

Technical note:

BRM E-Scrap EPR/YP3306MF – Appendix J

Noise Screening Assessment

1. Introduction

1.1 Background

Britannia Refined Metals Ltd (a subsidiary of Glencore plc), is seeking to develop a facility to sample waste electronics material (also known as an E-scrap sampling plant) on a site immediately adjacent to and north of their existing facility on Botany Road/ Manor Way, Northfleet DA11 9BG.

1.2 The site and its surroundings

- 1.2.1 The site of the proposed E-scrap sampling plant comprises ~1.25ha of land, which is located immediately north of the existing operational Britannia Refined Metals (BRM) Ltd plant, off Manor Way, Northfleet, Gravesend DA11 9BG. It is situated on the western edge of Gravesham Borough, close to the administrative boundary of Dartford Borough. The site sits outside the area for which the Ebbsfleet Development Corporation is responsible.
- 1.2.2 The proposed development site is bounded to the east by the tidal River Thames and to the south by the wider operational BRM facility, which extends approximately (~) 350m southwards - beyond that, is the industrial Seacon Terminals Ltd freight facility. To the west (and on the opposite side of Manor Way), is the freshwater Botany Marsh, which comprises a network of drainage ditches, ponds, former grazing marsh, rough grassland and scrub. The marsh is partly owned by BRM, and the company has a management plan in place to maintain the environmental value of the land owned by them. The marsh was recently notified by Natural England as being a nationally significant Site of Special Scientific Interest (SSSI).
- 1.2.3 Immediately north of the site are other commercial sites fronting the river, which include Northfleet Wharf and Concrete Plant.
- 1.2.4 The river frontage is characterised by hard engineered flood defences and intertidal mud flats. The Ebbsfleet United football stadium is located ~750m southeast of the proposed facility and the nearest residential properties can be found south of the A226/ Galley Hill Road, some ~750m south of the proposed development site.
- 1.2.5 Access to and from the site is via an existing access point into the wider BRM site – located immediately south of the site - off Manor Way, and then to the wider highway network via Lower Road and the A226.
- 1.2.6 The HS1/Eurostar rail route from London St Pancras to Ebbsfleet emerges from a tunnel portal ~700 m southwest of the site. Due to the proximity of the rail tracks and the tunnel portal, it is expected that the local ambient and maximum noise levels would be affected by train movements, particularly at the SSSI.

2. Noise Risk Assessment

2.1 Identified Noise Sources from the facility

- 2.1.1 Mitigation of potential noise effects has been incorporated into the proposed development. Most notably, all potentially noisy activities such as the loading and unloading of E-scrap and the shredding of material would be carried out within a fully enclosed building. Additionally, this building will be fitted with fast acting roller shutters doors, which will further mitigate against the potential for the proposed development to give rise to any significant adverse noise effects. The roof will be composed of a built-up metal roofing system or composite roof panel. The building walls will be concrete and clad with built-up metal walling system or composite wall panels.
- 2.1.2 The noise created while processing the E-Scrap is likely to be high frequency in nature and therefore will be more easily contained by the building sound insulation.
- 2.1.3 One noise source which was identified was a Dust Extraction Fan unit, which is located adjacent to the exterior wall of the facility, to the northwest of the building. The sound pressure level of the unit is 80 dB(A) at 3m, as stated in the manufacturer's (OKAY Engineering) specification. This unit would be in use during the operational times of the facility.
- 2.1.4 It is understood that there will be 10 HGV movements on site a day with a maximum of 2 per hour. The noise levels (L_{max} of a single vehicle pass-by at 10m) of HGVs were obtained from British Standard 5228:2009 + A1:2014¹, Annex C, Table C.11, line 11, 44 tonne lorry with a 306kW power rating was used for worst case scenario.

2.2 Noise Sensitive Receptors

- 2.2.1 **Table 2.1** shows the identified noise sensitive receptors (NSRs) closest to the development that have been used when assessing the potential noise impact.

Table 2.1 Noise Sensitive Receptors (NSRs)

Receptor	Type	Distance from source (m)
R1	School	910
R2	Residential	870
R3	Residential	1,160
R4	Residential	1,160
R5	Residential	2,930
R6	Residential	2,720
R7	Residential	2,290

¹ British Standards Institution (2014). *BS 5228-1:2009 + A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise*. BSI, London

Receptor	Type	Distance from source (m)
R8	Residential	1,560
R9	Residential	1,610
R10	Residential	1,680
R11	Residential	1,870
R12	Residential	2,030
R13	Residential	1,730
R14	Residential	1,780
R15	Residential	1,580
R16	Residential	1,140
R17	Residential	1,140
R18	Industrial	600
R19	Gym	790
R20	Commercial	660
R21	Cafe	860
R22	Industrial Car Park	1,140
R23	Ecological- SSSI Swancombe Peninsula	60

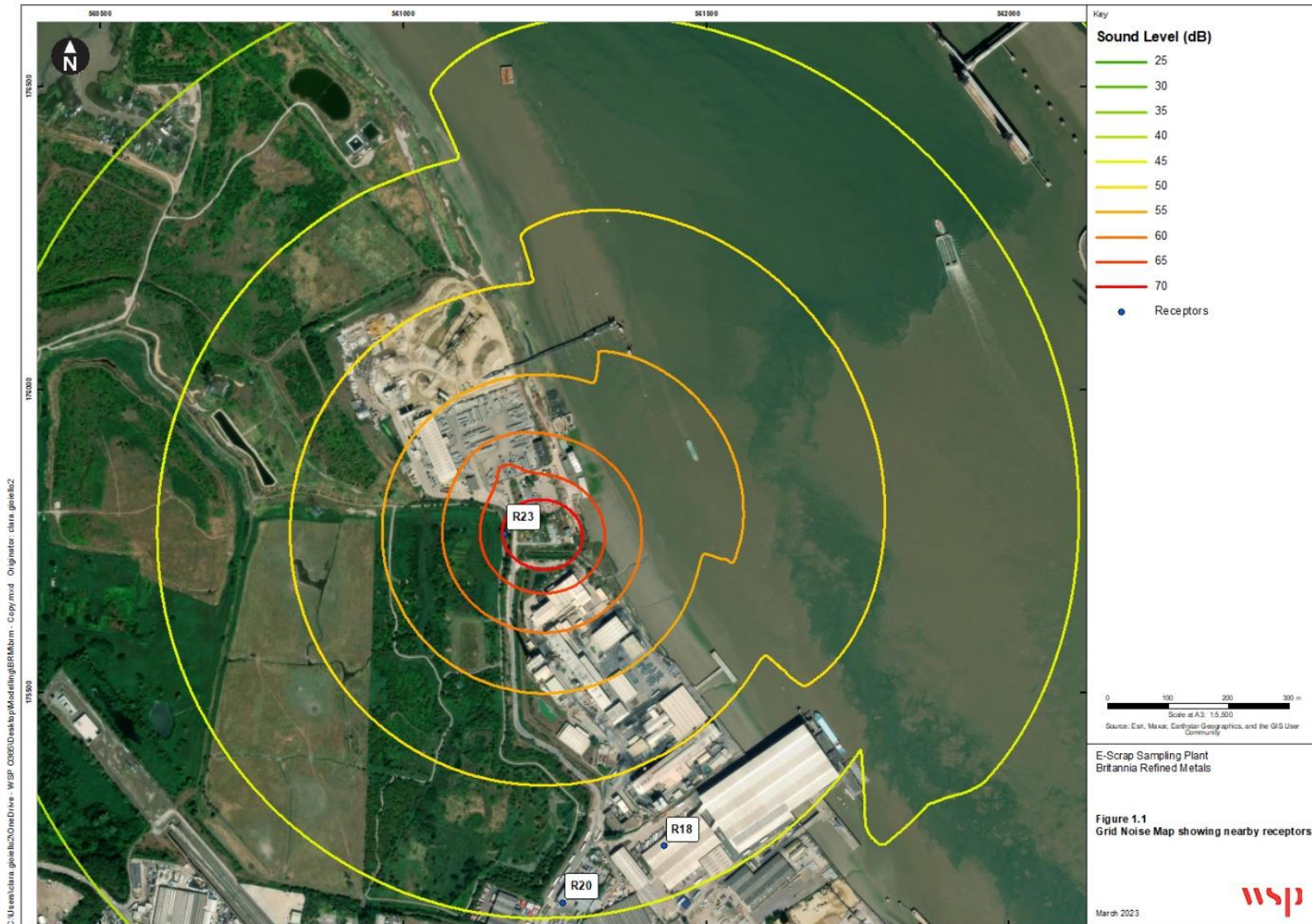
2.3 Impacting features

- 2.3.1 The site is bounded to the east by the River Thames. Large bodies of water have an impact on the propagation of sound and so this has been factored into the assessment. For the noise prediction model, the river has been modelled as a reflective surface.
- 2.3.2 **Figure 2.1** and **Figure 2.2** show the predicted noise contours of site relative to the closest NSRs.

Figure 2.1 Grid Noise Map (at 1.5 m height) showing all receptors



Figure 2.2 Grid Noise Map (at 1.5m height) showing nearby receptors



3. Conclusions & Summary

3.1 Conclusions

- 3.1.1 The assessment shows that, for the majority of NSRs, sound levels are below 45 dB, with R18 and R20 sitting within the 45 dB contour band and R23 sitting within the 70 dB contour band. As R18 (industrial use) and R20 (commercial use) are not residential receptors, and the contours are representing external noise, they will benefit from sound reductions due to the building envelopes and are not expected to be adversely affected by the noise.
- 3.1.2 R23 is the Swancombe Peninsula SSSI. The grid noise map shows that a small section of the SSSI would be exposed to ($L_{Aeq,T}$) noise levels of up to approximately 70 dB. Although it is not expected to cause adverse impact due to the overall area and existing noise character in which the site and the SSSI is located. It is recognised that the SSSI is already located in an area where there is a policy acceptance of noise generating activities.

3.2 Summary

- 3.2.1 The Noise Risk Assessment for the E-scrap sampling plant off Manor Way, Northfleet, Gravesend, DA11 9BG has found that the activities of the site present a low risk of adverse noise impacts off site.
- 3.2.2 23No noise-sensitive receptors were identified in the assessment, of which, only 3 were situated in areas where sound levels from site would exceed 45 dB. None of the 3 identified receptors were residential and were of industrial, commercial and ecological use. The Swancombe Peninsula SSSI would be exposed to noise levels of 55 - 75 dB, however it would only be a small area of the site and it is situated in an area where there is a policy acceptance of noise generating activities.
- 3.2.3 Therefore, based on the above, noise from the E-Scrap sampling plant is considered to result in low to negligible impacts at all receptors.

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Document revisions

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