



Administration
Environmental Licensing Programme
Office of Environmental Sustainability
Environmental Protection Agency
Headquarters
PO Box 3000
Johnstown Castle Estate
County Wexford

10th February 2021

Reg. No. H0208-01

Re: Greenhills (Former Refuse Depot) Landfill – Notice in accordance with Regulation 7(4) of the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations, 2008

Please see responses below numbered as per your original request for information.

1. Please see attached updated Drawing No. 16 Rev A titled 'Surface Water Locations – REV A' showing the location of surface water monitoring locations referred to in Table 5-5 of the Tier 2 Assessment.
2. The correct site boundary is shown in Drawing titled 'Legacy Landfill Site, Athy Co. Kildare' in Attachment B.1.
3. The gas monitoring events indicated no flow. As stated in Section 7.5 of the Environmental Assessment:
*The flow rate indicates the level of gas movement through the permeable layers. The purpose of measuring gas flow rates is to predict surface emissions and from these deduce the potential for gas ingress into buildings (CIRIA, 2007). Furthermore, surface emission rate measures the potential for gas to escape from a particular area of the ground. The very low flow rates observed, and the results of the VOC monitoring survey (surface emissions), inside and outside the Site and inside the leisure centre building, demonstrated that the imported material is not actively generating landfill gas and it is therefore not migrating vertically or laterally, and hence would not affect any potential receptors (on or off-site). In addition, Section 8.2 of the Environmental Risk Assessment states:
The linkages of greatest concern according to the preliminary conceptual site model include the risk of landfill gas migration to off-site receptors (SPR10) and the risk of landfill gas migration to onsite receptors (SPR11). These linkages reported a normalised score of 23% and 14% respectively. As described in section 7.5, due to the site location, the low flow rates observed in all monitoring locations and the findings during the VOC monitoring surveys within and outside the site boundary and within the leisure centre, it can be concluded that the observed landfill gas concentrations do not pose a risk to human health or the environment and that the pollutant linkages SPR10 and SPR11 are no longer valid.
Accordingly, a gas venting/management system is not proposed for the site.*
4. There is a surface water system in place for the Leisure Centre and associated hard standings, no further surface water management run-off management system or infrastructure is proposed.

5. As stated in Section 7.2 of the Environmental Risk Assessment:
The elevated concentrations of a number of parameters identified in the leachate were not identified in any of the groundwater and surface water results, with the exception of potassium at GW3 (upgradient well). Therefore, it is reasonable to assume that the leachate generated is not migrating downwards or horizontally and accordingly will not pose a risk to the underlying aquifer or any potential receptors.
Accordingly, there is no leachate management system or associated infrastructure proposed.
6. Please see attached updated Drawing No. 15 Rev A titled 'Site Investigation Locations – REV A' showing the location of soil permeability sample GW04.
7. An engineered cap is not proposed for the site because, as stated in Section 9 of the Environmental Risk Assessment:
The capping material encountered during the site investigations was identified as brown gravelly clay/brown clay with a of 0.5 to 1.1m. According to the geotechnical results the capping material was classified as brown slightly sandy gravelly clay, with a permeability 2.3×10^{-9} m/s. The low permeability of the capping material overlying the imported material would impede rainfall infiltration and therefore reduce the generation of leachate.
Also, as stated in Section 12 of the Environmental Risk Assessment:
The CoP requires that suitable remedial measures are discussed depending on the results of the QRA. As stated in the previous Section 11, the Site has been well characterised and it has been concluded that the Site, in its current status, does not require any further actions, hence no remedial measures are proposed.
8. As per Attachment C.4:
*Currently the site is mainly an open space of grassed amenity, maintained by Kildare County Councils Park Section. However, it is also occupied by a Sports and Leisure facility, owned by Kildare County Council, and managed by Kildare Sports and Leisure Facilities Ltd. There is currently no change of use of the site proposed. Should any other use be proposed in the future it would be subject to Kildare County Council's planning procedures and in accordance with Section 12 of the Environmental Risk Assessment: *It is critical...that if there is a proposed change in land-use then a re-appraisal of the risk, based on detailed site investigations, shall be carried out.**

The information supplied in compliance with the notice does not impinge on the non-technical summary. Accordingly, a revised non-technical summary is not included.

Yours Sincerely,



Micheál MacGiollaCoda
Executive Engineer

- Encl. Drawing No. 15 Site Investigation Locations - REV A
Drawing No. 16 Surface Water Locations - REV A
GREENHILLS LANDFILL Drawing List

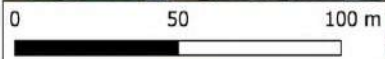
Drawing List

Drawing No.	Drawing Title	Status
Drawing 1	Subsoils Map	D
Drawing 2	Bedrock Map	D
Drawing 3	Bedrock Aquifer	D
Drawing 4	Sands and Gravel Aquifer	D
Drawing 5	Aquifer Vulnerability	D
Drawing 6A	Groundwater Flow Direction – April 2019	D
Drawing 6B	Groundwater Flow Direction – May 2019	D
Drawing 7	Groundwater Well Database	D
Drawing 8	Hydrological Receptors Map	D
Drawing 9	Groundwater Source Protection Areas (SI/SO)	D
Drawing 10	Special Areas of Conservation	D
Drawing 11	Proposed Natural Heritage areas	D
Drawing 12	Trial Pit Locations	D
Drawing 13	Leachate/Gas Well Locations	D
Drawing 14	Groundwater Well Locations	D
Drawing 15	Site Investigation Locations – REV A	Rev. A
Drawing 16	Surface Water Locations – REV A	Rev. A
Drawing 17	Surface VOC Survey Locations	D
Drawing 18	Approximate Extent of the Waste	D
Drawing 19	Conceptual Site Model	D

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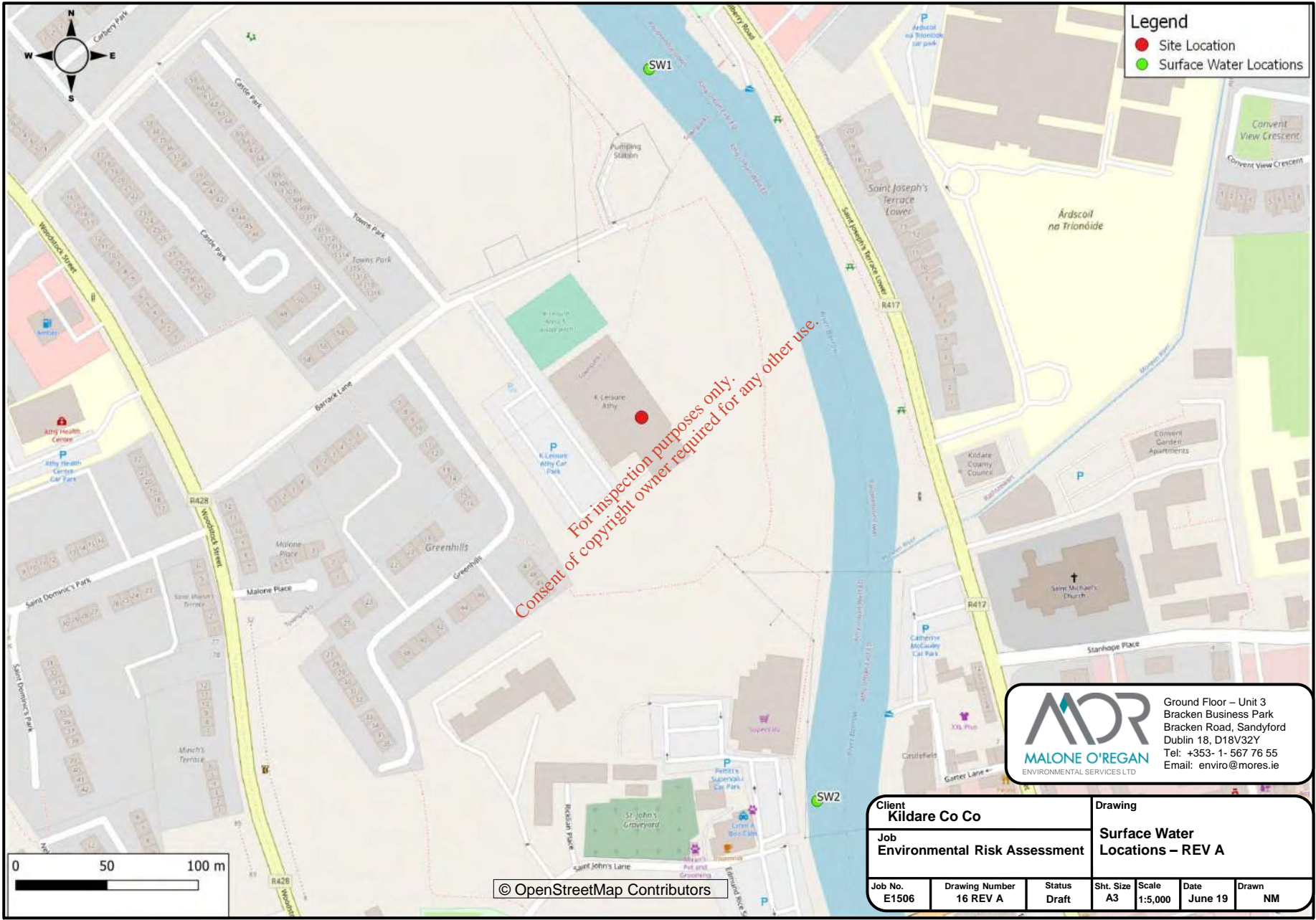
- Legend**
- Site Boundary
 - Groundwater Well Locations
 - Leachate Well Locations
 - Trial Pit Locations
 - Soil Sample - Capping Layer



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Client Kildare County Council			Drawing Site Investigation Locations – REV A			
Job Environmental Risk Assessment						
Job No. E1506	Drawing Number 15 Rev A	Status DRAFT	Sht. Size A3	Scale 1:10,000	Date June 19	Drawn NM



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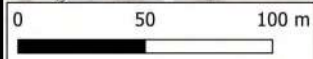
Legend

- Site Location
- Surface Water Locations

MALONE O'REGAN
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Client Kildare Co Co			Drawing			
Job Environmental Risk Assessment			Surface Water Locations – REV A			
Job No. E1506	Drawing Number 16 REV A	Status Draft	Sht. Size A3	Scale 1:5,000	Date June 19	Drawn NM



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