	Permit granted 14 April 2020 for a period of four (4) years and extended further for 6 months on the 22 nd March 2024
<i>PA/04834/04</i>	Development of controlled landfill and ancillary facilities.	23 February 2006
<i>PA/03141/04</i>	Proposed excavation works (only) in preparation for a landfill facility.	Granted 16 August 2004
<i>PA/06448/04</i>	Proposed excavation in preparation for a landfill facility and construction of amenity building	Granted 22 June 2005

PA/02342/06	Development of landfill at Ghallis Ta` Gewwa.	Granted 06 May 2014
PA/03447/14	Construction of circulation road within landfills complex	Granted 20 February 2015
PA/06753/17	Erection of 1st floor (Class 4A, Offices) over existing Ground Floor	Granted 14 December 2017
PA/3422/22	<i>Upgrading of the road network at the Ecohive complex, Maghtab</i>	Screening Process

2.6. Consultations

2.6.1. Intra-ERA Feedback

The **Compliance and Enforcement Unit** had no comments on the application documents. A number of improvement program items from IP 0001/06/C are still being discussed with applicant as follows:

1. Items 29 & 30 in relation to a leachate treatment proposal which excludes recirculation and its implementation – a tender process is being undertaken by the applicant, which should be concluded by Q2 2025.
2. Item 31 in relation to an exercise to determine the integrity of the engineered lining system – this requirement will be superseded by the leachate treatment proposal in Items 29 & 30 above.
3. Item 33 – Closure plan including provisions for after-care as required by S.L. 549.29 – will be addressed in a future variation application and suggested to be retained.
4. Item 34 – in relation to the requirement for installation of a catalytic convertor for the landfill gas powered plant, WSM explained that a catalytic converter is not the best solution given the high concentration of siloxanes, for which an activated charcoal filter is already in place to serve as pre-treatment. Albeit monitoring of emissions from combustion plants is not required by The Medium Combustion Plant Regulations S.L. 549.122 due to the size of the engine in question (0.47 MWth). Monitoring of certain products of combustion in gases is being suggested in view that the Landfill Regulations S.L. 549.29 require the monitoring of landfill gases and so as to monitor progress with respect to the last 2018 monitoring exercise. Standard conditions allowing for the Authority to request operational changes such as abatement could still apply.
5. Item 35 in relation to a cut and fill exercise to obtain the approved topography – This is dependant on the outcome of Item 33 above. Therefore item was removed and replaced by a condition requiring pre-settlement heights in accordance with the approved heights and layout plans.
6. Item 37 – thermographic monitoring proposal for temperatures within the landfill mass – this has been submitted and started to be implemented, therefore being proposed as Approved Document IP 0003/23/DOC4.

In view that there are no operational changes from current permit, the following Units had no comments on this application: **Environmental Assessment, Ambient Quality and Waste and Biodiversity and Water.**

2.6.2. Feedback from external consultees

From a land use planning perspective the **Planning Authority (PA)** commented that the renewal of the IPPC permit of the Ta' Zwejra non-hazardous landfill shall not affect or prejudice permit PA 2342/06 (Sanctioning of extension to Zwejra Engineered landfill including the Closure Plan for the same Landfill) as well latest permits issued on site (PA 3447/14 – Construction of circulation road within landfills complex and PA 6753/17 - Erection of 1st floor (Class 4A, Offices) over existing Ground Floor).

The **Environmental Health Directorate (EHD)** requested mitigation measures to prevent odour pollution from leachate collection and treatment. The applicant has noted this feedback and conditions in this regard as well as other standard conditions proposed by the EHD are being proposed.

The **Water Services Corporation (WSC)** suggested the inclusion of a buffer tank and provided conditions and prohibitions on the type of effluent which could be discharged to sewer. Any discharge to the sewer is subject to the requirements of a Public Sewer Discharge Permit including associated monitoring requirements. In view that the selection and of leachate treatment system is still ongoing at the operator's end, this feedback has been passed on to WSM and conditions included accordingly.

The **Occupational Health and Safety Authority (OHSA)** suggested that measures shall be mainstreamed in all phases of the project including the public procurement process as required by Cap 424 and subsidiary legislations.

The **Regulator for Energy and Water Services (REWS)** had no objection to this renewal application.

The **Civil Protection Department (CPD)** recommended a condition to ensure a fire safety report prepared and submitted by the entrusted fire safety engineer, competent in fire safety. The engineer shall also declare that the proposed project is compliant and adhering to the relevant fire safety standards and BS 9999. Declaration shall also clearly indicate that the access and facilities for the fire service is specifically fully adhering such standards. The compliance by the engineer shall be issued after the project is finalised, however before operating. Failing these conditions and requirements, the CPD objects. Such feedback was conveyed to applicant and conditions included accordingly to be enforced by CPD.

The **Malta Resources Authority (MRA)** and the **Energy and Water Agency (EWA)** had no comments to make.

2.6.3. Feedback from applicant

When consulted on the proposed conditions the applicant proposed to move the implementation of the leachate treatment system required by Improvement Program Item No. 30 from April to June 2024, which is being considered favourably by the Directorate.

The applicant also committed to relocate borehole 3308 to a site downstream and further Northeast from the landfill whilst requested to either remove or reword CPD's condition concerning BS 9999 to apply better to the site in question. Discussions were held with the CPD and amendments are being made accordingly.

2.7. Representations from Public

2.7.1. Public Consultation Dates: 7th December to 24th December 2023

2.7.2. Responses Received: None

2.8. Discussion

The IPPC application for the renewal of IP 0001/05/C was received on 9th October 2023 without any changes to the current operations being proposed. The installation consists of an engineered landfill for non-hazardous waste which has been permitted since 2005 under the S.L. 549.29 - Waste Management (Landfill) Regulations and S.L. 549.77 - Industrial Emissions (Integrated Pollution Prevention and Control) Regulations, Schedule 1, Activity 5.4 - *Landfills, as defined in the Waste Management (Landfill) Regulations (S.L.549.29) receiving more than 10 tonnes of waste per day or with a total capacity exceeding 25,000 tonnes, excluding landfills of inert waste.*

The estimated landfill capacity is circa 820,600 cubic meters. The facility has been developed in three phases consisting of 4 hydraulically independent cells. Each cell has its own leachate collection / extraction system and are physically connected to form an integral common base of the landfill. The facility has a surface water collection system and a gas extraction system with possible utilisation through the following emission points requiring annual monitoring or as otherwise determined in the Environmental Monitoring Program of the whole Ecohive complex being discussed with the operator separately through the Compliance & Enforcement process to enable a degree of flexibility in terms of operational adjustments and technological developments:

Emission Limits to Air and Monitoring		
Location code	Emission source	Pollutants to be measured
PS1	Combined Heat and Power Plant (CHP)	NO _x , SO _x (Oxides of sulfur), Total VOC & CO (Carbon Monoxide)
PS2	Regenerative Thermal Oxidizer (RTO) plant	Total VOC

PS3	Emergency flare	--
PS4	Emergency backup flare	--
PS5	Regenerative Thermal Oxidizer (RTO) plant	Total VOC

Certain directly associated activities and infrastructure are shared with other neighbouring waste management facilities managed by the same operator such as the quarantine area, weighbridge, gas collection treatment system and eventual leachate treatment plant. When applicable, conditions covering such activities are still being included in this permit.

During the processing of this application, it emerged that the only downstream groundwater and landfill gas monitoring point next to the site has been closed by court order since year 2022. The other downstream monitoring point is in fact just north of the Ghallis non-hazardous landfill and Maghtab dump. Therefore, an Improvement Program Item is being included to provide an alternative sampling point to ensure compliance with monitoring requirements of S.L. 549.29, Schedule 4, Part 4 (A) which requires monitoring of groundwater with a least two measuring points in the outflow region.

The Regulatory consultation was carried out between 20th November and 5th December 2023 and no objections to the renewal application were received. Conditions suggested by the consultees were discussed with applicant and included accordingly to be enforced by respective external proponent.

In a site visit on the 9th July 2024, it was observed that there are two RTO and two flares serving the site. The operator revised the associated layout plan by adding a backup flare and RTO. A condition was thus included to require their monitoring if they are put into use.

Progress on all Improvement Program Items as described in Section 2.6 above was noted and is being reflected in conditions and revised Improvement Program accordingly.

The bank guarantee value is being revised to reflect the new lower risk associated with a significantly reduced list of Improvement Programme items.

2.9. Financial Matters

Financial guarantee	€1,083,000 (previously €4,780,000) (covered by the Letter of Undertaking covering Government Projects ref MF35/05/160)
Application Fee	€16,412 - Paid
Annual Fee	€3,282.40

3. Environment Officer Recommendation:

The Regulatory Affairs Directorate recommends the GRANTING of the Permit for a period of ten (10) years subject to the following conditions as post decision requirements:

The proposed permit conditions include:

- a) Standard conditions applicable to this sector;
- b) Site specific conditions:
 - All leachate generated by the landfill shall be adequately treated to standards prescribed by the Authority and other Regulatory Bodies in accordance with Improvement Program No. 29.
 - Mitigation measures to prevent odour pollution from the leachate treatment are to be carried out ∞.
 - Further to Improvement Program Item 29:
 - a) WSC-DPU shall be kept apprised of the decisions taken by WSM in terms of the type of waste treatment technology selected and provide documentation confirming that this is the recommended BAT for the intended use.
 - b) If an RO system will be used as part of the treatment process, the concentrated brine produced shall not be discharged to sewer and alternative disposal routes are to be sought and approval sought from relevant Authorities prior to such discharge/disposal.
 - The project shall have the fire safety report prepared and submitted by the entrusted fire safety engineer, competent in fire safety. The engineer shall also declare that the proposed project is compliant and adhering to the relevant fire safety standards and BS 9999. Declaration shall also clearly indicate that the access and facilities for the fire service is specifically fully adhering such standards.∞
 - The Permit Holder shall monitor temperatures within the landfilled waste mass Approved Document IP 0003/23/DOC4. These shall include at least annual thermographic imagery, whereby for areas which result in posing at least a moderately severe risk of fire, another thermographic imaging exercise shall be undertaken to demonstrate progress resulting from the actions taken to rectify the situation.

c) Improvement programme items:

No.	Improvement	Date
29	Proposal for leachate treatment which excludes recirculation for approval by the Authority.	End December 2024
30	Implementation and commissioning of leachate treatment system in accordance with the proposal approved in No. 29 above as approved by the Authority.	End June 2025.
33	Submission of Closure plan based on IP 0003/23/DOC1 which includes a proposal for after-care monitoring in accordance with the requirements of The Landfill Regulations, S.L. 549.29 to the Authority for approval.	End July 2025.

37	Update to the Environmental Monitoring Programme showing how groundwater and landfill gas outside the installation shall be measured according to the requirements of Schedule 4 of The Landfill Regulations, S.L. 549.29	End October 2024

Annex 1: Site Plan

