

*This Report has been cleared for submission to the Board by Programme Manager, Marie O'Connor.*

Signed: Marie O'Connor Date: 03/11/2022



**OFFICE OF ENVIRONMENTAL SUSTAINABILITY**

**REPORT OF THE TECHNICAL COMMITTEE ON OBJECTIONS TO PROPOSED DECISION**

**TO:** Directors

**FROM:** Technical Committee Environmental Licensing Programme

**DATE:** 3<sup>RD</sup> NOVEMBER 2022

**RE:** Objection to Proposed Decision for **GLV BAY LANE LIMITED**, Bay Lane Quarry, Bay Lane, St. Margaret's, Dublin, Waste Reg: W0301-01

Application Details	
<b>Classes of Activity (under Waste Management Act 1996 as amended):</b>	WMA Activity under the 4th Schedule of the Waste Management Act 1992 as amended  R5 Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.  R13 Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).
<b>Licence application received:</b>	05 April 2019
<b>PD issued:</b>	13 June 2022

<b>First party objection received:</b>	1
<b>Third Party Objection received:</b>	0
<b>Submissions on Objections received:</b>	0
<b>Regulation 33(1) extension of time:</b>	24 October 2022

### **Company**

The licence application relates to the operation of an inert waste recovery facility at Bay Lane Quarry, Bay Lane, St. Margaret's, Dublin 15, by GLV Bay Lane Limited. The principal activity is backfilling of a quarry void using imported soil and stone. The facility application boundary covers an area of 13.67 hectares, of this 8.59 hectares consist of the quarry void to be backfilled. The proposed maximum annual intake is 532,800 tonnes of waste inert soil and stone. The proposed total volume of material required to restore the quarry is 1,332,084 tonnes (including material required for final profiling).

There was one submission received in relation to the application and this was considered by the Board at PD stage.

### **Consideration of the Objection**

The Technical Committee (TC), comprising of David Matthews (Chair) and Ann O'Sullivan has considered all of the issues raised in the objection and this report details the Committee's comments and recommendations following the examination of the objections and the documents associated with the Waste Management Act licence application.

This report considers the first party objection. The objections raised are summarised below. However, the original objection should be referred to for greater detail and further expansion of particular points.

## **First Party Objection**

The applicant has made two main points of objection relating to specific Conditions and Schedules of the Proposed Determination and the Inspector's Report. The points of objection are dealt with in the order below.

### **A. 1 Condition No. 3.23 Infrastructure and Operation**

The applicant objects to Condition No. 3.23 *"The licensee shall provide and maintain a waste water treatment plant at the facility for the treatment of sanitary effluent arising on-site. Any waste water treatment system and percolation area shall satisfy the criteria set out in the Code of Practice Domestic Waste Water Treatment Systems (Population Equivalent < 10), published by the Environmental Protection Agency"*.

The applicant had initially proposed to provide and maintain a wastewater treatment plant at the facility for the treatment of sanitary effluent arising on-site. The applicant now has requested to continue to tanker wastewater offsite by an appropriately licensed haulier to an appropriately licensed treatment facility.

Technical Committee's Evaluation:

The TC considers that the applicant's proposal to tanker wastewater off site for disposal at a licensed treatment facility is a suitable alternative to providing and maintaining a waste water treatment plant at the facility for the treatment of sanitary effluent arising on-site, and it will provide adequate protection to the environment. This approach has been adopted at similar facilities, such as Roadstone Limited W0307-01 and Roadstone Limited W0299-01.

The TC recommends that Condition 3.23 be amended. In addition, Condition No. 3.24 states "*The licensee shall, prior to commencement of waste acceptance, submit a drawing of the site showing the location of the waste water treatment plant and percolation area at the facility.*" The TC recommends removing Condition 3.24 from the PD following the proposed amendment to Condition 3.23.

Reason for Decision:

The TC has reached its conclusion on the basis of the following consideration:

- To ensure the licence appropriately reflects operations at the site while ensuring the protection of the environment.

Recommendation:

Amend *Condition 3.23* to read as follows:

**3.23 The licensee shall provide and maintain a holding tank at the facility for the storage of sanitary effluent arising on-site. All sanitary effluent shall be removed from the facility in accordance with Condition 8.3.**

Delete *Condition 3.24*

**B.2 Schedule B: Emission Limits *B.2 Emissions to Water***

The applicant objects to the emission limit value (ELV) of 250 mg/l for sulphates (SO<sub>4</sub>) set in Schedule B.2 Emissions to Water.

The applicant outlined that the former quarrying operation exposed large volumes of limestone rock face to oxidative conditions, leading to sulphate concentrations in both rock and water, resulting in the closure of Bay Lane Quarry operations in 2009. The applicant conducted analysis of sulphate concentrations in the waters in the quarry and of the Shallon/Ward River and concluded that the river Shallon/Ward has background concentrations of sulphates that are naturally elevated without quarry influence. The applicant asserts that "The baseline sulphate levels in the river upstream and at the discharge point show levels of sulphates elevated above 250 mg/l, prior to discharge of waters from Bay Lane Soil Recovery Facility." In support of the applicant's objection, the applicant provided upstream, downstream and discharge to water monitoring data (dated May 2005 to May 2022). The applicant refers to elevated historic upstream sulphate concentrations and a sample which recorded a sulphate concentration of 500 mg/l in July 2009 and more recent data which indicated elevated concentrations of sulphate upstream of the site (211 mg/l and 156 mg/l sulphate in December 2021 and April 2022 respectively).

The licensee states that the downstream sulphate concentrations were also elevated before any water discharge from Bay Lane Soil Recovery Facility started in March 2020. The applicant refers to an average of 502 mg/l based on five samples recorded in 2019 including one sample which recorded a concentration of 681 mg/l in July 2019. The average concentration based on the 36 samples recorded between 2005 and September 2019 is 262 mg/l. The applicant states that the cause of the upstream and downstream elevated concentrations has not been definitively determined. "Causes may include exposure to sulphide containing minerals in the streambed, or on exposed rock faces or from incursion of sulphate containing groundwater." The applicant is concerned that direct discharge of site water consistently elevated above 250mg/l for sulphate will breach the ELV for sulphate (250 mg/l). The applicant requests that an appropriate alternative discharge arrangement be permitted by agreement with the EPA and that Schedule B.2 of the Waste License be changed to allow for this alternative.

Using data from May and June 2022 the applicant calculated sulphate loading to the river at 16.6 kg/day. The applicant refers to their trade effluent licences from Fingal (granted 2019 and 2004), which capped the total quantity of sulphate  $SO_4$  at 241.9 kg and 730 kg respectively for the total quantity of sulphate  $SO_4$  that could be discharged per day. The applicant considers the total load being discharged to the river to be a small fraction (6.8%) of the load that had been permitted under the 2019 permit from Fingal County Council. The applicant proposes that this rate of loading should be acceptable under the waste licence.

The applicant proposes a combination of three options to manage sulphate at the facility.

1. Discharge into the Shallon / Ward River over a 2.5 to 5 year duration, under a changed ELV, until floor levels at the site increase. The applicant believes the high concentrations of sulphate in the storm water appears to be time limited, dictated by the pace / duration of operations at the soil recovery facility. The applicant propose ELVs should be set at appropriate varying scales to allow for balancing of peaks; a daily average ELV of 625 mg/l, a monthly average ELV of 500 mg/l and an annual average ELV of 400 mg/l for sulphates ( $SO_4$ ). The applicant compares these proposed ELV's to those set in Licence No. P0519-04. This approach would

- include storing water onsite for short periods pending discharge with a hydrobrake at times of high river flow.
2. Reduce water inflow to minimise volumes arising. The inflow to Bay Lane Quarry is primarily diffuse due to rain/precipitation and via surface and underground channels. The applicant states measures will be taken to reduce the existing small surface inputs to reduce volumes arising.
  3. Monitoring. The applicant proposes monitoring ground and surface waters via wet chemistry and telemetry to better understand management options.

The applicant requests "EPA to increase the sulphate emission limit value. This change should be implemented via conditions to ensure that concentration and loading of sulphates in the river remain at acceptable levels, e.g.

- ELVs set at appropriate varying scales, such as a daily average ELV, a monthly average ELV and an annual average ELV.
- To discharge only when there is adequate flow in the water to stay under the desired maximum concentration of sulphate in the river water. Water to be retained onsite in the interim periods of low or no flow.
- To discharge at an agreed loading rate.
- Discharge flows restricted by a hydrobrake to minimise peaking of sulphate levels."

#### Technical Committee's Evaluation:

The TC notes that the applicant proposes a higher ELV for sulphate referencing Saint Gobain Construction Products (Ireland) Ltd., IE Licence Reg. No. P0519-04 as an example. The applicant states this proposed approach would include storing water onsite for short periods pending discharge with a hydrobrake at times of high river flow. St Gobain Construction Products (Ireland) Ltd. made reference in its application to the Canadian British Columbia guidelines which refer to the fact that as water hardness increases there is a decrease in sulphate toxicity. This approach could have been relevant, but the applicant has not provided any data on water hardness.

Based on the monitoring data provided as part of the objection it is noted that there are elevated levels of sulphate upstream of the site (average 132 mg/l based on 45 samples). It is noted that there is no environmental quality standard (EQS) for sulphate set in the European Communities Environmental Objectives (Surface Waters) Regulations 2009 as amended. There is a recommended limit for sulphate in the EPA's 2003 Interim Groundwater Guidelines for surface waters of 200 mg/l, and there is an indicator parameter for sulphate in the Drinking Water Regulations 2014 of 250 mg/l, but these are not directly relevant to emissions to water. In the PD, the ELV for sulphate was set at 250 mg/l, which was based on the indicator parameter for sulphate, as stated in the Drinking Water Regulations 2014. However, recently issued Commission Implementing Decisions give sulphate BAT AEL ranges as follows: in the Waste Incineration CID for discharges to water from bottom ash treatment the sulphate BAT AEL range is 400 to 1000 mg/l, the Glass CID has a value of <1000 mg/l, and the Large Combustion Plant CID has a range

of 1300 to 2000 mg/l. Sulphates occur naturally in surface freshwaters and are generally not believed to be toxic to aquatic life except at high concentrations.

The TC notes the applicant is currently operating under a Waste Facility Permit, issued by Fingal County Council. The ELV for sulphate in this permit is currently 100 mg/l, and the applicant is non-compliant with this ELV. The average discharge concentration from 10/03/2020 to 05/05/2022 was 513 mg/l sulphate (based on eight samples) and monitoring data for 17/12/2021, 01/04/2022 and 05/05/2022 show outflow results of 525 mg/l, 378 mg/l and 379 mg/l respectively. The ELV for sulphate, as stated in the PD, is 2.5 times higher than the sulphate limit that the applicant currently has in its permit, however, based on data provided by the applicant, it will not be able to comply with this ELV either. The reason the applicant cannot comply is due to elevated levels of sulphate in the water leaving the quarry, due to past quarrying operations which exposed large volumes of limestone rock to oxidative conditions. The IR outlines how sulphate concentrations and total sulphate load on the river will continue to reduce over time due to the removal of the aggregate piles and the water from the quarry, and backfilling the quarry with soil and stone reducing the leachate potential. There is no drinking water abstraction from surface water of the River Shallon/Ward near the facility and the nearest groundwater protection area is 7km to the west of the facility. Therefore, it is proposed to increase the ELV for sulphate from 250 mg/l to 550 mg/l, subject to the equivalent mass emission limit of 600 kg/day (calculation is made using ELV of 250 mg/l in PD), that was in the PD. Based on recent monitoring results, the applicant will be able to comply with this higher ELV. This is based on sulphate BAT AEL ranges as listed in Waste Incineration CID, the Glass CID and the Large Combustion Plant CID.

The TC recommends the insertion of new *Condition 3.23 Storm Water Management* through the installation of a storm water retention pond, and the fitting of a flow restrictor to control the flow of the storm water to the River Ward. The TC recommends the ELV for sulphate, as listed in *Schedule B.2 Emissions to Water* be amended from 250 mg/l to 550 mg/l and that a mass emission limit of 600 kg/day is added.

Reason for Decision:

The TC has reached its conclusion on the basis of the following consideration:

- To ensure the ELV's for emissions to water in the Waste Licence are appropriate, achievable and provide adequate protection for the environment.

Recommendation:

Insert New *Condition 3.24 Storm Water Management* to read as follows:

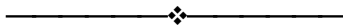
**3.24 Within six months of date of grant of the licence, the licensee shall install a storm water retention pond, fitted with a flow restrictor at the outlet. The flow of storm water from the storm water retention pond to the River Ward shall be limited during periods of low river flow.**

Amend *Schedule B.2 Emissions to Water*

**B.2 Emissions to Water**

Emission Point Reference No:	W2 (Discharge from settlement tank)
Location:	(309832E, 242976N)
Volume to be emitted:	Maximum in any one day: 2,419 m <sup>3</sup>
	Maximum in any one hour 165 m <sup>3</sup>

Parameter	Emission Limit Value	
pH	6 - 9	
	mg/l	kg/d
BOD	2.6	
Total Suspended Solids	15	
Total Ammonia (as N)	0.140	
Orthophosphate (as P)	0.075	
Sulphates (SO <sub>4</sub> )	550	600



Environmental Impact Assessment Directive – Reasoned Conclusion Update

The TC has reviewed the assessment in the Inspector’s Report and, taking into account all objections received, and the contents of this TC report, the TC considers that the potential significant direct and indirect effects of the activity have been identified,

described and assessed in an appropriate manner as respects the matters that come within the functions of the Agency, and as required by Section 83(2A) of the EPA Act 1992 as amended.

It is considered that the monitoring, mitigation and preventative measures proposed in the Inspector's Report, and as detailed in this TC report, will enable the activity to operate without causing environmental pollution, subject to compliance with the licence conditions included in the PD, with the inclusion of the amendments proposed in this report.

#### Appropriate Assessment – Technical Committee Review

The TC has reviewed the Inspector's Appropriate Assessment in the Inspector's Report and, taking into account all objections received, and the content of this TC report, the TC is satisfied that the Inspector's Report provides an adequate examination and evaluation of the effects of the activities on the European Site(s) concerned, Baldoyle Bay SAC (Site Code:000199), Malahide Estuary SAC (Site Code:000205), Rogerstown Estuary SAC (Site Code:000208), North Dublin Bay SAC (Site Code:000206), South Dublin Bay SAC (Site Code:000210), Rye Water Valley/Carton SAC (Site Code:001398), North Bull Island SAC (Site Code: 004006), Rogerstown Estuary SPA (Site Code: 004015), Baldoyle Bay SPA (Site Code: 004016), South Dublin Bay and River Tolka Estuary SPA (Site Code: 004024) and Malahide Estuary SPA (Site Code:004025), in the light of their conservation objectives.

The TC notes that updated Conservation Objectives have been issued by the National Parks and Wildlife Service for European Site(s), Rye Water Valley/Carton SAC (Site Code:001398), as per Table 1 below since completion of the Inspector's Report. These updated Conservation Objectives have been reviewed and considered and the TC is satisfied that the Inspector's Report provides an adequate examination and evaluation of the effects of the activities on the European Site concerned, in light of its updated conservation objectives.

<b>Table 1. Updated Conservation Objectives</b>
NPWS (2021) Conservation Objectives: Rye Water Valley/Carton SAC 001398. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

### **Overall Recommendation**

It is recommended that the Board of the Agency grant a licence to the applicant

- (i) for the reasons outlined in the proposed determination and
- (ii) subject to the conditions and reasons for same in the Proposed Determination, and
- (iii) subject to the amendments proposed and the reasons set out in this report.



Signed

David Matthews

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for and on behalf of the Technical Committee