



**Tata Steel UK Limited (Tata Steel)**

# **Electric Arc Furnace (EAF)**

Environmental Statement (ES) Statement of Compliance

Reserved Matters: Application No. 2 – Scrap Metal Handling Facility

RSK Project No. 664195



**JULY 2026**



# RSK GENERAL NOTES

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**Project No.:** 664195

**Title:** Port Talbot, Electric Arc Furnace: ES Statement of Compliance: Reserved Matters Application No. 2 – Scrap Metal Handling Facility

**Client:** Tata Steel UK Limited (Tata Steel)

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- EIA management
- EIA team capabilities
- EIA regulatory compliance
- EIA context & influence
- EIA content
- EIA presentation
- Improving EIA practice

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### Appendix 4.1: Viewpoint Analysis

### Appendix 5.1: Noise and Vibration Impact Assessment

### Appendix 5.2: Operational Noise and Vibration Management Plan

## GLOSSARY

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|                                                                                                            |                              |
|------------------------------------------------------------------------------------------------------------|------------------------------|
| EAF Development (including full and outline planning components)                                           | The EAF Development          |
| Reserved matters 1: electrical works                                                                       | The RM1 Development          |
| Reserved matters 2: scrap facility                                                                         | The RM2 Proposed Development |
| Tata Steel UK Limited                                                                                      | The Applicant                |
| The EAF Environmental Statement                                                                            | The EAF ES                   |
| EAF Planning Boundary                                                                                      | The Wider EAF Site           |
| Reserved matters scrap metal handling facility and associated scrap yards area (within the Wider EAF Site) | The RM2 Site                 |

# 1 INTRODUCTION

---

## 1.1 Background

- 1.1.1 To secure the long-term sustainability of its UK operations, Tata Steel UK Limited (Tata Steel), hereafter ‘the Applicant’, sought permission for the construction and operation of a new electric arc furnace (EAF) based steel production facility (hereafter ‘the EAF Development’) located inside the existing Port Talbot Steelworks at Margam in South Wales.
- 1.1.2 A hybrid planning application for the EAF Development was submitted to Neath Port Talbot Council (NPTC) in November 2024 and approved in March 2025 (ref: P2024/0711). An Environmental Statement (hereafter referred to as the ‘EAF ES’) was prepared and submitted as part of the hybrid planning application in accordance with the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (hereafter ‘the EIA Regulations’). In line with good practice for EIAs, the EAF ES assessed the likely effects of the outline components of the EAF Development on the basis of a series of maximum and minimum parameters and indicative assessment assumptions.
- 1.1.3 This ES Statement of Compliance (SoC) has been prepared in relation to a reserved matters application pursuant to P2024/0711, which covers the development of a scrap metal handling facility and associated infrastructure (hereafter the ‘RM2 Proposed Development’). The design of the RM2 Proposed Development has been cognisant of the approved parameters and the assessment assumptions considered in the EAF ES. However, to ensure that the RM2 Proposed Development achieves maximum operational functionality, it has been necessary to alter some of the assessment assumptions previously assessed. This reflects best available technology, updated operational requirements and safety standards on the site.
- 1.1.4 The purpose of this SoC is to assess the potential impacts and likely effects of the RM2 Proposed Development and the EAF Development as a whole, considering the proposed variations to the assessment assumptions. This SoC should be read alongside the EAF ES, particularly Volumes II and III. Where reports or elements of text in the EAF ES are still valid, this SoC does not repeat the text.
- 1.1.5 Relevant planning history which provides further context to this SoC is provided in the following sections.

### Hybrid planning application

- 1.1.6 As set out above, the Applicant submitted a hybrid planning application (P2024/0711) for the EAF Development in November 2024 under the Town and Country Planning Act 1990 (as amended). The full description of the EAF Development was as follows:

*“Full planning permission for the demolition of existing buildings and structures, partial infill of the basic oxygen steelmaking (BOS) lagoon, and construction of a new electric arc furnace-based steel production facility (1 no. arc furnace, 2 no. ladle furnaces). The development includes chemical/material storage and transfer infrastructure, pipework and cabling (above and below ground), buildings, fume and dust treatment plant, water*

*treatment facility and material handling systems, electrical control rooms and power infrastructure, offices and ancillary facilities, together with new and amended roads and rail lines, landscaping and green infrastructure, lighting, hardstanding, CCTV, drainage and associated engineering operations.*

*Outline planning permission (with all matters reserved except for access and landscaping) for the construction of a scrap metal handling facility and associated scrap yards, scrap processing facility, new substation, underground and overground electrical infrastructure, and new and amended roads and rail lines, landscape and green infrastructure, lighting, hardstanding, CCTV, drainage and associated engineering operations.”*

- 1.1.7 The EAF ES comprised four volumes and assessed the effects of both the detailed and outline components of the development. The hybrid planning permission that was approved by NPTC in March 2025 splits conditions between the full and outline elements of the EAF Development. Conditions 39 onwards of P2024/0711 are associated with the outline planning permission and are referenced throughout the reserved matters application to which this SoC relates. Condition 68 of P2024/0711 requires the development to be carried out in ‘substantial accordance’ with the principles and mitigation measures as set out in the EAF ES.

- 1.1.8 All pre-commencement conditions were discharged by early July 2025.

**Reserved matters application 1: new substation (submitted July 2025; approved September 2025)**

- 1.1.9 The Applicant submitted the first reserved matters application (RM1) (P2025/0506) pursuant to P2024/0711 in July 2025, which covered the construction of preliminary works and a National Grid substation compound. The description of the RM1 Development was as follows:

*“Application for the approval of reserved matters (appearance, scale and layout) pursuant to planning permission P2024/0711 for the development of preliminary works and a new substation compound. Works to include earthworks, construction of working platforms, surface water management and drainage infrastructure, new electrical infrastructure (including ducting), new and improved internal access roads, 4 no. transformers, 1 no. generator, GIS building, amenity/welfare facility, water tank, storage/workshop buildings, boundary treatments, lighting, CCTV, noise mitigation measures, parking, creation of hardstanding and associated engineering operations.”*

- 1.1.10 An ES Statement of Compliance was submitted in support of P2025/0506, wherein the RM1 Development was compared with the relevant outline elements of the EAF Development, as described in EAF ES Chapter 2 and illustrated in the parameter plans in EAF ES Figure 2.2: Parameters Plans. That ES Statement of Compliance concluded that the RM1 Development was within those parameters, which had been assessed within the EAF ES, and there were no changes in circumstances. Consequently, no additional assessment of environmental effects was necessary for any of the environmental factors that had been scoped into the EAF ES. RM1 was approved by NPTC in September 2025.
- 1.1.11 Informal pre-application engagement with Officers at NPTC during June 2026 have informed the same methodology being used in preparing this SoC. The robust approach is agreed between the Applicant and NPTC.

## 1.2 Approach to the Assessment

- 1.2.1 The purpose of this SoC is to assess the likely environmental effects of the RM2 Development, as part of the EAF Development, compared against the assessment of the outline elements of the EAF Development in the EAF ES. This SoC compares any updated assessment conclusions with those reported in the EAF ES to determine if the RM2 Proposed Development, which was assessed on the basis of parameters and assumptions under the outline planning element of the hybrid application, would result in any new or different significant effects compared with the consented EAF Development.

### Scoping exercise

- 1.2.2 Scoping is an important, albeit optional, part of the EIA process. As part of the production of this SoC, the technical topics (factors) considered within the EAF ES were evaluated based on their potential to exhibit new or different significant environmental effects to those previously identified as a result of the detailed design of the RM2 Proposed Development. The evaluation process included provisional assessments to understand whether the detailed design information now available for the RM2 Proposed Development would reflect an update to the previously assessed design assumptions. Specifically, the RM2 Proposed Development design has been compared with the parameters and assumptions described in EAF ES Chapter 2 and illustrated in the parameter plans in EAF ES Figure 2.2. The purpose of the scoping exercise was to identify the factors which:

- have the potential to result in new or different likely significant effects and therefore require a full standalone assessment chapter; or
- are not anticipated to result in any new or different likely significant effects and do not require their own technical chapter.

- 1.2.3 For those factors which do not require their own chapter, this SoC outlines the findings of the scoping exercise in **Chapter 3**. This applies to most of the environmental factors that were previously scoped into the EAF ES, where the parameters and assessment assumptions upon which the assessments in the EAF ES were based remain unchanged and there are no changes in circumstances. Consequently, the scoping exercise determined that no additional assessment of environmental effects has been necessary for the following environmental factors:

- Air Quality;
- Biodiversity;
- Surface Water, Flood Risk and Drainage;
- Land, Soil and Groundwater;
- Cultural Heritage;
- Transport and Access;
- Climate Change;
- Socioeconomics and Health;
- Major Accidents and Disasters; and
- Cumulative Effects.

- 1.2.4 The scoping exercise identified two environmental factors as requiring further detailed assessment to determine whether the RM2 Proposed Development may give rise to new

or different significant effects or require different mitigation measures to those set out in the EAF ES. These assessments are:

- Landscape and Visual Impact, presented in **Chapter 4**; and
- Noise and Vibration, presented in **Chapter 5**.

1.2.5 It is considered that the environmental factors that were scoped out of the EAF ES (as detailed in EAF ES Chapter 4), including material assets and waste, daylight, sunlight and overshadowing, and heat and radiation, can remain scoped out of assessment for the purposes of this SoC.

## 2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

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- 2.1.1 The approved EAF Development has always included a new scrapyard facility, equipped to receive, store and process approximately 2.85 million tonnes of scrap per annum<sup>1</sup>.
- 2.1.2 In Chapter 2 of the EAF ES, the outline element of the hybrid application for the scrap handling facility entailed the following two phases to provide flexibility as to whether scrap would be processed off-site and delivered 'furnace ready', or for this processing to take place at Port Talbot, or a combination of the two:
- Phase 1: The facilities required to receive and handle 'furnace ready' scrap.
  - Phase 2: Additional shredding and processing capacity for this to be completed on Site.
- 2.1.3 This reserved matters application relates to Phase 1 only. Phase 2 is not being pursued by the Applicant at this time. If required in the future, any development required to deliver Phase 2 will be subject to a separate reserved matters and/or full planning application.
- 2.1.4 The description of the RM2 Proposed Development for this reserved matters application is as follows:
- "Application for the approval of reserved matters (appearance, scale and layout) pursuant to planning permission P2024/0711 for the development of a scrap metal handling facility and associated scrap yards. Works to include earthworks, surface water and drainage management, construction of concrete pads for storage of scrap materials, new and improved internal access roads, rail infrastructure upgrades including single track railway and rail receipt facilities, amenity/welfare facility, workshop building, electrical equipment and infrastructure, boundary treatments, lighting, CCTV, noise mitigation measures, parking and creation of hardstanding and associated engineering works."*
- 2.1.5 The overall area of the RM2 Proposed Development in this reserved matters application is approximately 20.3 hectares. The phasing is consistent with the approved phasing plan required by Condition 39 on the hybrid planning permission (application ref. P2024/0711) for the EAF.
- 2.1.6 The Proposed Development will comprise the following:
- Single track railway infrastructure;
  - Rail receipt facilities for inspecting and unloading trains;
  - Scrap bays for segregation and storage of scrap;
  - Road network to provide access around scrap yard facility;
  - Office and amenity provision for scrap yard workers;
  - Dedicated scrap overflow yard;
  - Scrap lorry unloading area;
  - Associated mobile equipment for scrap handling;

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<sup>1</sup> EAF ES Chapter 2 stated an assumed input of 2,479,300 tonnes per annum (tpa) of ferrous scrap metals based on the information available at the time. The revised figure is the result of more certainty around the proposed scrap metal handling facility as the detailed design has progressed. It does not affect the conclusions of the assessments within the EAF ES.

- Minimal operational lighting (lux) levels across the scrap yard area; and
- Gravel surface for overflow scrap storage.

2.1.7 The planning drawings from the reserved matters application planning pack that have been used to inform this SoC are summarised in **Table 2.1**.

**Table 2.1: Planning Drawings informing this SoC**

| Drawing Title                  | Drawing Reference and SoC Reference                       |
|--------------------------------|-----------------------------------------------------------|
| Site Location Plan             | Site Location Plan – 900006 – P05 – EAF RM 2              |
| Outline Phasing Plan           | Outline Phasing Plan – 900614 – P07 – EAF RM 2            |
| Proposed Site Plan             | Proposed Site Plan – 900010A – P12 – EAF RM 2             |
| Proposed Scrap Layout Plan     | Proposed Scrap Layout Plan – 900005 – P07 – EAF RM 2      |
| Proposed Site Sections         | Proposed Site Sections – 900700 – P03 – EAF RM 2          |
| Proposed Site Sections 2       | Proposed Site Section 2 – 900701 – P00 – EAF RM 2         |
| Area 25 Proposed GA            | Proposed GA – Area 25 – 060001 – P03 – EAF RM 2           |
| Area 25 Proposed GA - Office   | Proposed GA – Office – 060002 – P01 – EAF RM 2            |
| Area 25 Proposed GA – Workshop | Proposed GA – Workshop – 060003 – P01 – EAF RM 2          |
| Area 25 Proposed GA - Car Park | Proposed GA – Car Park – 060004 – P02 – EAF RM 2          |
| Area 25 - Office Floorplans    | Proposed Floor Plans – Office – 060102 – P01 – EAF RM 2   |
| Area 25 - Workshop Floorplan   | Proposed Floor Plans – Workshop – 060103 – P01 – EAF RM 2 |
| Lighting Plan                  | Lighting Plan – 900051 – P02 – EAF RM 2                   |
| Landscape Plan                 | Landscape Plan – 900710 – P00 – EAF RM 2                  |

## 2.2 Assessment Design and Comparison with EAF ES Parameters

### Construction

- 2.2.1 Construction of the RM2 Proposed Development would be within the maximum parameters set out in the EAF ES. As stated in EAF ES Chapter 2, the final platform level for the scrap yard and scrap storage yard earthworks would be circa 7 m above ordnance datum (mAOD) and designed to minimise the cut and fill volumes of the earthworks. Large areas of the proposed scrap yard and scrap storage yard sites are currently laid to stone which has been well trafficked and will be suitable to be reused as permanent works to reduce the volume of earthworks.
- 2.2.2 As the RM2 Proposed Development is proposed to be constructed in accordance with the parameters and assessment assumptions which informed the assessments for the construction phase in the EAF ES (i.e. no additional construction traffic or changes to plant requirements), and the environmental controls would remain in place through the ongoing implementation of the site-wide CEMP, which was approved via discharge of

condition 11, and as required by condition 50 (both pursuant to planning permission P2024/0711), the construction phase effects are expected to be in line with those reported in the EAF ES. The effects of construction phase impacts have therefore not been revisited in this SoC.

- 2.2.3 Details of the secured management plans have been produced in accordance with the mitigation measures detailed within the EAF ES are provided in **Section 2.4** of this SoC.

### Operation

- 2.2.4 Operation of the RM2 Proposed Development will be within the maximum height and area parameters and the operational management and process assumptions described within EAF ES Chapter 2.
- 2.2.5 The RM2 Proposed Development would be operational 24 hours a day, seven days a week. Scrap metal will be delivered predominantly by train in containers to the main scrap storage and processing area, where each loaded container will be removed from the train and replaced with an empty container. The proposed units within the RM2 Proposed Development will be equipped with loading docks and all loading and unloading activities will happen inside the units. The scrap will be segregated and stored before being transported to the EAF. For further details on the process see EAF ES Chapter 2.
- 2.2.6 While the intention is for all scrap and ore-based metallics (OBMs) to arrive by rail, provision has been made for some material (up to 10% of total scrap import) to be delivered by road. This may include trial material (at lower tonnage than would constitute a trainload), contingency (for example, should rail failures occur), and local scrap (for example, from the scrap merchants' yard in Skewen).
- 2.2.7 It is anticipated that there would be 44 off-site train deliveries per week, equating to 88 total external train movements. Trains are expected to comprise 28 wagons with two 35-t containers on each, resulting in a total of 56 containers per train.
- 2.2.8 Incoming rail movements are expected to be spread evenly over both the day and night-time periods (subject to Network Rail agreement), which would result in a single train movement every 30 minutes. This includes:
- Daytime and movements are to be equivalent to two trains per one-hour period;
  - Night-time movements are to be equivalent to one train per 15-minute period;
  - Incoming trains to consist of up to 56 no. 35 t scrap containers per train; and
  - Offloading of containers will be spread evenly across the entire week, resulting in one container being unloaded every four minutes.
- 2.2.9 The incoming rail movements listed above are based on a worst-case scenario. A realistic expectation of rail movements over a 24-hour period is as follows:
- Approximately 5 – 6 scrap trains; and
  - 1 – 2 OBM trains.
- 2.2.10 As a reasonable worst-case scenario for the purposes of assessment, it has been assumed that train movements would not be spread evenly and there could potentially be up to two train movements (inbound and outbound) within a 15-minute period, with fewer movements at other times.

2.2.11 The units as identified in the Proposed Site Plan (drawing reference 900010), and the components included in the RM2 Proposed Development are as follows:

- Area of Unit 25
  - Amenity building comprising office, meeting room and welfare facilities.
  - Creation of designated car parking area (up to 37 standard spaces, 2 disabled and 4 EV charging spaces).
  - Workshop and Storage buildings including scrap storage.
  - Installation of localised acoustic mitigation barriers.
  - Security/protective fencing.
  - Transport infrastructure upgrade to the rail line infrastructure including extension of line northward into the overflow scrap storage area.
  - Associated civil works.
  - CCTV.
  - Surface water management and drainage infrastructure including internal drainage systems.

### **Phase 2 components**

2.2.12 As explained in **paragraph 2.1.3**, this reserved matters application is for Phase 1 of the scrap handling process only. Consequently, those elements that relate to Phase 2, i.e. additional shredding and processing of scrap, have not been considered in this SoC. It should be noted that while EAF ES Chapter 2 included “*Relocation of existing Harsco shredder to new scrap yard for processing*” in the list of proposed Phase 1 activities, it is no longer required for Phase 1 and is not considered as part of this reserved matters application.

### **Mobile plant requirements**

2.2.13 A variety of mobile plant would be used to meet the scrap handling needs. For the purposes of the assessments provided in the EAF ES, the following reasonable worst-case estimate of plant items operating simultaneously was considered (for further information see Chapter 7: Noise and Vibration of the EAF ES):

- Three reach stackers for scrap container movements from the train to the yard;
- Four tipper trailers for scrap delivery to the EAF;
- Six front end loaders for scrap piling and loading of tipper trailers;
- Twelve material handling excavators for scrap piling and shredder feed;
- Three magnet excavators for material movements and yard maintenance; and
- Four forklift trucks.

2.2.14 The mobile plant requirements have since been refined and are expected to comprise the following:

- Three reach stackers;
- Four 100-tonne tippers, with 133 m<sup>3</sup> capacity;
- Four front-loading shovels, with 10 m<sup>3</sup> bucket capacity (one in Consteel, one in scrap yard, one in OBM yard and one in overflow yard);
- Five material handlers, with 5 m<sup>3</sup> grab capacity (one in scrap yard, one in OBM yard, one in overflow yard and two in Consteel (conveyor)); and
- Four rotators (two for scrap, two for OBM).

- 2.2.15 It should be noted that an alternative, but equivalent, container moving vehicle could be used, for example forklift truck instead of reach stacker. The EAF ES assumed that only one 100-tonne tipper would be utilised at a given time; following further detailed design and operational information, it is expected that on occasion two may be in operation concurrently. This change has been assessed in the updated Noise and Vibration assessment (**Chapter 5** and supporting appendices).

### Acoustic barrier

- 2.2.16 The outline element of the hybrid EAF planning permission provides for an acoustic barrier around the southern and eastern boundaries of the scrap handling area to mitigate potential noise impacts on identified residential receptors. The approved parameters allowed for a worst-case height of 15 m for the purposes of assessment. However, it was stated in Chapter 2 of the EAF ES that as further information on the outline elements of the scheme emerged and the acoustic benefit provided by closure of the 'heavy end' process became available for full quantification *"there may be opportunity to reduce the height of the barrier whilst remaining compliant with required noise limits at off-site receptors"*.
- 2.2.17 Following refinement of assumptions and availability of further details on the outline elements of the scheme, and subsequent updates to the acoustic modelling (see **Appendix 5.1**), it is considered that compliant noise levels can be attained without the installation of the acoustic barrier, as set out in **Section 2.3**. Instead, noise attenuation would be provided by the scrap stockpiles and local container barriers. This is subject to a number of conditions being met, including the following, which are explained in more detail in **Chapter 5** and **Appendix 5.2**:
- The stockpile (~5 m high) will be in place with loading of the 100-tonne tipper occurring within 5 m;
  - As the stockpile is reclaimed and moves east, the 100-tonne tipper loading activity will remain within 5 m of the stockpile; and
  - If the stockpile is degraded below the required condition, the 100-tonne tipper loading activity will occur within 5 m of a local container barrier (containers stacked two high [5.2 m] with five containers on each row in an 'L' configuration [3-2], between the loading operation and receptor directions).
- 2.2.18 Consequently, this change has been assessed within the updated 'Landscape and Visual Impact' assessment (**Chapter 4**) and the updated 'Noise and Vibration' assessment (**Chapter 5**).

### Scrap metal handling facility components

- 2.2.19 **Table 2.2** presents the detailed design information proposed by the Applicant for the reserved matters application alongside the maximum heights that were shown on EAF ES Figure 2.2. It illustrates that the detailed height parameters for these components are within those of the hybrid application. Where components differ from the parameters and assumptions set out in the EAF ES, this has been specified and the row highlighted. Components that related to Phase 2 of the scrap handling process (the Harsco shredder and shear), are not included in the table.

**Table 2.2: Detailed list of Proposed Development components for the scrap handling facility works**

| Component Name                                                          | Proposed maximum dimensions (m)                                                                                                        |               |       | Max. height stated on EAF ES Figure 2.2 (m)       |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|-------|---------------------------------------------------|
| Area of Unit 25                                                         |                                                                                                                                        |               |       |                                                   |
| Office                                                                  | L - 40                                                                                                                                 | W - 20        | H - 8 | 20 in northern section,<br>15 in southern section |
| Car park                                                                | L - 25                                                                                                                                 | W - 25        | H - 0 |                                                   |
| Roadside car park                                                       | L – 31.2                                                                                                                               | W – 4.8       | H - 0 |                                                   |
| Workshop                                                                | L - 60                                                                                                                                 | W - 25        | H - 8 |                                                   |
| Scrap storage                                                           | <i>Varies</i>                                                                                                                          | <i>Varies</i> | H - 7 |                                                   |
| Acoustic mitigation barrier (15 m height)                               | Alternative noise mitigation proposed – see <b>paragraphs 2.2.16</b> and <b>2.2.17</b> . Height varies – scrap stockpiles up to 7 m.   |               |       |                                                   |
| Remaining Scrap Area                                                    |                                                                                                                                        |               |       |                                                   |
| Overflow gravelled scrap storage.                                       | Would not exceed parameter                                                                                                             |               |       | 15                                                |
| Incoming scrap yard electrical building and non-ferrous processing area | Area repropoed for drainage basin. Would not exceed parameter – see <b>paragraphs 2.2.22</b> and <b>2.2.23</b> for further information |               |       |                                                   |
| Existing Repurposed Building                                            | To be used as general storage, not as part of the scrap process                                                                        |               |       | N/A                                               |

### Lighting design

- 2.2.20 The hybrid application included an indicative lighting design for the outline element of the EAF Development, as shown on EAF ES Figure 2.5: Lighting Design. A Light Pollution Study (dated October 2024) was submitted with the hybrid application, which concluded that the indicative lighting design would not have a detrimental effect on nearby sensitive receptors. As stated in EAF ES Chapter 5, the night-time operational visual effects assessment assumed luminaires would be installed on circa 20 m high lighting columns and concluded that there would be adverse but not significant effects on some receptors.
- 2.2.21 The lighting scheme for the RM2 Proposed Development is presented on the Lighting Plan (Lighting Plan – 900051 – P02 – EAF RM 2), which is submitted as part of the reserved matters application, and comprises a total of 29 high mast lighting columns. This lighting scheme has been developed following a feasibility options study (see External Lighting Feasibility Report (UK0041847.0811), which is also submitted as part of the reserved matters application). The preferred option that was recommended during

detailed design includes proposed lighting columns that have a maximum height of 25 m. This option was selected as it was the only option that achieves the required levels of illumination and uniformity, and is assessed as not introducing any new or difference significant environmental effects compared with the conclusions of the EAF ES, as explained in **Chapter 4**.

### **Drainage design**

- 2.2.22 The hybrid application included a concept surface water drainage strategy for the EAF Development and associated works. The Concept Strategy for the area comprising the RM2 Proposed Development was prepared in line with the Statutory Standards for SuDS in Wales and concluded that as the scrap area is considered a 'high pollution hazard' in line with the simple index approach, the RM2 Site would be drained via a pumped, piped system to the Nautilus building for treatment prior to being discharged to the Bristol Channel, a tidal waterbody. Pre-treatment would be provided within the RM2 Proposed Development area in the form of an interceptor, which would provide some form of attenuation.
- 2.2.23 The proposed surface water drainage strategy for the RM2 Proposed Development area is presented on the Outline Drainage Strategy (Tata - Outline Drainage Strategy - SAB5 RM - Rev A - July 2026), which is submitted as part of the reserved matters application. The surface water drainage strategy has been developed by Skanska following a full options appraisal (see **Appendix 2.1**) to determine the optimal solution for surface water drainage. The proposals include the addition of an open basin to provide attenuation within the RM2 Proposed Development area. This option was selected as it was the only option that achieves the required levels of attenuation whilst allowing for a gravity based solution as far as is reasonably practicable, whilst balancing the requirements for the unavoidable 'high pollution hazard' classification of the scrap yard. It also allows a comprehensive approach to green infrastructure and biodiversity enhancement in this area of the site, taking into account ecological and landscape design input.
- 2.2.24 The drainage basin would be designed to convey all flows within the system up to the 1 in 30-year rainfall event. It would be concrete-lined to avoid floatation of structures and groundwater ingress into the asset, given the groundwater levels in the area. A 1 m strip at the top of the basin slope would comprise site-won material including seedbank from the Wider EAF Site to encourage self-seeding vegetation akin to habitats within the wider steelworks. A bund of approximately 1 m in height and 7 m wide at the base is proposed around approximately two thirds of the basin, with fencing around the remaining portion due to the presence of a proposed lighting tower, to discourage entry for health and safety reasons. As with the 1 m strip at the top of the basin, the bund will comprise site-won material to encourage self-seeding vegetation, which will provide biodiversity benefits. Steps will be provided to allow for maintenance access to the basin.
- 2.2.25 The proposals are assessed as not introducing any new or different significant environmental effects compared with the conclusions of the EAF ES.

## **2.3 Reasonable Alternatives Considered**

- 2.3.1 Chapter 3: Environmental Context and Alternatives of the EAF ES considered the reasonable alternatives studied by the Applicant. The principles of this chapter remain

unchanged by the detailed design information provided for the RM2 Proposed Development. The primary alternatives considered in relation to this reserved matters application are in relation to the acoustic barrier, the lighting design and the drainage design.

### **Acoustic barrier**

- 2.3.2 The removal of the 15 m-high acoustic barrier and proposed replacement with alternative noise mitigation measures have been developed through consultation with NPTC and informed by sensitivity testing through noise modelling, with a view to ensuring that the amendments would not result in a change to the noise emissions associated with the scrap yard. The proposed amendments sought therefore to correspond with the option considered that would not affect the findings of the EAF ES.
- 2.3.3 Noise modelling undertaken during the detailed design stage indicated that, with localised screening in place, the railside barrier would not materially reduce noise levels at the nearest receptors, as the dominant sources are already screened at source. While the railside barrier would reduce noise from secondary activities such as train movements and reach stacker movements, these are not significant contributors and do not affect the assessment outcome. The evolution from a 15 m railside barrier to localised screening reflects the progression from a precautionary outline measure to a deliverable solution aligned with the proposed operation. By controlling the dominant sources at or close to source, the updated approach achieves comparable acoustic performance at the nearest sensitive receptors.

### **Lighting**

- 2.3.4 As stated in **paragraph 2.2.21** a feasibility options study was undertaken to determine the most suitable method to illuminate the scrap yard, taking into account the desired lighting levels to be achieved to allow for safe operation; energy consumption; quantities of equipment; and potential nuisance and environmental impacts.
- 2.3.5 The options that were considered are as follows:
- Option 1 – 25 m high masts;
  - Option 2 – combination of 25 m high masts and 12 m columns; and
  - Option 3 – 12 m columns.
- 2.3.6 The study concluded that Option 1 achieves the required levels of illumination while successfully limiting light spill to minimise impact on environmentally sensitive adjacent areas.

### **Drainage**

- 2.3.7 A key challenge for the Primary Scrap Yard is the large volume of runoff generated during rainfall events. Conveying all runoff directly to the treatment facility without storage would require substantial pumping infrastructure and was therefore considered impractical.
- 2.3.8 An assessment of six drainage options was undertaken (see **Appendix 2.1**) to determine the optimal solution for surface water drainage across the RM2 Proposed Development area which complies with the Statutory Standards for SuDS in Wales and meets the operational requirements for the site. These options represented variations of three principal drainage strategies: direct transfer without attenuation, attenuation tanks and

attenuation basins. The assessment sought to identify the most appropriate method of collecting, storing and transferring runoff to the Nautilus treatment facility.

2.3.9 Each option was assessed against factors including:

- Operational complexity;
- Construction requirements;
- Land take;
- Long-term maintenance;
- Resilience and reliability; and
- Compatibility with the wider site drainage strategy.

2.3.10 In selecting the proposed gravity-fed, partial concrete-lined basin, which is detailed further in the Outline Surface Water Drainage Strategy (Outline Drainage Strategy - Scrap Handling Facility RM - Rev A - July 2026) accompanying this RM submission, it was considered that the proposals resulted in the most appropriate balance across hydraulic performance, constructability, operational simplicity, maintenance requirements and compatibility with the Wider EAF Site drainage strategy and the Statutory Standards for SuDS in Wales. The option provides attenuation storage prior to controlled transfer of runoff to the Nautilus treatment facility and reduces reliance on extensive pumping infrastructure when compared with alternative solutions considered during the appraisal. It also includes an inherent landscape and biodiversity enhancement opportunity.

## **2.4 Secured Mitigation Measures**

2.4.1 A series of management plans have been produced in accordance with the mitigation measures detailed within the EAF ES and would be applicable to the reserved matters application and adhered to. Compliance is required throughout the construction phase of the RM2 Proposed Development. Details of their implementation have been provided, where relevant, throughout this SoC. These management plans, which are secured by planning conditions pursuant to P2024/0711, are listed below and the corresponding condition for each one is provided:

- Construction Environmental Management Plan (CEMP), Condition 50;
- Landscape and Ecological Management Plan (LEMP), submitted with the hybrid application. This is not conditioned through P2024/0711 but is required to be implemented by Condition 68 to be in accordance with the EAF ES principles and mitigation measures;
- Construction Noise and Vibration Management Plan (CNVMP), Condition 49;
- Air Quality Management Plan (AQMP), Condition 52;
- Materials Management Plan (MMP), Condition 53;
- Soils and Peat Management Plan (SPMP), Condition 54; and
- Piling Risk Assessment (PRA), Condition 62.

## 3 ASSESSEMENT OF ENVIRONMENTAL EFFECTS – FACTORS NOT NEEDING STANDALONE ASSESSMENT

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### 3.1 Introduction

- 3.1.1 As stated in **Section 2.2** of this SoC, the construction phase effects are expected to be in line with those reported in the EAF ES. The effects of construction phase impacts have therefore not been revisited in this SoC. Consideration of the potential effects of the operational phase of the RM2 Proposed Development, compared against the assessment of the outline elements of the EAF Development for factors that do not need a standalone assessment are presented in this chapter.

### 3.2 Air Quality

- 3.2.1 An assessment of the likely significant effects of the EAF Development on air quality was undertaken in Chapter 6: Air Quality of the EAF ES. This SoC should be read in conjunction with that chapter and its supporting appendices.

#### Operation

- 3.2.2 Fugitive dust from the Wider EAF Site during operation will be controlled by the existing Air Quality Management Plan for the steelworks site and EAF Development. The existing operations are regulated by an Environmental Permit issued by Natural Resources Wales, which will require a variation due to the EAF Development. In addition to regulating activities through permits, 'Best Available Technology' will be implemented to control emissions from fugitive dust generated by the EAF and scrapyard. With these mitigation measures in place, the EAF ES concluded that there would not be any potentially significant effects associated with operational fugitive dust.
- 3.2.3 As stated in EAF ES Chapter 6, the processing of scrap for use in the EAF is expected to be the main source of fugitive dust once the EAF is operational. The RM2 Proposed Development is within the maximum parameters assessed within EAF ES Chapter 6. The conclusions of the EAF ES remain valid and unchanged.
- 3.2.4 It should be noted that the assessment within EAF ES Chapter 6 considered the shredding and shearing processes. These processes are not considered within this SoC as they were part of Phase 2 of the scrap handling. EAF ES Chapter 6 assesses a worst-case scenario on this basis.
- 3.2.5 Concentrations of operational vehicle and industrial emissions were modelled for two scenarios: Future Operational without Development (2027) and Future Operational with Development (2027). The reduction in trips associated with the EAF Development was determined as likely to have medium- to long-term, local predominantly beneficial or otherwise negligible 'not significant' effects on air quality at existing human receptor locations once operational. As set out in **Section 3.7** of this SoC, the RM2 Proposed Development would result in a minor increase in trips compared to the trips assessed for the EAF Development. However, this change would still represent a substantial decrease

in trips when compared to the assessed baseline conditions. Therefore, it is anticipated that this change in vehicle numbers would not materially affect the findings of the assessment reported in the EAF ES and effects would remain 'not significant'.

- 3.2.6 In addition, these scenarios were modelled at ecological receptors, and it was concluded that the EAF Development is likely to have generally beneficial and 'not significant' air quality effects at designated ecological sites once operational.

### **Conclusion**

- 3.2.7 As the RM2 Proposed Development would be within broad compliance of the parameters assessed as part of the EAF ES, no new or different effects are anticipated. This section of the SoC has demonstrated that the air quality conclusions reported in the EAF ES remain valid for this reserved matters application.

### 3.3 Biodiversity

- 3.3.1 An assessment of the likely significant effects of the proposed EAF Development on biodiversity was undertaken in EAF ES Chapter 8: Biodiversity. This SoC should be read in conjunction with that chapter and supporting appendices.
- 3.3.2 The spatial and temporal extents of biophysical changes likely to be generated during the operation of the EAF Development with the potential to lead to effects upon ecological features are listed in **Table 3.1**.

**Table 3.1: Activities likely to generate ecological effects**

| Activity                 | Potential effect                                                                                        |
|--------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Operational phase</b> |                                                                                                         |
| Drainage                 | <ul style="list-style-type: none"> <li>Change in water quality of existing drainage network.</li> </ul> |
| Lighting                 | <ul style="list-style-type: none"> <li>Disturbance to vulnerable species.</li> </ul>                    |
| Noise                    | <ul style="list-style-type: none"> <li>Disturbance to vulnerable species.</li> </ul>                    |
| Habitat creation         | <ul style="list-style-type: none"> <li>Potential positive biodiversity benefit.</li> </ul>              |

- 3.3.3 The biodiversity assessment was based on the following assumptions:
- There would be no large areas of trees removed;
  - There would be a minimum 6 m offset of construction works from all waterbodies where practicable;
  - No additional lighting would be added to areas that are currently dark; and
  - No drainage ditches would be removed, and the grid connection cable route would use temporary short-term over-pumping to allow for the installation beneath them.
- 3.3.4 There are six statutory designated sites covered by nine designations located within 10 km of the Wider EAF Site, including Margam Moors SSSI which is located adjacent to the Wider EAF Site.
- 3.3.5 There are three non-statutory designated sites within 1 km of the Wider EAF Site, including Neath Port Talbot Watercourses Site of Importance for Nature Conservation (SINC). All Neath Port Talbot Watercourses are designated as SINCs, therefore there are SINCs present within the Wider EAF Site.
- 3.3.6 As depicted in Figure 8.3 of the EAF ES, the RM2 Proposed Development footprint comprises dense scrub, bare ground, hardstanding, ephemeral/short perennial habitat, and a small stretch of standing water.
- 3.3.7 The following receptors were assessed in EAF ES Chapter 8:
- Statutory designated sites (within 1 km of the EAF including the Margam Moors SSSI);
  - Non-statutory sites (including onsite SINCs);
  - Coastal floodplain grazing marsh;
  - Open mosaic habitat (scrub and ephemeral);

- Other habitats (including broadleaved woodland, open water and semi-improved neutral grassland habitats);
- Invertebrates;
- Reptiles;
- Breeding birds;
- Wintering birds;
- Foraging/commuting bats; and
- Invasive non-native species.

- 3.3.8 No additional vegetation is required to be removed as part of this reserved matters application than what was previously assessed in the EAF ES. Sheets 5, 6, 8, 9 and 10 of Figure 2.4: Landscape Proposals Part 1 of the EAF ES illustrate the retained vegetation within the immediate vicinity of the RM2 Proposed Development including rough grass/mosaic habitat and ditches. Habitat creation would compensate for what is being lost and will have a direct, long-term beneficial effect. Planting will be undertaken in line with the implementation of the LEMP and the Net Benefit for Biodiversity report. It is therefore considered that the conclusions stated in the EAF ES, which are summarised below, are still applicable.
- 3.3.9 The proposed approach to the RM2 Proposed Development drainage strategy (see **paragraph 2.2.24**) provides enhanced green infrastructure when compared with a wholly underground attenuation solution. The open basin, vegetated bund and self-colonising margins introduce more extensive above-ground habitat opportunities within an industrial setting and support integration with the wider industrial landscape.
- 3.3.10 The removal of the previously proposed Building 27 in this area also changes part of the land use from impermeable surfacing to spoil-based, permeable surfacing. This is expected to provide opportunities to support windblown seed that will naturally colonise, contributing to brownfield habitat characteristics similar to those already present across the Wider EAF Site. This will be subject to regular disturbance through the usual working of the site which will ensure that the habitat does not succeed into dense scrub.
- 3.3.11 The bund and basin margins will utilise site-won material containing the existing seedbank, encouraging vegetation establishment that reflects the wider site character. This will help create a 'habitat stepping stone' through the Wider EAF Site for mobile species and improve habitat linkage and wider ecological connectivity.

### Operation

- 3.3.12 There will be no direct or indirect impacts during the operational phase on any of the statutory sites. As set out in **Section 3.1**, no changes to the significance of air quality effects on ecological receptors are anticipated.
- 3.3.13 The EAF Development (including the RM2 Development) will adhere to the LEMP which outlines the long-term management of the retained and created habitats. The LEMP includes lighting design to minimise the lighting of these areas. Low light spill devices will be used adjacent to habitats, minimising the impacts on nocturnal species such as bats using the Wider EAF Site for foraging and commuting.
- 3.3.14 The RM2 Development area will be subject to regular disturbance through the usual working of the site which will ensure that the habitat does not succeed into dense scrub.

### **Conclusion**

- 3.3.15 As the RM2 Proposed Development would be within the maximum parameters assessed as part of the EAF ES, no new or different effects are anticipated. This section of the SoC has demonstrated that the biodiversity conclusions reported in the EAF ES remain valid for this reserved matters application.

## 3.4 Surface Water, Flood Risk and Drainage

- 3.4.1 An assessment of the likely significant effects of the proposed EAF Development on surface water, flood risk and drainage was undertaken in Chapter 9: Surface Water, Flood Risk and Drainage of the EAF ES. This SoC should be read in conjunction with that chapter and supporting appendices.
- 3.4.2 The Wider EAF Site is located adjacent to Swansea Bay to the west. There are no Natural Resources Wales Main Rivers within the Wider EAF Site. A number of Natural Resources Wales Main Rivers are located within 2 km of the Wider EAF Site, including the Afon Cynffig to the south and the Afon Afan and Nant Ffrwdwyllt to the north. All three of these rivers are used for process water abstraction at the Wider EAF Site.
- 3.4.3 The Wider EAF Site has a complex network of surface water drainage with several ordinary watercourses crossing it. In addition, the Wider EAF Site has an extensive piped drainage network to manage surface water runoff, foul drainage, and process water Site. **Figure 3-1** (a reproduction of Figure 9.3 in the EAF ES) depicts an indication of the surface water drainage within the Wider EAF Site.
- 3.4.4 Margam Moors drains in a northerly direction towards the Wider EAF Site. The reen network of the moors comprises a SSSI and SINCR, with the extent of the SSSI boundary Heolcae-r Bont at the southern extent of the Applicant's land ownership. The reen network drains in a northerly direction, through the Wider EAF Site, and ultimately drains to the Lower Mother Ditch.

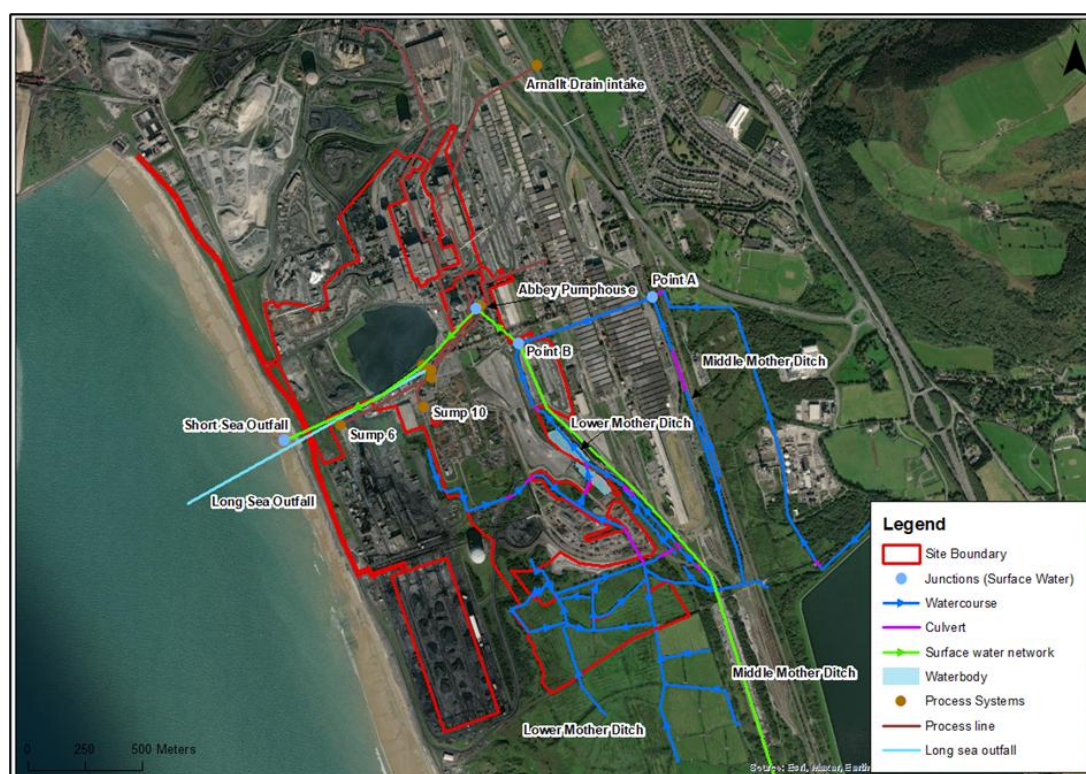


**Figure 3-1: Land at Port Talbot Steelworks surface water drainage (Wider EAF Site)**

- 3.4.5 There is a substantial drainage system in place to process surface water and effluent in a combined network with the Applicant's existing operational facility. In the south, surface water enters the Wider EAF Site from ordinary watercourses (i.e., the Lower Mother Ditch), which is then culverted into the main combined network. There are also other drainage ditches present on-site which connect to the main network.
- 3.4.6 The combined surface/effluent outfall is via the Long Sea Outfall, which discharges approximate 2 km offshore into the Swansea Bay. A second excess surface water outfall discharges via the Abbey Beach outfall (Short Sea Outfall).
- 3.4.7 There is limited water quality data available for the watercourses and wetland/pond areas within the Wider EAF Site. As detailed in the EAF ES, the water quality is generally considered to be relatively good in the ditches of the southern portion of the Site, as these flow through areas of coastal floodplain grassland and are fed by watercourses flowing from Margam Moors SSSI.
- 3.4.8 The RM2 Proposed Development is not located within Flood Zones 2 or 3 of the Flood Map for Planning for Rivers and Sea. The RM2 Proposed Development is predominantly located within Flood Zone 1 of the Flood Map for Planning for Surface Water and Small Watercourses, with isolated areas of Flood Zones 2 and 3. Such surface water risk is associated with localised topographic depressions within the RM2 Proposed Development boundary and is not considered to pose a significant risk to the development.
- 3.4.9 Land use within the Wider EAF Site will remain the same: as a heavy industry site. There will be an increase in hard standing, where areas characterised by made ground and used for material storage will become hard-standing for process areas or accommodate new buildings.

### **Operation**

- 3.4.10 The operational phase of the RM2 Proposed Development has the potential for long term and permanent effects on the water environment receptors. The EAF ES concluded that there would be a not significant effect on water quality and water resources and there would be a significant beneficial effect on flood risk with regard to surface water quality at Swansea Bay Water Framework Directive (WFD) waterbody.

### *Water Quality*

- 3.4.11 The EAF ES determined that there would be a change to the volume and contaminant concentration in effluent discharge from site processes when compared to the established baseline. The EAF Development will require a variation to the Site Environmental Permit with Best Available Techniques (BAT) to be applied. The Associated Emissions Limits for key contaminants under BAT will decrease compared to the established baseline. Additionally, the water quality within Swansea Bay WFD is predicted to be improved as a result of the EAF Development.
- 3.4.12 The implementation of a comprehensive surface water drainage strategy to serve the RM2 Proposed Development Area will reduce the potential for surface water to flow overground or infiltrate and contribute to baseflows to the Lower Mother Ditch with the potential to mobilise contaminants due to the nature of the slag material currently comprising this area. Instead, due to the 'high pollution hazard' classification of the RM2

Proposed Development' surface water shall be initially treated via interceptors prior to attenuation and subsequent further treatment at the main water treatment centre of the Wider EAF Site.

- 3.4.13 Overall, it is anticipated that the RM2 Proposed Development will have a small beneficial effect on water quality. The conclusions of the EAF ES are still considered to be valid and unchanged.

#### *Water Resources*

- 3.4.14 The EAF ES demonstrated that the EAF Development will require less water and abstraction than the established operational baseline. The proposed water use represents a 71% reduction from established baseline levels. This is expected to result in a small 'beneficial' effect.
- 3.4.15 The EAF Development will include the addition of a new water tank, which will further improve water resource provisions across the wider Site. The conclusion of the EAF ES of not significant effects is still considered to be valid and unchanged.

#### *Flood Risk*

- 3.4.16 The EAF ES determined that there would be no impact on flood risk from rivers, sea, groundwater and sewers due to the Wider EAF Site being at low risk from these sources.
- 3.4.17 The RM2 Proposed Development will contribute to additional areas of impermeable surface, serving the scrap handling facility and associated structures. This will generate increased volumes of surface water runoff to the receiving drainage network, compared to the established baseline. This would result in some increased surface water flood risk on-site. However, this would be mitigated by the implementation of the proposed surface water drainage strategy. The surface water drainage strategy proposes to convey flows via a piped system to its receptor with on-site attenuation provided within a concrete-lined basin (required to mitigate the risk of groundwater ingress and floatation), designed to convey all flows within the system up to the 1 in 30-year rainfall event. Additional measures to the concrete-lined basin include the provision of a 1 m strip at the top of the slope to be comprised of site-won material (at a level at which the risk of groundwater ingress is minimal) and the provision of a vegetated bund to the top of the basin for additional health and safety requirements.
- 3.4.18 The EAF ES assessed that the predicted consequences of reservoir flooding to the EAF Development are largely within the recommended limits of acceptability for flooding outlined in TAN-15 (2004), applicable at the time of preparation of the EAF ES (and noting that these only apply to fluvial and tidal sources of risk and not specifically reservoir failure). Within the Wider EAF Development, it is specifically areas within the RM2 Proposed Development boundary which are at risk should failure of the Eglwys Nunedd Reservoir occur. Margam Moors provide a significant low risk area for the reservoir to drain to relatively safely, with the minimum consequence for the RM2 Proposed Development. Even in a combined probability event of high fluvial levels in Margam Moors and a reservoir failure, the large area of the moors (1.3 km<sup>2</sup>) and relatively low elevation provides a very significant volume of storage.
- 3.4.19 The RM2 Proposed Development is not predicted to result in a flood risk higher than assessed in the EAF ES. Therefore, with mitigation measures in place including the

Outline Surface Water Drainage Strategy (Outline Drainage Strategy - Scrap Handling Facility RM - Rev A - July 2026), which is submitted in support of the reserved matters application, the conclusions of the EAF ES (not significant) are considered to be valid and unchanged.

*Residual Operational Effects*

- 3.4.20 Overall, the effect on operational water environment receptors is predicted to be negligible or minor (not significant), with the exception of surface water quality at Swansea Bay WFD Waterbody where there is predicted to be a moderate beneficial (significant effect).

**Conclusion**

- 3.4.21 As the RM2 Proposed Development would be within the maximum parameters assessed as part of the EAF ES, no new or different effects are anticipated. This section of the SoC has demonstrated that surface water, flood risk and drainage conclusions reported in the EAF ES remain valid for this reserved matters application.

### 3.5 Land, Soil and Groundwater

- 3.5.1 An assessment of the likely significant effects of the proposed EAF Development on land, soil and groundwater was undertaken in Chapter 10: Land, Soil and Groundwater of the EAF ES. This SoC should be read in conjunction with that chapter and supporting appendices.
- 3.5.2 The RM2 Proposed Development will be located within the footprints and parameters assessed in the EAF ES, therefore the conclusions stated in the EAF ES are still applicable and are summarised below.
- 3.5.3 The assessment in EAF ES Chapter 10 was split into two zones: Area 1 which is subject to the detailed planning application; and Area 2 which is subject to the outline planning application (including the RM2 Proposed Development). Historical mapping of Area 2 shows that this area was predominantly undeveloped agricultural land and moorland from 1876 to 1965. From 1965, this area was developed through the expansion of the steelworks.

#### Operation

- 3.5.4 The Wider EAF Site is a Control of Major Accident Hazards (COMAH) upper tier site and is subject to the COMAH Regulations 2015. The Wider EAF Site currently has an Environmental Contingency Plan and an Environmental Emergency Plan. These will require updating and expansion to incorporate any changes at the Wider EAF Site. In addition, the Wider EAF Site is regulated under an Environmental Permit (EPR/BL7108M) and operation of the EAF Development (including the RM2 Proposed Development) would require a variation of the existing environmental permit. This would also require an updated Site Condition Report, a monitoring programme and emergency response plan. Pollution control measures set out in the permit would add certainty that operational activities will not result in significant effects on land, soil and groundwater resources. The EAF Development (including the RM2 Proposed Development) will be required to comply with the general provisions of the environmental permit, monitoring programme and plans.
- 3.5.5 The EAF ES determined that proposed activities during the operational phase would be undertaken in a controlled fashion with, for example, extensive hardstanding, materials appropriately stored and closed drainage systems. The conclusion in the EAF ES that there would be a not significant effect on land, soil, and groundwater receptors during operation is considered to remain valid for the RM2 Proposed Development.
- 3.5.6 A Coal Mining Risk Assessment (CMRA) was produced by Wardell Armstrong (now SLR) (ref. September 2024 (ref.ST20879/001/v2.0)). The CMRA concludes that potential geotechnical constraints are present at the Wider EAF Site as a result of historic coal mining activities which are potentially within a depth at which there is the potential for influence on the Wider EAF Site without mitigation. The CMRA concludes with a statement to highlight the fact that construction on sites with a coal mining legacy is common practice and that the features and potential hazards on site are not unusual and can be overcome with engineered mitigation. Condition 18 (full) and 57 (outline) of the

EAF hybrid planning permission (permission reference P2024/0711) require further investigation and/or mitigation of coal risk on the Wider EAF Site. A Scheme of Mitigation for Coal Mining Risk was submitted to NPTC by the Applicant as part of an application to discharge Condition 57, which was approved in April 2026 (reference P2026/0135). An application to discharge Condition 18, supported by a Scheme of Mitigation for Coal Mining Risk, was approved on 1 July 2026 (reference P2026/0427), resulting in the full discharge of that condition.

### **Conclusion**

- 3.5.7 As the RM2 Proposed Development would be within the maximum parameters assessed as part of the EAF ES, no new or different effects are anticipated. This section of the SoC has demonstrated that land, soil and groundwater conclusions reported in the EAF ES remain valid for this reserved matters application.

## 3.6 Cultural Heritage

- 3.6.1 An assessment of the likely significant effects of the proposed EAF Development on cultural heritage was undertaken in Chapter 11: Cultural Heritage of the EAF ES. This SoC should be read in conjunction with that chapter and supporting appendices.
- 3.6.2 There are no designated assets located within the Wider EAF Site. There are three non-designated historical assets located within the Wider EAF Site, one of which lies within the RM2 Site, while the other two lie to the north and north-west of the RM2 Site. These are as follows:
- Morfa Colliery (421174) is a 19th century colliery, located in the northern part of Area of Unit 25 within the RM2 Site;
  - Morfa Colliery Gas Works (710277) was a private gasworks used to light the colliery buildings, located to the north the RM2 Site; and
  - Theodrics Grange (20041) is a ruined Medieval building which formed part of a monastic grange, possibly of a domestic function, located to the north-west of the RM2 Site.
- 3.6.3 Adjacent to the Wider EAF Site's southern boundary is Margam Warren (24479), a rabbit warren of probable Medieval origin. Although this is recorded as a single point it is likely that it covered land in the immediate vicinity, which may include land within the Wider EAF Site.
- 3.6.4 A desk-based assessment was undertaken as part of the EAF ES which identified that within the Wider EAF Site there is:
- A low potential for below ground archaeological remains to be present from the Mesolithic to Early Medieval periods;
  - A medium potential for archaeological remains dating to the Palaeolithic, Post-Medieval and Modern periods likely to be associated with Morfa Colliery and the steelworks respectively;
  - A high potential for archaeological remains dating to the Medieval remains, likely to be associated with the grange located within the Wider EAF Site or associated agricultural activity; and
  - Large areas of the Wider EAF Site have been disturbed or truncated by Post-Medieval mining and modern development of the steelworks and associated railway tracks. However, borehole records indicate a layer of peat below much of the Wider EAF Site which may contain archaeological potential for remains of low (Local) importance.
- 3.6.5 Historic Landscape Characterisation defines the south-eastern part of the Wider EAF Site as: HLCA002 Margam Moors. This is reclaimed and enclosed salt marsh wetland pasture. There are Medieval and Post-Medieval fields and former Medieval monastic grange land with varied field patterns with typical ridge and furrow, earth bank and drainage features.

### Operation

- 3.6.6 The Morfa Colliery memorial (421174), located in the northern part of Area of Unit 25 within the RM2 Site, will be retained in situ. Following construction, the temporary Heras fencing that has been installed around the memorial to prevent accidental damage (as required by Condition 56 of P2024/0711, and in line with the recommendations of the WSI) will be removed.

- 3.6.7 Impacts during the operational phase of the EAF Development (including the RM2 Proposed Development) have the potential to arise as a result of visual change within the Wider EAF Site associated with the change in the number of buildings and massing. The EAF Development (including the RM2 Proposed Development) falls within the existing steelworks, which already forms an industrial component within each asset's setting. It is therefore considered that there will be no additional impacts that would arise in terms of below ground archaeological remains that have not been considered for the construction phase.

### **Conclusion**

- 3.6.8 As the RM2 Proposed Development will be within the maximum parameters assessed in the EAF ES, no new or additional effects are anticipated and therefore the conclusions within Chapter 11 of the EAF ES remain valid.

## 3.7 Transport and Access

- 3.7.1 An assessment of the likely significant effects of the proposed EAF Development on transport and access was undertaken in Chapter 12: Transport and Access of the EAF ES. This SoC should be read in conjunction with this chapter and supporting appendices.
- 3.7.2 Due to the end-of-life of much of the heavy end of the steelworks, the coke ovens have been turned off and the two blast furnaces have been switched off prior to commencement of the construction of the EAF Development. This has resulted in the reduction of staff and vehicle numbers at the wider Steelworks site. In addition, once operational, the scrap metal is predominantly proposed to be delivered by rail, with only up to 10% of the scrap material imported to site to be delivered by road.

### Operation

- 3.7.3 The operational phase of the EAF Development (including the RM2 Proposed Development) will result in a reduction in staff vehicle and HGV movements when compared to the established baseline. The EAF ES identified the potential operational traffic effects for all receptors as beneficial. A summary of the impacts are set out as follows.
- Driver delay – negligible beneficial (not significant);
  - Public transport users – negligible beneficial (not significant);
  - Pedestrian delay – negligible beneficial (not significant);
  - Pedestrian amenity – minor beneficial or negligible beneficial (not significant);
  - Fear and intimidation – minor beneficial or negligible beneficial (not significant);
  - Severance – negligible beneficial (not significant); and
  - Accidents and road safety – negligible beneficial (not significant).
- 3.7.4 The overall reduction in vehicle movements associated with the EAF Development equates to -2697 Annual Average Weekday Traffic (AAWT), of which -190 are HGV's (113 HGVs associated with scrap metal deliveries and 77 associated with coal deliveries). Chapter 12 of the EAF ES assumed that all trips associated with the RM2 Proposed Development would be delivered by rail. However, it is now anticipated that the RM2 Proposed Development would require the delivery of some material (up to 10%) via road, for example where materials are less than a train load, or to account for local scrap (e.g. from scrap merchants' yard in Skewen). This would result in an increased number of HGV trips than previously assessed in the EAF ES; however, the EAF Development as a whole would still represent a substantial reduction in vehicle movements on the local highway network. Considering the quantity of trips proposed (approximately 12 AAWT), and the reduction in trips associated with the wider EAF Development, it is not anticipated that there would be any change to the scale and significance of effects identified in the EAF ES.

### Conclusion

- 3.7.5 The traffic associated with the construction and operational phase of the EAF Development will result in a minor/negligible adverse and minor/negligible beneficial effects. The conclusions in Chapter 12 of the EAF ES remain valid and unchanged for the RM2 Proposed Development.

## 3.8 Climate Change

- 3.8.1 An assessment of the likely significant effects of the EAF Development on climate change was undertaken in Chapter 13: Climate Change of the EAF ES. This SoC is to be read in conjunction with this chapter and associated appendices.
- 3.8.2 EAF ES Chapter 13 reported that the likely significant effects relating to climate change are:
- The effect of the EAF Development on climate from greenhouse gas (GHG) emissions / reductions ("climate change mitigation"); and
  - The effects on the EAF Development itself from climate change ("climate change resilience").
- 3.8.3 Steel production at the Wider EAF Site has, to date, used blast furnaces, which emit significant amounts of greenhouse gases. When fully operational, the Port Talbot steelworks was the largest direct greenhouse emitter in the UK, accounting for around a fifth of Welsh GHG emissions.
- 3.8.4 Baseline emissions were based on a five-year average between 2020 and 2024 and revealed that the Wider EAF Site averages approximately 6.25 million tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) emissions a year. The assessment predicted a significant emissions decrease from baseline levels in the interim period due to the closure of the operational steelworks and construction of the EAF Development.
- 3.8.5 It is noted that the EAF Development comprises the construction and operation of a new EAF facility, thereby comprising inherent GHG emissions mitigation compared to the steel produced previously by the blast furnaces.
- 3.8.6 The climate change assessment in the EAF ES included both the full and outline planning applications which included the RM2 Proposed Development. The calculations and conclusions in Chapter 13 of the EAF ES are therefore still valid and are summarised below.

### Operation

- 3.8.7 Once operational, the EAF Development is expected to reduce GHG emissions. Subtracting the forecast net operational GHG emissions from the established baseline GHG emissions, the savings are as follows:
- 6.2 million tonnes in 2027;
  - 5.6 million tonnes in 2028;
  - 5.4 million tonnes in 2029; and
  - 5.4 million tonnes in 2030 (the latest year for which a forecast of the operational EAF emissions has been made).
- 3.8.8 The receptor of the GHG assessment is the global climatic system, which has a high sensitivity. The magnitude of change is large in terms of the contribution of the EAF Development to Wales and the UK Government's steel sector decarbonisation projections. The level of impact during the operational phase is therefore considered to be major beneficial, which is significant.
- 3.8.9 The savings from the operational EAF Development equate to a minimum 23.1% of the annual carbon budgets estimated for Wales and 1.6% of the annual carbon budgets

estimated for the UK. Regarding the UK Government's projection of annual average GHG savings that can be achieved through electrification of the UK steel industry, the operational EAF is forecast to meet a minimum 71.8% of this projection between 2027 and 2030. This level of effect is expected to be major beneficial, and therefore significant.

- 3.8.10 The RM2 Proposed Development supports the beneficial effects of the EAF Development as it is fundamental to the functioning of the EAF.
- 3.8.11 The EAF Development has included a number of embedded mitigation measures to ensure resilience against climate change in relation to major accidents and disasters, physical risks, ground conditions, flood risk and biodiversity. Following implementation of these mitigation measures it was concluded in the EAF ES that there would be no significant effects anticipated in relation to wind speed, water availability, ground conditions, flood risk and water resources.
- 3.8.12 No significant operational stage effects are anticipated on other habitats or species including internationally or nationally designated sites, badger, reptiles, breeding birds, wintering birds, or bats. Significant beneficial effects are predicted in relation to bats and invasive non-native species through adherence to the LEMP.
- 3.8.13 The potential for major accidents and disasters is actively managed on the Wider EAF Site to comply with the relevant health and safety regulations as set out in EAF ES Chapter 15: Major Accidents and Disasters.
- 3.8.14 The EAF Development (including the RM2 Proposed Development) has incorporated the embedded mitigation measures described in EAF ES Chapter 13, therefore the conclusions made in relation to climate change resilience remain valid and unchanged.

### **Conclusion**

- 3.8.15 The climate change assessment covered all aspects of the full and outline elements of the hybrid planning application. The RM2 Proposed Development will be within the maximum parameters stated in the EAF ES, therefore the conclusions in Chapter 13 of the EAF ES remain valid and unchanged.

## 3.9 Socioeconomics and Health

- 3.9.1 An assessment of the likely significant effects of the proposed EAF Development on socioeconomics and health was undertaken in Chapter 14: Socioeconomics and Health of the EAF ES. This SoC should be read in conjunction with EAF ES Chapter 14.
- 3.9.2 The Applicant indicates that c. 300 direct FTE jobs could be supported by new operations at the EAF Development once completed, of which 100 shift-based employees will be retained to facilitate transformation works prior to the EAF coming online.

### **Socioeconomics**

#### **Operation**

- 3.9.3 There are no changes to any of the assessment assumptions that informed the socio-economics assessment of operational phase effects. Therefore, the following impacts remain as reported in the EAF ES:
- Change in direct, indirect and induced employment - a direct, permanent, long-term, adverse effect on the labour force as a result of the change in direct, indirect and induced employment during the operational phase which is considered to be major significant.
  - Change in employee expenditure - direct, permanent, long-term, adverse effect on businesses and associated labour force as a result of the change in employee expenditure during the operational phase which is considered to be moderate significant.

### **Health**

#### **Operation**

- 3.9.4 The following chapters should be referred to for operational phase health related effects relating to each environmental factor; no significant effects in the context of human health were reported in the respective EAF ES chapters:
- EAF ES Chapter 5: Landscape and Visual Impact;
  - EAF ES Chapter 6: Air Quality;
  - EAF ES Chapter 7: Noise and Vibration;
  - EAF ES Chapter 8: Biodiversity;
  - EAF ES Chapter 9: Surface Water, Flood Risk and Drainage;
  - EAF ES Chapter 10: Land, Soil and Groundwater;
  - EAF ES Chapter 12: Transport and Access; and
  - EAF ES Chapter 13: Climate Change.
- 3.9.5 As demonstrated throughout this SoC, no changes are anticipated in relation to the scale and significance of effect for any of the above assessments. Therefore, the overall effect on health outcomes during the construction and operational phases of the EAF Development remain as previously assessed.

### **Conclusion**

- 3.9.6 The socio-economic and health assessment included both the full and outline planning applications, which included the RM2 Proposed Development, therefore the conclusions made in the EAF ES are considered to be valid and unchanged.

### 3.10 Major Accidents and Disasters

- 3.10.1 An assessment of the likely significant effects of the proposed EAF Development on major accidents and disasters was undertaken in Chapter 15: Major Accidents and Disasters of the EAF ES. This SoC should be read in conjunction with that chapter and associated appendices.

#### Operation

- 3.10.2 The major accidents and disasters assessment in EAF ES Chapter 15 assessed the potential effects of the operational phases within a risk assessment matrix (refer to Table 15.3 in EAF ES Chapter 15), following hazards being identified in a local context from the UK National Risk Register of Civil Emergencies (Cabinet Office, 2023)<sup>2</sup> and the Neath Port Talbot County Borough Council Local Risk Register (Neath Port Talbot County Borough Council, 2017)<sup>3</sup>, to understand which risks were more likely to be significant locally.
- 3.10.3 Embedded mitigation measures will be implemented to contribute to the mitigation and management of major accidents and disasters, including the following:
- The EAF Development (including the RM2 Proposed Development) is subject to COMAH Regulations, which includes the preparation of an on-site emergency plan and a 'Safety Report' that identifies evidence to confirm the safety and integrity of on-site activities. COMAH related documentation will be required updating to incorporate changes to the Wider EAF Site;
  - The EAF Development (including the RM2 Proposed Development) will be subject to the Environmental Permitting Regulations 2016. The environmental permitting process imposes restrictions and monitoring requirements for waste handling and emissions (to land air or water), thereby minimising the risk of major environmental accidents and hazards. A variation of the existing Environmental Permit will be required;
  - A hazardous substances consent (if required) will be important in the control of major hazards. Full assessment of the Planning (Hazardous Substances) Regulations 2015 will be completed once a full inventory of process substances and quantities is available;
  - The Applicant operates a business-wide Health & Safety Management System, which includes Emergency Preparedness principles that must be applied across the business. This management system includes the requirements for a host of emergency plans, ensuring that all reasonably practicable measures are taken to prevent major accidents involving hazardous substances and limit their consequences to people and the environment.

#### Conclusion

- 3.10.4 Overall, it can be concluded that the RM2 Proposed Development will not result in any new or different risks and effects of major accidents and disasters. Therefore, the conclusions of the EAF ES are valid and unchanged.

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<sup>2</sup> Cabinet Office (2023). National Risk Register 2023. Available at: [National Risk Register 2023 - GOV.UK](https://www.gov.uk/national-risk-register-2023)

<sup>3</sup> Neath Port Talbot County Borough Council (2017). Local Risk Register. Available at: [npt\\_local\\_risk\\_register\\_2017.pdf](#)

## 4 LANDSCAPE AND VISUAL IMPACT

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### 4.1 Introduction

- 4.1.1 This chapter reports the outcome of the assessment of the effects of the RM2 Proposed Development, as the subject of this reserved matters application, and as part of the EAF Development as a whole in relation to the Landscape and Visual Impact Assessment (LVIA).
- 4.1.2 This chapter should be read in conjunction with Chapter 5: Landscape and Visual Impact of the EAF ES, and associated appendices. It is supported by the following appendices within this SoC:
- **Appendix 4.1 Viewpoint Analysis.**
- 4.1.3 This chapter should also be read in conjunction with the following standalone report that is submitted as part of this reserved matters application:
- **External Lighting Feasibility Report (UK0041847.0811).**

### 4.2 Policy, Legislation and Guidance

- 4.2.1 The legislation, policy and guidance set out within EAF ES Chapter 5 remains valid for this updated LVIA assessment.

### 4.3 Approach to the Assessment

#### Consultation

- 4.3.1 No additional consultation on LVIA matters has been undertaken since the EAF ES in relation to this updated assessment.

#### Scope of the Assessment

- 4.3.2 The RM2 Proposed Development components, as set out within **Chapter 2** of this SoC, have been reviewed to determine whether they are likely to result in any new or different significant effects to those identified in the EAF ES. Where the RM2 Proposed Development remains compliant with the parameters assessed within the EAF ES, no detailed assessment has been undertaken as there would be no change to the conclusions reported in the EAF ES. The following amendments have been identified as relevant to this assessment:
- Removal of the permanent acoustic barrier and installation of localised acoustic mitigation barriers; and
  - Revised lighting design, with a detailed design replacing the indicative lighting design that was included with the hybrid planning application.
- 4.3.3 The RM2 Proposed Development amendments are broadly in accordance with the assessment parameters and assumptions set out within the EAF ES, with the exception of those changes set out in **paragraph 4.3.2**. It is therefore considered that there would be no change in perception of the EAF as an industrial facility within the local landscape

and no changes to the effects upon landscape character areas. Subsequently, landscape character has been scoped out of further assessment for the purposes of this ES SoC.

- 4.3.4 It is acknowledged that there has also been an amendment to the drainage proposals for the RM2 Proposed Development. However, due to visual screening provided by proposed and existing intervening built form between receptors and the proposed drainage basin, it is considered that this amendment would not introduce any new or different likely significant landscape and visual amenity effects, and it has therefore not been considered in this assessment. Additionally, the drainage basin falls within the maximum height parameters assessed within the EAF ES.
- 4.3.5 As part of the review of the RM2 Proposed Development components, a viewpoint assessment review has been carried out. Each of the key representative viewpoint locations assessed in the EAF ES, as previously agreed with NPTC, have been reviewed to determine where the RM2 Proposed Development has the potential to alter the previously identified effects. Any viewpoints where the RM2 Proposed Development would be particularly visible have been assessed with the findings reported in **Appendix 4.1** and this chapter.
- 4.3.6 The scope of the assessment is therefore limited to visual effects on the following receptor groups:
- Visual receptors to within 3km of the Site: Longland Lane/PRoW 5/92.PT/3;
  - Wales Coast Path;
  - Ogwr Ridgeway, Glamorgan Ridgeway;
  - M4 Motorway; and
  - Relevant night-time visual receptors: Longland Lane/ PRoW 5/92.PT/3.
- 4.3.7 The RM2 Proposed Development amendments would not materially alter the construction methodology which informed the assessment presented in the EAF ES (i.e. no additional construction traffic or plant requirements). Therefore, the construction phase assessments have not been re-assessed within this SoC as the findings presented in the EAF ES remain valid.

### **Methodology**

- 4.3.8 This LVIA update has used the same methodology as the EAF ES where appropriate. Where this methodology has not been appropriate, i.e., due to the more localised nature of the RM2 Proposed Development compared to the full EAF Development, the following sections specify the methodology used.

### **Study Area**

- 4.3.9 The LVIA reported within EAF ES Chapter 5 drew from guidance found in NRW Guidance Note 46 (NRW, last updated 2025) in order to determine a suitable study area for the assessment. An extract from the table provided in NRW Guidance Note 46 is presented in **Table 4.1**.

**Table 4.1: Typical extent of search and study areas for tall structures**

| Height of structure (metres) | <25 | 26 to 49 | 50 to 79 | 80 to 108 | 109 to 145 |
|------------------------------|-----|----------|----------|-----------|------------|
| Search area (km)             | 3   | 4 to 8   | 8 to 12  | 12 to 17  | 17 to 23   |
| Study area (km)              | 2   | 2 to 5   | 5 to 8   | 8 to 11   | 11 to 20   |

- 4.3.10 The study area for the EAF ES was set at 15 km in order to capture more distant sensitive receptors that might be affected by the EAF Development. However, any potential changes as a result of the removal of the permanent acoustic barrier and installation of localised acoustic mitigation barriers would be much reduced in comparison. Therefore, as the changes to the height of the RM2 Proposed Development relate to the relatively low-level scrap storage and localised acoustic mitigation barriers, a study area of 4 km has been deemed sufficient to include all non-negligible effects. Any effects identified in the EAF ES on receptors beyond this 4 km zone of influence would not change as a result of the RM2 Proposed Development and would remain as set out in EAF ES Chapter 5.

### **Surveys**

- 4.3.11 No additional surveys have been required in order to undertake this assessment as the existing baseline information obtained remains valid.

### **Receptors**

- 4.3.12 The extent of receptors is limited by the small scale of change associated with the removal of the permanent acoustic barrier. It is considered that any appreciation of such change would be limited to visual receptors within 4 km of the scrap storage. The visual receptors potentially affected are therefore limited to the following:
- Longland Lane/PRoW 5/92.PT/3;
  - Wales Coast Path;
  - Ogwr Ridgeway, Glamorgan Ridgeway; and
  - M4.

### **Assessment Criteria**

- 4.3.13 The assessment has been conducted in line with the significance criteria set out in EAF ES Chapter 5, Section 5.4. Full details of the assessment criteria are provided in Appendix 5.1 in the EAF ES.

### **Limitations**

- 4.3.14 There are no additional limitations further to those stated in the EAF ES.

## **4.4 Baseline Conditions**

- 4.4.1 There have been no substantive changes to the landscape or visual baseline since the submission of the hybrid application in 2024.

## 4.5 Project Characteristics and Embedded Mitigation

- 4.5.1 Embedded mitigation is considered inherent within the siting and design of the EAF Development. The RM2 Proposed Development is located within the existing industrial area of the wider EAF Development. It will therefore be perceived as part of the existing Wider EAF Site works rather than an altogether new development. The scale of the proposals will not extend the working area of the Wider EAF Site and will be subservient to existing plant and buildings.

## 4.6 Assessment of Potential Significant Effects

### Sensitivity of visual receptors

- 4.6.1 The visual receptor groups identified in **Section 4.3** above are to be taken forward for further assessment. The sensitivity of these receptors groups varies and is identified in **Table 4.2**.

**Table 4.2: Summary of visual receptor sensitivity**

| Visual receptor                                     | Value     | Susceptibility | Sensitivity  |
|-----------------------------------------------------|-----------|----------------|--------------|
| <b>Main roads</b>                                   |           |                |              |
| M4 Motorway                                         | Regional  | Low            | Medium/ Low  |
| <b>Recreational routes</b>                          |           |                |              |
| Wales Coast Path, Ogwr Ridgeway, Glamorgan Ridgeway | Regional  | High           | High/ Medium |
| <b>Public rights of way</b>                         |           |                |              |
| Footpath 5/92.PT/3                                  | Community | High           | High/ Medium |
| <b>Viewpoints</b>                                   |           |                |              |
| Bro Stone                                           | Regional  | High           | High/ Medium |

### Viewpoint Analysis

- 4.6.2 Viewpoint analysis has been undertaken for a total of five viewpoints. The viewpoint locations are illustrated on Figure 5.1 in Volume 2 of the EAF ES. The visualisations (comprising photographs of the existing view, wireframes and photomontages) are illustrated with reference to the same five viewpoints in Volume 4 of the EAF ES. These viewpoints have been selected as representative of the visual receptors (people) considered most likely to experience potentially significant visual effects.
- 4.6.3 The full viewpoint analysis is contained within **Appendix 4.1**. The findings are summarised below in **Table 4.3**. In each case, distances are listed in relation to the nearest point on the Wider EAF Site boundary.

**Table 4.3: Viewpoint Analysis Summary**

| No. | Name                                              | Distance             | Scale of Visual Change        |                                              |
|-----|---------------------------------------------------|----------------------|-------------------------------|----------------------------------------------|
|     |                                                   |                      | EAF ES (2024)                 | 2026 Assessment                              |
| 1   | Longland Lane/<br>PRoW 5/92.PT/3                  | Southern<br>boundary | Medium                        | Medium<br>(No change)                        |
| 4   | M4 Eglwys<br>Nunydd Reservoir                     | 1.45 km SE           | Small/ Negligible             | Small/ Negligible<br>(No change)             |
| 7   | Wales Coast Path                                  | 1.9 km E             | Medium/ Small                 | Medium/ Small<br>(No change)                 |
| 11  | Ogwr Ridgeway<br>Walk/ Glamorgan<br>Ridgeway Walk | 3.4 km E             | Small to Small/<br>Negligible | Small to Small/<br>Negligible<br>(No change) |
| 12  | M4 overbridge                                     | 3.9 km SSE           | Small to Small/<br>Negligible | Small to Small/<br>Negligible<br>(No change) |

4.6.4 Effects on views would be greatest on receptors within the immediate vicinity of the RM2 Site as follows:

- Walkers on Longland Lane, PRoW 5/92.PT/3, representative of local footpaths users, would experience up to medium scale visual effects as a result of near to middle distance views in the context of an existing industrial landscape.

4.6.5 The scale of effects would reduce beyond this area as follows:

- Walkers on the Wales Coast Path within 2 km of the RM2 Site, representative of recreational walkers on footpaths and CROW open access land above the scarp, would experience medium/small scale visual effects as a result of middle distance views in the context of an existing industrial landscape,
- Beyond approximately 2 km from the RM2 Site, the RM2 Proposed Development is increasingly viewed as a smaller element within a large industrial complex and visual effects reduce to at most small scale.

4.6.6 Beyond these distances the scrap stockpiles would not be distinguishable from the existing industrial complex and the scale of effects would reduce to negligible.

### **Night-time operational visual effects**

4.6.7 The RM2 Proposed Development will require lighting to provide a safe environment for workers.

4.6.8 A Light Pollution Study (dated October 2024) was submitted with the hybrid application, which showed that all residential areas in the vicinity of the EAF Development are too far from the Wider EAF Site to be significantly adversely affected by light spillage, while three areas were identified due to sensitive ecological receptors that could potentially be impacted. The study concluded that the proposed indicative lighting scheme for the outline scrap element of the EAF Development (as shown on shown on EAF ES Figure 2.5: Lighting Design) would not have a detrimental effect on nearby sensitive receptors. The night-time operational visual effects assessment in EAF ES Chapter 5 assumed

luminaires would be installed on circa 20 m high lighting columns and concluded that there would be adverse but not significant effects on some receptors.

- 4.6.9 The lighting scheme for the RM2 Proposed Development, as shown on the Lighting Plan (Lighting Plan – 900051 – P02 – EAF RM 2), comprises lighting columns with a maximum height of 25 m and is designed to achieve required levels of illumination and uniformity while minimising light spill. The External Lighting Feasibility Report (UK0041847.0811), which has been submitted to support this reserved matters application, has concluded that there would be no likely significant adverse effects on residential areas as a result of the detailed lighting design. It also notes that there would be a limited increment in light spillage to the northern corner of the Margam Marshes to the south of the RM2 Proposed Development. However, this is not expected to result in likely significant effects to users of Longland Lane some 0.4 km further to the south of this area. It is therefore considered that there would be no new or different significant environmental effects as a result of the RM2 Proposed Development lighting design and the conclusions of the EAF ES remain valued.

## **4.7 Mitigation**

- 4.7.1 Embedded mitigation is considered inherent within the siting and design of the RM2 Proposed Development and wider (approved) EAF Development. The RM2 Proposed Development is located firmly within the existing industrial area of the EAF Development and will therefore largely be perceived as part of the existing Wider EAF Site infrastructure and works, rather than an altogether new development. The scale of the proposals will not extend the working area of the Wider EAF Site and the height and massing of buildings will be subservient to existing plant and buildings. New lighting will be designed to minimize light spillage whilst providing a safe working environment, noting that the steel works is already a well-lit feature within the views.
- 4.7.2 Overall, it is considered that the embedded mitigation is sufficient to mitigate all potentially significant landscape and visual effects and no further secondary or tertiary mitigation would be required.

## 4.8 Residual Effects

4.8.1 As summarised in **Table 4.4**, there would be no change in residual effects between the EAF ES and the updated Proposed Development.

**Table 4.4: Residual Effects Summary**

| Receptor                                              | Residual effect description                                                                                                                                                                                                                                                                                                                                                    | 2024 Residual effect |                                          | 2026 Residual effect |                                          |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------------|----------------------|------------------------------------------|
|                                                       |                                                                                                                                                                                                                                                                                                                                                                                | Magnitude            | Significance                             | Magnitude            | Significance                             |
| Visual receptors:<br>Longland Lane/ PRow<br>5/92.PT/3 | Long-term effects arising from views of the completed development, including views of the upper levels of scrap stockpiles experienced by walkers on the path. The magnitude of effect would no greater than the EAF ES.                                                                                                                                                       | Moderate to Slight   | Moderate adverse (not significant)       | Moderate to Slight   | Moderate adverse (not significant)       |
| Wales Coast Path                                      | Long-term effects arising from views experienced by walkers on the elevated braided route to the east of the RM2 Site. The scrap stockpiles would be partially screened by existing intervening steel works and would make up a very small part of the overall view of the EAF Development, and the magnitude of effect would no greater than the EAF ES.                      | Moderate to Slight   | Moderate adverse (not significant)       | Moderate to Slight   | Moderate adverse (not significant)       |
| Ogwr Ridgeway Walk/<br>Glamorgan Ridgeway Walk        | Long-term effects arising from distant views of the completed development experienced by walkers on the trails to the east of the RM2 Site. The scrap stockpiles would be partially screened by existing intervening steel works and would make up a very small part of the overall view of the EAF Development, and the magnitude of effect would no greater than the EAF ES. | Slight               | Moderate-Minor adverse (not significant) | Slight               | Moderate-Minor adverse (not significant) |
| M4 Motorway                                           | Long-term effects arising from views of the completed development along a section of the motorway from the M4 overbridge at Mawdlam                                                                                                                                                                                                                                            | Slight               | Minor adverse (not significant)          | Slight               | Minor adverse (not significant)          |

| Receptor                                                                  | Residual effect description                                                                                                                                                                                                                             | 2024 Residual effect |                                          | 2026 Residual effect |                                          |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------------|----------------------|------------------------------------------|
|                                                                           |                                                                                                                                                                                                                                                         | Magnitude            | Significance                             | Magnitude            | Significance                             |
|                                                                           | to the Eglwys Nunydd Reservoir. The upper levels of the scrap stockpiles would make up a very small part of the overall view of the EAF Development for drivers and passengers on the M4, and the magnitude of effect would no greater than the EAF ES. |                      |                                          |                      |                                          |
| Relevant night-time visual receptors:<br>Longland Lane/ PRow<br>5/92.PT/3 | Proposed lighting would be visible as points of light, especially where there would be a high degree of contrast at sensitive viewpoints.                                                                                                               | Slight               | Moderate-Minor adverse (not significant) | Slight               | Moderate-Minor adverse (not significant) |

## 4.9 References

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## 5 NOISE AND VIBRATION

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### 5.1 Introduction

- 5.1.1 This chapter reports the outcome of the assessment of the effects of the RM2 Proposed Development, as the subject of this reserved matters application, and as part of the EAF Development as a whole in relation to noise and vibration.
- 5.1.2 This chapter should be read in conjunction with Chapter 7: Noise and Vibration of the EAF ES, and associated appendices. It is supported by the following appendices within this SoC:
- **Appendix 5.1 Noise and Vibration Impact Assessment – Scrap Handling Facility**
  - **Appendix 5.2 Operational Noise and Vibration Management Plan**

### 5.2 Policy, Legislation and Guidance

- 5.2.1 The legislation, policy and guidance set out within the EAF ES Chapter 7 remains valid for this updated noise and vibration assessment.

### 5.3 Approach to the Assessment

#### Consultation

- 5.3.1 A consultation meeting with NPTC on 14 July 2025 to discuss the updated acoustic assessment, including the incorporation of interim baseline sound survey data and the assessment approach. The overall approach of which is provided in the RSKA technical note EAF Baseline 2062419-RSKA-TN-010-(02) dated 19 May 2026. This document is unpublished and was shared with NPTC for comment on 15 June 2026.
- 5.3.2 Further consultation with NPTC has been undertaken to discuss the updated acoustic assessment, including discussion of assessment methodology, modelling approach, scrap handling facility mitigation evolution.

#### Scope of the Assessment

- 5.3.3 The RM2 Proposed Development components, as set out within **Chapter 2** of this SoC, have been reviewed to determine whether they are likely to result in any new or different significant effects to those identified in the EAF ES. Where the RM2 Proposed Development remains compliant with the parameters assessed within the EAF ES, no detailed assessment has been undertaken as the reported conclusions remain unchanged.
- 5.3.4 The following amendments have been identified as relevant to this assessment:
- Removal of the permanent acoustic barrier and installation of localised acoustic mitigation barriers
  - Updating of operational and plant assumptions in line with the detailed proposal
  - Incorporation of interim baseline condition noise survey data

- 5.3.5 This assessment incorporates the scheme refinement arising from detailed design and provides a more accurate prediction of likely operational noise effects than those reported in the EAF ES. Updated design information, layouts and assumptions reduces uncertainty and providing findings that are more robust and representative of the final scheme.
- 5.3.6 Therefore, the scope of the assessment is limited to operational noise and vibration from the scrap handling facility. The RM2 Proposed Development amendments would not materially alter the construction methodology that informed the assessment presented in the EAF ES (i.e. no additional construction traffic or plant requirements). As such, the construction phase assessments have not been revisited within this SoCt, and the findings presented in the EAF ES remain valid.

## Methodology

### Study Area

- 5.3.7 The technical assessment methodology is outlined in Section 4 of **Appendix 5.1** for this updated noise and vibration assessment

### Surveys

- 5.3.8 **Table 5.1** summarises all studies/surveys that have been undertaken to inform the assessment presented within this updated noise and vibration assessment.

**Table 5.1: Background studies/surveys**

| Study/ survey                                         | Overview                                                                                               | Date of completion |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------|
| Interim baseline noise survey – residential receptors | Baseline surveys were undertaken at residential receptors. Details are provided in <b>Appendix 5.1</b> | October 2024       |

### Receptors

- 5.3.9 The nearest residential noise sensitive receptors (NSR) to the RM2 Proposed Development are identified in **Table 5.2**.

**Table 5.2: Residential NSRs**

| NSR Ref. | Description                               | Type of Receptor | Easting | Northing |
|----------|-------------------------------------------|------------------|---------|----------|
| R1       | Residential properties at West End        | Residential      | 277127  | 188899   |
| R2       | Residential properties at Prince Street   | Residential      | 277641  | 188331   |
| R3       | Residential properties at Brynhyfryd Road | Residential      | 278365  | 187088   |
| R4       | Residential properties at Longland Lane   | Residential      | 279273  | 186115   |
| R5       | Residential properties at Eglwys Nunydd   | Residential      | 280190  | 184858   |

- 5.3.10 Other areas of interest considered within this assessment include the nearby Site of Special Scientific Interest (SSSI) and quiet areas as identified in Policy EN10 of the Neath Port Talbot County Borough Council Local Development Plan (2011–2026), as identified in **Table 5.3**.

**Table 5.3: SSSI and quiet area NSRs**

| NSR Ref. | Description                              | Type of Receptor | Easting | Northing |
|----------|------------------------------------------|------------------|---------|----------|
| R6       | Margam Moors                             | SSSI             | 278040  | 185241   |
| R7       | Eglwys Nunydd reservoir                  | SSSI             | 279744  | 184949   |
| R8       | Vivian Park                              | Quiet Area       | 275023  | 190020   |
| R9       | Talbot Memorial Park / Parc Coffa Talbot | Quiet Area       | 277393  | 189282   |

- 5.3.11 All NSRs identified within **Table 5.2** and **Table 5.3** are identified graphically in Figure C1 of Appendix C within **Appendix 5.1**.

### ***Value of Receptors***

- 5.3.12 Receptor sensitivity has been categorised for a range of receptor types as set out in **Table 5.4**, which has been informed by guidance contained in the following documents:
- DMRB LA 111; and
  - Guidelines for Environmental Noise Impact Assessment.

**Table 5.4: Receptor value and sensitivity**

| Receptor Sensitivity | Type of Receptor                                                                                                                                                                                                       |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High                 | Residential properties (including gardens), educational establishments, hospitals, places of worship, hotels, children's nurseries, nursing homes, quiet areas (designated under noise and soundscape plan 2023–2028). |
| Medium               | Commercial premises, halls, public municipal areas, bars and restaurants, SSSI.                                                                                                                                        |
| Low                  | Industrial premises.                                                                                                                                                                                                   |
| Negligible           | All other areas such as those used primarily for agricultural purposes.                                                                                                                                                |

### ***Project Consent Conditions***

- 5.3.13 The assessment of EAF Project noise emissions is based on the planning conditions (set out in the Neath Port Talbot County Borough Council decision notice for Application P2024/0711, dated 7 November 2024). Consent conditions are expressed relative to either background sound levels or the established baseline scenario, and are to be applied in accordance with BS 4142:2014+A1:2019.
- 5.3.14 The relevant noise-related consent conditions are summarised in **Table 5.5** below.

**Table 5.5: Summary of Noise Related Consent Conditions for the EAF Project**

| Condition No. | Assessment reference        | Requirement                                                                                  |
|---------------|-----------------------------|----------------------------------------------------------------------------------------------|
| 69            | Interim Baseline Background | The noise emitted from the development hereby approved (including the development within the |

| Condition No. | Assessment reference                                              | Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | sound level ( $L_{A90,T}$ )                                       | outline area defined by condition 1) shall not exceed cumulative rating levels ( $L_{Ar,Tr}$ ) of 5 dB above the interim background sound level $L_{A90,T}$ when measured or predicted at the nearest noise sensitive premises. The measurement and/or prediction of the noise will be carried out in accordance with the methodology contained within BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound.'                                                                                              |
| 70            | Established baseline scenario ambient noise level ( $L_{Aeq,T}$ ) | The noise emitted from the development hereby approved (including the development within the outline area defined by condition 1) shall not exceed the established baseline scenario ambient noise level $L_{Aeq,T}$ when measured or predicted at sensitive receptors as identified in the Environmental Statement (2024). The measurement and/or prediction of the noise will be carried out in accordance with the methodology contained within BS 4142:2014+A1:2019 'Methods for rating and assessing industrial and commercial sound.' |

### Assessment Criteria

- 5.3.15 The EAF Project design criteria based on the inclusion of interim baseline noise data and the incorporation of EAF Project planning conditions and are summarised in **Table 5.6** and **Table 5.7**.

**Table 5.6: EAF Project Design Criterion at Residential Receptors**

| ID     | Noise metric                                                  | Daytime period | Night-time period | Assessment Criterion                                                                               | Daytime criterion dB | Night-time criterion dB |
|--------|---------------------------------------------------------------|----------------|-------------------|----------------------------------------------------------------------------------------------------|----------------------|-------------------------|
| R1     | Cumulative rating level <sup>1</sup> (dB L <sub>Ar,Tr</sub> ) | 50             | 44                | L <sub>Ar,Tr</sub> ≤ Interim baseline background sound level dB L <sub>A90,T</sub> + 5             | ≤55                  | ≤49                     |
| R2     |                                                               | 44             | 42                |                                                                                                    | ≤49                  | ≤47                     |
| R3     |                                                               | 45             | 42                |                                                                                                    | ≤50                  | ≤47                     |
| R4     |                                                               | 54             | 50                |                                                                                                    | ≤59                  | ≤55                     |
| R5     |                                                               | 52             | 43                |                                                                                                    | ≤57                  | ≤48                     |
| R1     | Cumulative noise level <sup>1</sup> (dB L <sub>Aeq,Tr</sub> ) | 52             | 56                | L <sub>Aeq, Tr</sub> ≤ established baseline ambient sound level dB L <sub>Aeq,T</sub> <sup>2</sup> | ≤51                  | ≤47                     |
| R2     |                                                               | 53             | 53                |                                                                                                    | ≤53                  | ≤48                     |
| R3     |                                                               | 55             | 51                |                                                                                                    | ≤52                  | ≤47                     |
| R4     |                                                               | 58             | 56                |                                                                                                    | ≤57                  | ≤54                     |
| R5     |                                                               | 65             | 60                |                                                                                                    | ≤55                  | ≤50                     |
| Notes: |                                                               |                |                   |                                                                                                    |                      |                         |

| ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Noise metric | Daytime period | Night-time period | Assessment Criterion | Daytime criterion dB | Night-time criterion dB |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------|-------------------|----------------------|----------------------|-------------------------|
| <p>1: Cumulative rating level refers to the total sound exposure on a sensitive receptor from multiple sources associated with EAF Development (including the RM2 Proposed Development) (as per condition 69 and 70)</p> <p>2: As detailed within Appendix Table 14 of Appendix 7.1 Noise and Vibration Impact Assessment – Scrap Handling Facility document submitted as part of the hybrid planning application for the construction of a new Electric Arc Furnace (EAF) steel production facility and associated works on land at Port Talbot Steelworks, Port Talbot (Ref: PP-12892667).</p> |              |                |                   |                      |                      |                         |

**Table 5.7: EAF Project Design Criterion at SSSI Receptors**

| ID | Noise metric                                                   | Daytime period | Night-time period | Assessment Criterion                                                                             | Daytime criterion<br>L <sub>Ar,Tr</sub> dB | Night-time criterion<br>L <sub>Ar,Tr</sub> dB |
|----|----------------------------------------------------------------|----------------|-------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|
| R6 | Cumulative noise level <sup>1</sup> (dB L <sub>Aeq, Tr</sub> ) | 49             | 50                | L <sub>Ar,Tr</sub> ≤ Established baseline ambient sound level dB L <sub>Aeq,T</sub> <sup>2</sup> | ≤49                                        | ≤50                                           |
| R7 |                                                                | 60             | 57                |                                                                                                  | ≤60                                        | ≤57                                           |

Notes:

1: Cumulative rating level refers to the total sound exposure on a sensitive receptor from multiple sources associated with EAF Development (including the RM2 Proposed Development) (as per condition 69 and 70)

2 As detailed within Appendix Table 18 of Appendix 7.1 Noise and Vibration Impact Assessment – Scrap Handling Facility document submitted as part of the hybrid planning application for the construction of a new Electric Arc Furnace (EAF) steel production facility and associated works on land at Port Talbot Steelworks, Port Talbot (Ref: PP-12892667).

- 5.3.16 Details of the legislation, policy and guidance considered as part of the overarching assessment are provided within **Appendix 5.1**.

### Magnitude of impact

- 5.3.17 The magnitude of the impact within this preliminary assessment has been described using the following scale:
- Large;
  - Medium;
  - Small; and
  - Negligible.
- 5.3.18 Although the lowest measure of magnitude of impact is defined as 'negligible', it should be noted that noise and vibration levels may still be audible/perceptible if defined as negligible during the operational phase of the RM2 Proposed Development.
- 5.3.19 The criteria in **Table 5.8** have been adopted for the assessment of magnitude of impact.

**Table 5.8: Definition of the magnitude of impact**

| Effect                                  | Magnitude of Impact                                                                                      |                                                                                                                           |                                                                                                                           |                                                                                                        |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
|                                         | Negligible                                                                                               | Small                                                                                                                     | Medium                                                                                                                    | Large                                                                                                  |
| <b>Operation – Noise (condition 69)</b> | Rating level below or equal to Interim baseline background sound level dB $L_{A90,T}$                    | Rating level $L_{A,r,Tr}$ of up to 5 dB above interim baseline background sound level dB                                  | Rating level $L_{A,r,Tr}$ of 5 dB to 10 dB above interim baseline background sound level dB                               | Project rating level more than 10 dB above interim baseline background sound level dB                  |
| <b>Operation – Noise (condition 70)</b> | Specific sound level $L_{Aeq,Tr}$ 5 dB below the established baseline ambient sound level dB $L_{Aeq,T}$ | Specific sound level $L_{Aeq,Tr}$ of between 0 and 5 dB below the established baseline ambient sound level dB $L_{Aeq,T}$ | Specific sound level $L_{Aeq,Tr}$ of between 0 dB and 10 dB above established baseline ambient sound level dB $L_{Aeq,T}$ | Specific sound level $L_{Aeq,Tr}$ >10 dB above established baseline ambient sound level dB $L_{Aeq,T}$ |

### **Determination of Significance**

- 5.3.20 The overall significance of an effect is determined by combining the sensitivity of the receptor and magnitude of impact (as presented in **Table 5.9**). The assessment of significance relies on best practice and the relevant published standards and guidance documents as defined in **Appendix 5.1**.
- 5.3.21 The significance of an effect is reported as either 'significant' or 'not significant'. Where significance of effect is assessed as 'negligible' or 'minor', the effect is not significant. Where the significance of effect is assessed as 'moderate' or 'major', the effect may be significant.

**Table 5.9: Determining significance of effects for noise and vibration**

| Sensitivity of receptor                                                                                                                                                                                           | Magnitude of Impact |            |            |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------|------------|------------|
|                                                                                                                                                                                                                   | Large               | Medium     | Small      | Negligible |
| <b>High</b>                                                                                                                                                                                                       | Major*              | Moderate*  | Minor      | Negligible |
| <b>Medium</b>                                                                                                                                                                                                     | Moderate*           | Minor      | Negligible | Negligible |
| <b>Low</b>                                                                                                                                                                                                        | Minor               | Negligible | Negligible | Negligible |
| <b>Negligible</b>                                                                                                                                                                                                 | Negligible          | Negligible | Negligible | Negligible |
| Note:<br>* With respect to operational noise, effects are only considered to be significant where a significant adverse impact is indicated following consideration of context in line with BS 4142:2014+A1:2019. |                     |            |            |            |

### ***Limitations***

- 5.3.22 Specific noise source data is not available for all of the proposed plant and equipment including in the RM2 Proposed Development. To inform the operational phase assessment, prospective equipment suppliers have provided information regarding the expected plant/equipment installations, including typical sound emission data. The resulting information has been used as part of the assessment to demonstrate that a workable solution can be achieved which does not result in significant adverse effects.
- 5.3.23 The operational assessment methodology requires specific locations to be modelled for operational phase noise sources, which has been achieved by producing a sound propagation model of the RM2 Proposed Development drawings. The propagation model is an approximation of the design drawings with the inclusion of noise source assumption data.
- 5.3.24 The noise assessment presented within this chapter has been informed by source and design assumptions developed in collaboration with the project team. The modelled scenarios represent the acknowledged worst-case operational conditions during both daytime and night-time periods, established on a conservative basis to ensure that the assessment does not understate potential effects at sensitive receptors.
- 5.3.25 The mobile nature of the scrap handling activity introduces inherent uncertainty regarding the precise location of individual operations at any given time. The locations and source positions modelled have been selected to represent the reasonable worst case and are considered to provide a robust characterisation of the expected operation and its noise impact on the surrounding area. Predicted effects are therefore not expected to be exceeded under typical operating conditions.
- 5.3.26 The noise data, together with the positioning and dimensions of the specific sound sources, reflects the level of design information available at this stage and forms the basis of this assessment. The conclusions presented within this chapter are derived from these source and design assumptions, which represent the expected operation of the Proposed Development as currently designed.
- 5.3.27 At the time of assessment, detailed traffic data, including the distribution of vehicle movements across the local road network, was not available. The assessment of traffic-related noise effects has therefore been undertaken on a qualitative basis using the information available, as provided by SCP Transport.
- 5.3.28 This approach is considered proportionate on the basis that the development scenario represents a substantial reduction in traffic movements compared with the established baseline. Notwithstanding the absence of detailed distribution data, the reported reduction in movements means that significant adverse noise effects associated with traffic would be unlikely even if such data were available. The qualitative conclusions presented within this chapter are therefore considered robust.

## **5.4 Baseline Conditions**

- 5.4.1 Since determination of the EAF hybrid planning permission, the operational context at Port Talbot Steelworks has progressed in line with the anticipated interim baseline condition set out within the original ES submission.

- 5.4.2 The post determination noise assessment concerns the application of the EAF Development (including the RM2 Proposed Development) planning consent conditions and to the current operational and acoustic environment, in order to inform the detailed design.
- 5.4.3 Following the shutdown of the 'heavy end' (September 2024), noise monitoring was undertaken under interim baseline conditions (October 2024). The interim baseline survey data is considered representative of the current operational acoustic environment at nearby noise sensitive receptors.
- 5.4.4 Baseline data was collected by RSK Acoustics Limited (RSKA) at locations representative of residential NSRs R1 – R5 following the shutdown of the 'heavy end' on 30 September 2024. The interim baseline survey was undertaken between Tuesday 1 October and Thursday 24 October 2024.
- 5.4.5 This interim baseline dataset allows background sound levels to be derived directly from measured data that reflects the existing acoustic environment, rather than relying on the previous baseline data collected during the established baseline period.
- 5.4.6 Further details of the baseline noise surveys are provided within Section 3 of **Appendix 5.1**.

## **5.5 Project Characteristics and Embedded Mitigation**

- 5.5.1 The RM2 Proposed Development has been designed with consideration of noise emissions throughout (through iterative design studies during the development of the ES and detailed design phase), and has embedded noise control measures, in accordance with Best Available Technique (BAT) and with relevant sector specific guidelines (BREF Documents). BAT references will be considered within the noise study prepared separately in support of the Environmental Permit Variation Application.
- 5.5.2 The scrap handling area is an outdoor operation with no building enclosure. Noise control is achieved through the following embedded measures:
  - At scrap unloading positions, 25-tonne scrap containers are arranged as acoustic barriers, stacked 2no. containers high and 3no. containers wide, positioned between the unloading activity and the nearest sensitive receptors. The proposed local container wall dimensions would be approximately 18.0 metres in total length, 5.4 metres high. These container walls provide screening attenuation to receptor locations during the noisiest phase of operation (tipping/unloading). Unloading of containers is to occur as close to containers as operationally possible, with excavator removing scrap from location prior to next container being unloaded.
  - The loading of 100-tonne tipper lorries is screened from receptors by the strategic positioning of scrap stockpiles at a minimum height of 5 metres, or by container walls arranged 2no. containers high and 3no. containers wide, between the loading operation and receptor directions. Loading of 100-tonne tipper to occur no more than 5-metre distance from the stockpile.
  - The Consteel conveyor system is enclosed within a canopy near the EAF building, providing attenuation of conveyor noise and scrap-on-conveyor noise in the vicinity of the melt shop (part of the EAF ES).

- All mobile plant (excavators, reach stackers, tipper lorries) shall be procured or specified with reference to declared sound power levels. Engines shall be fitted with manufacturer-standard exhaust silencers maintained in good condition.
- All site-operated mobile plant shall be fitted with broadband (white noise) reversing alarms in place of tonal beepers, to eliminate tonal character at receptors.
- The facility layout has been designed to maximise the screening benefit of container stacks and stockpiles between the principal noise sources and the nearest sensitive receptors.
- A preventive maintenance schedule shall be maintained for all noise-critical plant and infrastructure (e.g. excavator and reach stacker exhaust silencers, broadband reversing alarms on all mobile plant, tipper lorry body condition (loose panels, worn hinges generating rattle), container condition (structural integrity for use as screening barriers), conveyor enclosure near EAF (panels, seals, doors)).

5.5.3 Other than the embedded mitigation measures identified, the RM2 Proposed Development will implement a Scrap Handling Facility Operational Noise and Vibration Management Plan (ONVMP) which will include details of the RM2 Proposed Development noise control strategy. A copy of the ONVMP is provided in **Appendix 5.2** of this SoC.

5.5.4 The ONVMP will allow for ongoing clarification and optimisation of the mitigation strategy required for the RM2 Proposed Development. It is anticipated that the RM2 Proposed Development will be supported by the submission of the ONVMP and associated noise control requirements as part of the RM application to NPTC. A planning condition is expected to require operation of the RM2 Proposed Development in accordance with the approved documents.

## 5.6 Assessment of Potential Significant Effects

### Operational noise assessment – human (residential)

5.6.1 The RM2 Proposed Development will not operate separately from the EAF Development (including full and outline planning components). If only the RM2 Proposed Development was considered, noise from this activity alone would remain within the levels presented below and would not introduce any additional significant effects.

5.6.2 The consented noise limits apply to the EAF Development (including the RM2 Proposed Development), which includes:

- The EAF
- The scrap handling facility
- National Grid Substation

5.6.3 The cumulative impacts include contribution from all aspects of the EAF Development (including the RM2 Proposed Development).

### *Residential Assessment – interim baseline assessment (Condition 69)*

5.6.4 Predicted results for the worst case operational scenario associated with the operation of the EAF Development (including the RM2 Proposed Development) during daytime hours are provided within **Table 5.10**.

- 5.6.5 The specific sound level results are also provided in graphical form as a contour noise map in **Appendix 5.1**.

**Table 5.10: Predicted Noise Levels (Daytime 07:00-23:00 hours)**

| ID | Specific Sound Level    | Rating Level           | Interim Baseline Background Level | Criterion                   | Rating Level vs Criterion |
|----|-------------------------|------------------------|-----------------------------------|-----------------------------|---------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Ar, Tr</sub> | dB L <sub>A90,T</sub>             | dB L <sub>A90,T</sub> + 5dB | dB L <sub>Ar, Tr</sub>    |
| R1 | 40                      | 43                     | 50                                | 55                          | -12                       |
| R2 | 39                      | 42                     | 44                                | 49                          | -7                        |
| R3 | 40                      | 43                     | 45                                | 50                          | -7                        |
| R4 | 44                      | 47                     | 54                                | 59                          | -12                       |
| R5 | 34                      | 37                     | 52                                | 57                          | -20                       |

- 5.6.6 Review of the daytime results indicates that the predicted rating levels from the EAF Development (including the RM2 Proposed Development) during daytime hours are below the 'background sound level + 5 dB' at all NSRs. This is an indication of the specific source having a low impact, depending on the context.
- 5.6.7 Predicted results for the worst-case operational scenario associated with the operation of the EAF Development (including the RM2 Proposed Development) during night-time hours are provided within **Table 5.11**.

**Table 5.11: Predicted Noise Levels (Night-time 23:00-07:00 hours)**

| ID | Specific Sound Level    | Rating Level           | Interim Baseline Background Level | Criterion                   | Rating Level vs Criterion |
|----|-------------------------|------------------------|-----------------------------------|-----------------------------|---------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Ar, Tr</sub> | dB L <sub>A90,T</sub>             | dB L <sub>A90,T</sub> + 5dB | dB L <sub>Ar, Tr</sub>    |
| R1 | 40                      | 43                     | 44                                | 49                          | -6                        |
| R2 | 40                      | 43                     | 42                                | 47                          | -4                        |
| R3 | 42                      | 45                     | 42                                | 47                          | -2                        |
| R4 | 45                      | 48                     | 50                                | 55                          | -7                        |
| R5 | 36                      | 39                     | 43                                | 48                          | -9                        |

- 5.6.8 Review of the night-time results indicates that the predicted rating levels from the EAF Development (including the RM2 Proposed Development) during night-time hours are below the 'background sound level + 5 dB' at all NSRs. This is an indication of the specific source having a low impact, depending on the context.

### **Residential Assessment – established baseline assessment (Condition 70)**

- 5.6.9 Predicted results for the worst-case operational scenario associated with the operation of the EAF Development (including the RM2 Proposed Development) during daytime hours are provided within **Table 5.12**.

**Table 5.12: Predicted Noise Levels (Daytime 07:00-23:00 hours)**

| ID | Specific Sound Level    | Established Baseline Ambient Noise Level | Specific Sound Level vs Criterion |
|----|-------------------------|------------------------------------------|-----------------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Aeq, T</sub>                   | dB L <sub>Aeq, Tr</sub>           |
| R1 | 40                      | 51                                       | -11                               |
| R2 | 39                      | 53                                       | -14                               |
| R3 | 40                      | 52                                       | -12                               |
| R4 | 44                      | 57                                       | -13                               |
| R5 | 34                      | 55                                       | -21                               |

- 5.6.10 Review of the results provided in **Table 5.12** indicates that the predicted rating levels from the EAF Development (including the RM2 Proposed Development) achieve the consent Condition 70 criteria for daytime at all NSRs.
- 5.6.11 Predicted results for the worst case operational scenario associated with the operation of the EAF Development (including the RM2 Proposed Development) night-time hours are provided within **Table 5.13**.

**Table 5.13: Predicted Noise Levels (Night-time 23:00-07:00 hours)**

| ID | Specific Sound Level    | Established Baseline Ambient Noise Level | Specific Sound Level vs Criterion |
|----|-------------------------|------------------------------------------|-----------------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Aeq, T</sub>                   | dB L <sub>Aeq, Tr</sub>           |
| R1 | 40                      | 47                                       | -7                                |
| R2 | 40                      | 48                                       | -8                                |
| R3 | 42                      | 47                                       | -5                                |
| R4 | 45                      | 54                                       | -9                                |
| R5 | 36                      | 50                                       | -14                               |

- 5.6.12 Review of the results provided in **Table 5.13** indicates that the predicted rating levels from the EAF Development (including the RM2 Proposed Development) achieve the consent Condition 70 criteria for night-time at all NSRs.

### **Context Discussion**

- 5.6.13 Following the initial estimate of impact, the following contextual considerations have been identified:
- Scrap material handling and movement already occurs onsite during both day and night-time. During the night-time, the existing scrap material can be moved from stockpiles to the scrap handling area behind the existing BOS plant up to

four times per hour. The proposed Scrap Facility will move scrap from the handling areas to the stockpile behind the existing BOS plant at an equivalent frequency to the existing activity,

- The existing site operates using similar mobile plant items and scrap handling activities during both the day and night-time (albeit at a lesser frequency). Based on night-time observations of the existing activity from nearby NSRs, similar existing activities to those proposed are audible at times,
- The scrap handling facility is to implement a wide range of embedded mitigation measures to reduce potential noise impacts and an environmental management plan that includes measures to ensure that the activity is undertaken in accordance with Best Practicable Means (BPM),
- Both historically and up until the present day, the site and surrounding area has been subject to industrial activities on the land at Port Talbot steelworks in Port Talbot both from Tata Steel UK Limited (Tata Steel) activities, as well as various other existing industrial activities.
- The highest calculated specific sound level (45 dB  $L_{Aeq,Tr}$ ) at the worst affected façade of the identified NSRs falls below the relevant criteria in World Health Organisation and BS8233 guidelines with respect to noise levels in external amenity areas.

- 5.6.14 Based on the above, it is considered that despite an initial indication of adverse impact (greater than +5 dB above background) the EAF Development (including the RM2 Proposed Development) is unlikely to result in significant adverse impacts based on the context of the area surrounding the site.
- 5.6.15 Based on the above, the assessment is shown to achieve the noise limits detailed within planning condition 69 and 70.
- 5.6.16 Uncertainty has been limited where possible through the monitoring methodology and conservative assessment approach. It is considered unlikely that uncertainty would adversely impact the assessment outcomes (as per Section 5 of **Appendix 5.1**).

## 5.7 Mitigation

- 5.7.1 No additional mitigation is considered to be necessary.

## 5.8 Residual Effects

5.8.1 As summarised in **Table 5.14**, there would be no new or different residual significant effects introduced as a result of the RM2 Proposed Development compared with the conclusions of the EAF ES.

**Table 5.14: Residual Effects Summary**

| Receptor              | Residual effect description                                                                                                                                                                     | 2024 Residual effect |              | 2026 Residual effect |                         |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------|----------------------|-------------------------|
|                       |                                                                                                                                                                                                 | Magnitude            | Significance | Magnitude            | Significance            |
| Residential receptors | Long-term noise effects generated by the continuous operation of the site with both the EAF and scrap handling facility contributing. The magnitude of effect would no greater than the EAF ES. | Medium               | Moderate     | Small                | Minor (not significant) |
| SSSI receptors        | Long-term noise effects generated by the continuous operation of the site with both the EAF and scrap handling facility contributing. The magnitude of effect would no greater than the EAF ES. | Negligible           | Negligible   | Negligible           | Negligible              |
| Quiet areas           | Limited noise effects noticeable from the site due to relative proximity and existing acoustic environment. The magnitude of effect would no greater than the EAF ES.                           | Negligible           | Negligible   | Negligible           | Negligible              |

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## 6 CUMULATIVE EFFECTS

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- 6.1.1 An assessment of the likely significant effects of the EAF Development on cumulative effects was undertaken in Chapter 16: Cumulative Effects of the EAF ES. This SoC is to be read in conjunction with that chapter.

### **Intra-project cumulative effects**

- 6.1.2 An intra-project cumulative effects assessment is an assessment of the interaction and combination of multiple effects as a result of a development. The assessment in Section 16.5 of EAF ES Chapter 16 is based upon residual (i.e., post-additional mitigation) adverse effects considered to be 'significant' and only those residual effects that have the potential for effect interactions or combinations are considered.

### **Inter-project cumulative effects**

- 6.1.3 An inter-project cumulative effects assessment was undertaken in the EAF ES and assesses the combined effects of the EAF Development and other committed development projects on commonly shared receptors. The assessment of inter-project effects is based upon the residual (post-additional mitigation) effects, as well as publicly available environmental information for the other committed developments.
- 6.1.4 The shortlist of committed developments is provided in Table 16.4 of EAF ES Chapter 16. While it is acknowledged that there have been some changes to the status of the committed developments assessed in the EAF ES, the RM2 Proposed Development is in accordance with the existing and approved consented EAF Development parameters and or / residual effects. As such, an inter-project cumulative effects assessment of the EAF Development (including the RM2 Proposed Development) and the previously assessed shortlist of committed developments is not considered to be required as there would be no change.
- 6.1.5 Any new developments in the local area, which have been submitted since the submission and subsequent approval of the original EAF hybrid application, would have been required to assess the potential for cumulative effects of that development with the consented EAF Development and mitigate for any significant effects. As the RM2 Proposed Development does not result in any changes to the significance of any residual effects of the EAF Development (as demonstrated through **Chapters 3, 4 and 5** of this SoC) no additional assessment is required.

### **Conclusion**

- 6.1.6 Overall, the RM2 Proposed Development is within the parameters assessed within the EAF ES when undertaking the intra and inter-project cumulative effects assessments. Therefore, the conclusions of EAF ES Chapter 16 are considered to be valid and unchanged.

## 7 CONCLUSION

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- 7.1.1 The design of the RM2 Proposed Development has been informed by the parameters and assessment assumptions described in **Chapter 2** of this SoC and further detailed in EAF ES Chapter 2 and the corresponding plans in EAF ES Volume 4: Figures. These parameters and assumptions were assessed as part of the EAF ES.
- 7.1.2 Where the detailed information provided in relation to this reserved matters application changes any of the parameters and assessment assumptions previously assessed, this SoC has demonstrated that these changes would not result in any new or different significant adverse effects to those reported in the EAF ES.
- 7.1.3 The RM2 Proposed Development would be carried out in substantial accordance with the principles and mitigation measures as set out within the EAF ES accompanying the hybrid application, in compliance with Condition 68 of P2024/0711. The 15 m-high acoustic barrier, which was proposed as part of the hybrid application, has been replaced with alternative noise mitigation measures as part of this reserved matters application (see **Section 2.2**), based on updates to the acoustic modelling following refinement of assumptions and availability of further detailed design information regarding the scrap yard.
- 7.1.4 Where necessary, this SoC has referred to adherence to any mitigation measures that are required to control adverse environmental effects, and that are required by the planning conditions within P2024/0711.
- 7.1.5 In undertaking this SoC, the RM2 Proposed Development has been compared with the outline elements of the EAF Development to determine whether it is within the parameters that were assessed within the EAF ES. For the majority of the environmental topics that were considered in the EAF ES, this SoC concludes that, in the context of the reserved matters application, there are no changes in circumstances to either the site, size or design as a result of the RM2 Proposed Development compared with the parameters assessed within the EAF ES. The preliminary assessment findings which demonstrate this are set out in **Chapter 3** of this SoC.
- 7.1.6 Based on the further detail now available regarding the RM2 Proposed Development, it was identified that two environmental factors ('Landscape and Visual Impact' and 'Noise and Vibration') required further assessment to determine whether the change in circumstances (namely the removal of the 15 m-high acoustic mitigation barrier and introduction of alternative noise mitigation measures) would alter the effects previously identified in the EAF ES. These additional assessments have concluded that there are no new or different significant environmental effects anticipated as a result of the RM2 Proposed Development, having taken into account the alternative noise mitigation measures and adherence to relevant management plans secured through planning conditions within P2024/0711 (see **Chapters 4 and 5** for details).
- 7.1.7 In conclusion, the RM2 Proposed Development would not alter the findings of the EAF ES, and the residual effects and proposed mitigation measures remain valid.

## **APPENDIX 2.1 DRAINAGE OPTIONS APPRAISAL**

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# **Primary Scrap Yard Drainage Options Appraisal**

## **Invictus**

Document No: 3701.00025-SKA-200604-CI-DTE-RE-00012

Revision: 1

Date: 17<sup>th</sup> July 2026

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## 1. Non-Technical Summary

The Primary Scrap Yard forms part of the wider Electric Arc Furnace (EAF) development at Port Talbot Steelworks.

Because runoff from scrap storage and handling areas is classified as a high pollution hazard, it cannot be discharged directly to local watercourses. The approved site-wide drainage strategy requires runoff from the Scrap Yard to be collected and transferred to the existing Nautilus water treatment facility, where it is treated before being discharged through Tata Steel's permitted drainage network.

A key challenge for the Primary Scrap Yard is the large volume of runoff generated during rainfall events. Conveying all runoff directly to the treatment facility without storage would require substantial pumping infrastructure and was therefore considered impractical.

An assessment of six drainage options was undertaken. These options represented variations of three principal drainage strategies: direct transfer without attenuation, attenuation tanks and attenuation basins. The assessment sought to identify the most appropriate method of collecting, storing and transferring runoff to the Nautilus treatment facility.

The options ranged from direct pumping arrangements with no storage through to underground storage tanks and attenuation basins.

Each option was assessed against factors including:

- Operational complexity.
- Construction requirements.
- Land take.
- Long-term maintenance.
- Resilience and reliability.
- Compatibility with the wider site drainage strategy.

Following consideration of the options presented, Tata Steel selected **Option 6, a gravity-fed attenuation basin with a controlled discharge rate of 110 l/s**, as its preferred drainage solution and instructed the design team to develop this option further.

The purpose of this note is to summarise the options considered and provide the rationale behind the drainage solution selected for further development.

## **2. Purpose**

This Technical Note summarises the drainage optioneering exercise undertaken for the Primary Scrap Yard development and records the assessment of the drainage options considered.

The purpose of the assessment was to identify the most appropriate method of collecting, storing and transferring runoff from the proposed Scrap Yard to the existing Nautilus water treatment facility whilst satisfying operational, environmental and engineering requirements.

The note has been prepared to support the Reserved Matters Application and demonstrates the process undertaken to evaluate the available drainage options.

## **3. Background**

The Primary Scrap Yard forms part of the wider Electric Arc Furnace (EAF) development at Port Talbot Steelworks.

The drainage strategy for the wider EAF development was developed by JBA Consulting and documented within the Outline Drainage Strategy Report (Revision D, November 2024). This strategy established the overarching principles for the management of surface water across the site and identified different approaches for clean and contaminated runoff streams.

As part of the strategy development, the proposed Scrap Storage Yards and associated scrap handling areas were identified as High Pollution Hazard catchments due to the nature of the materials stored, handled and transported within these areas. The water quality assessment prepared in support of the planning application similarly classified the Scrap Storage Yards and associated haulage routes as High Pollution Hazard areas requiring treatment before discharge.

As a consequence, runoff from the Primary Scrap Yard cannot discharge directly to local watercourses or conventional surface water drainage systems. Instead, runoff must be collected and conveyed to the existing Nautilus water treatment facility, where it can be treated before discharge through Tata Steel's existing permitted drainage network.

The wider drainage strategy also concluded that infiltration-based drainage solutions were not appropriate due to naturally high groundwater levels and the potential risk of mobilising contaminants associated with historic industrial use of the site. This approach was subsequently accepted through pre-application discussions with the SuDS Approval Body (SAB).

The volume of runoff generated by the proposed Primary Scrap Yard during storm events is substantial. Conveying all runoff directly to the Nautilus treatment facility without intermediate storage would require very large pumping infrastructure, significant below-ground drainage assets and extensive mechanical and electrical equipment.

An optioneering exercise was therefore undertaken to identify the most appropriate method of managing runoff from the Scrap Yard prior to conveyance to the Nautilus treatment facility.

The purpose of the exercise was not to determine whether treatment was required, as this requirement had already been established through the site-wide drainage strategy, but rather to determine the most appropriate means of storing and transferring runoff to Nautilus for treatment.

Six options were developed and assessed.

Whilst six options were presented, they broadly fell into three principal drainage strategies:

No attenuation storage, with runoff transferred directly to the Nautilus treatment facility.

Underground attenuation tanks providing storage prior to transfer to Nautilus.

Attenuation basins providing storage prior to transfer to Nautilus.

The six options presented therefore represent variations of these three principal approaches, with differences in storage volume, discharge rate and pumping arrangements.

The assessment demonstrated that direct transfer of runoff to the Nautilus treatment facility without storage would require substantial pumping infrastructure. The remaining options therefore focussed on providing attenuation storage prior to transfer to the treatment facility, either in the form of underground tanks or attenuation basins.

## **4. Design Options Appraisal**

### **4.1 Option 1 – No Attenuation**

#### **4.1.1 Description**

This option considered transferring runoff directly from the Scrap Yard to the Nautilus treatment facility without providing attenuation storage.

The approach relied on large pumping stations and associated rising mains being sized to accommodate peak rainfall runoff directly.

#### **4.1.2 Advantages**

- No attenuation storage required.
- Smaller land take within the Scrap Yard area.
- Simplified drainage philosophy.

#### **4.1.3 Disadvantages**

- Requires very large pumping infrastructure.
- Significant capital cost.
- Increased operational and maintenance requirements.
- High energy demand.
- Reduced system resilience due to complete reliance on pumping equipment.
- Considered a substantial engineering undertaking when compared to the alternative options.

### **4.2 Option 2 - Gravity-Fed Attenuation Tank (600 l/s)**

#### **4.2.1 Description**

This option utilised a buried attenuation tank to provide temporary storage before controlled transfer to the Nautilus treatment system at approximately 600 l/s.

The arrangement represents a conventional underground attenuation solution.

#### **4.2.2 Advantages**

- Proven and widely adopted drainage solution.
- Storage located below ground.
- Minimal operational impact on the Scrap Yard.

- Compact footprint compared with basin solutions.

#### **4.2.3 Disadvantages**

- Significant excavation required.
- Interaction with groundwater anticipated.
- Measures required to address flotation risks.
- Larger pumping requirement than lower discharge rate options.

### **4.3 Option 3 – Gravity-Fed Attenuation Tank (350 l/s)**

#### **4.3.1 Description**

This option adopted the same principle as Option 2 but reduced the discharge rate to approximately 350 l/s.

The lower discharge rate required a larger storage volume and therefore a larger attenuation structure.

#### **4.3.2 Advantages**

- Conventional and well understood solution.
- Reduced discharge rate compared with Option 2.
- Storage remains below ground.
- Compact operational footprint.

#### **4.3.3 Disadvantages**

- Larger storage requirement.
- Increased excavation compared with Option 2.
- Groundwater and flotation considerations remain.
- Increased construction complexity.

### **4.4 Option 4 – Pump-Fed Attenuation Basin**

#### **4.4.1 Description**

This option utilised a pumped attenuation basin providing storage prior to transfer to the Nautilus treatment facility.

The arrangement reduced the required depth of excavation by raising storage levels within the system. However, runoff was required to be pumped before entering the attenuation basin, introducing additional pumping infrastructure and operational complexity.

#### **4.4.2 Advantages**

- Shallower excavation than gravity-fed alternatives.
- Reduced interaction with groundwater.
- Potential reduction in structural requirements.

#### **4.4.3 Disadvantages**

- Multiple pumping systems required.
- Increased mechanical and electrical infrastructure.
- Increased maintenance requirements.
- Higher operational costs.
- Greater overall system complexity.

### **4.5 Option 5 – Gravity-Fed Attenuation Basin (350 l/s)**

#### **4.5.1 Description**

This option utilised a gravity-fed attenuation basin providing storage prior to transfer to the Nautilus treatment facility.

The option adopted a similar approach to Option 6 but utilised a higher discharge rate of approximately 350 l/s. The increased discharge rate reduced the attenuation storage volume required and therefore reduced the overall basin footprint when compared with Option 6.

The option maintained the benefits of a gravity-fed system whilst requiring less storage volume than the lower discharge rate alternative.

#### **4.5.2 Advantages**

- Gravity-fed operation reduces reliance on pumping infrastructure.
- Reduced mechanical complexity compared with pump-fed alternatives.
- Smaller basin footprint than Option 6.
- Lower operational and maintenance requirements.

- Improved resilience through reduced dependence on mechanical equipment.

#### **4.5.3 Disadvantages**

- Larger footprint than tank-based solutions.
- Deep excavation required.
- Groundwater interaction anticipated.
- Structural measures required to address flotation risks.
- Greater land take than underground tank options.

### **4.6 Option 6 – Gravity-Fed Attenuation Basin (110 l/s)**

#### **4.6.1 Description**

This option utilised a gravity-fed attenuation basin providing storage prior to transfer to the Nautilus treatment facility.

The reduced discharge rate of approximately 110 l/s increased the attenuation storage volume required and therefore increased the basin footprint when compared with Option 5. However, the lower discharge rate minimised pumping requirements and maximised onsite attenuation storage.

The option maximised onsite storage while minimising pumping requirements and operational complexity. Surface water would be conveyed to the attenuation basin by gravity before controlled transfer to the Nautilus treatment facility.

#### **4.6.2 Advantages**

- Lowest discharge rate of the options considered.
- Predominantly gravity-driven operation.
- Reduced reliance on pumping infrastructure.
- Lower operational and maintenance requirements.
- Improved resilience through reduced dependence on mechanical equipment.
- Opportunity for future optimisation through revised drainage levels.

#### **4.6.3 Disadvantages**

- Largest attenuation footprint.

- Deep storage structure required.
- Groundwater interaction anticipated.
- Structural measures required to address flotation risks.
- Greater land take than tank-based solutions.

## **5. Common Design Considerations**

During the optioneering process, the potential impact of groundwater and flotation was identified as a design consideration for attenuation storage structures. These factors were recognised during the assessment process and were communicated as part of the options appraisal.

The requirement to consider groundwater interaction and flotation resistance was therefore identified prior to the selection of a preferred option and was not unique to any individual attenuation solution. The significance of these considerations varied depending on the type, size and depth of attenuation structure adopted, but they remained relevant to both tank-based and basin-based solutions.

Following Tata Steel's selection of Option 6, these considerations informed the subsequent development of the preferred design solution.

## **6. Design Development Opportunity**

Following completion of the optioneering exercise, a potential opportunity was identified to further optimise the selected drainage solution through the use of open drainage (OD) channels within the Scrap Yard area.

Subject to further hydraulic assessment, raising upstream drainage levels may allow the attenuation storage levels to be increased, reducing excavation depth, increasing separation from groundwater levels and potentially reducing flotation-related design requirements.

This opportunity does not alter the preferred drainage strategy selected by Tata Steel but may provide an opportunity to optimise the final detailed design solution.

## **7. Design Risk Assessment**

In accordance with the Construction (Design and Management) Regulations 2015 (CDM 2015), the principal design risks associated with the preferred attenuation basin solution have been considered as part of the design development process.

A summary of the identified hazards, associated risks and design mitigation measures is provided in Appendix B - CDM Design Risk Assessment Summary.

The identified risks will be reviewed and developed further through subsequent stages of detailed design and communicated through the project CDM Risk Register as appropriate.

## **8. Preferred Option and Client Selection**

The drainage options were developed within the framework established by the JBA Outline Drainage Strategy for the wider EAF development. The overriding requirement throughout the assessment was that runoff from the High Pollution Hazard Scrap Yard must ultimately be conveyed to the existing Nautilus treatment facility for treatment prior to discharge.

The six options presented a range of solutions with varying levels of attenuation storage, pumping infrastructure, operational complexity and land take.

Following consideration of the options presented, Tata Steel selected Option 6, comprising a gravity-fed attenuation basin with a controlled discharge rate of 110 l/s, as its preferred drainage strategy and instructed the design team to progress this option through subsequent design development.

In selecting Option 6, Tata Steel considered that the option provided an appropriate balance between:

- Hydraulic performance.
- Constructability.
- Operational simplicity.
- Long-term maintenance requirements.
- Resilience and reliability.
- Compatibility with the wider site drainage strategy.

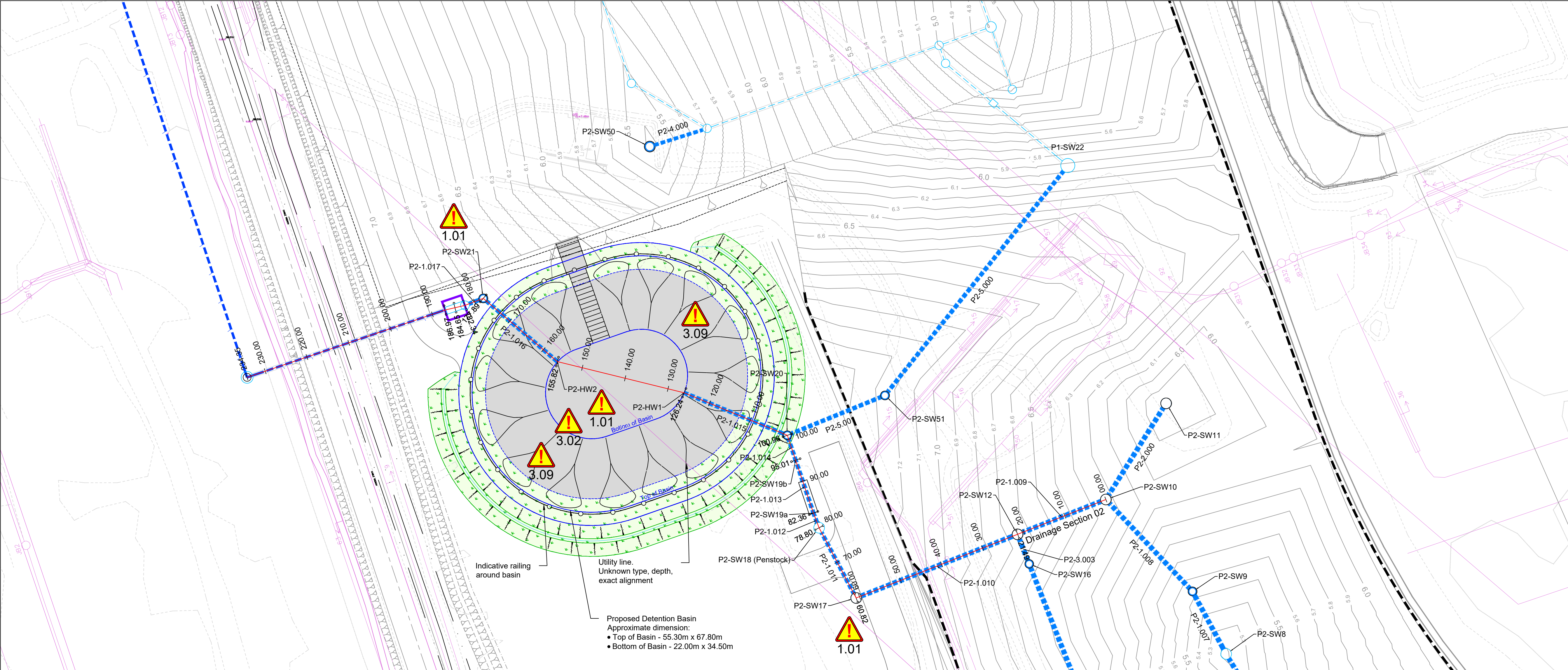
Following Tata Steel's selection, Option 6 was progressed through subsequent design development and formed the basis of the drainage proposals taken forward for the Primary Scrap Yard. The attenuation basin arrangement was subsequently developed through tender-stage design and therefore represents the most developed of the options considered within this appraisal.

The option provides attenuation storage prior to controlled transfer of runoff to the Nautilus treatment facility and reduces reliance on extensive pumping

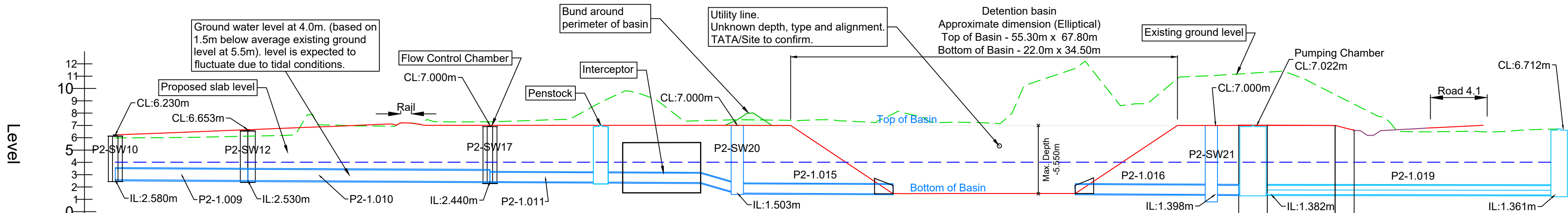
infrastructure when compared with alternative solutions considered during the appraisal.

Future design development may continue to explore opportunities to optimise the solution further, including the potential use of open drainage channels within the Scrap Yard area to raise drainage levels, reduce storage depth and minimise interaction with groundwater where practicable.

## **APPENDIX A – SAB 5 DRAINAGE OPTIONEERING SCRAP YARD PUMP AND STORAGE ARRANGEMENT**



DRAINAGE SECTION 02 - LONGSECTION  
SCALE: H 1:500,V 1:250. DATUM: -2.000



| Chainage | Existing Levels |        | Proposed Levels | Level Difference |
|----------|-----------------|--------|-----------------|------------------|
|          | 5.987           | 5.987  |                 |                  |
|          | 5.986           | 5.986  | 6.279           | -5.000           |
|          | 5.999           | 5.999  | 6.329           | -2.500           |
|          | 6.003           | 6.003  | 6.378           | -5.000           |
|          | 6.015           | 6.015  | 6.427           | -7.500           |
|          |                 |        |                 | -10.000          |
|          | 6.028           | 6.028  | 6.476           | -12.500          |
|          | 6.054           | 6.054  | 6.525           | -15.000          |
|          | 6.071           | 6.071  | 6.574           | -17.500          |
|          | 6.082           | 6.082  | 6.623           | -20.000          |
|          | 6.110           | 6.110  |                 | -22.500          |
|          | 6.136           | 6.136  | 6.673           | -25.000          |
|          | 6.161           | 6.161  | 6.722           | -27.500          |
|          | 6.185           | 6.185  | 6.771           | -30.000          |
|          | 6.816           | 6.816  | 6.820           |                  |
|          | 7.032           | 7.032  | 6.869           | -32.500          |
|          | 7.325           | 7.325  | 6.918           | -35.000          |
|          | 7.900           | 7.900  | 6.968           | -37.500          |
|          | 6.963           | 6.963  | 7.022           | -40.000          |
|          |                 |        |                 | -42.500          |
|          | 6.954           | 6.954  | 7.077           | -45.000          |
|          | 6.933           | 6.933  | 7.105           | -47.500          |
|          | 7.200           | 7.200  | 7.150           | -50.000          |
|          | 7.240           | 7.240  | 7.200           | -52.500          |
|          | 7.299           | 7.299  | 7.009           | -55.000          |
|          | 7.284           | 7.284  | 7.009           | -57.500          |
|          | 7.288           | 7.288  | 7.009           | -60.000          |
|          | 7.316           | 7.316  | 7.008           | -62.500          |
|          | 7.357           | 7.357  | 7.008           | -65.000          |
|          | 7.400           | 7.400  | 7.008           | -67.500          |
|          | 7.443           | 7.443  | 7.007           | -70.000          |
|          | 7.847           | 7.847  | 7.006           | -72.500          |
|          | 7.842           | 7.842  | 7.006           | -75.000          |
|          | 8.628           | 8.628  | 7.005           | -77.500          |
|          | 9.164           | 9.164  | 7.005           | -80.000          |
|          | 9.744           | 9.744  | 7.005           | -82.500          |
|          | 9.600           | 9.600  | 7.004           | -85.000          |
|          | 9.171           | 9.171  | 7.004           | -87.500          |
|          | 8.237           | 8.237  | 7.003           | -90.000          |
|          | 7.340           | 7.340  | 7.003           | -92.500          |
|          | 7.365           | 7.365  | 7.003           | -95.000          |
|          | 7.415           | 7.415  | 7.002           | -97.500          |
|          | 7.453           | 7.453  | 7.002           | -100.000         |
|          | 7.458           | 7.458  | 7.002           | -102.500         |
|          | 7.442           | 7.442  | 7.001           | -105.000         |
|          | 7.427           | 7.427  | 7.000           | -107.500         |
|          | 7.406           | 7.406  | 6.971           | -110.000         |
|          | 7.427           | 7.427  | 6.937           | -112.500         |
|          | 7.463           | 7.463  | 5.203           | -115.000         |
|          | 7.382           | 7.382  | 4.389           | -117.500         |
|          | 7.316           | 7.316  | 3.535           | -120.000         |
|          | 7.256           | 7.256  | 2.701           | -122.500         |
|          | 7.653           | 7.653  | 1.867           | -125.000         |
|          | 8.096           | 8.096  | 1.467           | -127.500         |
|          | 7.784           | 7.784  | 1.468           | -130.000         |
|          | 7.263           | 7.263  | 1.469           | -132.500         |
|          | 7.250           | 7.250  | 1.470           | -135.000         |
|          | 7.232           | 7.232  | 1.470           | -137.500         |
|          | 7.174           | 7.174  | 1.470           | -140.000         |
|          | 7.739           | 7.739  | 1.470           | -142.500         |
|          | 10.223          | 10.223 | 1.470           | -145.000         |
|          | 10.628          | 10.628 | 1.470           | -147.500         |
|          | 11.070          | 11.070 | 1.469           | -150.000         |
|          | 11.492          | 11.492 | 1.469           | -152.500         |
|          | 12.165          | 12.165 | 2.032           | -155.000         |
|          | 10.586          | 10.586 | 2.886           | -157.500         |
|          | 9.007           | 9.007  | 3.701           | -160.000         |
|          | 8.718           | 8.718  | 4.535           | -162.500         |
|          | 8.775           | 8.775  | 5.370           | -165.000         |
|          | 9.800           | 9.800  | 6.204           | -167.500         |
|          | 10.845          | 10.845 | 7.000           | -170.000         |
|          | 10.979          | 10.979 | 7.000           | -172.500         |
|          | 11.103          | 11.103 | 7.000           | -175.000         |
|          | 11.105          | 11.105 | 7.000           | -177.500         |
|          | 11.184          | 11.184 | 7.000           | -180.000         |
|          | 11.264          | 11.264 | 7.000           | -182.500         |
|          | 11.344          | 11.344 | 7.000           | -185.000         |
|          | 10.871          | 10.871 | 7.000           | -187.500         |
|          | 10.260          | 10.260 | 7.000           | -190.000         |
|          | 9.523           | 9.523  | 7.000           | -192.500         |
|          | 8.854           | 8.854  | 7.000           | -195.000         |
|          | 8.365           | 8.365  | 6.433           | -200.000         |
|          | 7.745           | 7.745  | 6.458           | -202.500         |
|          | 6.872           | 6.872  | 6.634           | -205.000         |
|          | 6.492           | 6.492  | 6.703           | -207.500         |
|          | 6.478           | 6.478  | 6.772           | -210.000         |
|          | 6.498           | 6.498  | 6.835           | -212.500         |
|          | 6.508           | 6.508  | 6.897           | -215.000         |
|          | 6.521           | 6.521  | 6.960           | -217.500         |
|          | 6.473           | 6.473  |                 | -220.000         |
|          | 6.497           | 6.497  |                 | -222.500         |
|          | 6.545           | 6.545  |                 | -225.000         |
|          | 6.558           | 6.558  |                 | -227.500         |
|          | 6.689           | 6.689  |                 | -230.000         |
|          |                 |        |                 | -232.500         |
|          |                 |        |                 | -235.000         |

General Notes:

1. Do not scale from this drawing.
2. All dimensions must be verified on site prior to construction.
3. Any discrepancies are to be reported immediately to the Drawing Originator.
4. This drawing is to be read in conjunction with all relevant engineering specifications and drawings.
5. All dimensions are in millimetres. All levels are in metres above Ordnance Datum unless noted otherwise.
6. Proposed drainage relates to permanent works only. Temporary works, enabling works, and groundwater control measures are not shown and are to be managed by the contractor unless stated otherwise.
7. The above-ground operational layout has not yet been confirmed. Any future changes to site features, including retaining structures or other elements, may alter surface water runoff flow paths from those assumed in the original design, potentially impacting the performance of the proposed slab drainage system and increasing the risk of localised flooding.

Standards and Specifications

8. All drainage works shall be carried out in accordance with the relevant requirements of BS EN 752, BS EN 1610, and the project specification unless stated otherwise.
9. Pipe bedding, surround, and backfill materials shall be provided in accordance with the project specification and relevant standards.
10. All chambers / structures, pipes and fittings shall be installed in accordance with DCG guidance, British Standards and manufacturer's requirements.
11. Covers and frames shall be in accordance with BS EN 124 and as specified within the drainage schedules unless noted otherwise.

Drainage Design Criteria

12. All surface water drainage pipes shall be constructed soffit to soffit unless noted otherwise within the contract documentation.
13. The proposed surface water drainage network has been designed to achieve the following performance criteria:
  - No surcharge during the 1 in 2 year storm event
  - No flooding during the 1 in 30 year storm event
  - Flooding to be contained within the site boundary during the 1 in 100 year storm event plus 40% climate change allowance

Drainage Installation Requirements

14. All drainage pipes shall be laid to the alignment and levels shown on the design drawings unless otherwise agreed with the Design Engineer.
15. Pipework shall be tested for watertightness in accordance with BS EN 1610 prior to backfilling unless otherwise agreed with the Design Engineer.
16. Finished covers and frames shall be set flush with surrounding finished surfaces unless noted otherwise.
17. Headwalls, flow control devices, and other proprietary drainage components shall be installed in accordance with manufacturer guidelines and requirements.
18. The final outfall arrangement shall incorporate suitable scour protection where required.

Environmental / Site Assumptions

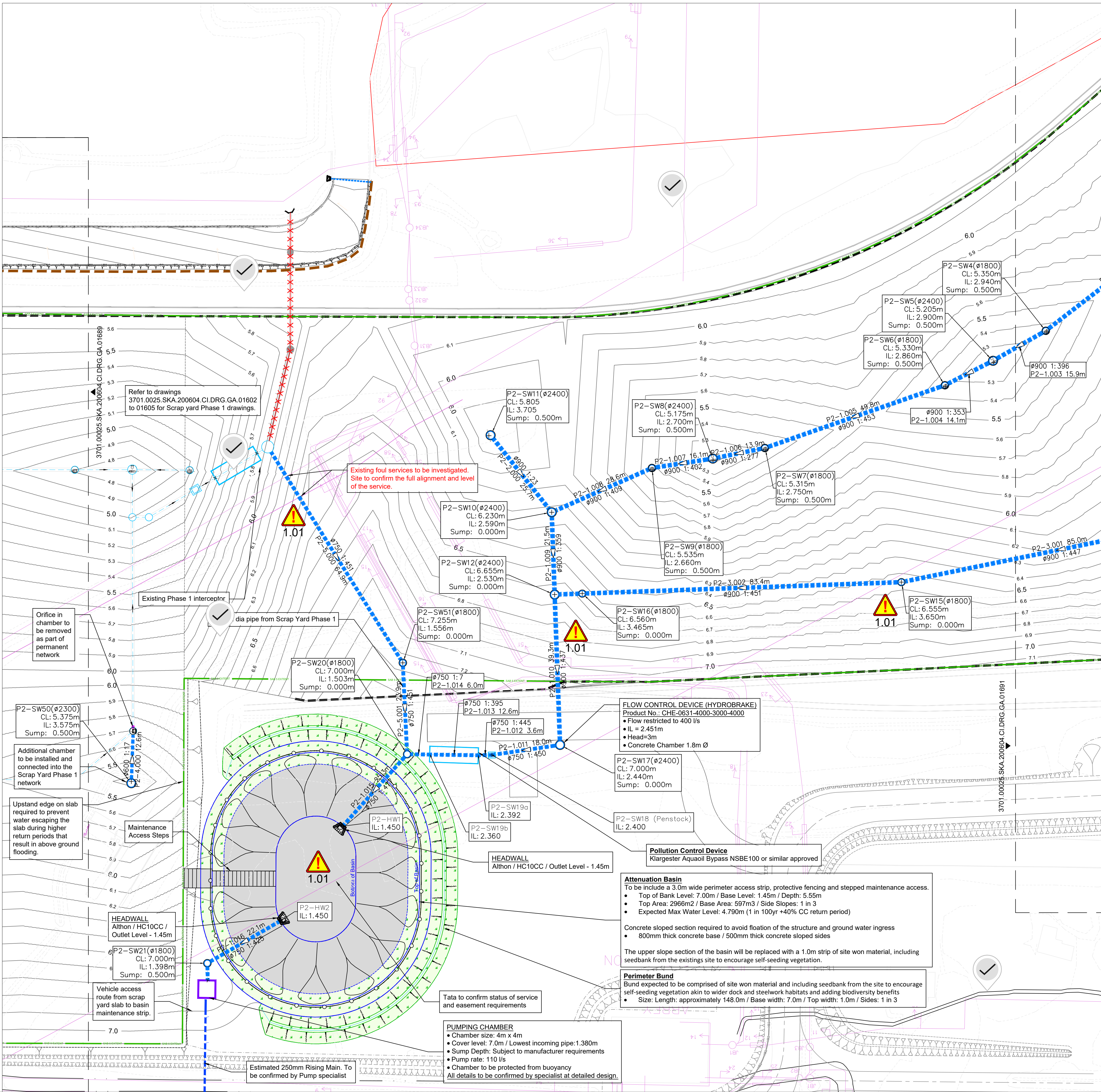
19. The presence of deleterious materials in the ground is unknown. Ground conditions are assumed to be non-aggressive unless confirmed otherwise by site investigation.
20. Only limited site investigation information has been provided for the area. Groundwater levels across the area are expected to range between 3.3m in the South to 4.0m in the North. Additional assessment may be required to prevent flotation of below-ground structures if ground water levels are found to be higher than expected.

Existing Services

21. Services shown have been provided by others and their accuracy cannot be guaranteed. The contractor must verify the presence and location of all services prior to construction.
22. Protection measures for all live and existing services within the vicinity of the works must be agreed with the relevant service operators.

HAA Storage Yard Specific

23. Section of pipes crossing under granular area may need additional protection. Subject to structural assessment. Refer to typical details.



SKANSKA

| KEY CDM RESIDUAL DESIGN AND ENVIRONMENTAL RISKS |                                                               |
|-------------------------------------------------|---------------------------------------------------------------|
| 1.01                                            | Possible conflict with existing buried services               |
| 1.02                                            | Working on Live Sewers                                        |
| 1.04                                            | Buried structures - historic buildings - possible basement    |
| 1.05                                            | Existing rail crossing within site boundary - level crossings |
| 2.02                                            | Contaminated Soil - Heavy metal - Polycarbonate biphenols     |
| 3.01                                            | Confined Space                                                |
| 3.02                                            | Deep excavations with possibility of unstable ground          |
| 3.06                                            | Sleep embankments- On Heavy vehicle movement routes           |
| 3.07                                            | Heavy / Light vehicle movements in and around proposed works  |
| 3.09                                            | High ground water levels, ingress of water during excavations |

IN ACCORDANCE WITH THE CONSTRUCTION DESIGN MANAGEMENT REGULATIONS 2015, THE DOCUMENT ORIGINATOR HAS UNDERTAKEN A RESIDUAL RISK ASSESSMENT FOR THE ELEMENTS SHOWN ON THIS DOCUMENT. THE ABOVE ARE ONLY THE KEY RISKS THAT WERE IDENTIFIED DURING THE RISK ASSESSMENT. FOR A COMPREHENSIVE LIST REFER TO THE DESIGN RISK ASSESSMENT.

CDM Note:  
1. THE ABOVE RISKS ARE TO BE READ IN CONJUNCTION WITH SKANSKA'S CDM DESIGNER'S RISK ASSESSMENT REF: 3701.00025.SKA.200604.CI.CDM.LI.00001

| KEY           |                                           |
|---------------|-------------------------------------------|
| 01S1.001 6.8m | Proposed surface water pipe               |
| 01S0 1:104    | Proposed surface water rising Main        |
| 01S1.001 6.8m | Proposed surface water manhole            |
| 01S1.001 6.8m | Proposed Gully                            |
| 01S1.001 6.8m | Proposed headwall                         |
| 01S1.001 6.8m | Proposed Filter drain                     |
| 01S1.001 6.8m | Red line boundary                         |
| 01S1.001 6.8m | Scrap Yard Phase 1 surface water pipe     |
| 01S1.001 6.8m | Scrap Yard Phase 1 surface water manholes |
| 01S1.001 6.8m | Proposed Perimeter infiltration trench    |
| 01S1.001 6.8m | Scrap Yard pollution control device       |
| 01S1.001 6.8m | Drainage to be removed/abandoned          |
| 01S1.001 6.8m | Assumed existing surface water drainage   |
| 01S1.001 6.8m | Existing services                         |

|           |          |                       |     |       |       |
|-----------|----------|-----------------------|-----|-------|-------|
| C         | 16/07/26 | BASIN DETAILS UPDATED | CT  | JP    | - KB  |
| B         | 21/05/26 | TENDER ISSUE          | AR  | JP    | - RH  |
| A         | 27/01/26 | PRELIMINARY ISSUE     | AR  | JP    | - RH  |
| Rev       | Date     | Description           | Drn | Chk'd | App'd |
| Revisions |          |                       |     |       |       |

Client



| SKANSKA                                                          |  | Skanska Technology      |
|------------------------------------------------------------------|--|-------------------------|
| Skanska UK<br>1 Hercules Way<br>Leavesden<br>Watford<br>WD25 7GS |  | Tel: +44(0)1923 776 666 |

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Drawing Status

FOR TENDER

Project Name

INVICTUS

|             |    |               |            |            |            |              |            |
|-------------|----|---------------|------------|------------|------------|--------------|------------|
| Drawn by    | AR | Drawn Date    | 27/01/2026 | Checked by | JP         | Checked Date | 27/01/2026 |
| Approved by | RH | Approved Date | 27/01/2026 | Scale      | 1:500 @ A1 |              |            |

Title

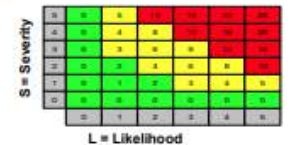
Original drawing sheet is A1

SAB 5 DRAINAGE  
GENERAL ARRANGEMENT  
SHEET 2

| Document Reference                                |            |          |            |             |          |          |
|---------------------------------------------------|------------|----------|------------|-------------|----------|----------|
| PROJECT NUMBER                                    | ORIGINATOR | FACILITY | DISCIPLINE | INFORMATION | DOCUMENT | REVISION |
| 3701-00025 - SKA - 200604 - CI - DRG - GA - 01690 | C          |          |            |             |          |          |

## APPENDIX B – CDM DESIGN RISK ASSESSMENT SUMMARY

| SKANSKA                                     |                                                                                                  |                                                                                                                                                                                                    | CDM Risk Assessment (Design) |   |      |                                                                                                                                                                                                                                                                       |               |   | Project     |                   | TATA - Invictus                                                                      |                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|-------------|-------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Revision Control:                           |                                                                                                  |                                                                                                                                                                                                    |                              |   |      |                                                                                                                                                                                                                                                                       |               |   | Sub Project |                   |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                        |
| Originator: R Hampton Date: 20th Feb 2025   |                                                                                                  |                                                                                                                                                                                                    |                              |   |      |                                                                                                                                                                                                                                                                       |               |   | Status      |                   | Preliminary                                                                          |                                                                                                                                                                                                                                                                                                                                                                                        |
| Checker: Keiron Baldwin Date: 20th Feb 2025 |                                                                                                  |                                                                                                                                                                                                    |                              |   |      |                                                                                                                                                                                                                                                                       |               |   | Doc Ref.    |                   | CDMRA-001                                                                            |                                                                                                                                                                                                                                                                                                                                                                                        |
| Approver: Darren Wines Date: 20th Feb 2025  |                                                                                                  |                                                                                                                                                                                                    |                              |   |      |                                                                                                                                                                                                                                                                       |               |   | Date        |                   | 17 July 2026                                                                         |                                                                                                                                                                                                                                                                                                                                                                                        |
|                                             |                                                                                                  |                                                                                                                                                                                                    |                              |   |      |                                                                                                                                                                                                                                                                       |               |   | Page        |                   | 1 of 2                                                                               |                                                                                                                                                                                                                                                                                                                                                                                        |
| Ref.                                        | Hazard                                                                                           | Risk                                                                                                                                                                                               | Risk                         |   |      | Design Action / Control Measures                                                                                                                                                                                                                                      | Residual Risk |   |             | Owner             | Residual Risk                                                                        | Contractors (or Others) Measures                                                                                                                                                                                                                                                                                                                                                       |
|                                             |                                                                                                  |                                                                                                                                                                                                    | L                            | S | Risk |                                                                                                                                                                                                                                                                       | L             | S | Risk        |                   |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                        |
| 5.35                                        | High groundwater levels within the proposed attenuation basin area.                              | Construction operatives working within excavations may suffer injury or fatality due to excavation flooding, instability of excavation faces, groundwater ingress and collapse of temporary works. | 5                            | 5 | 25   | Groundwater identified during optioneering. Groundwater constraints communicated through the options appraisal process.                                                                                                                                               | 5             | 5 | 25          | TATA / Contractor | Risk identified and communicated through optioneering and design development.        | <b>Future Design Actions:</b> Review opportunities to raise drainage levels through OD channels. Optimise basin levels during detailed design to minimise excavation depth where practicable.<br><b>Construction / Contractor Actions:</b> Contractor to undertake temporary works design and provide suitable dewatering and groundwater management measures throughout construction. |
| 5.36                                        | Groundwater uplift forces acting on attenuation structures below groundwater level.              | Construction workers, maintenance operatives and site infrastructure may be affected by structural movement, damage or flooding if flotation forces are not adequately addressed.                  | 4                            | 4 | 16   | Flotation risk identified during optioneering. Requirement for uplift resistance communicated during the options appraisal process.                                                                                                                                   | 4             | 4 | 16          | Skanska / TATA    | Risk identified and communicated through optioneering and design development.        | <b>Future Design Actions:</b> Detailed structural assessment of uplift forces. Develop structural solution to resist groundwater uplift. Verify uplift resistance during detailed design.<br><b>Construction / Contractor Actions:</b> Construct in accordance with detailed design requirements. Implement temporary groundwater management measures during construction.             |
| 5.37                                        | Unauthorised or accidental entry into the attenuation basin.                                     | Site operatives, maintenance personnel or visitors may suffer injury through slips, trips, falls into the basin or drowning.                                                                       | 3                            | 4 | 12   | Bund and perimeter fencing incorporated within the design to discourage unauthorised access and prevent accidental entry by pedestrians. Steps incorporated within the attenuation basin to provide a means of escape should personnel inadvertently enter the basin. | 2             | 4 | 8           | TATA              | Risk reduced through provision of perimeter protection measures and means of escape. | <b>Future Design Actions:</b> Confirm final fencing arrangement and access control requirements.<br><b>Owner / Operator Actions:</b> Tata Steel to inspect and maintain fencing, gates and warning signage.                                                                                                                                                                            |
| 5.38                                        | Vehicles inadvertently entering the attenuation basin.                                           | Vehicle operators may suffer injury or fatality due to vehicle overturning, collision or entering standing water within the basin.                                                                 | 3                            | 5 | 15   | Bund and perimeter fencing incorporated within the design to discourage accidental vehicle entry into the basin. Basin positioned away from operational vehicle routes where practicable.                                                                             | 2             | 5 | 10          | TATA              | Risk reduced through provision of bunding and perimeter protection measures.         | <b>Future Design Actions:</b> Review final interface between vehicle routes and basin perimeter during detailed design.<br><b>Owner / Operator Actions:</b> Tata Steel to maintain fencing, bunds and traffic management arrangements.                                                                                                                                                 |
| 5.39                                        | Maintenance activities associated with the attenuation basin and associated drainage structures. | Maintenance personnel may suffer injury through slips, trips, falls, exposure to contaminated runoff or confined space hazards during inspection and maintenance activities.                       | 3                            | 4 | 12   | Maintenance requirements identified during design development. Steps incorporated within the basin to provide safe maintenance access and egress.                                                                                                                     | 2             | 4 | 8           | TATA              | Risk reduced through provision of dedicated maintenance access arrangements.         | <b>Future Design Actions:</b> Review opportunities to minimise confined space entry during detailed design. Confirm final maintenance access requirements.<br><b>Owner / Operator Actions:</b> Tata Steel to develop maintenance procedures, training requirements and safe systems of work.                                                                                           |



Risk = Likelihood x Severity

| SKANSKA           |                                                                                                    |                                                                                                                                                                                                    | CDM Risk Assessment (Design) |   |      |                                                                                                                                                                |               |   | Project     |                   | TATA - Invictus                                                               |                                                                                                                                                                                                                                                                                                                                                                                        |  <p>S = Severity</p> <p>L = Likelihood</p> <p>Risk = Likelihood x Severity</p> |
|-------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|-------------|-------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Revision Control: |                                                                                                    |                                                                                                                                                                                                    |                              |   |      |                                                                                                                                                                |               |   | Sub Project |                   | Preliminary                                                                   |                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                   |
| Originator        |                                                                                                    |                                                                                                                                                                                                    |                              |   |      |                                                                                                                                                                |               |   | Status      |                   | CDMRA-001                                                                     |                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                   |
| Checker           |                                                                                                    |                                                                                                                                                                                                    |                              |   |      |                                                                                                                                                                |               |   | Doc Ref.    |                   | 17 July 2026                                                                  |                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                   |
| Approver          |                                                                                                    |                                                                                                                                                                                                    |                              |   |      |                                                                                                                                                                |               |   | Date        |                   | 2 of 2                                                                        |                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                   |
| Ref.              | Hazard                                                                                             | Risk                                                                                                                                                                                               | Risk                         |   |      | Design Action / Control Measures                                                                                                                               | Residual Risk |   |             | Owner             | Residual Risk                                                                 | Contractors (or Others) Measures                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                   |
|                   |                                                                                                    |                                                                                                                                                                                                    | L                            | S | Risk |                                                                                                                                                                | L             | S | Risk        |                   |                                                                               |                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                   |
| 5.40              | High groundwater levels within the proposed attenuation basin area.                                | Construction operatives working within excavations may suffer injury or fatality due to excavation flooding, instability of excavation faces, groundwater ingress and collapse of temporary works. | 5                            | 5 | 25   | Groundwater identified during optioneering. Groundwater constraints communicated through the options appraisal process.                                        | 5             | 5 | 25          | TATA / Contractor | Risk identified and communicated through optioneering and design development. | <b>Future Design Actions:</b> Review opportunities to raise drainage levels through OD channels. Optimise basin levels during detailed design to minimise excavation depth where practicable.<br><b>Construction / Contractor Actions:</b> Contractor to undertake temporary works design and provide suitable dewatering and groundwater management measures throughout construction. |                                                                                                                                                                   |
| 5.41              | Groundwater uplift forces acting on attenuation structures below groundwater level.                | Construction workers, maintenance operatives and site infrastructure may be affected by structural movement, damage or flooding if flotation forces are not adequately addressed.                  | 4                            | 4 | 16   | Flotation risk identified during optioneering. Requirement for uplift resistance communicated during the options appraisal process.                            | 4             | 4 | 16          | Skanska / TATA    | Risk identified and communicated through optioneering and design development. | <b>Future Design Actions:</b> Detailed structural assessment of uplift forces. Develop structural solution to resist groundwater uplift. Verify uplift resistance during detailed design.<br><b>Construction / Contractor Actions:</b> Construct in accordance with detailed design requirements. Implement temporary groundwater management measures during construction.             |                                                                                                                                                                   |
| 5.42              | Attenuation and transfer of runoff classified as High Pollution Hazard runoff from the Scrap Yard. | Construction operatives and maintenance personnel may be exposed to contaminated water and sediments resulting in potential health effects through skin contact, ingestion or inhalation.          | 4                            | 4 | 16   | Runoff directed to the Nautilus treatment facility in accordance with the approved drainage strategy. Design reduces the potential for uncontrolled discharge. | 2             | 4 | 8           | TATA / Contractor | Risk reduced through adopted drainage strategy.                               | <b>Future Design Actions:</b> Maintain segregation of contaminated and clean water systems during detailed design.<br><b>Construction / Operational Actions:</b> Appropriate PPE, training and safe working procedures required during construction and maintenance activities.                                                                                                        |                                                                                                                                                                   |
| 5.43              | Deep excavation for attenuation basin adjacent to operational railway infrastructure.              | Construction operatives may be struck by rail traffic and excavation activities may affect railway stability resulting in injury, fatality or railway asset damage.                                | 3                            | 5 | 15   | Railway interface identified during design development. Risk communicated through the CDM process.                                                             | 3             | 5 | 15          | TATA / Contractor | Risk identified and communicated through design development.                  | <b>Future Design Actions:</b> Review stand-off distances and construction interfaces during detailed design.<br><b>Construction / Contractor Actions:</b> Works adjacent to railway to comply with railway authority requirements including exclusion zones, possessions and approved safe systems of work.                                                                            |                                                                                                                                                                   |



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## **APPENDIX 4.1 VIEWPOINT ANALYSIS**

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# APPENDIX 4.1: VIEWPOINT ANALYSIS

## Introduction

1. A hybrid planning application for the EAF Development was submitted to Neath Port Talbot Council (NPTC) in November 2024 and approved in March 2025 (ref: P2024/0711). A Landscape and Visual Impact Assessment (LVIA) was submitted as part of the hybrid planning application. In line with good practice the LVIA assessed the likely effects of both the full and outline components of the EAF Development. The outline components were assessed on the basis of a series of maximum and minimum parameters and indicative assessment assumptions.
2. This updated viewpoint analysis has been prepared in relation to a reserved matters application pursuant to P2024/0711, which covers the development of a scrap metal handling facility and associated infrastructure (the 'RM2 Proposed Development'). The design of the RM2 Proposed Development has been cognisant of the approved parameters and the assessment assumptions considered in the approved EAF ES. However, to ensure that the RM2 Proposed Development achieves maximum operational functionality, it has been necessary to alter some of the assessment assumptions previously assessed.
3. Following refinement of assumptions and availability of further details on the outline elements of the scheme, the following amendments have been identified as relevant to the selection of viewpoints for analysis:
  - Removal of the permanent 15m high acoustic barrier and installation of localised acoustic mitigation barriers; and
  - Revised lighting design, with a detailed design replacing the indicative lighting design that was included with the EAF hybrid planning application.
4. Following a review of the 25 views as previously selected in agreement with Neath and Port Talbot County Borough Council and Natural Resources Wales between January 2022 and April 2024, five viewpoints have been selected where the RM2 Proposed Development has the potential to alter the previously identified effects. This is considered a proportionate response considering the relatively small-scale changes as a result of the RM2 Proposed Development.
5. The locations of the five viewpoints selected are shown on Figure 5.1 in Volume 4 of the EAF ES. Details for each viewpoint are provided below. Annotated visualisations are provided in Volume 4 of the EAF ES to illustrate the existing view at each viewpoint location and the likely extent of the RM2 Proposed Development within the view.
6. This viewpoint analysis has been carried out using the five representative viewpoint locations to inform the assessment of the likely magnitude and significance of landscape and visual effects arising as a result of the RM2 Proposed Development. This assessment enables a further comparison of how the effects of the RM2 Proposed Development compare to those effects previously assessed and reported in the approved EAF ES.

**Views reviewed:**

| <b>Viewpoint No.</b> | <b>Distance to Proposed Development</b> | <b>Receptor Type</b>                        |
|----------------------|-----------------------------------------|---------------------------------------------|
| Vp 1                 | Southern boundary                       | Longlands Lane/PRoW 5/92.PT/3               |
| Vp 4                 | 1.45km SE                               | M4 at Eglwys Nunydd Reservoir               |
| Vp 7                 | 1.9km E                                 | Wales Coast Path                            |
| Vp 11                | 3.4km E                                 | Ogwr Ridgeway Walk/ Glamorgan Ridgeway Walk |
| Vp 12                | 3.9 km SSE                              | M4 overbridge                               |

7. This viewpoint analysis describes the baseline view at the viewpoint and considers the nature of the predicted change in the view. The scale of the change as described in this analysis is then reported in Table 4.3 in Chapter 4: Landscape and Visual Impact of the SoC. The wider extent of the effect (beyond the individual viewpoint considered), and its duration, are not captured in the viewpoint analysis (as a single viewpoint cannot capture extent or duration). The scale, extent and duration are factors in the overall judgement on magnitude of change, therefore judgements on magnitude of change and overall level of effect and significance are provided in Chapter 4: Landscape and Visual Impact of the SoC.
8. The visual assessment takes into account the screening effect of intervening landform, vegetation and built form and the potential for changes to those baseline features. It assumes clear weather conditions; although the influence of different seasons, weather, sunlight and visibility conditions have been considered, where relevant.

| VP | Location                                                              | Key features of existing view                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Predicted Visual Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | <b>Longlands Lane/public right of way 5/92.PT/3 Southern boundary</b> | Views towards the existing steelworks consist of Margam Marshes in the foreground which extend toward the steelworks in the middle and longer distance. Establishing scrub vegetation screens views into the existing brownfield land of the site further to the north. The scarp slope and upland plateau form the backdrop to the northeast, with Mynydd Brombil Wind Farm a notable feature in the skyline.                                                                     | <p><i>Operation year 1:</i> There would be limited views of the proposed scrap stockpiles in the middle distance, partially screened by existing scrub vegetation beyond the area of restored coastal meadows. The RM2 Proposed Development would be viewed as being located within the extents of existing industry.</p> <p>The RM2 Proposed Development would not increase the screening or filtering of longer distance views of lower scarp slopes to the north over and above that of the wider EAF development and there would be no reduction in the sense of big skies. The reinstated fields and ditches would extend the type of views found to the south.</p> <p><i>Operation year 10:</i> The restored coastal meadows would largely recreate the historic field and drainage pattern to the south of Longlands Lane, creating a more coherent and well managed view in the round.</p> |
| 4  | <b>Eglwys Nynydd Reservoir (M4) 1.45km SE</b>                         | Taken from privately owned (Tata Steel) land to approximate views from the motorway at this location. Views towards the existing steelworks consist of Eglwys Nynydd Reservoir in the foreground which extend toward the steelworks in the middle and longer distance. Tree and scrub vegetation softens views of the lower levels of the works. The scarp slope is just visible to the north, but the view is dominated by water and sky with the steelworks at its intersection. | <i>Operation year 1 and 10:</i> There would be limited views of the proposed scrap stockpiles in the middle distance, partially screened by existing scrub vegetation. The overall scale of industrial development would not increase in views and the RM2 Proposed Development would be viewed as part of the existing steelworks. The RM2 Proposed Development would potentially rise slightly above the horizon but would remain lower in form than much of the existing steelworks and the big skies would be retained.                                                                                                                                                                                                                                                                                                                                                                        |
| 7  | <b>Wales Coastal Path, Braided Route 1.9 km W</b>                     | Wide panoramic views towards the existing steelworks from the scarp slope across the flat coastal plain of Margam Marshes and out to the wide expanse of Swansea Bay and the Mumbles. The area of existing industrial development defines the coast at this location.                                                                                                                                                                                                              | <i>Operation 1 and 10:</i> There would be views of the proposed scrap stockpiles, partially screened by existing intervening steelworks. The RM2 Proposed Development would be viewed as part of existing industry on the coastal plain. The overall scale of industrial development would not increase in views and the RM2 Proposed Development would be viewed as part of the existing steelworks. The RM2 Proposed Development would remain below the horizon and the big skies would be retained.                                                                                                                                                                                                                                                                                                                                                                                             |
| 11 | <b>Ogwr Ridgeway Walk 3.4 km E</b>                                    | Wide panoramic views towards the existing steelworks from the scarp slope across Margam Country Park and the flat coastal plain and out to the wide expanse                                                                                                                                                                                                                                                                                                                        | <i>Operation year 1 and 10:</i> Somewhat distant views of the proposed scrap stockpiles above and between the existing intervening steelworks. The RM2 Proposed Development would be viewed as part of the existing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| VP | Location                            | Key features of existing view                                                                                                                                                                                                                                                                                               | Predicted Visual Change                                                                                                                                                                                                                                                                                                                                                                                   |
|----|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                     | of Swansea Bay and the Mumbles. The RM2 Proposed Development area is partially visible and, although it extends into an area of Margam Marshes, it appears contained within the area of existing industrial development that defines the coastal edge at this location.                                                     | steelworks and would not affect longer-distance views.                                                                                                                                                                                                                                                                                                                                                    |
| 12 | <b>M4 overbridge<br/>3.9 km SSE</b> | Views are channelled across the Kenfig Industrial Estate towards the existing steelworks by the cutting and vegetation either side of the M4. The coastal plain is dominated by existing industry which gives way to the scarp slope and upland plateau to the north and east and wider reaches of Swansea Bay to the west. | <i>Operation year 1 and 10:</i> The Proposed Development would be viewed in the distance, beyond the Kenfig Industrial Estate. The overall extents of industrial development would not increase in views and the RM2 Proposed Development would be viewed as part of the existing steelworks along the coast. The RM2 Proposed Development would remain below the horizon and the big skies would remain. |

## **APPENDIX 5.1 NOISE AND VIBRATION IMPACT ASSESSMENT – SCRAP HANDLING FACILITY**

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# NOISE AND VIBRATION IMPACT ASSESSMENT – SCRAP HANDLING FACILITY EAF PROJECT

Tata Steel UK Limited  
2062419-RSKA-RP-006-(01)





## General notes

|                      |                                                                 |
|----------------------|-----------------------------------------------------------------|
| <b>Project Name:</b> | EAF Project                                                     |
| <b>Title:</b>        | Noise and Vibration Impact Assessment – Scrap Handling Facility |
| <b>Client:</b>       | Tata Steel UK Limited                                           |
| <b>Issue Date:</b>   | 25 June 2026                                                    |
| <b>Report No.</b>    | 2062419-RSKA-RP-006-(01)                                        |

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|-----------|--------------|----------------|-------------------|--------------|
| 01        | For Issue    | Alex West MIOA | Daniel Clare MIOA | 25 June 2026 |
|           |              |                |                   |              |
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Technical reviewer:

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Signature:



Signature:



Date: 25 June 2026

Date:

25 June 2026

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Acoustics Ltd.



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# 1 Introduction

## Project Background

- 1.1 The Electric Arc Furnace (EAF) Project was subject to an Environmental Impact Assessment (EIA) in accordance with the relevant EIA Regulations. An Environmental Statement (the 'EAF ES') (RSK Environment Ltd 2024), including a noise and vibration chapter, was prepared, submitted and has subsequently been determined by the Neath Port Talbot County Borough Council.
- 1.2 At the time the EAF ES was prepared, the Port Talbot Steelworks was undergoing a period of operational transition associated with the planned permanent shutdown of the 'heavy end' of the steelmaking process (Blast Furnaces). As a result, the EAF ES adopted a baseline framework that recognised both long established operational conditions and foreseeable changes to site operations.
- 1.3 The noise and vibration chapter of the EAF ES, together with associated supporting documents, set out how this transitional context was addressed within the assessment and established the framework for the consideration of established, interim and future baseline conditions.
- 1.4 The EAF Project received approval of a hybrid (part full and part outline) planning permission, subject to compliance with conditions, as set out in the Neath Port Talbot County Borough Council decision notice for Application P2024/0711, approved 07/03/2025.

## Applicable EAF Project Planning Conditions

- 1.5 The assessment of EAF Project noise emissions is based on the planning conditions (set out in the Neath Port Talbot County Borough Council decision notice for Application P2024/0711, dated 7 November 2024). The planning conditions are expressed relative to either background sound levels or the established baseline scenario, and are to be applied in accordance with BS 4142:2014+A1:2019.

## Site and the Proposed Activity Description

- 1.6 The location of the site and the site's future footprint is provided in within the planning pack, as detailed below:
  - Scrap Layout Plan: Drawing number - EAF-LAW-X-X-DR-A-900005

## Description of Development – Reserved Matters

- 1.7 The description of development is as follows:

*“Application for the approval of reserved matters (appearance, scale and layout) pursuant to planning permission P2024/0711 for the development of a scrap metal handling facility and associated scrap yards. Works to include earthworks, surface water and drainage management, construction of concrete pads for temporary storage, new and improved internal access roads, rail infrastructure upgrades including single track railway and rail receipt facilities, amenity/welfare facility, workshop building, electrical equipment and infrastructure, boundary treatments, lighting, CCTV, noise mitigation measures, parking and creation of hardstanding and associated engineering works.”*

- 1.8 A detailed overview of the proposed works is provided below:

- Single track railway infrastructure
- Rail receipt facilities for inspecting and unloading trains
- Scrap bays for segregation and storage of scrap
- Road network to provide access around scrap yard facility
- Office and amenity provision for scrap yard workers



- Dedicated scrap overflow yard
- Scrap lorry unloading area
- Associated mobile equipment for scrap handling
- Minimal operational lighting (lux) levels across the scrap yard area
- Gravel surface for overflow scrap storage

## Consultation

1.9 Table 1-1 provides a summary of the consultation undertaken to inform the noise and vibration assessment to date.

*Table 1-1 Summary of the consultation in relation to noise and vibration*

| Body / organisation | Meeting dates and other forms of consultation | Summary of outcome of discussions                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NPTC                | Meetings on 18 April 2024 and 15 May 2024     | General approach to baseline monitoring and acoustic assessment of the EAF Development (Acoustic Assessment Method Statement - EAF Project - 2062419-RSKA-MS-001-(04) - Draft - 20 May 2024).<br><br>Informal response from NPTC following document review confirmed agreement with the methodology and proposals.                                                                                     |
| NPTC                | Meeting on 14 July 2026                       | Consultation with NPTC has been undertaken to discuss the updated acoustic assessment, including the incorporation of interim baseline sound survey data and the assessment approach. The overall approach of which is provided in the RSKA technical note EAF Baseline 2062419-RSKA-TN-010-(02) dated 19 May 2026. This document is unpublished and was shared with NPTC for comment on 15 June 2026. |
| NPTC                | Meeting on 21 July 2026                       | Consultation with NPTC has been undertaken to discuss the updated acoustic assessment, including discussion of assessment methodology, modelling approach, scrap handling facility mitigation evolution.                                                                                                                                                                                               |

## Scope of the Assessment

1.10 The below section details the elements of the EAF Development (including the RM2 Proposed Development) that are scoped in or scoped out of this noise and vibration assessment.

### Elements scoped out of the assessment

1.11 The elements shown in Table 1-2 are not considered to give rise to likely significant impacts as a result of the EAF Project and have therefore not been considered within this assessment.



**Table 1-2 Elements scoped out of the assessment**

| Element Scoped Out                     | Justification                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction noise and vibration       | Construction noise and vibration effects are addressed within the Construction Noise and Vibration Management Plan (2062419-RSKA-CVNMP-002-(04)) Issued June 2025.                                                                                                                                                                                                                                                                                 |
| Vibration during operation phase       | <p>The RM2 Proposed Development has a very low potential to generate any operational vibration emissions.</p> <p>As the nearest residential receptor is more than 500 m away (on Byass Street) from the Site means there is limited potential for vibration to be perceptible.</p> <p>For the reason above, operational vibration and the potential adverse impact from vibration emissions are not considered any further in this assessment.</p> |
| Freight vehicle movements via the port | <p>The RM2 Proposed Development is not expected to have freight deliveries through the Port Talbot port.</p> <p>For the reason above, freight via the Port Talbot port is not considered any further in this assessment.</p>                                                                                                                                                                                                                       |

### Elements scoped into the assessment

- 1.12 The elements shown in Table 1-3 are considered as having the potential to give rise to adverse impacts as a result of the RM2 Proposed Development and are therefore considered within this assessment.

**Table 1-3 Elements scoped into the assessment**

| Element Scoped In                                                                                        | Justification                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Noise and vibration from heavy vehicle movements associated with construction activities.                | Temporary noise impacts associated with construction traffic on the public highway.                                                                                                                                           |
| Noise from road traffic vehicle movements associated with the operation of the RM2 Proposed Development. | Noise generated by operational traffic (heavy good vehicles and passenger vehicle movements etc.) on existing local routes, potentially affecting existing noise sensitive receptors (NSRs).                                  |
| Noise from rail traffic vehicle movements associated with the operation of the RM2 Proposed Development. | Noise generated by operational rail traffic on existing and proposed rail line local routes, potentially affecting existing noise sensitive receptors (NSRs).                                                                 |
| Noise from the operation of the RM2 Proposed Development.                                                | Noise from the operation of the EAF Development including noise arising from the existing unchanged processes on site, as well as the new or altered noise generating equipment associated with the RM2 Proposed Development. |

### Identification of Noise Sensitive Receptors (NSRs)

- 1.13 Receptor sensitivity has been categorised based on professional judgement for a range of receptor types as set out in Table 1-4.



**Table 1-4 Receptor sensitivity**

| Receptor Sensitivity | Type of Receptor                                                                                                                                                                                                       |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High                 | Residential properties (including gardens), educational establishments, hospitals, places of worship, hotels, children's nurseries, nursing homes, quiet areas (designated under noise and soundscape plan 2023-2028). |
| Medium               | Commercial premises, halls, public municipal areas, bars and restaurants, SSSI.                                                                                                                                        |
| Low                  | Industrial premises.                                                                                                                                                                                                   |
| Very low             | All other areas such as those used primarily for agricultural purposes.                                                                                                                                                |

## Noise Sensitive Receptors (NSRs)

- 1.14 The nearest residential NSRs to the development site are identified in Table 1-5 below.

**Table 1-5 NSR Locations**

| NSR Ref. | Description                               | Type of Receptor | Easting | Northing |
|----------|-------------------------------------------|------------------|---------|----------|
| R1       | Residential properties at West End        | Residential      | 277127  | 188899   |
| R2       | Residential properties at Prince Street   | Residential      | 277641  | 188331   |
| R3       | Residential properties at Brynhyfryd Road | Residential      | 278365  | 187088   |
| R4       | Residential properties at Longland Lane   | Residential      | 279273  | 186115   |
| R5       | Residential properties at Eglwys Nunydd   | Residential      | 280190  | 184858   |

- 1.15 Other areas of interest to be considered within this assessment include the nearby Site of Special Scientific Interest (SSSI) and quiet areas as identified in Policy EN10 of the Neath Port Talbot County Borough Council Local Development Plan (2011-2026), as identified in Table 1-6 below.

**Table 1-6 SSSI and Quiet Area Locations**

| NSR Ref. | Description                              | Type of Receptor | Easting | Northing |
|----------|------------------------------------------|------------------|---------|----------|
| R6       | Margam Moors                             | SSSI             | 278040  | 185241   |
| R7       | Eglwys Nunydd reservoir                  | SSSI             | 279744  | 184949   |
| R8       | Vivian Park                              | Quiet Area       | 275023  | 190020   |
| R9       | Talbot Memorial Park / Parc Coffa Talbot | Quiet Area       | 277393  | 189282   |

## Study Areas

- 1.16 The study area for the assessment varies depending on the impacts under assessment, and in accordance with the relevant standards and guidance. A summary of the study areas adopted for the assessment is provided below:

**Rail Noise:** The Study Area considered for the railway noise is up to 300 m from the rail movements within the Site, in line with the quoted ranges within CRN

**Road Traffic Noise:** Off-site receptors within 50 m of any potentially affected route (defined as any route potentially experiencing a road traffic noise level change of +/-1 dB Short Term



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Operational Noise: Noise effects arising from the operation of the EAF Development (including the RM2 Proposed Development), will be limited to 1000 m from the Site.

- 1.17 Figure C 1: Red Line Boundary and Study Area within Appendix C – Figures provides an overview of the site location and a graphical overview of the study areas described above.



## 2 Planning Conditions

2.1 The assessment of EAF Project noise emissions is based on the planning conditions (set out in the Neath Port Talbot County Borough Council decision notice for Application P2024/0711, dated 7 November 2024). Planning conditions are expressed relative to either background sound levels or the established baseline scenario, and are to be applied in accordance with BS 4142:2014+A1:2019.

2.2 The relevant noise-related planning conditions are summarised in Table 2-1 below.

**Table 2-1 Summary of Noise Related Planning Conditions for the EAF Project**

| Condition No. | Noise metric                            | Assessment reference                                              | Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|-----------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 69            | Cumulative rating level ( $L_{Ar,Tr}$ ) | Interim baseline Background sound level ( $L_{A90,T}$ )           | The noise emitted from the development hereby approved (including the development within the outline area defined by condition 1) shall not exceed cumulative rating levels ( $L_{Ar,Tr}$ ) of 5 dB above the interim background sound level $L_{A90,T}$ when measured or predicted at the nearest noise sensitive premises. The measurement and/or prediction of the noise will be carried out in accordance with the methodology contained within BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound.' |
| 70            | Cumulative rating level ( $L_{Ar,Tr}$ ) | Established baseline scenario ambient noise level ( $L_{Aeq,T}$ ) | The noise emitted from the development hereby approved (including the development within the outline area defined by condition 1) shall not exceed the established baseline scenario ambient noise level $L_{Aeq,T}$ when measured or predicted at sensitive receptors as identified in the Environmental Statement (2024). The measurement and/or prediction of the noise will be carried out in accordance with the methodology contained within BS 4142:2014+A1:2019 'Methods for rating and assessing industrial and commercial sound.' |

### Controlling Assessment Criteria

2.3 The EAF Project design criteria based on the inclusion of interim baseline noise data and the incorporation of EAF Project planning conditions and are summarised in Table 2-2 and Table 2-3.

**Table 2-2 EAF Project Design Criterion at Residential Receptors**

| ID | Noise Metric                                           | Daytime period | Night-time period | Assessment Criterion                                                          | Daytime criterion dB | Night-time criterion dB |
|----|--------------------------------------------------------|----------------|-------------------|-------------------------------------------------------------------------------|----------------------|-------------------------|
| R1 | Cumulative rating level <sup>1</sup> (dB $L_{Ar,Tr}$ ) | 50             | 44                | $L_{Ar,Tr} \leq$ Interim baseline background sound level dB $L_{A90,T} + 5$   | $\leq 55$            | $\leq 49$               |
| R2 |                                                        | 44             | 42                |                                                                               | $\leq 49$            | $\leq 47$               |
| R3 |                                                        | 45             | 42                |                                                                               | $\leq 50$            | $\leq 47$               |
| R4 |                                                        | 54             | 50                |                                                                               | $\leq 59$            | $\leq 55$               |
| R5 |                                                        | 52             | 43                |                                                                               | $\leq 57$            | $\leq 48$               |
| R1 | Cumulative noise level <sup>1</sup> (dB $L_{Aeq,Tr}$ ) | 52             | 56                | $L_{Aeq,Tr} \leq$ established baseline ambient sound level dB $L_{Aeq,T}^{2}$ | $\leq 51$            | $\leq 47$               |
| R2 |                                                        | 53             | 53                |                                                                               | $\leq 53$            | $\leq 48$               |
| R3 |                                                        | 55             | 51                |                                                                               | $\leq 52$            | $\leq 47$               |
| R4 |                                                        | 58             | 56                |                                                                               | $\leq 57$            | $\leq 54$               |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |    |    |  |     |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----|----|--|-----|-----|
| R5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | 65 | 60 |  | ≤55 | ≤50 |
| Notes:<br>1: Cumulative rating level refers to the total sound exposure on a sensitive receptor from multiple sources associated with the EAF Development (including the RM2 Proposed Development) (as per condition 69 and 70)<br>2: As detailed within Appendix Table 14 of Appendix 7.1 Noise and Vibration Impact Assessment – Scrap Handling Facility document submitted as part of the hybrid planning application for the construction of a new Electric Arc Furnace (EAF) steel production facility and associated works on land at Port Talbot Steelworks, Port Talbot (Ref: PP-12892667). |  |    |    |  |     |     |

**Table 2-3 EAF Project Design Criterion at SSSI Receptors**

| ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Noise Metric                                            | Daytime period | Night-time period | Assessment Criterion                                                      | Daytime criterion $L_{Ar,Tr}$ dB | Night-time criterion $L_{Ar,Tr}$ dB |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------|-------------------|---------------------------------------------------------------------------|----------------------------------|-------------------------------------|
| R6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Cumulative noise level <sup>1</sup> (dB $L_{Aeq, Tr}$ ) | 49             | 50                | $L_{Ar,Tr} \leq$ Established baseline ambient sound level dB $L_{Aeq, T}$ | $\leq 49$                        | $\leq 50$                           |
| R7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                         | 60             | 57                |                                                                           | $\leq 60$                        | $\leq 57$                           |
| 1: Cumulative rating level refers to the total sound exposure on a sensitive receptor from multiple sources associated with the EAF Development (including the RM2 Proposed Development) (as per condition 69 and 70)<br>2 As detailed within Appendix Table 18 of Appendix 7.1 Noise and Vibration Impact Assessment – Scrap Handling Facility document submitted as part of the hybrid planning application for the construction of a new Electric Arc Furnace (EAF) steel production facility and associated works on land at Port Talbot Steelworks, Port Talbot (Ref: PP-12892667). |                                                         |                |                   |                                                                           |                                  |                                     |

Details of the legislation, policy and guidance considered as part of the overarching assessment are provided within Appendix D – Legislation, Policy and Guidance.



## 3 Interim Baseline Sound Survey

- 3.1 This section provides an overview of the baseline sound survey work undertaken related to the EAF Development (including the RM2 Proposed Development), the methodologies implemented and the results of baseline sound survey undertaken.

### Current Site Condition

- 3.2 Since determination, the operational context at Port Talbot Steelworks has progressed in line with the anticipated interim baseline condition set out within the EAF ES submission.
- 3.3 The post determination noise assessment concerns the application of EAF planning conditions and to the current operational and acoustic environment, in order to inform the detailed design.

### Interim Baseline Survey

- 3.4 Following the shutdown of the 'heavy end' (September 2024), noise monitoring was undertaken under interim baseline conditions (October 2024). The interim baseline survey data is considered representative of the current operational acoustic environment at nearby noise sensitive receptors.
- 3.5 Baseline data was collected by RSK Acoustics Limited (RSKA) at locations representative of residential NSRs R1 – R5 following the shutdown of the 'heavy end' on 30 September 2024. The interim baseline survey was undertaken between Tuesday 1 October and Thursday 24 October 2024.
- 3.6 This interim baseline dataset allows background sound levels to be derived directly from measured data that reflects the existing acoustic environment, rather than relying on the previous baseline data collected during the established baseline period.

### Survey Methodology and Instrumentation

- 3.7 All baseline sound survey monitoring was undertaken in general accordance with BS 4142:2014+A1:2019 Section 6 (Measurement procedure).

#### Instrumentation

- 3.8 All sound level meters used as part of the survey conform to BS EN 61672 1, Class 1, for free-field application. Any filters, where used, will conform to BS EN 61260, Class 1, and sound calibrators to BS EN 60942, Class 1. Any equipment used as part of the site survey will have a calibration history that is traceable to a certified calibration institution. Calibration certificates can be provided on request.

#### Equipment Details

- 3.9 Measurements of the  $L_{Aeq}$ ,  $L_{A90}$  and  $L_{AFmax}$  indices were recorded over consecutive 15-minute periods (see the glossary of this report for an explanation of the noise units used) for the duration of the surveys.
- 3.10 The equipment listed within Table 3-1 provides the equipment for the unattended surveys.

**Table 3-1** *Equipment used during unattended noise survey*

| Receptor | Monitoring Location | Survey Equipment  | Type        | Serial No. | Calibration Date |
|----------|---------------------|-------------------|-------------|------------|------------------|
| R1       | MP1                 | Sound level meter | 01dB Fusion | 15171      | 20/03/2024       |
| R2       | MP2                 | Sound level meter | 01dB Fusion | 15172      | 27/04/2023       |
| R3       | MP3                 | Sound level meter | 01dB Fusion | 14917      | 14/08/2024       |
| R4       | MP4                 | Sound level meter | 01dB Fusion | 14919      | 02/12/2024       |
| R5       | MP5                 | Sound level meter | 01dB Fusion | 14177      | 19/10/2023       |



| Receptor | Monitoring Location | Survey Equipment    | Type       | Serial No. | Calibration Date |
|----------|---------------------|---------------------|------------|------------|------------------|
| -        | All                 | Acoustic calibrator | Rion NC-74 | 34625616   | 16/07/2024       |

3.11 The microphones were fitted within weatherproof windshields and the sound level meters were calibrated before and after the survey to confirm an acceptable level of accuracy.

3.12 No calibration drift above 1.0 dB was recorded at any of the measurement positions.

### Meteorological Conditions

3.13 Weather data including wind speed, direction and rainfall was collected using a Vaisala Weather Transmitter (WXT530) at monitoring location MP1.

3.14 Any measurement that coincided with adverse weather conditions (e.g. during rainfall or high wind speeds (> 5 m/s)) have been excluded from the data analysis and are not considered within the derivation of the background sound level or the subsequent assessment.

### Interim Baseline Survey Results

3.15 Table 3-2 presents the ambient sound level and representative background sound levels during the 'Interim Baseline' period representative of each of the residential assessment locations considered within the EAF ES.

3.16 The ambient sound level presented is the arithmetic average of the log average  $L_{Aeq, T}$  level measured at each measurement location for both daytime (07:00 to 23:00) and night-time (23:00 to 07:00).

3.17 The representative background sound level ( $dB L_{A90, T}$ ) at each measurement location for both daytime (07:00 to 23:00) and night-time (23:00 to 07:00), in line with the guidance provided within BS 4142:2014+A1:2019. This excludes periods where weather conditions were unsuitable for noise monitoring.

**Table 3-2 'Interim Baseline' Ambient and Background Sound Level Results**

| Receptor | Ambient Sound Level,<br>$dB L_{Aeq, T}$ |            | Representative Background Sound<br>Level, $dB L_{A90, T}$ |            |
|----------|-----------------------------------------|------------|-----------------------------------------------------------|------------|
|          | Daytime                                 | Night-time | Daytime                                                   | Night-time |
| R1       | 61                                      | 58         | 50                                                        | 44         |
| R2       | 53                                      | 50         | 44                                                        | 42         |
| R3       | 56                                      | 53         | 45                                                        | 42         |
| R4       | 63                                      | 59         | 54                                                        | 50         |
| R5       | 67                                      | 61         | 52                                                        | 43         |

3.18 Representative background sound levels were derived on a per-location basis for each measurement position representative of receptors R1–R5. In accordance with BS 4142:2014+A1:2019 Subclause 8.1.4, the representative value for each period was not taken automatically as either the minimum or the modal value, but was established through professional judgement having regard to the full range of measured  $L_{A90}$  levels, the time history, and the statistical distribution of the data across the survey.

3.19 The adopted representative value was not set above the modal or mean value, and is typically selected below this depending on the assessment location. Data recorded during wind speeds in excess of 5 m/s were excluded prior to analysis to avoid wind-induced influence on the microphone. Time history plots and further details of the statistical analysis undertaken to derive the representative background sound level at each NSR location are provided within Appendix E – Interim Baseline Survey Data Analysis.



## Interim Baseline Survey Summary

- 3.20 The measured data demonstrates that background and ambient sound levels now differ from those present during the established baseline period, reflecting the removal of 'heavy end' activities. The degree of change varies by monitoring location, primarily depending on proximity to former 'heavy end' operations.
- 3.21 The interim baseline monitoring has also enabled background sound levels ( $L_{A90,T}$ ) to be derived directly from measurements of the prevailing site conditions. This provides refinement over the EAF ES assessment, which relied on conservative proxy derived representative background sound levels.
- 3.22 The monitoring also enabled further analysis of the prevailing site conditions in relation to  $L_{AFmax}$  events during the interim baseline period. The updated data collected will allow for a refinement in both the understanding of the existing acoustic environment and any contextual assessment undertaken in line with BS 4142:2014+A1:2019.

## Implications for Assessment

- 3.23 The assessment continues to follow the EAF ES methodology, with criteria expressed relative to background sound levels under the applicable planning conditions.
- 3.24 The updated background levels affect the available headroom for EAF noise emissions compared with the conservative assumptions previously used.
- 3.25 At receptor R1, where background levels have reduced more substantially, the assessment framework quantifies the change in the acoustic environment. At receptors R2 to R5, where ambient noise is dominated by non-Tata Steel sources and remains similar to established baseline conditions, the updated background sound levels provide additional absolute headroom without increasing the risk of adverse effects (i.e. still within the EAF ES approach to impact/significance).

## Soundscape

The need for a soundscape assessment was identified during consultation with NPTC on the noise and vibration impact assessment. The soundscape assessment presented in Appendix 7.4 – Soundscape of the EAF ES remains applicable, with good acoustic quality secured through good acoustic design of the EAF Development.



## 4 Assessment Methodology

### Assessment and Criteria

#### Residential Assessment and Criteria

- 4.1 The operational noise impact assessment has been undertaken in general accordance with BS 4142:2014+A1 2019, which is based on the comparison of rating levels during the site operation with respect to the background sound level prevailing at representative NSRs. The assessment must also provide an understanding of the context in which the sound occurs / will occur to establish the significance of the impact.
- 4.2 The EAF Project design criteria based on the inclusion of interim baseline noise data and the incorporation of EAF Project planning condition 69 and are summarised in Table 2-2.

#### SSSI Assessment and Criteria

- 4.3 The operational assessment is based on the guidance within the IECS 2009 report (Cutts et al., 2009) and the review of thresholds provided in the Natural England 2018 document, which considers that a noise threshold of 55 dB  $L_{Aeq, T}$  is acceptable for the assessment of nesting and wintering birds within the SSSI. Such a noise level is an indication of low noise level effect in the Natural England, 'A Review of the Effects of Noise on Birds – Version 1' 2018 guidance.
- 4.4 In addition, discharge of Condition 70 requires that the development does not give rise to noise emissions that exceed the established baseline scenario ambient noise level ( $L_{Aeq, T}$ ) when measured or predicted at the identified sensitive receptors. This requirement provides the primary compliance framework for the SSSI assessment presented within this report.

#### Quiet Area Assessment and Criteria

- 4.5 Although there is no defined applicable criteria for the quiet areas, a level that does not exceed 50 dB  $L_{Aeq, T}$  is defined within BS 8223 as desirable for external spaces. Based on this, for the purposes of the assessment a level of 50 dB  $L_{Aeq, T}$  has been used as a noise threshold for the onset of adverse impacts.

### Embedded Mitigation Evolution (Outline Application to Detailed RM Application)

- 4.6 At outline design stage, a barrier up to 15 m high along the railside boundary of the scrap handling area was identified as a mitigation measure and included in the Environmental Statement (ES), reflecting the limited design detail then available.
- 4.7 At outline design stage, limited design detail meant mitigation had to address activities at a high level, and continuous screening provided the necessary flexibility. Detailed design has since confirmed the scrap handling philosophy allowing mitigation to be targeted at those specific activities and activity locations.
- 4.8 Following delivery by rail, containers are unloaded using a reach stacker, tipped within unloading areas, and the material transferred to stockpiles and 100-t tippers. Tipping, both from container to ground or stockpile and from stockpile to tipper, is the dominant noise source. These activities sit adjacent to localised screening, provided by stacked containers (typically two high by three wide) or retained stockpiles, which screen receptors to the east.
- 4.9 Propagation modelling indicates that, with this localised screening in place, the railside barrier would not materially reduce noise levels at the nearest receptors, as the dominant sources are already screened at source.
- 4.10 While the railside barrier would reduce noise from secondary activities such as train movements and reach stacker movements, these are not significant contributors and do not affect the assessment outcome.



- 4.11 The evolution from a 15 m railside barrier to localised screening reflects the progression from a precautionary outline measure to a deliverable solution aligned with the proposed operation of the scrap handling facility. By controlling the dominant sources at or close to source, the updated approach achieves comparable acoustic performance at the nearest sensitive receptors.

## Operational Phase Embedded Mitigation Measures

- 4.12 The scrap handling area is an outdoor operation with no building enclosure. Noise control is achieved through the following embedded measures:
- At scrap unloading positions, 25-tonne scrap containers are arranged as effective acoustic barriers, stacked 2 containers high and 3 containers wide, positioned between the unloading activity and the nearest sensitive receptors. These container walls provide screening attenuation to receptor locations during the noisiest phase of operation (tipping/unloading). Unloading of containers is to occur as close to containers as operationally possible, with excavator removing scrap from location prior to next container being unloaded.
  - The loading of 100-tonne tipper lorries is screened from receptors by the strategic positioning of scrap stockpiles at a minimum height of 5 metres, or by container walls arranged 2 containers high and 3 containers wide, between the loading operation and receptor directions. Loading of 100-tonne tipper to occur no more than 5 meter distance from the stockpile. Both will act as effective noise barriers.
  - The Consteel conveyor system is enclosed within a canopy near the EAF building, providing attenuation of conveyor noise and scrap-on-conveyor noise in the vicinity of the melt shop (part of the EAF Development).
  - All mobile plant (excavators, reach stackers, tipper lorries) shall be procured or specified with reference to declared sound power levels. Engines shall be fitted with manufacturer-standard exhaust silencers maintained in good condition.
  - All site-operated mobile plant shall be fitted with broadband (white noise) reversing alarms in place of tonal beepers, to eliminate tonal character at receptors.
  - The facility layout has been designed to maximise the screening benefit of container stacks and stockpiles between the principal noise sources and the nearest sensitive receptors.
  - A preventive maintenance schedule shall be maintained for all noise-critical plant and infrastructure (e.g. excavator and reach stacker exhaust silencers, broadband reversing alarms on all mobile plant, tipper lorry body condition (loose panels, worn hinges generating rattle), container condition (structural integrity for use as screening barriers), conveyor enclosure near EAF (panels, seals, doors)).
- 4.13 Relevant layout drawings for the scrap handling facility are provided in:
- Area 25 GA Drawing No. EAF-LAW-25-X-DR-A-060001,
  - Sections drawing EAF-LAW-25-X-DR-A-900700
  - Scrap Layout Plan drawing EAF-LAW-25-X-DR-A-900005
- 4.14 The above embedded mitigation is discussed as part of the ONVMP storyboard, provided in Appendix C of the ONVMP.

## Operational Noise Modelling

- 4.15 To determine the predicted impact at the nearest noise sensitive receptors, a computer sound propagation model has been prepared. This uses a combination of noise source assumptions, including consideration of:
- Hours of operation
  - Mode of operation (e.g. continuous)
  - Operational load (e.g. 100% load, number of movements)



- Location of sound sources
- Specific source emission levels
- Any character adjustment (impulsive, tonal, intermittent etc.)

- 4.16 The noise source assumptions included within the propagation model are detailed below in Section 4.4.
- 4.17 All sound propagation predictions have been carried out using SoundPLAN v 9.1. An overview of the sound propagation modelling parameters is provided in Table 4-1.

**Table 4-1 Modelling parameters**

| Item                      | Setting                                                                                                                                                                                                                                                                                                                 |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Algorithm                 | BS ISO 9613-2 (2024).                                                                                                                                                                                                                                                                                                   |
| Ground absorption         | The ground absorption across the site has been set with an absorption coefficient of 0.0, representing hard, reflective surfaces.<br><br>Beyond the site boundary, ground absorption settings have either been determined as hard (0.0), mixed (0.5) or soft (0.7) following a desktop review of the ground conditions. |
| Meteorological conditions | 10 degrees Celsius<br>70 % humidity<br>Wind from source to receiver                                                                                                                                                                                                                                                     |
| Receptor height           | Ground Floor level set at 1.5 m above external ground level, first floor is set to 4.0m above external ground level.                                                                                                                                                                                                    |
| Site Layout               | Site layout is provided in within the planning pack, as detailed in:<br>Scrap Layout Plan: Drawing number - EAF-LAW-X-X-DR-A-900005                                                                                                                                                                                     |
| Character Corrections     | For the purpose of the noise impact assessment against BS 4142:2014+A1 2019 criteria a character penalty of +3 dB has been applied to the activity for impulsivity relating to the unloading and loading of scrap materials which is has the potential to be perceptible at some residential receptors.                 |
| Terrain                   | LiDAR DTM with a 1-metre resolution has been imported into the model.                                                                                                                                                                                                                                                   |
| Assessment Periods        | Daytime 0700 – 2300 hours<br>Night-time 2300 – 0700 hours                                                                                                                                                                                                                                                               |

## Modelling Scenarios – Scrap Handling Facility

### Overview of Modelling Approach

- 4.18 The latest noise modelling for the EAF Project has been undertaken to assess a series of defined scrap handling scenarios associated with the proposed scrap handling facility and associated movements to the EAF and Consteel processing areas. The modelling has been undertaken using a worst case operational approach, consistent with the methodology adopted in the previous assessment, to ensure that the potential impact from the activity is robustly assessed.
- 4.19 Each modelling scenario has been assessed for both daytime and night time periods and has been evaluated at all identified residential, ecological (SSSI) and designated quiet area receptors. The assessment presents only the worst-case predicted noise levels for each scenario at each receptor.

### Common Assumptions Across All Scrap Scenarios

- 4.20 Unless stated otherwise, each scenario includes the following activities occurring concurrently for the relevant scrap type(s) and stockpile location per assessment period:



- One train movement in and out of the site
- Offloading of scrap materials from containers using a reach stacker and rotating reach stacker
- Movement of scrap material from the container offload location to the stockpile using a 30-tonne excavator and/or material handler
- Loading of scrap material from the stockpile into a 100-tonne tipper using a 30-tonne excavator and/or material handler

Haulage of scrap using a 100-tonne tipper from the stockpile to either of the below depending on the scrap material type:

- the Consteel building canopy
- the Consteel stockpile at the EAF
- Scrap handling activities at the Consteel building and/or Consteel stockpile using a 30-tonne excavator and material handler

### Scrap Types Considered

- 4.21 Following the processing of noise source data, either collected by RSKA or provided by The Applicant, associated with the loading, unloading, handling and movement of scrap materials, the modelling and assessment have grouped scrap into two broad categories. These categories are based on the relative similarity of noise emission levels generated during handling activities of each scrap type.
- 4.22 The modelling scenarios consider the processing and movement of the following scrap types:
- 0A / P&S, Bushelling, and Downstream Operations (DSO) (including material within HBI and pig iron)
  - 3B shred and super-shred
- 4.23 Scrap types are described below:
- 3B: Shredded scrap
  - Bushelling: Scraps of steel left over from manufacturing process
  - Home / internal scrap / DSO (Downstream Operations): Scrap from the production process either at Port Talbot or from sister sites across the country. Only that which is from outside Port Talbot will be delivered by train - to include sheet, crops (cut ends of coils), coil, tubes and bobbins (coil trimmings wound into a bundle)
  - 0A / P&S (Plate & Structural): Heavy-duty scrap. Also called 0A or Demo
  - HBI (Hot Briquetted Iron): Hot briquetted iron. It is the densified briquette form of direct reduced Iron
  - Pig Iron: Intermediate Iron product created from smelting Iron ore
- 4.24 Current assumptions indicate that approximately 52% of the scrap mix comprises 0A / , P&S, bushelling and DSO (including material within HBI and pig iron), which are typically associated with slightly higher noise emissions during material movement, while the remaining 48% comprises 3B shredded and super-shred scrap, which generates relatively lower noise levels.
- 4.25 As a result, the reported modelling outcomes represent a worst-case upper bound, with actual noise emissions expected to vary over time in response to changes in the prevailing scrap mix, and to be lower during periods dominated by 3B shredded and super-shred materials.
- 4.26 For the scrap handling facility, the identified scrap types are assumed to be processed and moved within the scrap stockpile locations (see the Scrap Layout Plan, drawing reference 900005, and the Unit 25 Proposed GA (General Arrangement), drawing reference 060001).



- 4.27 Planned operations within the OBM yard has also been included within the assessment. Within this area the modelling assumes that the worst-case scrap type (0A / P&S) is processed and handled, in order to provide a conservative assessment.

### Operational Noise Source Assumptions

- 4.28 Not all plant items and activities will operate simultaneously. However, the assumptions adopted ensure that the assessment captures the worst-case combined noise emissions.
- 4.29 The noise source assumptions used to inform the propagation model and assessment are provided in Table 4-2. These assumptions have been developed to represent reasonable worst-case scenarios, including the potential for simultaneous operation of plant and activities within specific areas of the site.

**Table 4-2 Plant Noise Emission Assumptions**

| Plant                                                                                                                 | Working Areas                                              | Quantity | On-time (%) | Ref. L <sub>WA</sub> (dB) |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------|-------------|---------------------------|
| Reach Stacker                                                                                                         | OBM; Container unloading areas                             | 1        | 80          | 106 <sup>1</sup>          |
| Reach Stacker (Rotating)                                                                                              | OBM; Container unloading areas                             | 1        | 80          | 106 <sup>1</sup>          |
| Excavator (30t e.g. CAT980)                                                                                           | Scrap handling areas; Stockpiles; Tipper loading; Consteel | 1        | 60          | 112 <sup>2</sup>          |
| Material Handler (5m <sup>3</sup> grab)                                                                               | Scrap handling areas; Stockpiles                           | 1        | 60          | 108 <sup>2</sup>          |
| 100 t Tipper or 45 t Tipper                                                                                           | Tipper haul route, stockpile areas                         | 2        | 100         | 108 <sup>2</sup>          |
| Note<br>1 based on manufacturers data with enhanced noise mitigation<br>2 Assumed based on typical manufacturers data |                                                            |          |             |                           |

**Table 4-3 Event / Material Movement Noise Emission Assumptions**

| Plant                                    | Activity                               | Number of events (per assessment period) | On-time (%) | Ref. L <sub>WA</sub> (dB) |
|------------------------------------------|----------------------------------------|------------------------------------------|-------------|---------------------------|
| Reach Stacker / Reach Stacker (Rotating) | Unloading 25 t container with OA       | 5                                        | -           | 116 <sup>1</sup>          |
|                                          | Unloading 25 t container with DSO      | 5                                        | -           | 115 <sup>1</sup>          |
|                                          | Unloading 25 t container with 3B shred | 5                                        | -           | 112 <sup>1</sup>          |
| Excavator (30t e.g. CAT980)              | Loading tipper with OA                 | 5                                        | -           | 116 <sup>1</sup>          |
|                                          | Loading tipper with DSO                | 5                                        | -           | 115 <sup>1</sup>          |
|                                          | Loading tipper with 3B shred           | 5                                        | -           | 112 <sup>1</sup>          |



| Plant                                                                                                                                     | Activity                                                   | Number of events (per assessment period) | On-time (%) | Ref. LwA (dB)    |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------|-------------|------------------|
| Excavator (30t e.g. CAT980)                                                                                                               | Scrap handling areas; Stockpiles; Tipper loading; Consteel | 1                                        | 60          | 112 <sup>2</sup> |
| Material Handler (5m <sup>3</sup> grab)                                                                                                   | Scrap handling areas; Stockpiles; Tipper loading; Consteel | n/a                                      | 60          | 108 <sup>1</sup> |
| <b>Note</b><br>1 Based on measurements undertaken by both RSKA and Tata Steel UK Limited<br>2 Assumed based on typical manufacturers data |                                                            |                                          |             |                  |

- 4.30 All noise source assumptions have been derived following review of available information or project meetings with The Applicant. All assumptions have been reviewed and agreed as appropriate by The Applicant.

### Operational Traffic Assumptions

- 4.31 SCP Transport, who are the appointed consultant that undertook the traffic assessment for the EAF ES (November 2024), have confirmed that 'the EAF Development (including the RM2 Proposed Development) will result in an overall reduction in road traffic vehicle numbers, when compared with the established baseline. The overall reduction in vehicle movements has been quantified by SCP Transport and equates to -2697 AAWT, of which -190 are HGV's (113 HGV's associated with scrap metal deliveries and 77 associated with coal deliveries), the remainder being light vehicles or cars.

### Operational Rail Assumptions

- 4.32 The operational rail assessment considers the potential for changes to noise emissions generated through the transportation of materials along the rail network.
- 4.33 The operational rail data provided by The Applicant details that mainline rail operations are anticipated to occur 24 hours a day and seven days a week, apart from during routine network outages e.g. 22.00 Saturday to 07.00 Sunday. Following rail traffic entering the site, on-site rail movements are expected to occur 24 hours a day and seven days a week.
- 4.34 Specific details of when rail delivery of scrap will occur during any given day is not available at this stage, as such it is assumed that deliveries will occur evenly over the day or night-time period.
- 4.35 It is anticipated that rail traffic will comprise up to 16 train movements (eight trains) in a 24-hour period. As a worst case scenario for the purposes of assessment, it has been assumed that there could be up to 18 train movements (nine trains) in a 24-hour period.
- 4.36 The CRN calculation used within the assessment is based on the following:
- A typical dwelling at 25 m from the railway line
  - Train speed 75 km/h
  - Rolling stock Class 60 diesel locomotives
  - Flat ground propagation
  - A façade correction of 2.5 dB (A)
  - 14 total number of trains of a particular type passing the reception point during the period 0600-2400 hours (Qday)



- Four total number of trains of a particular type passing the reception point during the period 2400-0600 hours (Qnight)

4.37 The BS4142 calculation used within the assessment is based on the following worst-case scenario:

- Four total on-site rail movements (inbound and outbound) within any 60-minute daytime (0700-2300 hours)
- Two total on-site rail movements (inbound and outbound) within any 15-minute night-time period (2300-0700 hours)



## 5 Noise Assessment and Results

### Operational Assessment

- 5.1 The RM2 Proposed Development will not operate separately from the EAF Development (including full and outline planning components). If only the RM2 Proposed Development was considered, noise from this activity alone would remain within the levels presented below and would not introduce any additional significant effects.
- 5.2 The consented noise limits apply to the EAF Development (including the RM2 Proposed Development), which includes:
- The EAF
  - The scrap handling facility
  - National Grid Substation
- 5.3 The cumulative impacts include contribution from all aspects of the EAF Development (including the RM2 Proposed Development).

### Residential Assessment – interim baseline assessment (Condition 69)

- 5.4 Predicted results for the worst-case operational scenario associated with the operation of the EAF Development (including the RM2 Proposed Development) during daytime hours are provided within Table 5-1.
- 5.5 The specific sound level results are also provided in graphical form as a contour noise map in Appendix C – Figures.

*Table 5-1 Predicted Noise Levels (Daytime 07:00-23:00 hours)*

| ID | Specific Sound Level    | Rating Level           | Interim Baseline Background Sound Level | Criterion                   | Rating Level vs Criterion |
|----|-------------------------|------------------------|-----------------------------------------|-----------------------------|---------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Ar, Tr</sub> | dB L <sub>A90,T</sub>                   | dB L <sub>A90,T</sub> + 5dB | dB L <sub>Ar, Tr</sub>    |
| R1 | 40                      | 43                     | 50                                      | 55                          | -12                       |
| R2 | 39                      | 42                     | 44                                      | 49                          | -7                        |
| R3 | 40                      | 43                     | 45                                      | 50                          | -7                        |
| R4 | 44                      | 47                     | 54                                      | 59                          | -12                       |
| R5 | 34                      | 37                     | 52                                      | 57                          | -20                       |

- 5.6 Review of the results provided in Table 5-1 indicates that the predicted rating levels from the EAF Development (including the RM2 Proposed Development) during daytime hours are below the background sound level + 5 dB at all NSRs. This is an indication of the specific source having a low impact, depending on the context.
- 5.7 Predicted results for the worst case operational scenario associated with the operation of the EAF Development (including the RM2 Proposed Development) during night-time hours are provided within Table 5-2.



**Table 5-2 Predicted Noise Levels (Night-time 23:00-07:00 hours)**

| ID | Specific Sound Level    | Rating Level           | Interim Baseline Background Sound Level | Criterion                   | Rating Level vs Criterion |
|----|-------------------------|------------------------|-----------------------------------------|-----------------------------|---------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Ar, Tr</sub> | dB L <sub>A90,T</sub>                   | dB L <sub>A90,T</sub> + 5dB | dB L <sub>Ar, Tr</sub>    |
| R1 | 40                      | 43                     | 44                                      | 49                          | -6                        |
| R2 | 40                      | 43                     | 42                                      | 47                          | -4                        |
| R3 | 42                      | 45                     | 42                                      | 47                          | -2                        |
| R4 | 45                      | 48                     | 50                                      | 55                          | -7                        |
| R5 | 36                      | 39                     | 43                                      | 48                          | -9                        |

5.8 Review of the results provided in Table 5-2 indicates that the predicted rating levels from the EAF Development (including the RM2 Proposed Development) during night-time hours are below the background sound level + 5 dB at all NSRs. This is an indication of the specific source having a low impact, depending on the context.

5.9 Based on the above, the assessment is shown to achieve the noise limits detailed within planning condition 69 of the EAF hybrid planning permission.

#### Residential Assessment – established baseline assessment (Condition 70)

5.10 Predicted results for the worst-case operational scenario associated with the operation of the EAF Development (including the RM2 Proposed Development) during daytime hours are provided within Table 5-3.

**Table 5-3 EAF Project Predicted Noise Levels (Daytime 07:00-23:00 hours)**

| ID | Specific Sound Level    | Established Baseline Ambient Noise Level | Specific Sound Level vs Criterion |
|----|-------------------------|------------------------------------------|-----------------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Aeq,T</sub>                    | dB L <sub>Aeq, Tr</sub>           |
| R1 | 40                      | 51                                       | -11                               |
| R2 | 39                      | 53                                       | -14                               |
| R3 | 40                      | 52                                       | -12                               |
| R4 | 44                      | 57                                       | -13                               |
| R5 | 34                      | 55                                       | -21                               |

5.11 Review of the results provided in Table 5-3 indicates that the predicted specific sound levels from the EAF Development (including the RM2 Proposed Development) achieve the planning condition 70 criteria for daytime at all NSRs.

5.12 Predicted results for the worst-case operational scenario associated with the operation of the EAF Development (including the RM2 Proposed Development) during night-time hours are provided within Table 5-4.

**Table 5-4 EAF Project Predicted Noise Levels (Night-time 23:00-07:00 hours)**

| ID | Specific Sound Level    | Established Baseline Ambient Noise Level | Specific Sound Level vs Criterion |
|----|-------------------------|------------------------------------------|-----------------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Aeq,T</sub>                    | dB L <sub>Aeq, Tr</sub>           |
| R1 | 40                      | 47                                       | -7                                |
| R2 | 40                      | 48                                       | -8                                |



| ID | Specific Sound Level    | Established Baseline Ambient Noise Level | Specific Sound Level vs Criterion |
|----|-------------------------|------------------------------------------|-----------------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Aeq, T</sub>                   | dB L <sub>Aeq, Tr</sub>           |
| R3 | 42                      | 47                                       | -5                                |
| R4 | 45                      | 54                                       | -9                                |
| R5 | 36                      | 50                                       | -14                               |

- 5.13 Review of the results provided in Table 5-4 indicates that the predicted specific sound levels from the EAF Development (including the RM2 Proposed Development) achieve the planning condition 70 criteria for night-time at all NSRs.

### Context Discussion

- 5.14 Following the initial estimate of impact, the following contextual considerations have been identified:
- Scrap material handling and movement already occurs onsite during both day and night-time periods. During the night-time, the existing scrap material can be moved from stockpiles to the scrap handling area behind the existing BOS plant up to four times per hour. The proposed Scrap Facility will move scrap from the handling areas to the stockpile behind the existing BOS plant at an equivalent frequency to the existing activity
  - The existing site operates using similar mobile plant items and scrap handling activities during both the day and night-time (albeit at a lesser frequency). Based on night-time observations of the existing activity from nearby NSRs, similar existing activities to those proposed are audible at times
  - The scrap handling facility is to implement a wide range of embedded mitigation measures to reduce potential noise impacts and an environmental management plan that includes measures to ensure that the activity is undertaken in accordance with Best Practicable Means
  - Both historically and up until the present day, the site and surrounding area has been subject to industrial activities on the Land at Port Talbot steelworks in Port Talbot both from Tata Steel UK Limited activities, as well as various other existing industrial activities
  - The highest calculated specific sound level (45 dB L<sub>Aeq, Tr</sub>) at the worst affected façade of the identified NSRs falls below the relevant criteria in World Health Organisation and BS8233 guidelines with respect to noise levels in external amenity areas
- 5.15 Based on the above, it is considered that with an initial indication of low adverse impact (less than +5 dB above background) the EAF Development (including the RM2 Proposed Development) and therefore the RM2 Proposed Development is unlikely to result in significant adverse impacts based on the context of the area surrounding the Port Talbot steelworks site.

### Uncertainty

- 5.16 Uncertainty has been limited where possible through the monitoring methodology and conservative assessment approach. It is considered unlikely that uncertainty would adversely impact the assessment outcomes.
- 5.17 The following measures have been taken to reduce uncertainty:
- Use of monitoring equipment in accordance with section 5 of BS 4142:2014+A1:2019, using Class 1 instrumentation.
  - Measurement procedures followed in general accordance with section 6 of BS 4142: 2014+A1: 2019 with all precautions taken to minimize interference whilst maintaining the security of both personnel and monitoring equipment. Weather conditions were monitored throughout the duration of the survey and the exclusion of weather affected data from the assessment.



- Use of computer sound propagation software implementing appropriate and widely accepted international standards e.g. ISO 9613 to calculate sound propagation levels
- Incorporation of accurate design layouts and plant noise emission assumptions derived with input from the EAF Project team.
- Assessment of a conservative operational scenario assuming concurrent operation of all proposed fixed plant items and HGV and rail movements.

## Operational Traffic Assessment

- 5.18 As specific road traffic distribution data is not available, we have provided a qualitative assessment based on the stated reduction in overall road traffic movements confirmed by SCP Transport.
- 5.19 For a significant effect to be generated by road traffic noise associated with the development, an increase to approximately double road traffic vehicle movements would be required, resulting in ~3 dB increase in road traffic noise emissions.
- 5.20 The stated reduction to operational road traffic vehicle movements is expected to result in road traffic noise emissions that would be quieter than the road traffic noise generated during the established baseline at all noise sensitive receptors. The impact of operational traffic noise is therefore considered negligible at all receptors and no mitigation is deemed necessary.

## Operational Rail Assessment

- 5.21 Calculation of noise levels are predicted to be 42 dB LAeq, 18 hour and 39 dB LAeq, 8 hour during the day and night-time, respectively. The calculation is based on a typical worst case scenario of a single two story dwelling at 25 m from the track with clear line of sight to the passing train. Any dwelling at further distance to this would be subject to lower noise levels.
- 5.22 Based on the above calculation, the levels are shown to be well below the specified day-time level of 68 dB LAeq, 18 hour and specified night-time level of 63 dB LAeq, 6 hour set out in The Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996. The impact of railway noise on the existing rail network is therefore considered negligible.

## SSSI Assessment

- 5.23 Table 5-5 below provides the predicted results for the EAF Development (including the RM2 Proposed Development) at nearby SSSI receptors.

**Table 5-5 SSSI Scrap Handling Facility Predicted Noise Levels**

| ID | Daytime criterion       | Night-time criterion    | Specific Sound Level | Specific Sound Level vs Daytime Criterion | Specific Sound Level vs Night-time Criterion |
|----|-------------------------|-------------------------|----------------------|-------------------------------------------|----------------------------------------------|
|    | dB LAeq, T <sup>1</sup> | dB LAeq, T <sup>1</sup> | dB LAeq, Tr          | dB LAeq, T                                | dB LAeq, T                                   |
| R6 | 49                      | 50                      | 45                   | -4                                        | -5                                           |
| R7 | 60                      | 57                      | 40                   | -20                                       | -17                                          |

1 As detailed within Appendix Table 18 of Appendix 7.1 Noise and Vibration Impact Assessment – Scrap Handling Facility document submitted as part of the hybrid planning application for the construction of a new Electric Arc Furnace (EAF) steel production facility and associated works on land at Port Talbot Steelworks, Port Talbot (Ref: PP-12892667).

- 5.24 Average predicted noise levels during the operational phased of the EAF Development (including the RM2 Proposed Development) are in the order of 40-45 dB LAeq, T. Although the applicable criteria for ecological receptors are concerned with the impact of construction related noise, predicted noise levels are considerably below the planning condition criteria and previously adopted 55 dB(A) threshold and consequently considered not significant.



- 5.25 Maximum predicted noise levels during the operational scenario at the ecological receptors range between 63 dB and 68 dB  $L_{AFmax}$ . Based on an analysis of the measured  $L_{AFmax}$  events during the baseline survey, both SSSI areas are subject to levels ( $>75$  dB  $L_{AFmax}$ ), in excess of the predicted  $L_{AFmax}$  levels.

### SSSI maximum noise level (dB $L_{AFmax}$ ) review

- 5.26 The updated modelling predicts maximum noise levels ( $L_{AFmax}$ ) of between 63 and 68 dB(A) at the identified SSSI locations. In interpreting these results, it is important to apply the same ecological assessment framework and contextual approach set out in the previous assessment, which was informed by guidance from the Institute of Estuarine and Coastal Studies (IECS, 2009) and Natural England (2018). That guidance recognises that potential disturbance effects are influenced not only by absolute noise level, but also by factors such as duration, frequency, regularity and the existing acoustic environment, with noise in the 55–70 dB(A) range typically associated with low to moderate disturbance, depending on context.
- 5.27 Baseline noise surveys undertaken at the SSSI locations demonstrate that the existing acoustic environment already includes frequent maximum noise events exceeding the updated predicted levels, with baseline events commonly above 70–75 dB  $L_{AFmax}$ . Against this baseline, the predicted maximum events of 63–68 dB  $L_{AFmax}$  would not represent a new or dominant noise source and would fall within the range of established and habitual noise conditions to which receptor species are already exposed.
- 5.28 On this basis, and in line with the conclusions of the previous assessment, the updated maximum noise levels at the SSSI locations are considered unlikely to give rise to significant adverse effects on ecological receptors.

### Quiet Area Review

- 5.29 Table 5-6 below provides the predicted results for the EAF Development (including the RM2 Proposed Development) at nearby quiet areas.

**Table 5-6 Quiet Area Scrap Handling Facility Predicted Noise Levels**

| ID | Specific Sound Level | Specific Sound Level vs Night-time Criterion |
|----|----------------------|----------------------------------------------|
|    | dB $L_{Aeq, T}$      | dB $L_{Aeq, T}$                              |
| R8 | 40                   | -10                                          |
| R9 | 37                   | -13                                          |

- 5.30 Average predicted specific sound levels during the operational phased of the the EAF Development (including the RM2 Proposed Development) are in the order of 35-40 dB  $L_{Aeq, T}$  (36 dB  $L_{Aeq, T}$  and 38 dB  $L_{Aeq, T}$  at N8 and R9, respectively).
- 5.31 Although the there is no defined applicable criteria for the quiet areas, predicted noise levels are expected to be significantly lower than those deemed to be desirable for external spaces (e.g. the noise level does not exceed 50 dB  $L_{Aeq, T}$ ). Furthermore, due to the proximity of the strategic road network, it is likely that the predicted noise levels are also below those of the existing acoustic environment.
- 5.32 Therefore, it is considered unlikely that the predicted levels from the EAF Development (including the RM2 Proposed Development) would reduce the perceived acoustic quality of the quiet areas or result in significant adverse effects.



## 6 Mitigation

### Operational Noise and Vibration Management Plan

- 6.1 In addition to the embedded mitigation measures outlined in Section 4.3, the RM2 Proposed Development will implement an Operational Noise and Vibration Management Plan (ONVMP), which will set out the overarching noise control strategy. The appointed service provider will be contractually required by Tata Steel to implement the ONVMP.
- 6.2 This requirement will be secured through an appropriately worded condition attached to the Reserved Matters (RM) planning permission.
- 6.3 The ONVMP is provided at Appendix 5.2 of the Environmental Statement (ES) Statement of Compliance (SoC).



## 7 Conclusions

- 7.1 RSK Acoustics Limited (RSKA) has undertaken a noise and vibration assessment for The Applicant to support the Reserved Matters (RM) planning application for the scrap metal handling facility and associated scrap yards at Port Talbot Steelworks, Port Talbot, South Wales.
- 7.2 The assessment considers operational noise and vibration, including the operational scrap handling activities, operational road traffic and rail movements, and potential effects at nearby noise sensitive receptors (NSRs). For the avoidance of doubt, where the report refers to “thresholds”, these are applied only in the context of the relevant EAF Project planning conditions and the associated assessment framework (primarily BS 4142:2014+A1:2019), and are not intended to introduce additional standalone limits beyond those consent requirements.
- 7.3 On the basis of the 2024 interim baseline survey data, the agreed modelling assumptions and the embedded mitigation incorporated into the RM2 Proposed Development, the assessment indicates that:
- For residential NSRs, the predicted operational rating levels associated with the scrap handling facility are below (or equal to) the applicable planning condition (69 and 70) criterion at all assessed locations, with assessment in line with BS 4142:2014+A1:2019 indicating a low impact, when considered in context
  - The contextual review (including the industrial setting, the presence of similar existing activities, and the package of embedded mitigation and management measures) supports the conclusion that the Proposed Development is unlikely to give rise to significant adverse noise effects at residential receptors
  - Predicted noise levels at the assessed SSSI receptors are below the criteria adopted for this assessment and indicate that the Proposed Development is unlikely to result in significant adverse effects
  - Predicted noise levels at the assessed quiet areas are substantially below levels considered desirable for external amenity areas and are also likely to be below the existing acoustic environment; significant adverse effects are therefore unlikely
  - Cumulative effects have been considered and the Proposed Development is predicted to comply with the relevant planning condition criteria for both daytime and night-time periods at all assessed NSRs
- 7.4 Overall, the RM2 Proposed Development is considered capable of being operated in compliance with the applicable noise-related planning conditions (69 and 70), subject to implementation of the embedded mitigation measures and both the Construction Noise and Vibration Management Plan (CNVMP) and Operational Noise and Vibration Management Plan (ONVMP). The ONVMP will be secured through a suitably worded condition attached to the Reserved Matters (RM) planning permission, with its implementation contractually required between The Applicant and the appointed service provider.



## Appendix A – References

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## Appendix B – Glossary

| Term                                                  | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------|-----------|----------------------|-----------|----------------|----------|--------------------------|----------|---------------------------|----------|--------------|----------|---------------------|---------|------------------------------------|
| <b>Acoustic environment</b>                           | Sound from all sources as modified by the environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>Ambient sound</b>                                  | The total sound at a given place, usually a composite of sounds from many sources near and far.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>A-weighting</b>                                    | A frequency-dependent correction that is applied to a measured or calculated sound of moderate intensity to mimic the varying sensitivity of the ear to sound for different frequencies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>Background sound level, <math>L_{A90,T}</math></b> | A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T, measured using time weighting, F, and quoted to the nearest whole number of decibels                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>dB</b>                                             | Decibel. Scale for expressing sound pressure level. It is defined as 20 times the logarithm of the ratio between the root mean square pressure of the sound field and a reference pressure i.e. $2 \times 10^{-5}$ Pascal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>dB(A)</b>                                          | <p>A-weighted decibel. This provides a measure of the overall level of sound across the audible spectrum with a frequency weighting to compensate for the varying sensitivity of the human ear to sound at different frequencies. Example sound levels include:</p> <table> <tr> <td>140 dB(A)</td><td>Threshold of pain</td></tr> <tr> <td>120 dB(A)</td><td>Threshold of feeling</td></tr> <tr> <td>100 dB(A)</td><td>Loud nightclub</td></tr> <tr> <td>80 dB(A)</td><td>Traffic at busy roadside</td></tr> <tr> <td>60 dB(A)</td><td>Normal speech level at 1m</td></tr> <tr> <td>40 dB(A)</td><td>Quiet office</td></tr> <tr> <td>20 dB(A)</td><td>Broadcasting studio</td></tr> <tr> <td>0 dB(A)</td><td>Median hearing threshold (1000 Hz)</td></tr> </table> | 140 dB(A) | Threshold of pain | 120 dB(A) | Threshold of feeling | 100 dB(A) | Loud nightclub | 80 dB(A) | Traffic at busy roadside | 60 dB(A) | Normal speech level at 1m | 40 dB(A) | Quiet office | 20 dB(A) | Broadcasting studio | 0 dB(A) | Median hearing threshold (1000 Hz) |
| 140 dB(A)                                             | Threshold of pain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| 120 dB(A)                                             | Threshold of feeling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| 100 dB(A)                                             | Loud nightclub                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| 80 dB(A)                                              | Traffic at busy roadside                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| 60 dB(A)                                              | Normal speech level at 1m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| 40 dB(A)                                              | Quiet office                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| 20 dB(A)                                              | Broadcasting studio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| 0 dB(A)                                               | Median hearing threshold (1000 Hz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>Frequency</b>                                      | The repetition rate of a sound wave. The subjective equivalent in music is pitch. The unit of frequency is the Hertz (Hz), which is identical to cycles per second. A thousand hertz is often denoted as kHz, e.g. 2 kHz = 2000 Hz. Human hearing ranges approximately from 20 Hz to 20kHz.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b><math>L_{Aeq,T}</math></b>                         | This is defined as the notional steady sound level over a stated period of time (T), would contain the same amount of acoustical energy as the A-weighted fluctuating sound measured over that period.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b><math>L_{Amax}</math></b>                          | Maximum time-weighted and A-weighted sound pressure level within a stated time interval starting at t1 and ending at t2, expressed in dB.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>Peak particle velocity (PPV)</b>                   | Instantaneous maximum velocity reached by a vibrating element as it oscillates about its rest position, typically expressed in mm/s.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>Rating level, <math>L_{Ar,Tr}</math></b>           | Specific sound level plus any adjustment for the characteristic features of the sound.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>Residual sound</b>                                 | Ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>Sound insulation</b>                               | The reduction or attenuation of airborne sound by a solid element between source and receiver.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |
| <b>Specific sound level</b>                           | Equivalent continuous A-weighted sound pressure level produced by the specific sound source being assessed at the assessment location over a given reference time interval, T.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |                   |           |                      |           |                |          |                          |          |                           |          |              |          |                     |         |                                    |



## Appendix C – Figures

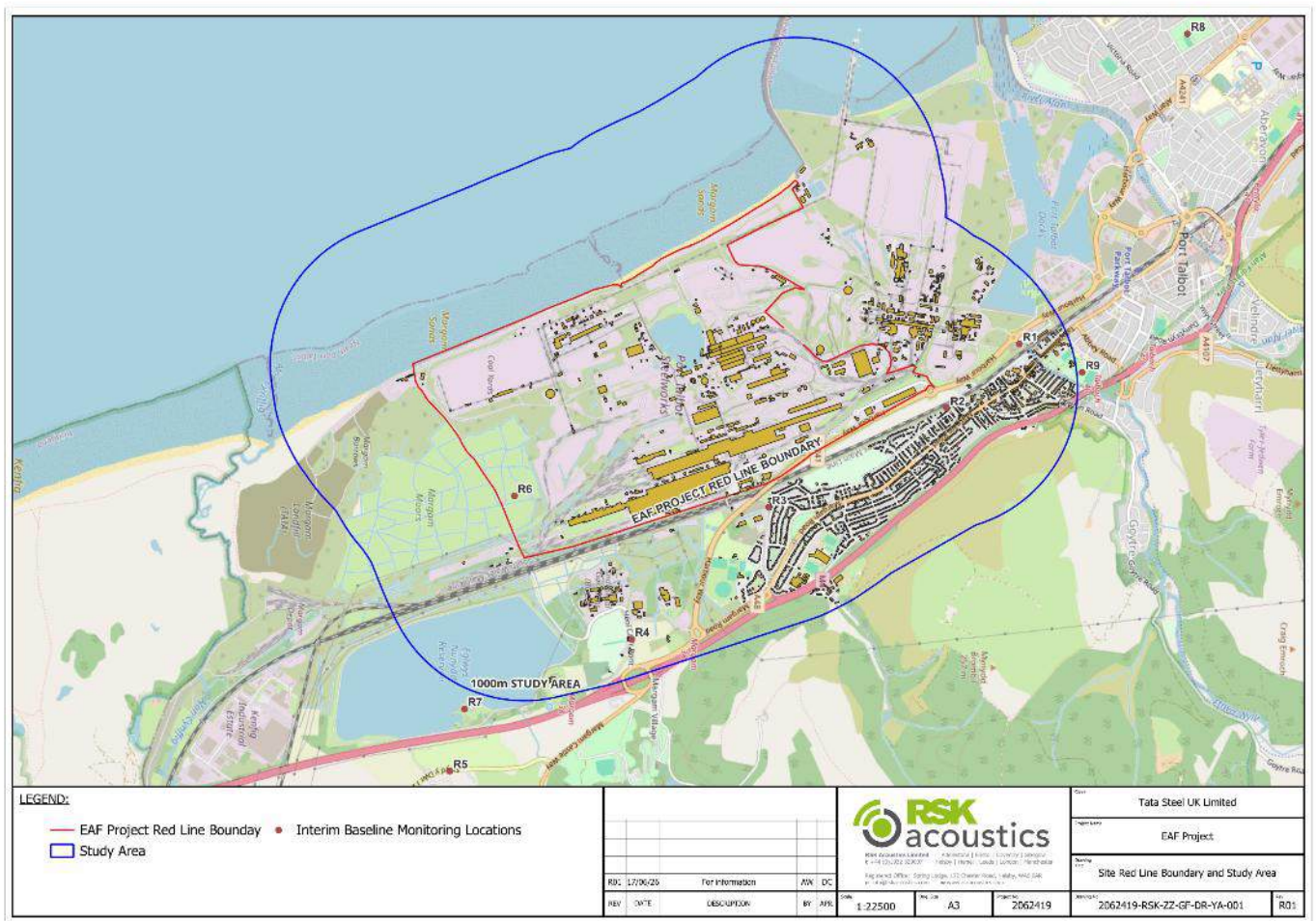


Figure C 1: Red Line Boundary and Study Area







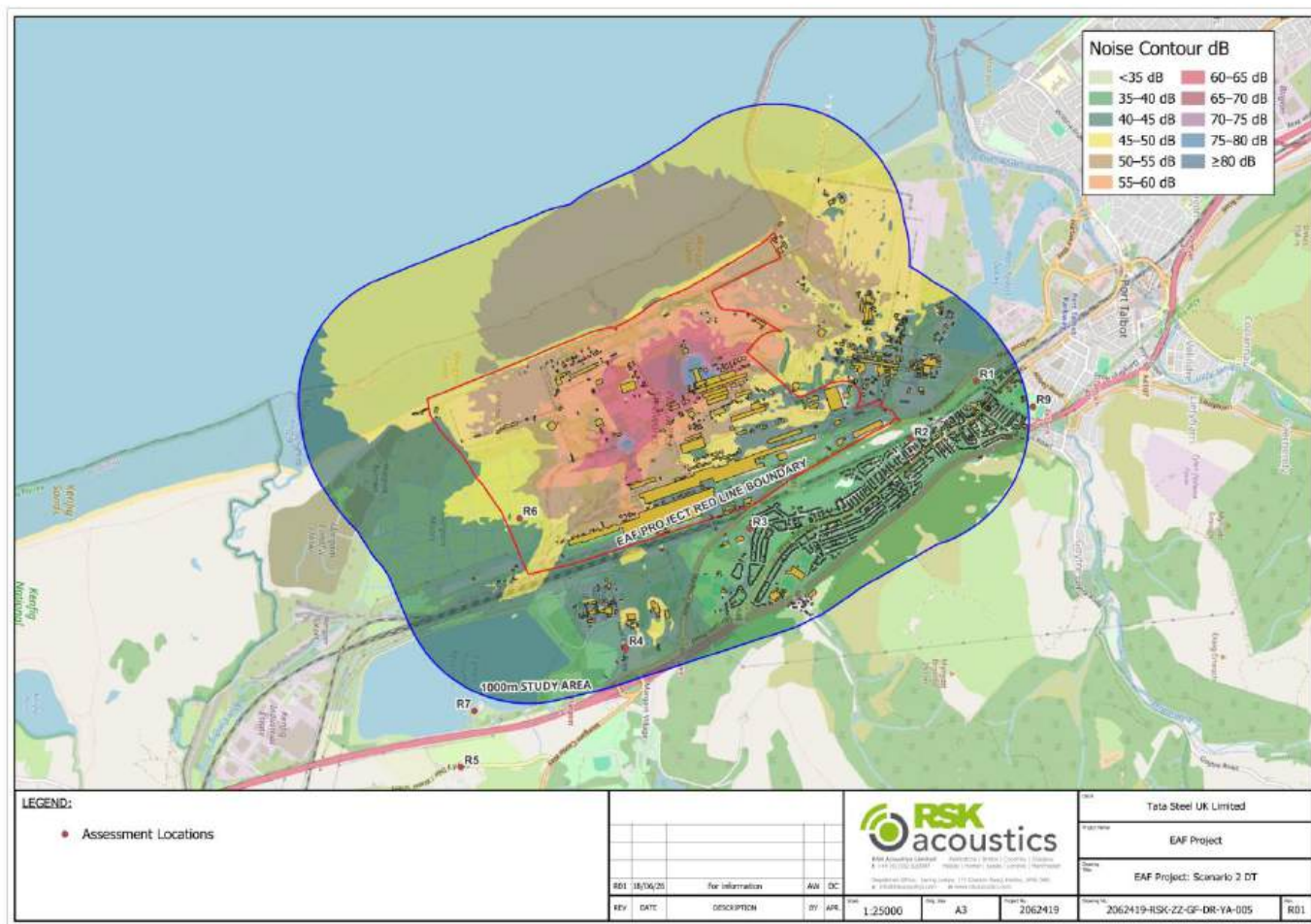


Figure C 4: Scenario 2: P&S Daytime (Cumulative)









## Appendix D – Legislation, Policy and Guidance

### Legislation

#### UK Government (1974). The Control of Pollution Act 1974.

Part III of Control of Pollution Act (CoPA) 1974 gives local authorities powers to control construction site noise and vibration. Best Practicable Means (BPM) is defined in Section 72 of CoPA.

#### UK Government (1990). Environmental Protection Act 1990.

This Act introduced integrated pollution control to prevent pollution arising as a result of emissions to air, land or water. The Act empowers local authorities to address noise pollution, classifying excessive noise as a statutory nuisance.

#### The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (“the 2017 Regulations”)

The 2017 regulations transpose the amendments made to the Environmental Impact Assessment (EIA) Directive 2011/92/EU by Directive 2014/52/EU and make a number of significant changes to the EIA regime in Wales. Changes to the EIA regime in Wales mirror those in England and Scotland closely.

#### The Environment (Air Quality and Soundscapes) (Wales) Act 2024

The Act make provision for improving air quality in Wales; for a national strategy for assessing and managing soundscapes in Wales.

### Policy and Local Plan Documents

#### Planning Policy Wales: Ed. 12, February 2024

The Planning Policy Wales states:

‘Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales’.

#### Technical Advice Note (TAN) 11 Noise: October 1997. CL-01-15 Updates to TAN 11 Noise, Noise Action Plan (2013-18) Commitments

Technical Advice Note (TAN) 11 should be taken into account by local planning authorities in Wales in the preparation of development plans. This document provides guidance on how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development.

‘CL-01-15 Updates to TAN 11 Noise - Noise Action Plan (2013-18) Commitments’ includes clarifications on how the amendments/ revision of the supporting legislation and British Standards affect the content of TAN11. This update includes references to the publication of the revised BS 4142:2014 ‘Methods for rating and assessing industrial and commercial sound’.

Annex B ‘*The Assessment of Noise from Different Sources*’ of CL-01-15 includes a section related to industrial and commercial noise sources:

‘In light of the introduction of the environmental permitting regime and the updating of British Standards, the existing paragraph B17 should be deleted and replaced with the following: B17. The likelihood of adverse impacts arising from noise of an industrial and/or commercial nature can be assessed, where the application of BS 4142:2014 is appropriate, using the guidance set out in that standard (...).’

‘(...) BS 4142:2014 states that as an initial estimate: “A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context. A difference of around +5 dB is likely to be an indication of



an adverse impact, depending on the context." However, this initial estimate of the impact may need to be modified due to the context, and determining whether this is the case should include consideration of absolute sound levels, the character and level of the residual sound compared to the specific sound, the sensitivity of the receptor, and good building design. Since background sound levels vary throughout a 24-hour period it will usually be necessary to assess the acceptability of sound levels for separate periods (e.g. day and night) chosen to suit the hours of operation of the proposed development. Similar considerations apply to developments that will emit significant noise at the weekend as well as during the week. In addition, general guidance on acceptable sound levels within buildings can be found in BS 8233:2014 (...)'.

### 'Future Wales: the national plan 2040': 2019; updated in 2021

Future Wales is the national development framework for Wales addressing air quality, soundscape and noise. The documents provide criteria that there are no unacceptable adverse impacts by way of noise (P18) and identify a desire to ensure that noise pollution is reduced or minimised.

### Noise and Soundscape Action Plan, 2023-2028, Welsh Government

Noise and soundscape action plan is the Welsh Government's central noise policy document. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next 5 years.

### Neath Port Talbot County Borough Council Local Development Plan (2011-2026) (Adopted January 2016)

Neath Port Talbot County Borough Council (NPTCDC) prepared a Local Development Plan (LDP) for the period 2011 to 2026, as required under the Planning and Compulsory Purchase Act 2004. This document *'(...) guides the future development of an area, providing a clear vision for the County Borough setting out where, when and how much new development can take place over the next 15 years (2011-2026). The aim is to provide developers and the public with certainty about the planning framework for Neath Port Talbot.'*

Policy EN8 *'Pollution and Land Stability'* includes considerations on noise pollution as follows:

'In relation to noise, potentially noisy proposals should not be located close to sensitive uses (such as hospitals, schools and housing) and new noise-sensitive developments should not be located near to existing noisy uses (including industry and existing or proposed transport infrastructure) unless it can be shown that adverse effects can be dealt with through mitigation measures incorporated into the design. Where noise levels are likely to be a significant issue, developers may be required to provide information to show that no nuisance is likely to be caused through increased noise levels at sensitive locations if the development proceeds. Policy EN10 sets out policy relating to designated Quiet Areas.'

Policy EN10 *'Quiet Areas'* list a number of areas of tranquillity that have been identified within urban locations. The below locations are located within the Port Talbot urban area:

- Talbot Memorial Park, Port Talbot (Reference EN10/7); and
- Vivian Park, Port Talbot (Reference EN10/8).

This policy 'protects quiet areas from significant increases in noise or other impacts from development that would adversely affect these criteria. Where development is proposed near to a quiet area, it will be assessed in relation to its effects on the 'pillars' of urban tranquillity and will be required to ensure that there are no significant adverse effects.' Both Talbot Memorial Park and Vivian Park are located at distances greater than 2.5km from the development site and therefore any impacts from the proposal are considered to be negligible; however, this will be fully considered within this noise assessment report.

## Guidance

### BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014

The two parts of BS 5228 provide guidance on the control of noise and vibration on construction and open sites. BS 5228-1 contains a methodology for predicting construction noise levels taking both stationary and mobile noise sources into consideration within designated construction areas. BS 5228-1 also contains methodology for assessing construction noise levels, and methods of reducing noise emissions from construction sites.



Annexe E of BS 5228 provides broad guidance on the significance of construction noise on residential and commercial sensitive receptors. This includes significance based on absolute limit levels and those according to magnitude of change in ambient levels. In terms of absolute limits, Section E.2 recommends that daytime construction noise should not exceed 70 dB(A) in rural & suburban environments and 75 dB(A) in urban environments close to main roads or heavy industry, in order to limit overall impact on receptors. This absolute criterion can be applied to both residential and commercial receptors.

Section E.3 of BS5228 presents two methods of deriving construction noise criteria, based on existing ambient noise levels. The first method looks at the existing ambient noise in combination with threshold values for day, evening and night-time periods, and then prescribes the appropriate value.

**Table 7-1** Example threshold of potential significant effect at dwellings (BS5228 Table E.1)

| Assessment category and threshold value period                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Threshold value in decibels (dB) (LAeq, T) |                         |                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------|-------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Category A <sup>A</sup>                    | Category B <sup>B</sup> | Category C <sup>C</sup> |
| Night-time (23.00 – 07.00)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 45                                         | 50                      | 55                      |
| Evening and weekends <sup>D</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 55                                         | 60                      | 65                      |
| Daytime (07.00 – 19.00) and Saturdays (07.00 – 13.00)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 65                                         | 70                      | 75                      |
| <p>NOTE 1 A potential significant effect is indicated if the LAeq,T noise level arising from the site exceeds the threshold level for the category appropriate to the ambient noise level.</p> <p>NOTE 2 If the ambient noise level exceeds the Category C threshold values given in the table (i.e. the ambient noise level is higher than the above values), then a potential significant effect is indicated if the total LAeq,T noise level for the period increases by more than 3 dB due to site noise.</p> <p>NOTE 3 Applied to residential receptors only.</p> |                                            |                         |                         |
| <p>A Category A: Threshold values to use when ambient noise levels (when rounded to the nearest 5 dB(A)) are less than these values.</p> <p>B Category B: Threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as the category A values.</p> <p>C Category C: Threshold values to use when the ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.</p> <p>D 19.00 – 23.00 weekdays, 13.00-23.00 Saturdays and 07.00 – 23.00 Sundays.</p>                                           |                                            |                         |                         |

The second method identifies significance where a 5 dB(A) increase in the ambient noise levels occur, subject to lower cut off values of 65, 55 and 45 dB(A) for each assessment period respectively. For the purpose of this assessment a conservative assumption has been applied and the lower criteria of the two methods have been applied.

In addition to the general construction assessment criteria, Section E.4 of BS 5228 provides thresholds at which consideration to noise insulation should be given. Given the distances and activities involved the likelihood of any of these applying is considered negligible.

BS 5228-2 provides guidance on vibration levels that can be used to assess the likely impacts of construction activities on buildings and on humans. Annex B of the standard gives guidance on the significance of vibration effects in terms of human response to vibration and structural response.

#### Human Exposure to Vibration

Human beings are known to be very sensitive to vibration, the threshold of perception being typically in the PPV range of 0.14 mm/s to 0.3 mm/s. Vibrations above these values can disturb, startle, cause annoyance or interfere with work activities. At higher levels they can be described as unpleasant or even painful.

Guidance on the human effects of vibration, based on human perception and disturbance are detailed below.

**Table 7-2** Guidance on Effects of Vibration Levels (Table B.1 – BS5228-2: 2009)

| Vibration Level (ppv) | Effect                                                                                                                                                                                          |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.14 mm/s             | Vibration might be just perceptible in the most sensitive situations for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration. |
| 0.3 mm/s              | Vibration might be just perceptible in residential environments.                                                                                                                                |



| Vibration Level (ppv) | Effect                                                                                                                                                                        |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.0 mm/s              | It is likely that vibration of this level in residential environments will cause complaint but can be tolerated if prior warning and explanation has been given to residents. |
| 10 mm/s               | Vibration is likely to be intolerable for any more than a very brief exposure to this level.                                                                                  |

#### Structural Response to Vibration

BS 7385-2:1993 'Evaluation and measurement for vibration in buildings –Part 2: Guide to damage levels from ground borne vibration' and BS ISO 4866:2010 'Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and their effects on structures' provide guidance on vibration measurement, data analysis and reporting as well as building classification and guide values for building damage.

**Table 7-3**      *Structural Damage Criteria*

| Damage Category | Description                                                                                                                                                                                                                |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cosmetic        | The formation of hairline cracks on drywall surfaces, or the growth of existing cracks in plaster or drywall surfaces; in addition, the formation of hairline cracks in mortar joints of brick/concrete block construction |
| Minor           | The formation of large cracks or loosening and failing of plaster or drywall surfaces, or cracks through bricks/concrete blocks                                                                                            |
| Major           | Damage to structural elements of the building, cracks in support columns, loosening of joints, splaying of masonry cracks etc                                                                                              |

Limits for transient vibration, above which cosmetic damage could occur, are given numerically and graphically in below in terms of the component PPV.

**Table 7-4**      *Transient Vibration Guide Values for Cosmetic Damage*

| Line | Type of Building                          | Peak component particle velocity in frequency range of predominant pulse |                                                           |
|------|-------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------|
|      |                                           | 4 Hz to 15 Hz                                                            | 15 Hz and above                                           |
| 1    | Reinforced or framed structures           | 50 mm/s at 4 Hz and above                                                |                                                           |
|      | Industrial and heavy commercial buildings |                                                                          |                                                           |
| 2    | Unreinforced or light framed structures   | 15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz                           | 20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above |
|      | Residential or light commercial buildings |                                                                          |                                                           |

Note 1 – values referred to are at the base of the building;

Note 2 – for line 2, at frequencies below 4 Hz, a maximum displacement of 0.6 mm (zero to peak) is not to be exceeded.



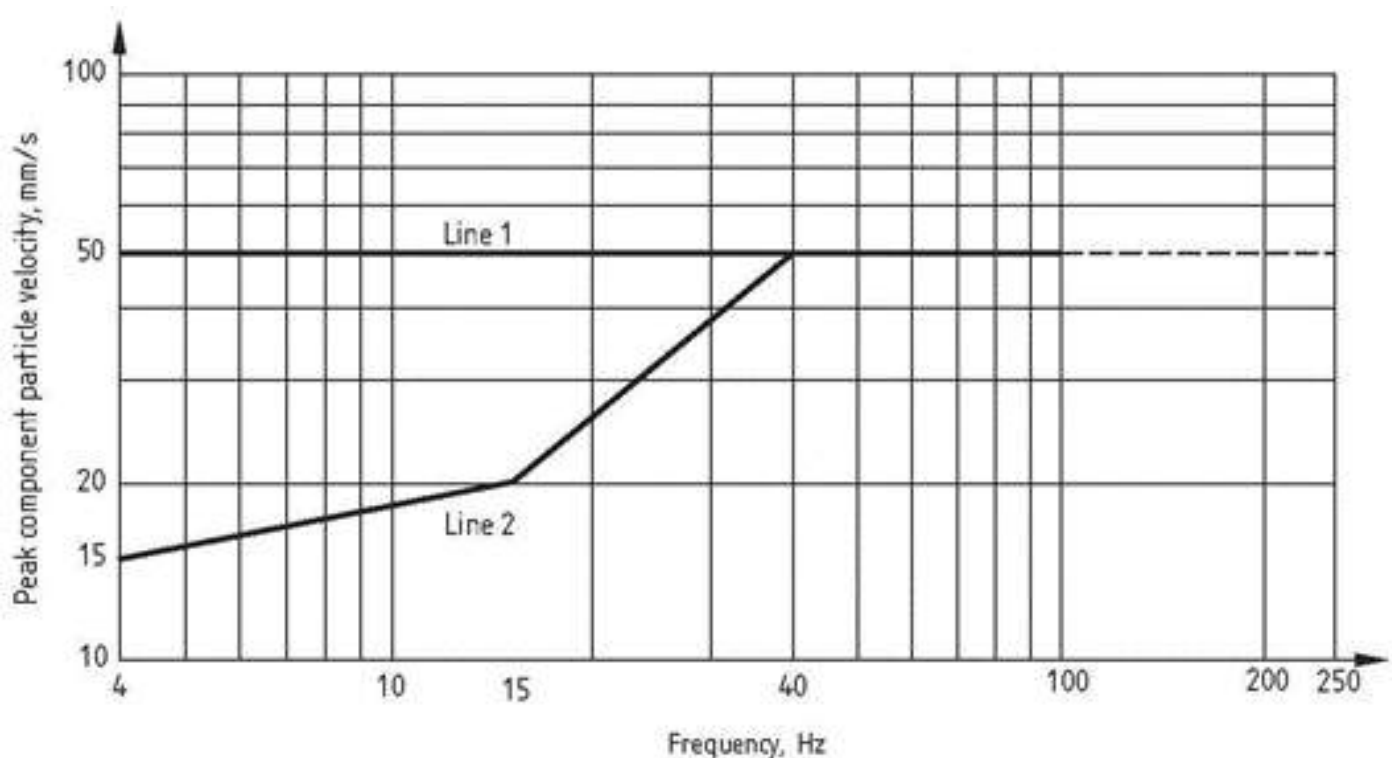


Figure 1 Transient Vibration Guide Values for Cosmetic Damage (BS7385-2: 1993, page 6)

Published damage criteria will not necessarily differentiate between these damage types, instead the guidance values will be at such a level which precludes the onset of cosmetic damage and therefore automatically prevent any higher grade of damage.

### BS EN 61672-1:2013, BS EN 61260-1:2014 and BS EN IEC 60942:2018

These standards specify the performance requirements for Class 1 sound level meters, octave-band and fractional-octave-band filters, and sound calibrators used in acoustic surveys. They provide the technical basis for instrumentation selection, calibration traceability and measurement reliability for the baseline sound survey and any subsequent compliance monitoring.

### BS 4142:2014+A1:2019 'Method for rating and assessing industrial and commercial sound'

BS 4142:2014+A1:2019 provides a method for rating industrial and commercial sound and assessing the resulting impacts upon surrounding receptors. The method is applicable to fixed plant installations, sound from industrial and manufacturing process and other associated activities. The rating method considers specific acoustic characteristics of the noise source, such as tonality, impulsivity and intermittency.

The impact assessment procedure described in BS 4142:2014+A1:2019 is based on a comparison of rating level from the noise source with the background sound level prevailing at the receptor locations. The assessment of impact and likelihood of complaints is made based on the following differences:

- A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on context;
- A difference of around +5 dB is likely to be an indication of an adverse impact, depending on context; and
- Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

Where the initial estimate of the impact needs to be modified due to the context, the following factors should be considered:

- The absolute level of sound;



- The character and level of the residual sound compared to the character and level of the specific sound; and
- The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions such as:
  - Façade insulation treatment;
  - Ventilation and/or cooling that will reduce the need to have windows open so as to provide rapid or purge ventilation; and
  - Acoustic screening.

## BS 8233: 2014 'Guidance on sound insulation and noise reduction for buildings'

### Internal Noise Criteria

BS 8233 establishes internal ambient noise levels for dwellings based upon occupancy patterns and derived from World Health Organisation (WHO) '*Guidelines for community noise*'. These are summarised in Table 7-5.

**Table 7-5** Summary of internal noise levels criteria

| Activity                   | Location         | 07:00 to 23:00      | 23:00 to 07:00     |
|----------------------------|------------------|---------------------|--------------------|
| Resting                    | Living room      | 35 dB $L_{Aeq,16h}$ | -                  |
| Dining                     | Dining room/area | 40 dB $L_{Aeq,16h}$ | -                  |
| Sleeping (daytime resting) | Bedroom          | 35 dB $L_{Aeq,16h}$ | 30 dB $L_{Aeq,8h}$ |

It should be noted that the internal noise level criterion can be relaxed by 5 dB where the proposed development is considered 'necessary or desirable' and reasonable internal conditions would still be achieved, as per Paragraph 7.7.2 of BS 8233.

### External Noise Criteria

BS8233 also provides design criteria for external noise and Paragraph 7.7.3.2 states:

'For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB  $L_{Aeq,T}$ , with an upper guideline value of 55 dB  $L_{Aeq,T}$  which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces but should not be prohibited.'

## BS 7385-2:1993 and BS ISO 4866:2010

These standards provide guidance on the measurement and evaluation of building vibration and the interpretation of vibration effects on structures, including guide values relevant to cosmetic damage. They are relevant to the broader construction vibration framework referenced in this assessment, even though operational vibration effects from the proposed development are scoped out.

## Professional Planning Guidance on Planning and Noise (ProPG)

The ProPG: Planning and Noise guidance document was published by the Association of Noise Consultants (ANC), the Institute of Acoustics (IoA) and the Chartered Institute of Environmental Health (CIEH), together with practitioners from a planning and local authority background, in May 2017.



ProPG encourages the use of good acoustic design as a means to inform the site masterplans and is key to avoiding or reducing to a minimum any adverse effects on any sensitive internal or external spaces. In considering acoustic design, consideration should be given by the developer to the management of noise through a hierarchy of potential mitigation measures which may include:

- Maximising the separation distance between source and receiver;
- Incorporate noise barriers (where applicable) to screen the development site (or individual plots) from significant sources of noise;
- Use existing features to reduce noise propagation across the site;
- Orientate the buildings in a manner which reduces the noise levels within habitable rooms (particularly bedrooms); and
- Building envelope design to mitigate the noise to acceptable levels, whilst providing adequate ventilation.

### Calculation of Road Traffic Noise (CRTN), 1988

The Calculation of Road Traffic Noise (CRTN) sets out standard procedures for calculating noise levels from road traffic. The calculation method uses a number of input variables, including traffic flow volume, average vehicle speed and percentage of heavy-duty vehicles (HDV), to predict the  $L_{A10,18\text{hour}}$  or  $L_{A10,1\text{hour}}$  noise level for any receptor point at a given distance from the road.

### Design Manual for Roads and Bridges, LA111 (DMRB)

The key part of the Design Manual for Roads and Bridges (DMRB) with relevance to this assessment is LA 111 Revision 2 (May 2020).

DMRB advises that the Calculation of Road Traffic Noise (CRTN) method should be used to model road noise emissions. DMRB also provides additional procedural guidance on the use of CRTN that reflects more recent developments in understanding of road noise prediction.

The CRTN method has been used to predict road noise emissions, as described below. The additional procedures recommended in DMRB have also been adopted.

Typically, the impact of the proposed development on the noise climate in the surrounding areas is based on the change in noise levels at noise sensitive receptors due to the changes in the volume of road traffic generated by the proposed development.

The DMRB provides two magnitude scales of impact for the change in noise levels in the 'short-term' (opening year) and in the 'long-term' (future year).

The traffic data has been provided by the transport consultants, SCP Transport, for the year 2026, the magnitude of impact at noise sensitive receptors has therefore been determined in accordance with the more stringent short-term magnitude scale. The magnitude of impact is presented in Table 7-6 below and has been applied to both the construction and the operational traffic.

**Table 7-6**      *Short term agnitude of change*

| Magnitude of Impact | Short term Noise Change (dB $L_{A10,18h}$ ) |
|---------------------|---------------------------------------------|
| Major               | Greater than or equal to 5 dB               |
| Moderate            | 3.0 to 4.9 dB                               |
| Minor               | 1.0 to 2.9 dB                               |
| Negligible          | Less than 1 dB                              |



## Calculation of Railway Noise (CRN) (1995), Department of Transport

The Calculation of Road Traffic Noise (CRTN) sets out standard procedures for calculating noise levels from road traffic. The calculation method uses a number of input variables, including traffic flow volume, average vehicle speed and percentage of heavy-duty vehicles (HDV), to predict the  $L_{A10,18\text{hour}}$  or  $L_{A10,1\text{hour}}$  noise level for any receptor point at a given distance from the road.

## BS 7445-1,-2,-3 'Description and measurement of environmental noise. Guide to quantities and procedures'

The three-part standard (BS) 7445 provides the framework within which environmental noise should be quantified.

BS 7445 does not prescribe the meteorological conditions under which noise measurements should or should not be taken, although it recommends that in order to facilitate the comparison of results, measurements should be undertaken under certain weather conditions (wind speed not exceeding  $5 \text{ ms}^{-1}$ , no strong temperature inversions and no heavy precipitation).

## BS ISO 9613-2:2024

International Standard: BS ISO 9613-2:2024: 'Acoustics - Attenuation of sound during propagation outdoors - Part 2: Engineering method for the prediction of sound pressure levels outdoors' enables the prediction of noise levels in the community from sources of known sound emission.

The noise prediction method described in this part of the standard is general and is suitable for a wide range of engineering applications where the noise level outdoors is of interest. The noise source(s) may be moving or stationary and the method considers the following major mechanisms of noise attenuation:

- Geometrical divergence (also known as distance loss or geometric damping).
- Atmospheric absorption.
- Ground effect.
- Reflection from surfaces.
- Screening by obstructions, barriers and buildings.

The method predicts noise levels under meteorological conditions favourable to noise propagation from the sound source to the receiver, such as downwind propagation, or equivalently, propagation under a moderate ground-based temperature inversion as commonly occurs at night.

## Institute of Estuarine and Coastal Studies 'Construction and Waterflow: Defining Sensitivity, Response, Impacts and Guidance' 2009

The IECS 2009 report (Cutts et al., 2009) defines disturbance in the general context as discrete events that disrupt ecosystem, community or population structures or in some way alter resource levels i.e. food and space. It may also influence the survival of individual birds and reduce the function of the site either for roosting or feeding. The report states that disturbance varies in its magnitude, frequency, predictability, spatial distribution and duration, and species vary greatly in their susceptibility to disturbance and this susceptibility is likely to vary with age, season, weather and the degree of previous exposure. The links between visual and audible stimuli are evident throughout the report and it is clear that noise by itself is not necessarily a cause for disturbance if not accompanied by a perceived visual threat.

In its literature review the IECS report cites a Dutch study (Smit and Visser, 1993) that found that reactions to noise from shooting ranges are stronger if sounds are combined with visual disturbance.

The IECS report reviews a 1999 study (Cutts and Allen 1999) into the disturbance of birds in response to flood defence works at Saltend on the Humber estuary.

In a separate series of reports by IECS to the Saltend Cogeneration Company into the effects of piling noise on estuarine birds, the monitoring of noise related disturbance was carried out. Noise levels were predicted across the site and ranged between 55 – 84 dB(A) (no indication is given initially in the report of the noise index used but, in subsequent



paragraphs, use is made of the  $L_{Amax}$  parameter, with the time response factor not identified – but it is presumed that the Fast time response is inferred).

Effects on the bird population were observed via observations of flight responses and or behavioural changes. With respect to specific noise levels the following response descriptors are given:

- Noise below 50 dB(A) – low;
- Regular noise 50 – 70 dB – low to moderate;
- Irregular noise 50 – 70 dB – moderate;
- Regular piling noise below 70 dB – moderate; and
- Irregular piling noise above 70 dB – moderate to high.

Cutts et al. 2013 using a combination of literature review and field observations linked the likely behavioural responses of waterbirds to typical noise levels that may arise during construction works. They categorised disturbance effects into high, moderate or low and linked these to a range of noise levels, as follows:

#### High Noise Level Effects

Noise disturbance is typified by regular responses to stimuli with birds moving away from the works to areas which are less disturbed (within noise tolerances). Most birds will show a degree of response to noise stimuli. Birds that remain in the affect area may not forage efficiently and if there are additional pressures on the birds (cold weather, extreme heat etc.) then this may impact upon the survival of individual birds or their ability to breed. For auditory disturbances to qualify as a high level, it must constitute a sudden noise event of over 60 dB (at the bird, not at source) or a more prolonged noise of over 72 dB.

#### Moderate Noise Level Effects

Moderate noise disturbance is typified as high level noise which has occurred over long periods so that birds become habituated to it or lower level noise which causes some disturbance to birds. This encompasses occasional noise events above 55 dB, regular noise 60 - 72dB and long-term regular noise above 72 dB, where birds have become habituated. There is cross-over in moderate and high level noise thresholds although the lower band can be assumed unless the species is particularly sensitive. Those species that are particularly sensitive are Brent Goose, Curlew and Redshank. Birds that may be more sensitive than average include Shelduck and Bar-tailed Godwit (Smit & Visser, 1993)

#### Low Noise Level Effects

Low level noise is classed as that which is unlikely to cause response in birds using a fronting intertidal area. As such noises of less than 55 dB at the bird are included in this category. These effects are likely to be masked by background inputs in all but the least disturbed areas and thus would not disturb the birds close by. Noise between 55 – 72 dB in some highly disturbed areas e.g., industrial or urban areas and adjacent to roads, may feature a low level of disturbance provided the noise level was regular as birds will to often habituate to a constant noise level.

A summary of the impact thresholds for bird populations is provided below:

**Table 7-7** *IECS noise impact criteria*

| Level | Impact                                                                          | Effect Level     | Noise Level / dB(A)  | Type of Noise              |
|-------|---------------------------------------------------------------------------------|------------------|----------------------|----------------------------|
| 1     | No impact                                                                       | Low              | Below 50             | Regular construction noise |
| 2     | Behavioral changes (alarm calls, heads up, change in feeding/roosting activity) | Moderate         | Equal to or below 70 | Piling noise               |
| 3     | Movement within zone                                                            | Moderate to high | Above 70             | Piling noise               |



| Level | Impact                                     | Effect Level | Noise Level / dB(A) | Type of Noise |
|-------|--------------------------------------------|--------------|---------------------|---------------|
| 4     | Movement out of zone but remaining on site | High         | Above 85            | Piling noise  |
| 5     | Movement off site                          | High         | Not defined         | N/A           |

The noise unit in is not defined in the 2009 IECS Report but is likely to refer to the  $L_{AFmax}$  which is referenced throughout. The A-weighting network has therefore been adopted to inform the impact thresholds for those ecological receptors.

### Natural England, 'A Review of the Effects of Noise on Birds – Version 1' 2018

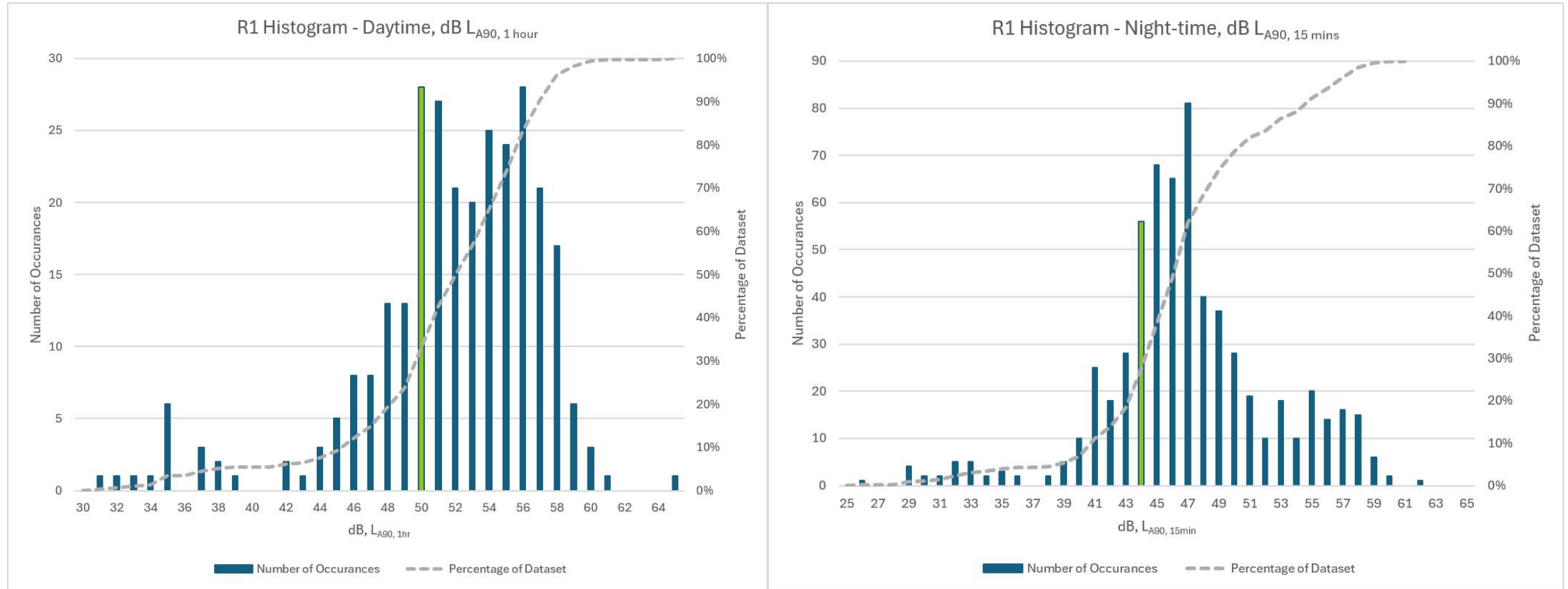
This guidance note describes the nature of the effects of noise on birds and provides a literature review of present studies and broad measures of mitigation. This includes the application of generic thresholds for potentially harmful noise levels (or increases in noise levels), and measures to help mitigate noise effects on birds.

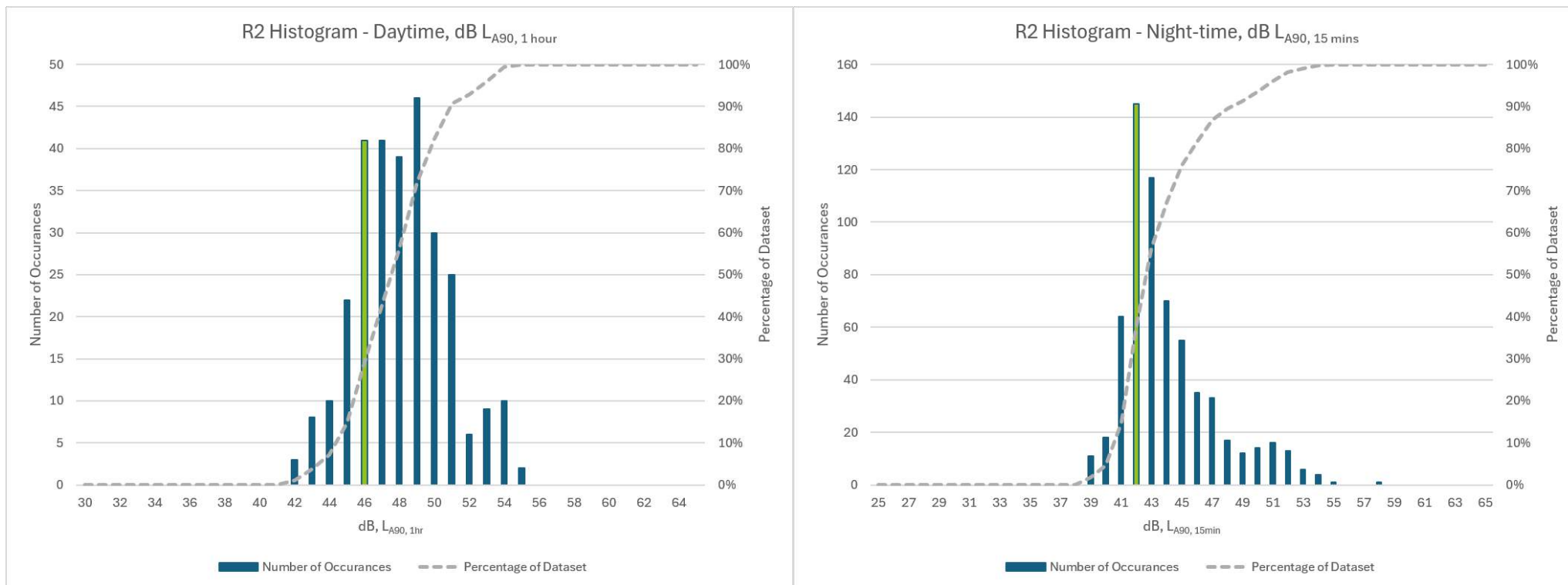
The document does not prescribe specific noise limits, rather a list of published thresholds for a range of activities, including construction piling, general construction, sporadic events such as shooting ranges and transportation sources. The document references the previously discussed Cutts et al, 2009 document, plus a number of others, all of which present noise thresholds for construction activity of between 55 dB(A) and 84 dB(A) as an indication of behavioural changes from anxiety displays to moderate responses (birds moving away).

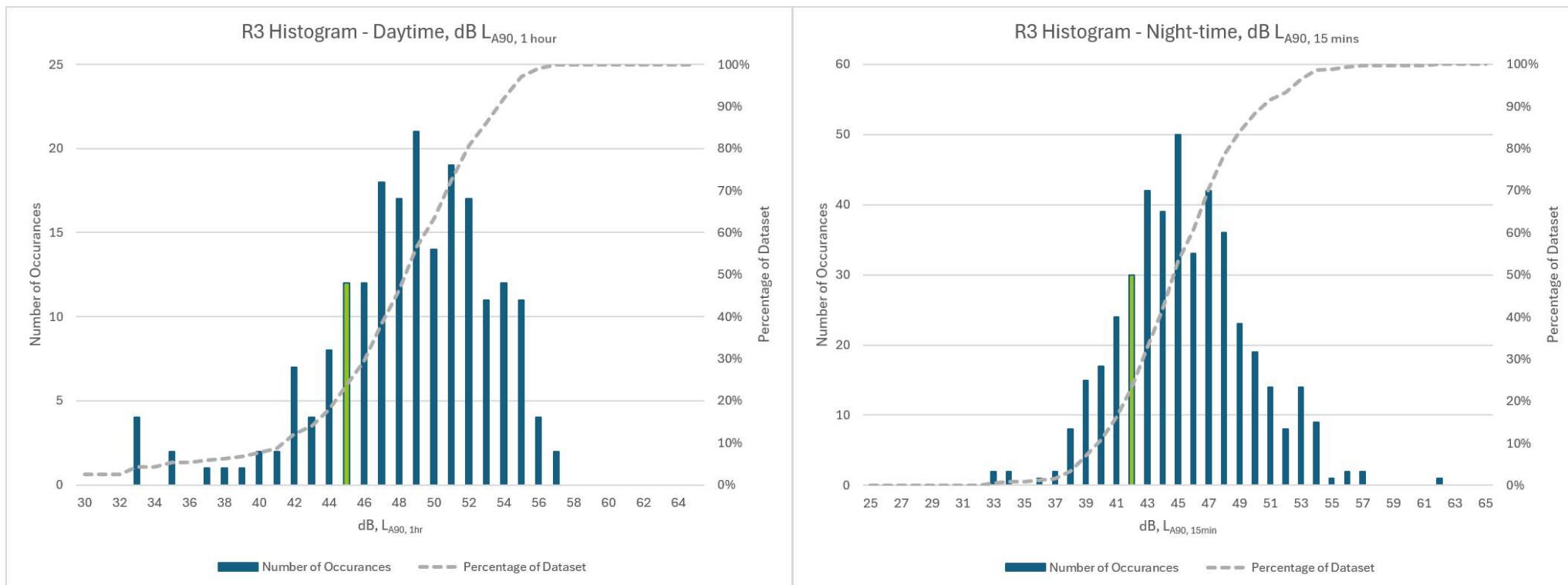


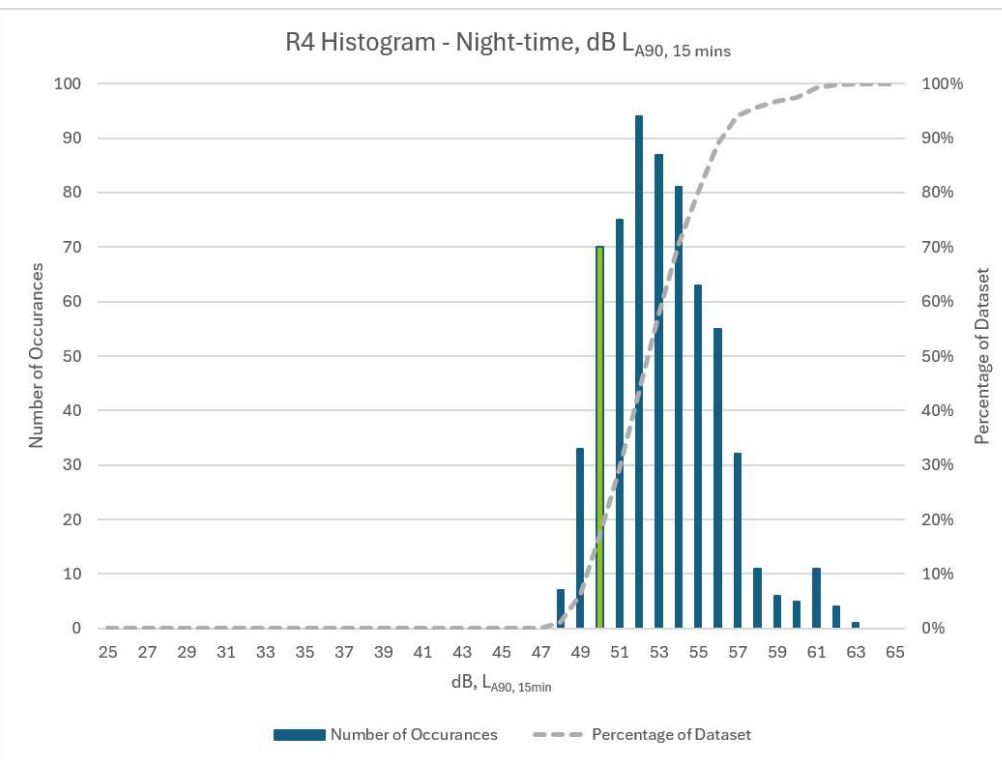
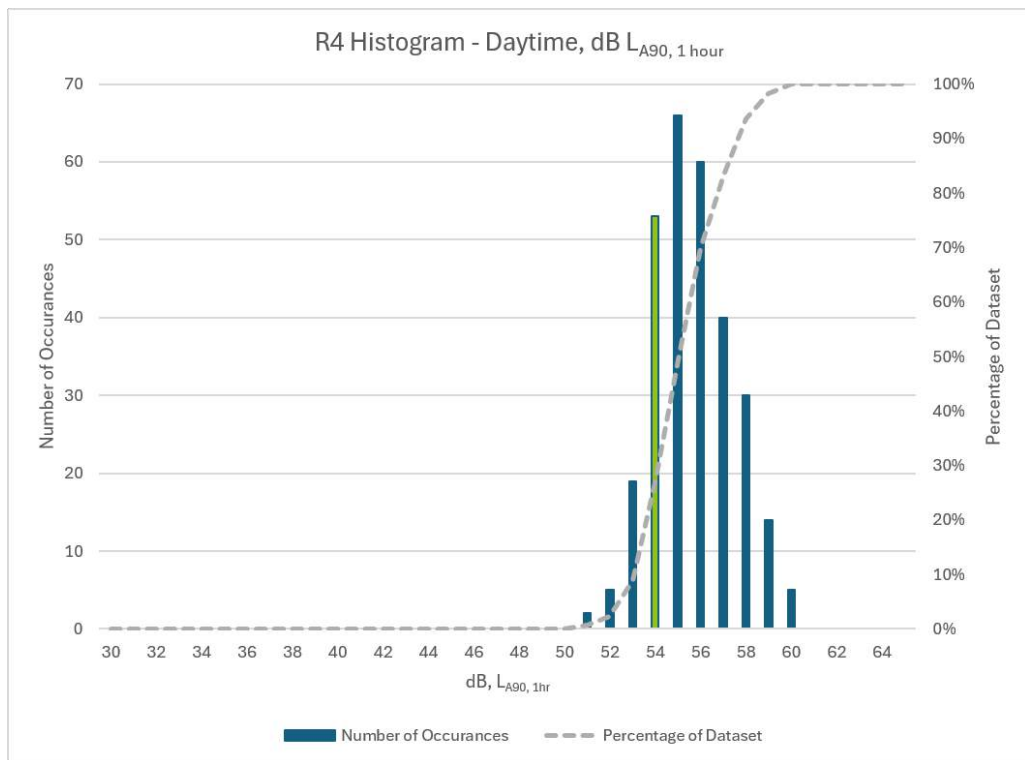
# Appendix E – Interim Baseline Survey Data Analysis

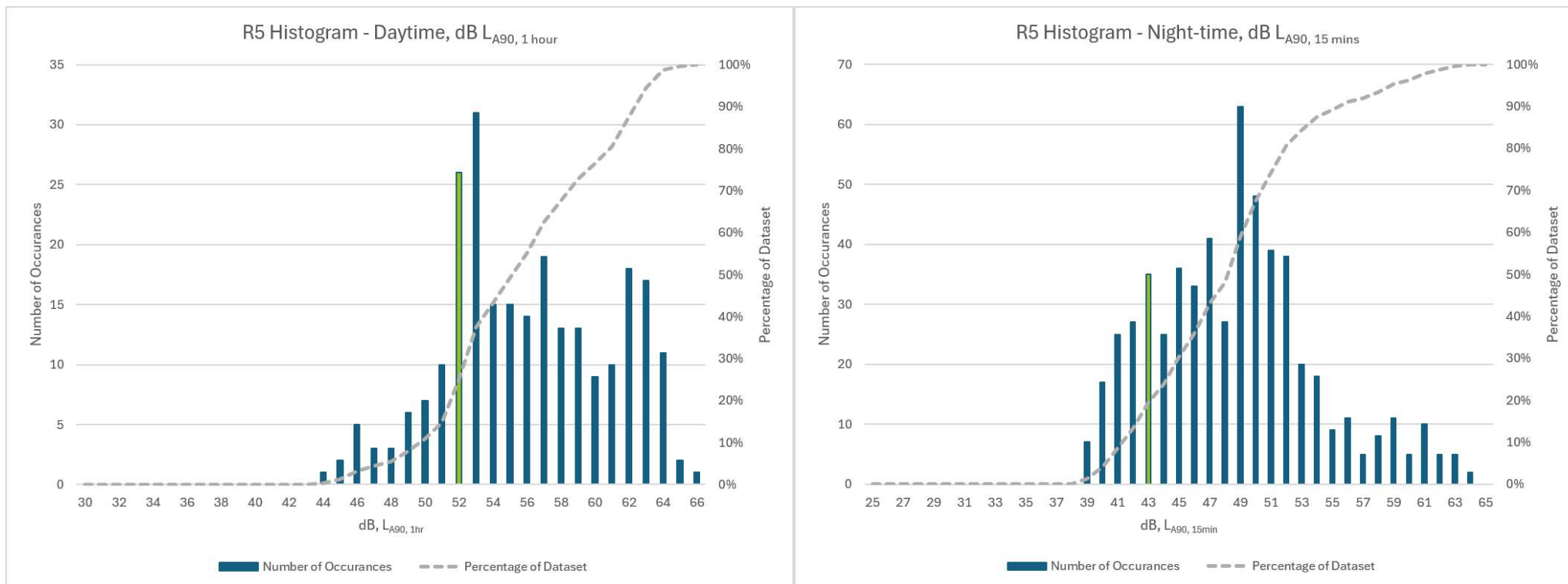
## Background Sound Level Statistical Analysis











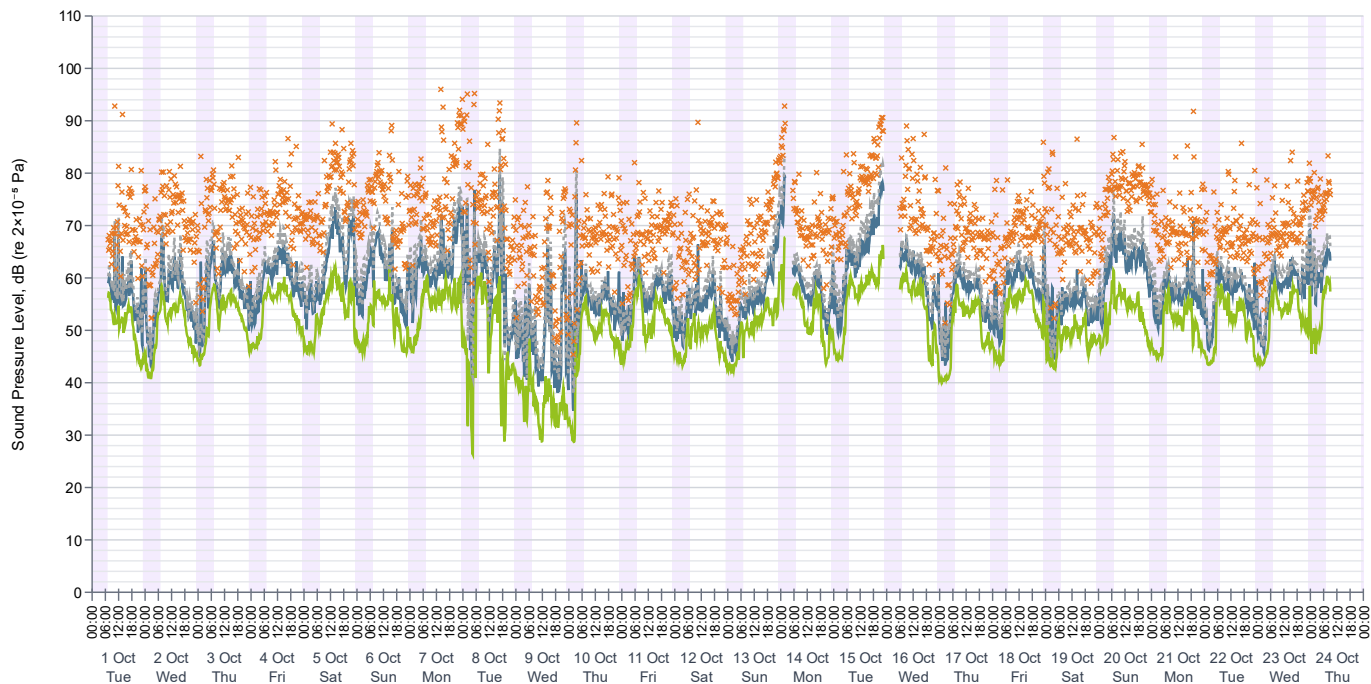


## Time History Plots

### EAJ Project - R1

Time History Plot (1 to 24 October 2024)

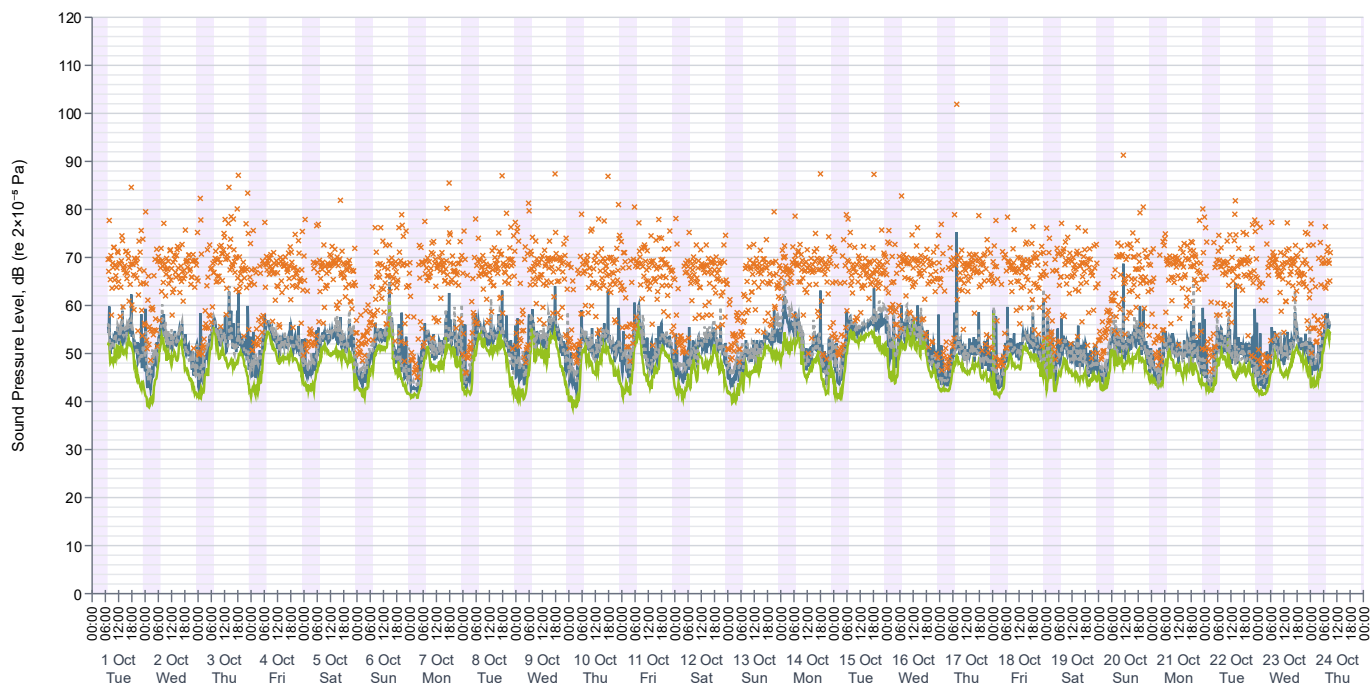
— LAeq    × LAFmax, 15min    .... LAF10, 15min    — LAF90, 15min



### EAJ Project - R2

Time History Plot (1 to 24 October 2024)

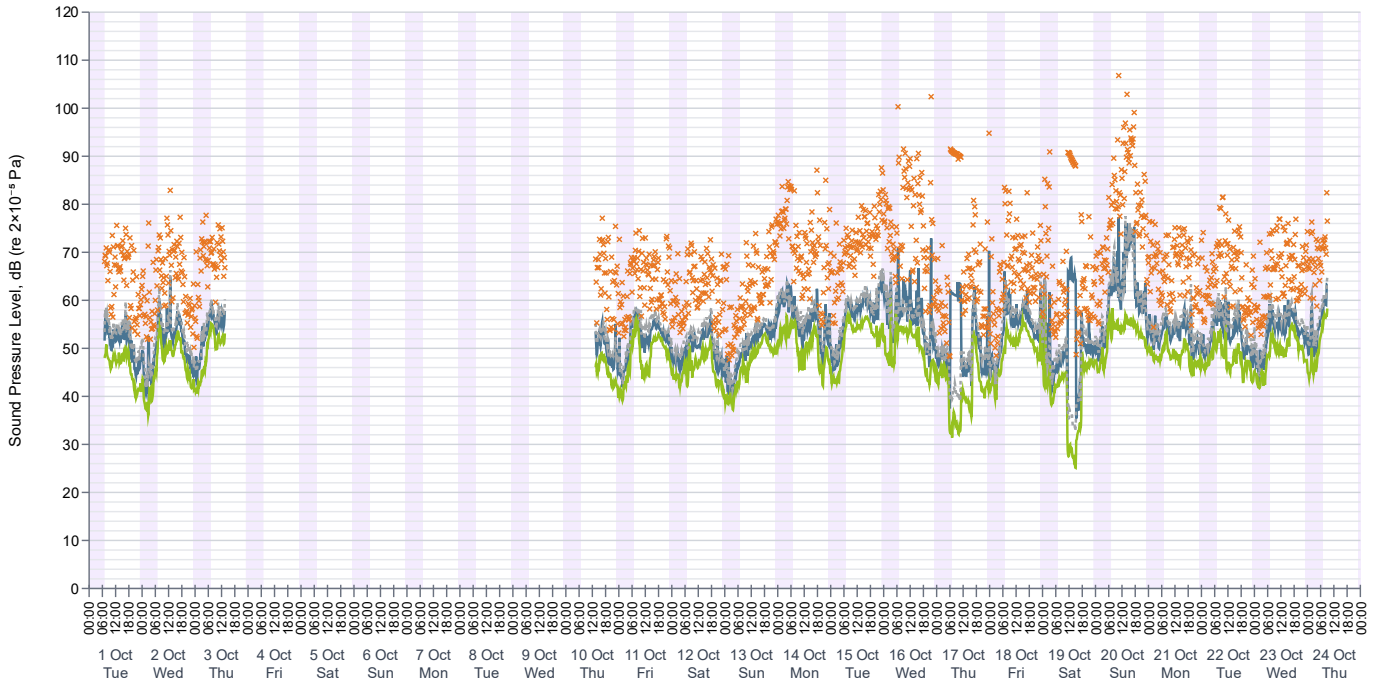
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## EAF Project - R3

Time History Plot (1 to 24 October 2024)

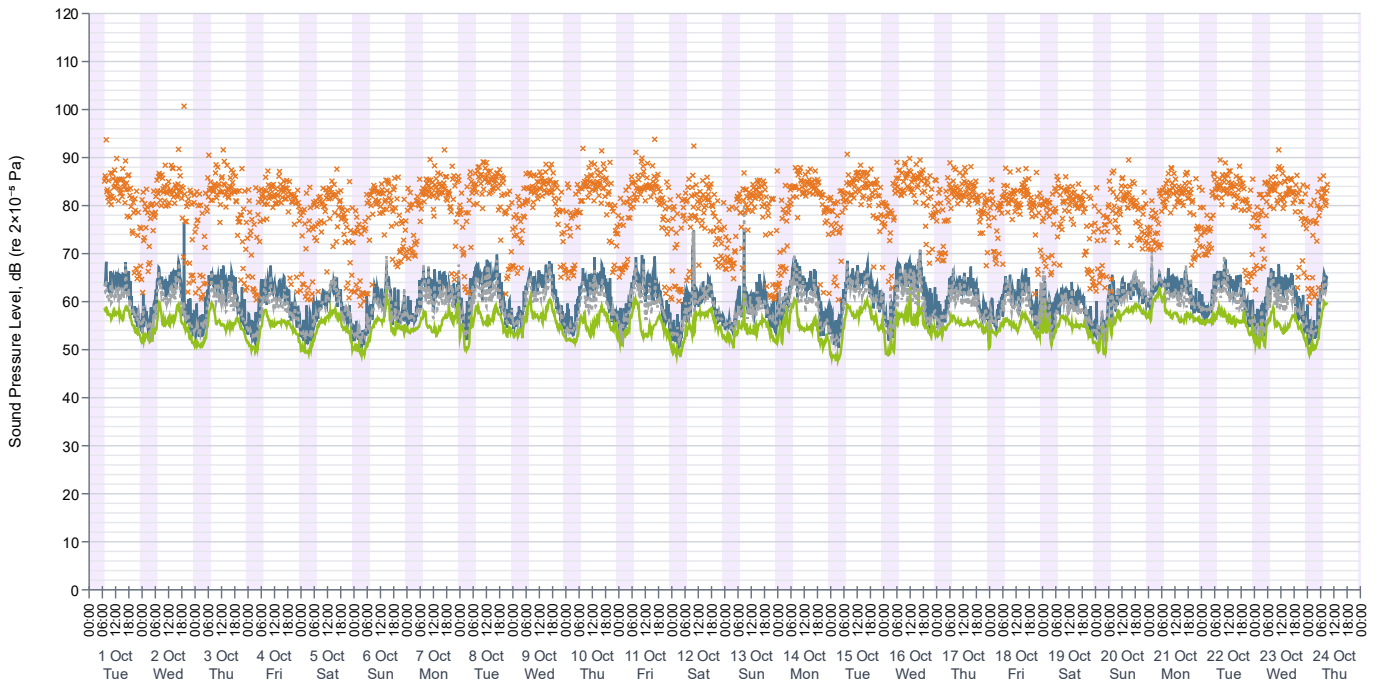
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## EAF Project - R4

Time History Plot (1 to 24 October 2024)

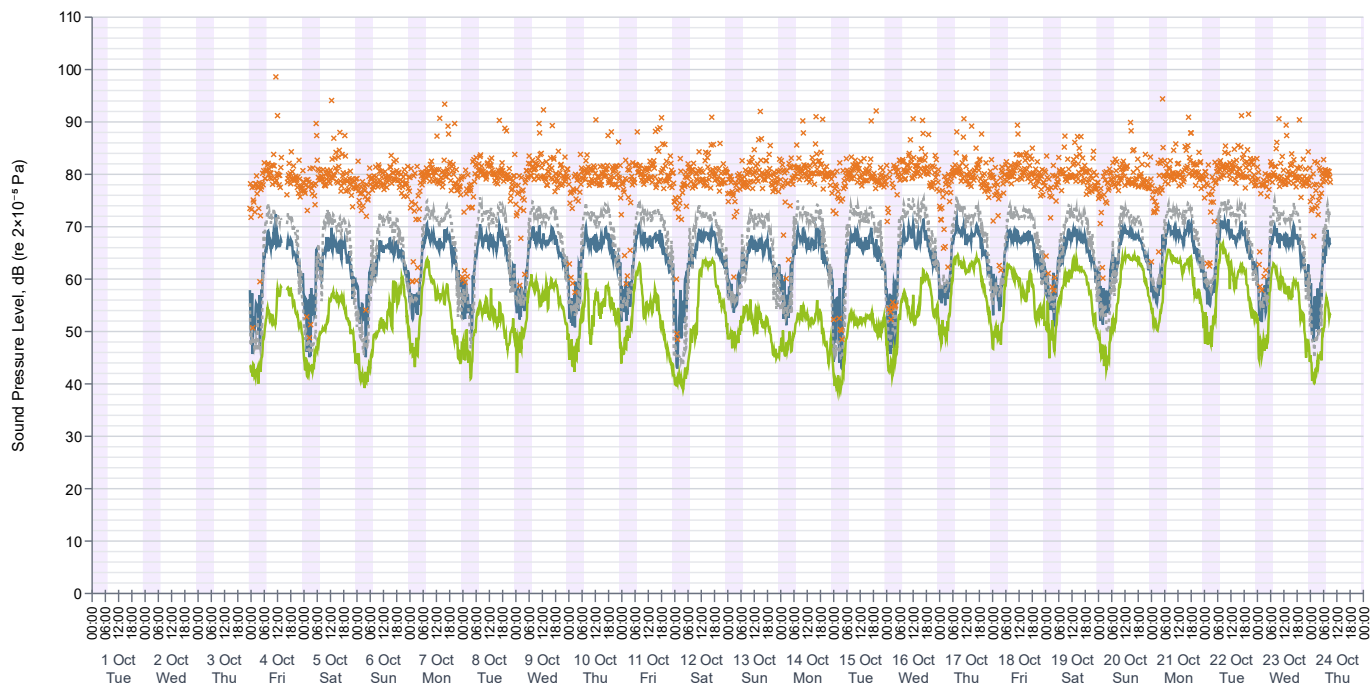
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## EAF Project - R5

Time History Plot (1 to 24 October 2024)

— LAeq    × LAFmax, 15min    .... LAF10, 15min    — LAF90, 15min





## **APPENDIX 5.2 OPERATIONAL NOISE AND VIBRATION MANAGEMENT PLAN**

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# OPERATIONAL NOISE & VIBRATION MANAGEMENT PLAN

## EAF PROJECT

Tata Steel UK Limited (Tata Steel)  
2062419-RSKA-RP-005-(01)





## General notes

|                      |                                               |
|----------------------|-----------------------------------------------|
| <b>Project Name:</b> | EAF Project                                   |
| <b>Title:</b>        | Operational Noise & Vibration Management Plan |
| <b>Client:</b>       | Tata Steel UK Limited (Tata Steel)            |
| <b>Issue Date:</b>   | 26 June 2026                                  |
| <b>Report No.</b>    | 2062419-RSKA-RP-005-(01)                      |

| Revision: | Description: | Author(s):     | Reviewer:         | Date:        |
|-----------|--------------|----------------|-------------------|--------------|
| 01        | First Issue  | Alex West MIOA | Daniel Clare MIOA | 26 June 2026 |
|           |              |                |                   |              |
|           |              |                |                   |              |

Author(s): Alex West

Technical reviewer:

Daniel Clare

Signature:

Signature:

Date: 26 June 2026

Date:

26 June 2026

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Acoustics Ltd.



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# 1 Introduction

## 1.1 Purpose and Scope

This Operational Noise and Vibration Management Plan (ONVMP) has been prepared on behalf of Tata Steel UK Limited for the electric arc furnace (EAF) Project located at Port Talbot. The ONVMP sets out the management framework, control measures, monitoring regime, and complaint response procedures to be implemented at the facility to prevent or minimise adverse noise and vibration effects on sensitive receptors.

The scope covers noise and vibration generating activities associated with the EAF facility (the 'EAF Development', subject to hybrid planning application P2024/0711 that was approved by Neath Port Talbot Council (NPTC) in March 2025) including the scrap metal handling facility and associated infrastructure (the 'RM2 Proposed Development', subject to a reserved matters application pursuant to P2024/0711), namely:

- The scrap handling facility, including the delivery, unloading, stockpiling and onward transfer of ferrous scrap. The principal activities comprise the receipt of scrap by rail and road, handling and stockpiling of scrap in outdoor storage areas using reach stackers and excavators, and the transfer of scrap to tipper lorries for transport to the EAF Consteel conveyor feed point
- The EAF including continuous scrap feeding via the Consteel conveyor, melting, refining, tapping, ladle furnace operations, continuous casting, fume extraction, and ancillary cooling and electrical systems.

This ONVMP is a live document. It shall be reviewed at intervals not exceeding 12 months, or following any material change to site operations, plant inventory, operating hours, or the surrounding receptor environment.

The current assessment does not include specific requirements associated with Best Available Techniques (BAT) or the Natural Resources Wales (NRW) permitting regime. These matters will be incorporated at the appropriate stage, once the applicable permitting conditions and regulatory requirements have been established.

Delivery of the mitigation measures described within this document will be secured through the (ONVMP), which will form a contractual requirement of the appointed scrap handling service provider. The ONVMP will define the operational controls necessary to maintain the effectiveness of all mitigation measures (including the positioning of containers and management of stockpiles) and will be an integral element of the facility's operation, particularly within the scrap handling area.

## 1.2 Facility Description and Operational Context

### 1.2.1 EAF

The EAF facility operates on a 24-hour, 7-day continuous basis. The principal plant and operations are:

- Electric Arc Furnace (EAF): Tenova Consteel, continuous charging EAF with electromagnetic stirring system (EMS). Scrap is continuously fed via an enclosed pre-heating conveyor and melted by immersion in the liquid steel bath under constant flat bath conditions
- Ladle Furnaces (LF): Two ladle metallurgy furnaces for secondary refining of liquid steel, temperature trimming, and composition adjustment prior to casting
- Hot Briquetted Iron (HBI) Building: Storage and handling facility for HBI used as a supplementary feed to the EAF alongside other scrap material
- Fume Treatment Plant: Primary fume extraction via the Consteel pre-heating tunnel and secondary extraction via canopy hood, ducted to a centralised fume treatment plant comprising baghouse filtration
- Main Fan / Blower, MHS Booster Fan, LF Fan: Extraction fans driving the fume treatment system
- Ducting: Fume extraction ductwork connecting the EAF, Consteel tunnel, LF, and canopy systems to the fume treatment plant



- Transformer: High-voltage power transformer supplying the EAF
- Cooling Towers: Cooling water system serving the EAF
- Compressor Room: Compressed air supply for oxygen lancing, carbon injection, pneumatic actuators, and general services
- Pump House: Primary cooling water circulation pumps serving the EAF and LF cooling circuits
- Secondary Pump House: Secondary cooling water pumps serving the continuous caster and ancillary cooling circuits
- Lagoon Pump House: Pumps serving the cooling water lagoon / settling system for recirculation and treatment of cooling water

### 1.2.2 Scrap Handling Facility

The facility operates on a 24-hour, 7-day basis to maintain continuous supply to the EAF.

The principal operational activities are:

- Receipt of scrap steel via rail (rail wagons) and road (HGV delivery)
- Unloading of scrap from rail wagons and HGVs to ground-level stockpiles using reach stackers
- Stockpiling of scrap in outdoor stockpile areas
- Movement and unloading of 25-tonne containers using reach stackers between the unloading area and stockpile locations
- Transfer of scrap from stockpiles to tipper lorries using 30-tonne excavators or material handlers
- Transport of scrap by tipper lorry to the EAF Consteel conveyor feed point
- Handling of scrap at the EAF conveyor stockpile using a 30-tonne excavator or material handler to feed the conveyor

### 1.2.3 Site Location and Layout

The location and layout of the RM2 Development within the Wider EAF Site is provided in within the planning pack, as detailed below:

- Scrap Layout Plan: Drawing number - EAF-LAW-X-X-DR-A-900005

## 1.3 Consenting Basis

This ONVMP has been prepared to satisfy the requirements of the Neath Port Talbot County Borough Council decision notice for Application P2024/0711, approved March 2025. Planning conditions are expressed relative to either background sound levels or the established baseline scenario, and are to be applied in accordance with BS 4142:2014+A1:2019.

The relevant noise-related consent conditions are summarised in Table 1-1 below.



**Table 1-1 Summary of Noise Related Consent Conditions for the EAF Project**

| Condition No. | Noise metric                            | Assessment reference                                              | Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|-----------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 19, 58        | n/a                                     | n/a                                                               | Prior to the first beneficial use of the hereby approved development, an operational Noise and Vibration Management Plan (ONVMP) shall be submitted to and approved in writing by the Local Planning Authority. The ONVMP shall include full details of the proposed noise and vibration control strategy for the operation of the development, full details of any necessary mitigation measures and details of the complaint's investigation procedures and reporting of findings and any identified necessary mitigation. The development shall be operated in full compliance with the approved ONVMP |
| 32, 69        | Cumulative rating level ( $L_{Ar,Tr}$ ) | Background sound level ( $L_{A90,T}$ )                            | The noise emitted from the development hereby approved (including the development within the outline area defined by condition 1) shall not exceed cumulative rating levels ( $L_{Ar,Tr}$ ) of 5 dB above the interim background sound level $L_{A90,T}$ when measured or predicted at the nearest noise sensitive premises. The measurement and/or prediction of the noise will be carried out in accordance with the methodology contained within BS 4142:2014+A1:2019 'Methods for rating and assessing industrial and commercial sound.'                                                              |
| 33, 70        | Cumulative rating level ( $L_{Ar,Tr}$ ) | Established baseline scenario ambient noise level ( $L_{Aeq,T}$ ) | The noise emitted from the development hereby approved (including the development within the outline area defined by condition 1) shall not exceed the established baseline scenario ambient noise level $L_{Aeq,T}$ when measured or predicted at sensitive receptors as identified in the Environmental Statement (2024). The measurement and/or prediction of the noise will be carried out in accordance with the methodology contained within BS 4142:2014+A1:2019 'Methods for rating and assessing industrial and commercial sound.'                                                               |

The document is intended for submission to the local planning authority (LPA) to discharge condition 19 and 58.

The EAF facility falls within the scope of Schedule 1, Part 2, Section 2.1 of the Environmental Permitting (England and Wales) Regulations 2016 (producing pig iron or steel, including continuous casting) and is regulated by NRW under the Industrial Emissions Directive (IED).



## 2 Project Team and Responsibilities

### 2.1 Named Roles

Appointed personnel or job roles responsible for the implementation and ongoing development of this ONVMP are identified within Table 2-1.

*Table 2-1 Named Roles*

| Role                                                                                                                                                                                                                                                                                                                                                   | Name | Organisation         | Contact Details |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------------------|-----------------|
| Environmental Manager (EAF) <sup>1</sup>                                                                                                                                                                                                                                                                                                               | TBC  | Appointed Contractor | TBC             |
| Environmental Manager (Scrap) <sup>1</sup>                                                                                                                                                                                                                                                                                                             | TBC  | Appointed Contractor | TBC             |
| Site Manager (EAF) <sup>1</sup>                                                                                                                                                                                                                                                                                                                        | TBC  | Appointed Contractor | TBC             |
| Site Manager (Scrap) <sup>1</sup>                                                                                                                                                                                                                                                                                                                      | TBC  | Appointed Contractor | TBC             |
| Shift supervisor (EAF) <sup>1</sup>                                                                                                                                                                                                                                                                                                                    | TBC  | Appointed Contractor | TBC             |
| Shift supervisor (Scrap) <sup>1</sup>                                                                                                                                                                                                                                                                                                                  | TBC  | Appointed Contractor | TBC             |
| <b>Note</b><br><sup>1</sup> At the time of submission, the facility operator has not been appointed and the personnel responsible for the operational management of the site are unable to be confirmed. These details will be incorporated into the ONVMP following the appointment of the site operator and prior to the commencement of operations. |      |                      |                 |

### 2.2 Responsibilities Matrix

Responsibilities associated with the ONVMP and the appointed personnel or job roles responsible for the implementation of each task are identified within Table 2-2.

*Table 2-2 Responsibility Matrix*

| Task                                    | Environmental Manager                                      | Site Manager                    | Shift Supervisor      |
|-----------------------------------------|------------------------------------------------------------|---------------------------------|-----------------------|
| Day-to-day noise control implementation | Oversee                                                    | Delivery                        | Maintain              |
| Noise monitoring programme              | Commission / undertake                                     | Facilitate site access          | Assist                |
| Complaint investigation                 | Lead response / Undertake technical assessment if required | Provide operational information | Technical support     |
| Regulatory liaison (LPA/NRW)            | Primary contact                                            | Support                         | Technical support     |
| ONVMP review and update                 | Approve revisions                                          | Identify operational changes    | N/A                   |
| Staff training delivery                 | Approve content                                            | Deliver toolbox talks           | Support toolbox talks |
| Plant maintenance oversight             | Approve schedule                                           | Implement schedule              | Maintain              |



## 3 References and Regulatory Framework

### 3.1 Legislation

- Town and Country Planning Act 1990 — provides the legislative basis for planning conditions controlling noise
- Environment (Wales) Act 2016 — establishes the framework for sustainable management of natural resources in Wales, including provisions relevant to environmental protection and pollution control
- Well-being of Future Generations (Wales) Act 2015 — requires public bodies in Wales to consider the long-term impact of decisions, including environmental quality and community wellbeing, relevant to the assessment of noise impacts on local communities
- Environmental Protection Act 1990, Part III — statutory nuisance provisions applicable to noise emitted from premises

### 3.2 Planning Policy

- Planning Policy Wales (PPW), Edition 12, February 2024 — Section 6.7 addresses noise and soundscape considerations. PPW requires that noise impacts are assessed and, where necessary, mitigated to prevent unacceptable harm to health and amenity
- Technical Advice Note 11: Noise (TAN 11), October 1997 — provides supplementary guidance on the use of conditions to control noise from industrial development and the application of noise assessment methodologies
- Future Wales: The National Plan 2040 — provides the national-level planning framework for Wales, within which development decisions are made
- Planning Practice Guidance: Noise (PPG-Noise), updated March 2019 — provides the Noise Exposure Hierarchy (NOEL, LOAEL, SOAEL, UAEL) framework. Whilst issued for England, the hierarchy is widely applied in Wales in the absence of an equivalent Welsh-specific framework, and has been referenced in Welsh planning decisions

### 3.3 Technical Standards

- BS 4142:2014+A1:2019 — Methods for rating and assessing industrial and commercial sound
- BS 8233:2014 — Guidance on sound insulation and noise reduction for buildings
- BS 6841:2005 — Guide to evaluation of human exposure to vibration in buildings. Part 1: Vibration sources other than blasting
- BS 7385-2:1993 — Evaluation and measurement for vibration in buildings. Part 2: Guide to damage levels from ground-borne vibration
- IEC 61672-1:2013 — Electroacoustics — Sound level meters

### 3.4 Guidance

- Defra / Welsh Government Noise Policy Statement for England (NPSE), March 2010 — establishes the NOEL, LOAEL, SOAEL framework.
- Institute of Environmental Management and Assessment and Institute of Acoustics. (2014) *Guidelines for environmental noise impact assessment*. Establishes the standard framework for assessing noise impacts from new developments, emphasizing changes in ambient levels and receptor perception. These guidelines are often applied alongside BS 8233:2014 for noise insulation and BS 4142:2014 for industrial sound assessment.
- British Metals Recycling Association (BMRA) guidance and sector good practice notes, where available



## 4 Noise Source Identification

### 4.1 Plant and Equipment Inventory

#### 4.1.1 Scrap Handling Facility

The following table identifies the principal noise-generating plant and activities at the scrap handling facility. All activities relate to the delivery, handling, stockpiling, and transfer of scrap to the EAF.

**Table 4-1** *Scrap Handling Facility Noise Sources*

| Source / Activity                                          | Description                                                                                                                                               | Operating Pattern                                 | Noise Character                                                                                                                                                      |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rail delivery                                              | Arrival and departure of rail wagons delivering scrap. Locomotive engine noise, wagon coupling/decoupling, brake application, and rail-wheel interaction. | Intermittent, scheduled deliveries, 24/7          | Intermittent. Impulsive content from coupling. Low-frequency engine noise.                                                                                           |
| HGV delivery, unloading and departure                      | Articulated and rigid HGVs delivering scrap. Engine, braking, reversing alarm, unloading of scrap and tailgate noise.                                     | Intermittent. 24/7                                | Reversing alarms (broadband type specified). Air brake release.                                                                                                      |
| Reach stacker — container movement                         | Reach stacker(s) moving 25-tonne scrap containers between unloading area, stockpile locations, and barrier positions.                                     | Intermittent, 24/7                                | Engine noise (diesel). Hydraulic system noise during lift/place. Impulsive content when containers are unloaded, placed or stacked.                                  |
| 30 t excavator — unloading and loading stockpile to tipper | 30-tonne excavator fitted with bucket attachment, moving scrap from unload area to stockpiles.                                                            | During and immediately following deliveries, 24/7 | Continuous when operating. Engine/hydraulic noise. Impulsive content from bucket engagement with scrap and release of material to stockpile. Metal-on-metal contact. |
| Tipper lorry                                               | Tipper lorries transporting scrap from stockpile area to EAF Consteel conveyor feed point. Engine, air brake, and reversing alarm noise.                  | Continuous circulation during operation, 24/7     | Engine noise during transit. Impulsive content during tipping at conveyor end. Reversing alarm (broadband type).                                                     |
| 30 t excavator / material handler— EAF conveyor stockpile  | 30-tonne excavator feeding scrap from the stockpile onto the hopper. Material handlers will feed scrap into the Consteel conveyor.                        | Intermittent, 24/7 (matching EAF production rate) | As S3 - continuous operation required to maintain conveyor feed rate.                                                                                                |
| Scrap tipping and stockpile formation                      | Release of scrap from excavator bucket to stockpile.                                                                                                      | Throughout operations                             | Impulsive. Metal-on-metal and metal-on-ground contact.                                                                                                               |
| Ancillary plant                                            | Site lighting (if generator-powered), welfare facilities, any fixed plant                                                                                 | As required                                       | Continuous or intermittent.                                                                                                                                          |
| Reach stacker — container unloading                        | Reach stacker(s) unloading 25-tonne scrap containers at unloading area with local barrier.                                                                | Intermittent following deliveries, 24/7           | Impulsive. Metal-on-ground contact.                                                                                                                                  |



## 4.1.2 EAF Facility

The following table identifies the principal noise-generating plant and activities at the EAF and associated activities. All activities relate to the processing of scrap at the EAF or ancillary plant or equipment required to ensure the EAF can operate.

**Table 4-2 EAF Noise Sources**

| Source / Activity                          | Description                                                                                                                                                                                                                                         | Operating Pattern           | Noise Character                                                                                              |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------|
| Electric Arc                               | The arc operates continuously under a foaming slag layer, with scrap melted by immersion in the liquid steel bath. Arc noise is attenuated by the slag layer and the liquid steel. The 100 Hz fundamental tone and harmonics remain present.        | Continuous during operation | Tonal at 100 Hz and harmonics. Continuous and relatively steady.                                             |
| Consteel conveyor area                     | Canopied section of the Consteel conveyor where scrap is loaded by excavator/material handler from the stockpile. Conveyor is an oscillating/inertial type.<br><br>Furnace off-gas preheats scrap. Gas flow and combustion noise within the tunnel. | Continuous, 24/7            | Continuous conveyor noise. Impulsive content from scrap loading by excavator. Attenuated by consteel canopy. |
| Furnace transformer and reactor            | Large power transformer and series reactor. Generates 100 Hz tone and harmonics. Located internally. Cooling fans contribute broadband noise.                                                                                                       | Continuous during operation | Tonal at 100 Hz and 200 Hz. Continuous and relatively steady.                                                |
| Fume extraction system                     | High-volume fume extraction.                                                                                                                                                                                                                        | Continuous, 24/7            | Continuous broadband.                                                                                        |
| Main fan / blower, MHS booster fan, LF fan | Primary extraction fans driving the fume treatment system.                                                                                                                                                                                          | Continuous, 24/7            | Continuous broadband.                                                                                        |
| Fume treatment plant / baghouse            | Baghouse filtration unit, pulse-jet cleaning, associated ductwork connections.                                                                                                                                                                      | Continuous, 24/7            | Continuous. Intermittent pulse-jet noise.                                                                    |
| Ducting (external runs)                    | External fume extraction ductwork between EAF, Consteel tunnel, LF, and fume treatment plant. Noise breakout from duct walls, flexible connections, and dampers.                                                                                    | Continuous, 24/7            | Continuous broadband.                                                                                        |
| Ladle metallurgy furnaces (×2)             | Two ladle furnaces for secondary refining. Arc noise mechanism similar to EAF but at lower power.                                                                                                                                                   | During refining phases      | Tonal (100 Hz) at lower level than EAF.                                                                      |



| Source / Activity                              | Description                                                                                                                             | Operating Pattern                             | Noise Character                                                                                                                  |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Continuous caster                              | Strand drive motors, mould oscillation, torch cutting, cooling water sprays.                                                            | Continuous during casting                     | Predominantly continuous. Low-frequency low-level vibration from mould oscillation. Intermittent torch cutting.                  |
| Cooling towers                                 | Cooling towers for furnace panels, transformer, and caster.                                                                             | Continuous, 24/7                              | Continuous broadband.                                                                                                            |
| Overhead cranes                                | Ladle crane, auxiliary cranes.                                                                                                          | Intermittent                                  | Motor/drive noise.                                                                                                               |
| Tapping operations                             | Tapping of liquid steel from EAF to ladle.                                                                                              | Intermittent, at end of each tap-to-tap cycle | Short-duration event.                                                                                                            |
| Slag handling                                  | Slag pot removal, cooling, and handling by mobile plant.                                                                                | After tapping                                 | Short-duration during pot movements.                                                                                             |
| Electrical switchgear / harmonic filters / SVC | High-voltage switchgear, power quality equipment, static VAR compensator.                                                               | Continuous, 24/7                              | Tonal hum from reactor coils.                                                                                                    |
| HBI building                                   | Storage and handling of hot briquetted iron. Conveyor/feeder systems transferring HBI to EAF charge. Material handling within building. | Intermittent, when HBI is part of charge mix  | Intermittent. Conveyor and feeder noise. Some impulsive content from material transfer points. Attenuated by building enclosure. |
| Compressor room                                | Compressed air compressors for oxygen lancing, carbon injection, pneumatic systems, and services.                                       | Continuous, 24/7                              | Continuous broadband. Potentially tonal from reciprocating or screw compressors. Attenuated by building enclosure.               |
| Pump house (primary)                           | Primary cooling water circulation pumps for EAF and LF circuits.                                                                        | Continuous, 24/7                              | Continuous. Motor and pump noise.                                                                                                |
| Secondary pump house                           | Cooling water pumps for continuous caster and ancillary circuits.                                                                       | Continuous during casting                     | Continuous. Motor and pump noise.                                                                                                |
| Lagoon pump house                              | Pumps for cooling water lagoon recirculation and treatment.                                                                             | Continuous or intermittent                    | Continuous. Motor and pump noise.                                                                                                |

## 4.2 Noise Character Summary

### 4.2.1 EAF Facility

EAF operations at this facility:

- The EAF will produce tonal energy at 100 Hz fundamental tone and harmonics. This tonal content will be effectively controlled through the dog house (enclosure) and Consteel building treatment proposed
- Fume extraction, multiple fan sources, cooling towers, ductwork, pump and compressor noise, transformer, and conveyor systems will generate continuous broadband noise
- Tapping and slag operations generate short-duration noise events



#### 4.2.2 Scrap Handling Facility

Scrap handling operations at this facility are characterised by:

- Metal-on-metal contact during excavator loading/unloading, container placement, and tipping of scrap onto floor or into tipper trucks. Based on the assessment undertaken for the facility, a character correction of +3 dB for impulsivity has been applied under BS 4142:2014+A1:2019, Clause 9.2. This correction reflects that the impulsive character, whilst present at source, it is moderated at receptor locations by the propagation path, the intervening screening from containers, stockpiles and existing buildings, as well as the existing  $L_{AFmax}$  levels present within the surrounding acoustic environment
- Excavators, reach stackers, and tipper lorries operating throughout the 24/7 shift pattern contribute relatively continuous broadband noise floor from diesel engines and hydraulic systems
- The principal noise sources do not exhibit prominent tonal characteristics. All mobile plant is specified with broadband reversing alarms to avoid introducing tonal content



## 5 Noise Control Measures

### 5.1 Embedded Noise Control

Full details of the embedded noise control are provided in Appendix B – Embedded Mitigation Measures. A summary of the embedded noise control measures is provided in Sections 5.1.1 and 5.1.2 below. Further details relating to the flow of material, plant and equipment use, implementation of embedded mitigation and best practice measures are provided within Appendix C – EAF Project – Storyboard.

#### 5.1.1 EAF Facility

The following noise control measures are embedded in the facility design:

- The EAF, ladle furnaces, and tapping area are housed within a fully enclosed melt shop building. The building envelope is the primary barrier between internal noise sources and the external environment
- A purpose-built acoustic enclosure (dog house) surrounds the EAF within the melt shop, providing secondary containment. The enclosure incorporates acoustically treated walls, ceiling, and sliding doors
- The Consteel conveyor is enclosed within a canopy, attenuating conveyor noise, scrap movement noise, and off-gas noise
- The furnace transformer is housed in a purpose-built enclosure with acoustic treatment to attenuate the 100 Hz magnetostriction tone and cooling fan noise
- Attenuators fitted to primary and/or secondary fume extraction ductwork
- The number and size of openings to the melt shop are minimised. Doors remain closed except during vehicle/material transit and in line with operational requirements
- Dog house panels, doors, and seals maintained in good condition. Deterioration of seals is a common cause of increased noise breakout and shall be addressed as a priority repair or maintenance item
- All mobile plant within the EAF facility fitted with broadband alarms

#### 5.1.2 Scrap Handling Facility

The scrap handling area is an outdoor operation with no building enclosure. Noise control is achieved through the following embedded measures:

- At scrap unloading positions, 20-foot shipping containers are arranged as acoustic barriers, stacked two containers high (5.2 metres) with five containers on each row in an 'L' configuration [3-2], positioned between the unloading activity and the nearest sensitive receptors. These container walls provide screening attenuation to receptor locations during the noisiest phase of operation (tipping/unloading). Unloading of full scrap containers to occur as close to the local container barriers as operationally possible, with excavator removing scrap from location prior to next container being unloaded.
- The loading of tipper lorries is to be screened from receptors by the strategic positioning of scrap stockpiles. To be effective as a noise control measure, the stockpile must be at least 5 metres high and the tipping activity must occur within 5 metres of the 5 metres high stockpile; if the stockpile is degraded below the required condition, a container wall is required for the tipper loading activity to continue. Where stockpiles cannot be maintained at a height of 5 metres, by 20-foot shipping containers are arranged as acoustic barriers, stacked two containers high (5.2 metres) with five containers on each row in an 'L' configuration [3-2], between the loading operation and receptor directions.
- Excavator operators shall minimise the drop height when releasing scrap from the bucket to stockpiles or tipper lorry bodies. Material shall be placed rather than dropped wherever practicable
- Reach stacker operators shall place containers gently, avoiding slamming or dropping from height. Containers shall not be stacked or moved unnecessarily



- The Consteel conveyor system is enclosed within a canopy near the EAF building, providing attenuation of conveyor noise and scrap-on-conveyor noise in the vicinity of the melt shop
- All mobile plant (excavators, reach stackers, tipper lorries) shall be procured or specified with reference to declared sound power levels. Engines shall be fitted with manufacturer-standard exhaust silencers maintained in good condition
- All site-operated mobile plant shall be fitted with broadband reversing alarms in place of tonal beepers, to eliminate tonal character at receptors
- Broadband reversing alarms on visiting HGVs where enforceable via site rules or haulage contract, Engine-off policy when stationary >2 min, designated HGV routing to maximise distance from receptors. Speed limit enforcement (20 mph).
- Designated queueing and waiting areas positioned to reduce impacts on nearest receptors.
- The facility layout has been designed to maximise the screening benefit of container stacks and stockpiles between the principal noise sources and the nearest sensitive receptors
- A preventive maintenance schedule shall be maintained for all noise-critical plant and infrastructure (e.g. excavator and reach stacker exhaust silencers, broadband reversing alarms on all mobile plant, tipper lorry body condition (loose panels, worn hinges generating rattle), container condition (structural integrity for use as screening barriers), conveyor enclosure near EAF (panels, seals, doors))
- All vehicles shall observe the site speed limit of 20 mph. Engines shall be switched off when stationary, as far as practicable
- During daytime operations (07:00–23:00), simultaneous loading of tippers is acceptable.
- During night-time operations (23:00–07:00), operators shall limit tipper loading to one position, apply heightened awareness of noise generation, with particular attention to drop height control, container placement, and avoidance of unnecessary impact noise events



## 6 Noise Assessment

### 6.1 Methodology

The noise risk assessment for this facility is based on BS 4142:2014+A1:2019. The methodology follows the steps:

- Determination of the background sound level ( $L_{A90,T}$ ) at representative receptor positions during the relevant assessment periods (daytime 07:00–23:00 and night-time 23:00–07:00, given the 24/7 operating regime).
- Determination of the specific sound level at receptor positions.
- Application of a +3 dB correction for impulsive character, as established for this facility.
- Derivation of the rating level ( $L_{Ar,T}$ ) and comparison with the background sound level.
- Contextual assessment considering the guidance in BS 4142, Section 11, including the absolute level of sound, the existing acoustic environment (including the established industrial character of the area and the elevated existing  $L_{AFmax}$  levels), the nature and duration of the specific sound, and the sensitivity of receptors.

### 6.2 Sensitive Receptors

The assessment locations are described in Table 6-1.

*Table 6-1 Baseline Survey Location Description*

| NSR Ref. | Description                               | Type of Receptor | Easting | Northing |
|----------|-------------------------------------------|------------------|---------|----------|
| R1       | Residential properties at West End        | Residential      | 277127  | 188899   |
| R2       | Residential properties at Prince Street   | Residential      | 277641  | 188331   |
| R3       | Residential properties at Brynhyfryd Road | Residential      | 278365  | 187088   |
| R4       | Residential properties at Longland Lane   | Residential      | 279273  | 186115   |
| R5       | Residential properties at Eglwys Nunydd   | Residential      | 280190  | 184858   |

### 6.3 Predicted Noise Levels

Predicted results for the worst-case operational scenario associated with the operation of the EAF Development during daytime hours are provided within Table 6-2.

The in-combination cumulative impacts include contribution from all aspects of the EAF Project:

- The EAF
- The scrap handling facility
- Margam Substation

*Table 6-2 EAF Project Predicted Noise Levels (Daytime 07:00-23:00 hours)*

| ID | Specific Sound Level | Rating Level    | Interim Baseline Background Sound Level | Daytime criterion | Rating Level vs Criterion |
|----|----------------------|-----------------|-----------------------------------------|-------------------|---------------------------|
|    | dB $L_{Aeq, Tr}$     | dB $L_{Ar, Tr}$ | dB $L_{A90,T}$                          | dB $L_{Ar,Tr}$    | dB $L_{Ar, Tr}$           |
| R1 | 40                   | 43              | 50                                      | 55                | -12                       |



| ID | Specific Sound Level    | Rating Level           | Interim Baseline Background Sound Level | Daytime criterion     | Rating Level vs Criterion |
|----|-------------------------|------------------------|-----------------------------------------|-----------------------|---------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Ar, Tr</sub> | dB L <sub>A90,T</sub>                   | dB L <sub>Ar,Tr</sub> | dB L <sub>Ar, Tr</sub>    |
| R2 | 39                      | 42                     | 44                                      | 49                    | -7                        |
| R3 | 40                      | 43                     | 45                                      | 50                    | -7                        |
| R4 | 44                      | 47                     | 54                                      | 59                    | -12                       |
| R5 | 34                      | 37                     | 52                                      | 57                    | -20                       |

Review of the results provided in Table 6-2 indicates that the predicted rating levels from the EAF Development (including the RM2 Proposed Development) are both below the interim baseline background sound level and achieve the consent condition criteria for daytime at all NSRs.

Predicted results for the worst-case operational scenario associated with the operation of the EAF Development (including the RM2 Proposed Development) during night-time hours are provided within Table 6-3.

**Table 6-3 EAF Project Predicted Noise Levels (Night-time 23:00-07:00 hours)**

| ID | Specific Sound Level    | Rating Level           | Interim Baseline Background Sound Level | Night-time criterion  | Rating Level vs Criterion |
|----|-------------------------|------------------------|-----------------------------------------|-----------------------|---------------------------|
|    | dB L <sub>Aeq, Tr</sub> | dB L <sub>Ar, Tr</sub> | dB L <sub>A90,T</sub>                   | dB L <sub>Ar,Tr</sub> | dB L <sub>Ar, Tr</sub>    |
| R1 | 40                      | 43                     | 44                                      | 49                    | -6                        |
| R2 | 40                      | 43                     | 42                                      | 47                    | -4                        |
| R3 | 42                      | 45                     | 42                                      | 47                    | -2                        |
| R4 | 45                      | 48                     | 50                                      | 55                    | -7                        |
| R5 | 36                      | 39                     | 43                                      | 48                    | -9                        |

Review of the results provided in Table 6-3 indicates that the predicted rating levels from the EAF Development (including the RM2 Proposed Development) does not exceed the 'interim baseline background sound level + 5dB', and achieve the consent condition criteria for daytime at all NSRs.



## 7 Noise and Vibration Control Management Measures

### 7.1 Training

#### 7.1.1 EAF

EAF personnel shall receive noise awareness training covering the noise characteristics of Consteel EAF operations, the function and importance of the dog house and melt shop enclosures, door management, foamed slag practice and its acoustic benefit, and defect reporting for enclosure integrity. Toolbox talks at intervals not exceeding 6 months.

#### 7.1.2 Scrap Handling Facility

Scrap handling facility personnel with operational responsibilities shall receive noise awareness training as part of site induction, covering the details contained within the ONVMP relevant to their role and location of sensitive receptors, the drop height and container placement protocols, the importance of maintaining container barriers and stockpile screens in effective positions, and the complaint reporting procedure. Toolbox talks shall be delivered at intervals not exceeding 6 months.

### 7.2 Noise Management

Day-to-day noise management shall be overseen by the Site Manager and Environmental Manager:

- Any abnormal noise (loss of foamed slag, abnormal power profiles, enclosure breach, equipment failure) to be addressed by shift supervisor
- Structural defects to melt shop building, dog house, or transformer enclosure reported immediately and repaired as a priority
- If a noise complaint is received, the environmental manager shall immediately review current operations and implement any available short-term noise reduction measures (e.g., repositioning work to a screened location, reducing drop heights, temporarily suspending non-essential activities).
- If noise monitoring identifies an exceedance of trigger levels, the activity responsible shall be modified until the cause is identified and corrective action is implemented.
- Any loss of screening effectiveness (e.g., removal of container barrier for operational reasons, reduction in stockpile height below 5 m in a critical screening position) shall be reported to the Environmental Manager and alternative screening arrangements implemented before the activity resumes in that location.

### 7.3 Out-of-Hours / Exceptional Working Protocol

Where operations outside normal parameters are required (e.g. abnormal maintenance, emergency works), which have the potential to generate noise, the Environmental Manager shall be notified in advance where practicable. The LPA/NRW shall be notified in advance of planned exceptional works, or as soon as practicable in the case of an emergency.

### 7.4 Complaint Receipt and Logging

All noise complaints shall be logged in a Noise Complaint Register recording: date/time of receipt, complainant details (where provided), date/time/duration of alleged event, description of noise, weather conditions, receiving officer, and unique reference number.

Complainant contacted within 24 hours of receipt.

#### 7.4.1 Investigation and Corrective Action

The actions which are recommended to be taken as soon as possible are as follows:



- As soon as possible after receipt of a complaint, undertake a site inspection. Note all noise and vibration-producing activities taking place and the mitigation methods that are being employed. If the complaint was related to an event in the recent past, note any noise and vibration-producing activities that were underway at that time, if possible. Implement any remedial action necessary.
- Where appropriate, investigation is to be initiated within 24 hours. Includes review of operational records, identification of probable source, assessment of noise control measure performance, permanent monitoring results at site boundary and specification of corrective action.
- Where the specific activity responsible for the complaint cannot be identified, consideration should be given to either the deployment of monitoring equipment or a noise survey in the area of the complaint in discussion with the main contractor or project manager.

#### 7.4.2 Reporting to LPA and NRW

- At the frequency specified in the permit/planning condition for routine results.
- On request, for access to the Noise Complaint Register.

#### 7.4.3 Record Retention

Minimum 2 years for all noise-related records.

### 7.5 Community Liaison

#### 7.5.1 Proactive Engagement

The operator will provide information on operational activities, monitoring results, complaints, and planned changes through established communication channels such as the Joint Consultative Group meeting with NPT Councillors, newsletters and social media.

#### 7.5.2 Community Liaison Contact

Name, telephone, email — displayed on site notice board and operator website.

#### 7.5.3 Pre-Notification of Planned Noisy Activities

Where activities are expected to generate significantly higher noise than normal (e.g., exceptional campaigns, construction, commissioning), the operator shall notify the LPA/NRW (10 working days) and registered contacts (5 working days) in advance.

#### 7.5.4 Annual Review Meeting

Where required by condition or permit, an annual review meeting with the LPA and/or NRW to discuss ONVMP implementation, monitoring results, and complaint trends.

### 7.6 Roles and Responsibilities

*Table 7-1 Noise and Vibration Control Management Measures Roles and Responsibilities*

| ONVMP Element                                                                                      | Accountable                            | Supporting        |
|----------------------------------------------------------------------------------------------------|----------------------------------------|-------------------|
| Overall ONVMP compliance                                                                           | Environmental Manager                  | Site Manager      |
| Noise control measure implementation (including container barrier and stockpile screen management) | Site Manager, Shift Supervisor (Scrap) | Operational Staff |
| Noise monitoring programme                                                                         | Environmental Manager                  |                   |
| Complaint handling                                                                                 | Environmental Manager                  | Shift Supervisor  |
| Regulatory reporting (LPA/NRW)                                                                     | Environmental Manager                  | Site Manager      |



| ONVMP Element                      | Accountable           | Supporting                               |
|------------------------------------|-----------------------|------------------------------------------|
| Staff training                     | Site Manager          | Operational Staff, Environmental Manager |
| Plant maintenance (noise-critical) | Site Manager          | Maintenance team                         |
| ONVMP review and update (annually) | Environmental Manager |                                          |

### 7.6.1 Project Team and Responsibilities

Shift supervisors shall notify either the Site Manager or Environmental Manager within 5 working days of:

- Installation of new plant or modification to existing plant.
- Change to operating patterns or throughput.
- Notification from the LPA or NRW regarding noise matters.
- Any change to the surrounding receptor environment.
- Any change to container barrier or stockpile screening arrangements that may reduce their effectiveness.



## Appendix A – Glossary

| Term                                             | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ambient sound</b>                             | The total sound at a given place, usually a composite of sounds from many sources near and far.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Background sound, <math>L_{A90,T}</math></b>  | A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval.                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>dB</b>                                        | Decibel. Scale for expressing sound pressure level. It is defined as 20 times the logarithm of the ratio between the root mean square pressure of the sound field and a reference pressure i.e. $2 \times 10^{-5}$ Pascal.                                                                                                                                                                                                                                                                                                                  |
| <b>dB(A)</b>                                     | A-weighted decibel. This provides a measure of the overall level of sound across the audible spectrum with a frequency weighting to compensate for the varying sensitivity of the human ear to sound at different frequencies. Example sound levels include:<br>140 dB(A) Threshold of pain<br>120 dB(A) Threshold of feeling<br>100 dB(A) Loud nightclub<br>80 dB(A) Traffic at busy roadside<br>60 dB(A) Normal speech level at 1m<br>40 dB(A) Quiet office<br>20 dB(A) Broadcasting studio<br>0 dB(A) Median hearing threshold (1000 Hz) |
| <b>Frequency</b>                                 | The repetition rate of a sound wave. The subjective equivalent in music is pitch. The unit of frequency is the Hertz (Hz), which is identical to cycles per second. A thousand hertz is often denoted as kHz, e.g. 2 kHz = 2000 Hz. Human hearing ranges approximately from 20 Hz to 20kHz.                                                                                                                                                                                                                                                 |
| <b><math>L_{Aeq,T}</math></b>                    | This is defined as the notional steady sound level over a stated period of time (T), would contain the same amount of acoustical energy as the A-weighted fluctuating sound measured over that period.                                                                                                                                                                                                                                                                                                                                      |
| <b><math>L_{AFmax}</math></b>                    | The maximum A-weighted fast time-weighted sound pressure level recorded over the period stated.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Rating level</b>                              | Specific sound level of a source plus any adjustment for the characteristic features of the sound.                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Residual sound</b>                            | Ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound.                                                                                                                                                                                                                                                                                                                                                                          |
| <b><math>R_w</math></b>                          | Weighted sound reduction index. A single-number index which characterises the frequency dependent airborne sound insulation performance of building elements determined under laboratory conditions.                                                                                                                                                                                                                                                                                                                                        |
| <b>Sound absorption</b>                          | Process whereby sound energy is converted in to heat. Sound absorption properties is expressed as the sound absorption coefficient $\alpha$ or the sound absorption class (A-E).                                                                                                                                                                                                                                                                                                                                                            |
| <b>Sound insulation</b>                          | The reduction or attenuation of airborne sound by a solid element between source and receiver.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Sound pressure level, <math>L_p</math> dB</b> | Sound pressure level is given by the formula<br>$L_p = 10 \log \left( \frac{p}{p_0} \right)^2$<br>where<br>$p$ is the root mean square sound pressure, in pascals (Pa);<br>$p_0$ is the reference sound pressure (20 $\mu$ Pa)                                                                                                                                                                                                                                                                                                              |
| <b>Specific sound</b>                            | Sound pressure level produced by the source being assessed at the assessment location.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Table A 1 Glossary



## Appendix B – Embedded Mitigation Measures

During the development of the EAF facility, the project team undertook a significant review of the available noise control mitigation measures available. This included the following:

- Identification of each item of the proposed plant, equipment or building breakout noise emissions that could contribute to noise levels at nearby NSRs
- A review of the potential noise control and mitigation options for each item of the proposed plant, equipment or building (including noise control barriers, enclosures and operational adjustments to reduce noise emissions)
- Calculation of the potential benefits of each noise control and mitigation measure for the contributing plant and equipment
- Identification of a noise control regime that mitigated and reduced the potential for adverse impacts at NSRs

As part of the above process, it was identified that the EAF and LF processes that are proposed within the existing BOS plant building have the potential to generate significant noise emissions. Following review of the initial propagation model outputs and various design team meetings, an onsite investigation and assessment relating to the sound insulation performance of the existing BOS plant building (including representatives from Tata Steel UK Limited (Tata Steel), the EAF equipment supplier and RSKA), a set of embedded mitigation measures was identified that could result in acceptable or non-significant effects.

The noise control measures identified within Table C1 1 are embedded as part of the design for the EAF Project.

*Table C1 1 Embedded Mitigation Measures (EAF)*

| Element/s                                                                | Summary of control measures                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Existing BOS Plant Building                                              | Strategic enhancement of existing BOS building façade cladding (to become the EAF building <sup>1</sup> ) to a total effective weighted sound reduction index of 48 dB R <sub>w</sub> , or equivalent internal 'doghouse' enclosure around the EAF. |
| Continuous Steel building                                                | Optimized cladding ranging from 28-48 dB R <sub>w</sub> ; and 6-8m high reflective noise barrier (minimum surface/area density 15 kg/m <sup>2</sup> ) between the lagoon and the continuous steel building <sup>1</sup> .                           |
| Compressor house                                                         | Enhancement of building façade cladding to a total effective weighted sound reduction index of 48 dB R <sub>w</sub> .                                                                                                                               |
| Louvers                                                                  | Louvers assumed to be a minimum of 300 mm deep, single bank and acoustically treated to achieve a minimum of ~20 R <sub>w</sub> <sup>1</sup> .                                                                                                      |
| Access routes / doors                                                    | All access doors assumed to be acoustically treated to achieve a minimum of 30 R <sub>w</sub> <sup>1</sup> . Location, number and specification of access doors / openings to be determined at detailed design.                                     |
| Any building not requiring specific additional embedded control measures | External roof and wall panel system used to achieve a minimum of 28 dB R <sub>w</sub> .                                                                                                                                                             |
| Main fan / blower                                                        | Enclosure performance of 45 dB R <sub>w</sub> <sup>2</sup> ; and Inline attenuator <sup>3</sup> .                                                                                                                                                   |
| MHS booster fan                                                          | Enclosure performance of 35 dB R <sub>w</sub> <sup>2</sup> ; and Inline attenuator <sup>3</sup> .                                                                                                                                                   |
| LF Fan                                                                   | Enclosure performance of 47 dB R <sub>w</sub> <sup>2</sup> ; and Outlet attenuator <sup>3</sup> .                                                                                                                                                   |



| Element/s                                                                                                                                                                                                                                                                   | Summary of control measures |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Notes:<br>1: Façade areas that require enhancement are detailed in ES chapter 7.2<br>2: Exact location, number and specification performance required to be confirmed during detailed design<br>3: Assumed performance of enclosures and attenuators provided in Table C1 2 |                             |

The performance of the enclosures and attenuators identified as part of the embedded mitigation provided in Table C1 1 are detailed below in Table C1 2.

*Table C1 2 Enclosures and attenuator performance*

| Item                                           | Octave band centre frequency (Hz) |     |     |     |     |     |     |     |
|------------------------------------------------|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                | 63                                | 125 | 250 | 500 | 1k  | 2k  | 4k  | 8k  |
| Main Fan Enclosure                             | -17                               | -23 | -35 | -50 | -50 | -50 | -50 | -50 |
| MHS Booster Fan Enclosure                      | -14                               | -19 | -23 | -32 | -43 | -50 | -50 | -50 |
| LF Fan Enclosure                               | -20                               | -25 | -40 | -48 | -50 | -50 | -50 | -50 |
| Main Fan Outlet Attenuator (Stack side)        | -14                               | -21 | -35 | -46 | -48 | -38 | -23 | -19 |
| MHS Booster Fan - Inlet Attenuator             | -3                                | -7  | -11 | -18 | -20 | -12 | -9  | -7  |
| LF Fan - Outlet Attenuator (exposed duct side) | -4                                | -11 | -25 | -36 | -38 | -28 | -13 | -9  |

Noise control measures identified within Table C1 3 are embedded as part of the design for the EAF Development (including the RM2 Proposed Development).

*Table C1 3 Embedded Mitigation Measures (Scrap Handling Facility)*

| Mitigated Activity                                                                                                         | Name                         | Description                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 25 t rail container unloading                                                                                              | Local container wall barrier | Container wall barriers consisting of stacked containers (3 x wide and 2 x high)                                                      |
| Loading tipper from stockpile<br><br>Tipper available for loading within 5 m distance of stockpile or local container wall | Stockpile (5m high)          | Stockpile must be 5 m high and tipper within 5 m; if stockpile is degraded below the required condition, a container wall is required |
|                                                                                                                            | Local container wall barrier | Container wall barriers consisting of stacked containers (3 x wide and 2 x high)                                                      |

*Offloading of containers expected to be spread evenly across the entire week, resulting in four containers within 15 minutes during typical operating pattern.*



## Appendix C – EAF Project – Storyboard

This appendix supplements the ONVMP by tracing the flow of material through the facility from inbound delivery to steel product, and identifying the noise and vibration mitigation options available at each stage. Mitigation measures are presented alongside each.

*Table D 1 EAF Project Storyboard*

| Stage                   | Activity                                                                                                                           | Plant & Equipment                             | Operating Pattern (Typical / Worst Case)                                                                                                                                                   | Daytime / Night-time | Best Practice / Mitigation                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inbound delivery (rail) | Scrap arrives by rail wagon. Locomotive positions wagons at unloading point. Wagons secured and locomotive departs or stands idle. | Locomotive, rail wagons, rail infrastructure. | Typical: one locomotive within an hour period.<br>Worst case: two locomotive movement in 15 minutes.                                                                                       | Day and Night-time   | Lower-noise locomotive type where operator has influence over haulier. Wagon maintenance to reduce brake squeal and coupling impact, where operator has influence.<br>Avoidance of unnecessary horn use on site (protocol with rail operator).<br>Routing of rail approach to maximise distance from receptors, where practicable.                                                                                |
| Inbound delivery (road) | HGVs arrive, pass through weighbridge, and are directed to the overflow yard.                                                      | Articulated and rigid HGVs, weighbridge.      | Typical: HGV movements 200 per week, distributed across operating hours.<br>Worst case: peak delivery periods with multiple HGVs queuing at weighbridge and unloading bays simultaneously. | Day and Night-time   | Broadband reversing alarms on all visiting HGVs where enforceable via site rules or haulage contract.<br>Engine-off policy when stationary >2 min. Avoidance of air brake release at locations closest to receptors.<br>Designated HGV routing to maximise distance from receptors. Speed limit enforcement (20 mph).<br>Designated queueing and waiting areas positioned to reduce impacts on nearest receptors. |



| Stage                                     | Activity                                                                                                                                                                                                                                                                                                                                                                                   | Plant & Equipment                                                               | Operating Pattern (Typical / Worst Case)                                                                                                                                                                                              | Daytime / Night-time   | Best Practice / Mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Container unloading at scrap unload areas | Reach stacker lifts 25 t containers from rail wagons and unloads them into designated scrap unload areas, directly behind a 20-foot shipping containers are arranged as acoustic barriers, stacked two containers high (5.2 metres) with five containers on each row in an 'L' configuration [3-2], screening the activity from receptors to the east. Containers tipped to release scrap. | Reach stacker, 25 t containers, local container wall.                           | Typical: containers emptied using one reach stacker, unloading four containers within 15 minutes.<br>Worst case: containers emptied using both reach stackers following a rail delivery, unloading four containers within 15 minutes. | Day and Night-time     | Controlled lowering of containers, no dropping of containers onto ground or train.<br>Container condition maintained (no loose panels).<br>Local container wall confirmed as in position at shift handover or prior to unloading containers. No unloading of 25 t containers without appropriately positioned local container wall.<br>Shipping containers are arranged as acoustic barriers, stacked two containers high (5.2 metres) with five containers on each row in an 'L' configuration [3-2] in place before unloading commences, positioned between unload area and nearest receptors (typically east). Unload area sited directly behind the wall.<br>Night-time: heightened placement technique awareness (23:00–07:00). |
| Scrap transfer: unload area to stockpile  | 30 t excavator with bucket moves scrap from unload area to designated stockpile locations. Secondary handling, scrap moved within stockpile location.                                                                                                                                                                                                                                      | 30 t excavators (bucket attachment), material handlers.                         | Typical: continuous during and after deliveries, single excavator.<br>Worst case: excavators operating with material handlers simultaneously.                                                                                         | Day and Night-time     | Drop height minimisation.<br>Bucket lowered to stockpile surface before release.<br>Smooth bucket engagement technique to reduce scraping and impact.<br>Stockpile height built up progressively, providing increasing self-screening.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Stockpile to tipper lorry                 | 30 t excavator or material handler loads scrap from stockpile into tipper body. Screening depends on stockpile proximity:                                                                                                                                                                                                                                                                  | 30 t excavator or material handler, 100 t or 45 t tipper lorry, container wall. | Typical: single loading position.<br>Worst case:<br>Daytime: two loading positions, active simultaneously.                                                                                                                            | Both. Continuous 24/7. | Drop height into tipper body minimised, bucket lowered to rim before release. Bucket not struck against tipper body sides. Tipper body maintained (no loose panels, worn hinges, damaged latches).<br>Decision rule before loading:<br>Stockpile or container wall must be confirmed before moving scrap to the tipper.                                                                                                                                                                                                                                                                                                                                                                                                              |



| Stage                                           | Activity                                                                                                                                                                                                                                                                                                                                          | Plant & Equipment           | Operating Pattern (Typical / Worst Case)                                                                                                                                                          | Daytime / Night-time   | Best Practice / Mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 | <p>(A) where 5 m high stockpile within 5 m of tipper, tipper on screened side</p> <p>(B) where stockpile not available, 20-foot shipping containers are arranged as acoustic barriers, stacked two containers high (5.2 metres) with five containers on each row in an 'L' configuration [3-2], positioned to the east before loading tipper.</p> |                             | Night-time: limited to one loading position for one tipper (100-t or 45-t).                                                                                                                       |                        | <p>Shift section leader (TSUK) and/or contractor team leader/scrap inspector confirms whether 5 m stockpile exists within 5 m of tipper loading activity. If yes, tipper on screened (west) side. If no, container wall (2 high × 3 wide) erected to the east before loading begins.</p> <p>As stockpile is degraded, tipper location relative to stockpile height to 5 m to be checked. Once tipper unable to be loaded within 5 m of a 5 m high stockpile, 20-foot shipping containers are to be arranged as acoustic barriers, stacked two containers high (5.2 metres) with five containers on each row in an 'L' configuration [3-2] erected to the east before loading continues.</p> <p>Stockpile heights to be checked via two methods, one is in comparison to the local container wall height. The other is through comparing the stockpile height to a known height of a large plant item e.g. a loader with bucket lifted to maximum extent (height of 5.2 metres). Once the stockpile is equal or above the container wall height or large plant item, the stockpile can be used.</p> <p>Daytime: Two loading positions available. Limited to two loading position for up to two (100-t or 45-t) tipper with stockpile or container wall.</p> <p>Night-time: Limited to one loading position for one (100-t or 45-t) tipper with stockpile or container wall .</p> |
| Transport: stockpile to EAF conveyor feed point | Loaded tipper to EAF Consteel conveyor feed point. Scrap tipped at conveyor stockpile or under Consteel canopy. Empty tipper returns.                                                                                                                                                                                                             | 100 t or 45 t tipper lorry. | <p>Typical: continuous tipper circulation, single vehicle on haul road at any time.</p> <p>Worst case: three tippers circulating simultaneously; one loading, one tipping and one in transit.</p> | Both. Continuous 24/7. | <p>Speed limit compliance on internal haul road (20 mph). Broadband reversing alarms.</p> <p>Controlled hydraulic raise during tipping; avoid slamming body down.</p> <p>Haul road alignment to maximise distance from receptors. Road surface maintenance (potholes increase rattle and impact noise).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |



| Stage                             | Activity                                                                                                                                                                      | Plant & Equipment                                                            | Operating Pattern (Typical / Worst Case)                                                                                                         | Daytime / Night-time      | Best Practice / Mitigation                                                                                                                                                                                                                                               |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   |                                                                                                                                                                               |                                                                              |                                                                                                                                                  |                           | Existing structures, stockpiles, or landform as incidental screening.                                                                                                                                                                                                    |
| EAF conveyor stockpile feeding    | 30 t excavator or material handler feeds scrap from stockpile into the hopper, magnet cranes feed scrap onto the Consteel conveyor.                                           | 30 t excavator or material handler, Consteel conveyor.                       | Typical: single excavator, steady feed rate matched to EAF demand.<br>Worst case: As above                                                       | Both.<br>Continuous 24/7. | Steady feed rate coordinated with EAF control room to avoid surge loading.<br>Drop height onto conveyor minimised.<br>Canopied conveyor section located to the west of the melt shop building (line of sight screening).                                                 |
| HBI feed                          | HBI transferred from enclosed HBI building to Consteel conveyor via dedicated feeder/conveyor.                                                                                | HBI building conveyors/feeders, transfer chutes.                             | Typical: Intermittent<br>Worst case: All conveyors running simultaneously.                                                                       | Day and Night-time        | Enclosed handling within building.<br>Rubber or composite transfer chute liners to reduce impact noise, where design permits.<br>Building doors closed except during HBI delivery vehicle access.<br>Transfer to Consteel via enclosed connection, where design permits. |
| Consteel pre-heating tunnel       | Scrap travels through enclosed pre-heating tunnel. Furnace off-gas flows counter-current, preheating the charge.                                                              | Consteel conveyor (enclosed tunnel), off-gas ducting, combustion air system. | Typical: continuous.<br>Worst case: continuous.                                                                                                  | Both.<br>Continuous 24/7. | Tunnel enclosure as part of the Consteel design.<br>Conveyor maintenance to prevent excessive vibration or bearing noise.<br>Tunnel panel integrity inspection and maintenance routine.                                                                                  |
| EAF melting (Consteel continuous) | Pre-heated scrap enters EAF through side connection and melts by immersion in liquid steel bath under continuous flat bath conditions.<br>Arc submerged beneath foaming slag. | Tenova Consteel® EAF, electrodes, oxygen lance, carbon injection.            | Typical: continuous submerged-arc operation under stable foamed slag.<br>Worst case: Dog house door open for extended period during maintenance. | Both.<br>Continuous 24/7. | Foamed slag practice maintained throughout.<br>Consteel continuous charging eliminates bucket charging noise.<br>Dog house enclosure with sliding doors closed during normal operation.<br>Melt shop building envelope as primary external barrier beyond dog house.     |



| Stage                         | Activity                                                                                                                                                                                      | Plant & Equipment                                                                    | Operating Pattern (Typical / Worst Case)                                                                                                | Daytime / Night-time      | Best Practice / Mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               |                                                                                                                                                                                               |                                                                                      |                                                                                                                                         |                           | Dog house, melt shop roof and Consteel building façade maintained.<br>Maintenance scheduled for daytime periods, where practicable.                                                                                                                                                                                                                                                                                                                                                     |
| Ladle furnace                 | Liquid steel tapped from EAF to ladle. Ladle transferred to one of two LMFs.                                                                                                                  | Two LMFs, overhead crane, ladle turret/transfer car, alloy addition systems.         | Typical: one LMF in operation at a time.<br>Worst case: both LMFs operating simultaneously.                                             | Both.<br>Continuous 24/7. | Controlled ladle transfer (steady crane movements).<br>Minimise open-door duration.<br>LMFs within melt shop building. Dog house and building doors closed when not required to be open.                                                                                                                                                                                                                                                                                                |
| Fume extraction and treatment | Continuous extraction from EAF (primary via Consteel tunnel, secondary via canopy) and LMFs. Air drawn through ductwork to fume treatment plant (baghouse). Cleaned air discharged via stack. | Main fan/blower, MHS booster fan, LF fan, ductwork (external runs), baghouse, stack. | Typical: all fans running at design duty, continuous.<br>Worst case: fan running at 100% duty following a period of reduced extraction. | Both.<br>Continuous 24/7  | Fan selection: lowest specific sound power for duty. VSDs where process permits.<br>In-duct attenuators sized for blade-pass frequency and broadband.<br>Anti-vibration mounts on fan housings.<br>Impeller balancing and bearing maintenance.<br>Ductwork lagging (acoustic and thermal) on external runs.<br>Flexible connections at fan inlet/outlet.<br>Fan discharge and baghouse pulse-jet valves oriented away from receptors where layout permits.<br>Stack discharge silencer. |



| Stage           | Activity                                                                                                                 | Plant & Equipment                                                                                                            | Operating Pattern (Typical / Worst Case)                                                                                                                                                                                                 | Daytime / Night-time     | Best Practice / Mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ancillary plant | Continuous or intermittent operation of cooling, compressed air, pumping, and electrical systems supporting EAF process. | Cooling towers, compressor room, pump house (primary), secondary pump house, lagoon pump house, transformer, switchgear/SVC. | Typical: cooling towers and pumps continuous; compressors duty-cycling.<br>Worst case: all cooling tower cells running at maximum fan speed; all compressors running simultaneously at peak demand; transformer cooling fans at maximum. | Both.<br>Continuous 24/7 | Low-noise fan selection for cooling towers. VSD on cooling tower fans.<br>Screw compressors (lower noise than reciprocating). Acoustic canopy on compressor packages.<br>Reduced-noise transformer core design. Lowest-noise pumps for duty point.<br>Cooling tower discharge oriented away from receptors. Acoustic louvres on intake faces towards receptors.<br>Compressor room, transformer, and pump houses enclosed with acoustic treatment to ventilation openings oriented away from receptors.<br>Any plant room building doors closed when not required to be open |



