ENVIRONMENTAL STATEMENT CHAPTER 13: SUMMARY OF MITIGATION AND MONITORING

Land South of Rover Way, Cardiff CF24 5PH

Harsco Metals Group Limited

SLR Ref: 416.09604.00001
Version No: FINAL V3
November 2019

BASIS OF REPORT

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DOCUMENT REFERENCES

TABLES

13.1.0 Introduction

13.1.1 This chapter of the Environmental Statement (ES) draws together a summary of the mitigation and monitoring measures proposed within the various technical chapters with regard to the proposed development.

13.1.2 Further detailed information pertaining to the proposed mitigation measures is provided within the relevant chapters of the ES, whilst the residual effects and conclusions are provided within Chapter 22: Conclusion.

13.1.3 This Chapter has been revised and re-issued in November 2019 following feedback from Natural resources Wales and Cardiff Council. Further information regarding this correspondence is provided within Chapter 5: Scoping and Consultation.

13.2.0 Ground Conditions and Contamination

13.2.1 For all construction activities, all workers and site visitors would be issued with appropriate Personal Protective Equipment (PPE) and will be trained how to use this correctly and effectively. The appropriate PPE, necessary to keep personnel on site safe, will be determined prior to those activities that require them. During construction, precautions will be taken to minimise the exposure of workers to potentially harmful substances. Appropriate Health and Safety Plans will need to be developed as required under the Construction (Design and Management) Regulations 2015. Attention will also need to be paid to restricting possible off-site dust emissions.

13.2.2 Specific protection is likely to include:

- Use of dust suppression techniques, including water spraying of access roads and stockpiles in dry weather;
- Avoiding the stockpiling of contaminated materials, where possible;
- Covering of stockpiled materials on the Site;
- Vehicles used to transport materials and aggregates will be enclosed; and
- Provision of fuel spill kits on all site plant, and appropriate chemical spill kits in the area where chemicals are both used and stored.

13.2.3 The mitigation measures described above are considered appropriate to address dust emission from on site sources, and the cumulative effects of these emissions on surrounding air quality.

13.2.4 In addition, the effective management of stockpiled soils would also reduce leaching of any contaminants and reduce the potential effects to controlled waters and designated ecosystems to low during the construction phase, particularly during the period between the removal of any existing hardstanding and the construction of the new slab.

13.2.5 Other mitigation measures proposed, include:

- Working in accordance with appropriately robust method statements during the construction phase to minimise the risk of significant leaks or spilled or stored hazardous liquids;
- The storage of any fuels and other hazardous substances associated with operation of the proposed development in adherence of an Environmental Permit;
- The selection of an appropriate drainage strategy supported by routine monitoring of any licensed discharges from the site;
- Selection of an appropriate piling technique to reduce the risk to controlled waters; and
- An assessment of the risks posed by hazardous ground gases that is supported by a robust programme of monitoring.

13.3.0 Air Quality

Construction Phase Dust

13.3.1 Proposed mitigation measures associated with Construction Phase Dust are presented within Table 13-1 below.

Table 13-1: Construction Dust Mitigation Measures

Site Application	Mitigation Measures
General Dust Management	Record all dust and air quality complaints and take appropriate measures to reduce emissions
	Record any exceptional; incidents that cause dust off site.
	Undertake daily visual inspection of dust soiling and dust generation and record in site log
	Ensure an adequate supply of water is available onsite for effective dust suppression
	Use enclosed chutes and conveyors and cover skips
	Minimise drop heights from conveyors, loading shovels and other material handling equipment
	Impose a site speed limit of 10mph on unpaved haul roads
	Ensure all vehicles engines are switched off when stationary
	Plan site layout so machinery is located away from receptors as far as possible
	Erect solid barriers around dusty activities or the site boundary
	Enclose specific operations where there is a high potential for dust production
	Avoid site runoff of water or mud
	Keep site fencing, barriers and scaffolding clean using wet methods
	Remove material that have the potential to produce dust from the site as soon as possible
Earthworks	Re-vegetate earthworks and soil stockpiles to stabilise surfaces as soon as practicable
	Cover stockpiles if not vegetated and only remove in small areas during work
	Avoid Double Handling of material
	Cease operations during high winds in the direction of sensitive receptors
Construction	Avoid scabbling (roughing of concrete surfaces) if possible

Site Application	Mitigation Measures
	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out
Trackout	Use water assisted dust sweepers on the access and local roads to removed tracked out material is necessary
	Avoid dry sweeping large areas
	Ensure vehicles entering and leaving sire are covered to prevent escape of materials during transport
	Access gates to be located at least 10m from receptors where possible

Operational Phase Dust

13.3.2 There are a number of control measures which will be required to be implemented as part of the Site's Permit in order to ensure that the operation of the site does not have the potential for dust emissions beyond the site boundary. The asphalt plant will be permitted as a Directly Associated Activity (DAA) to the new Melt Shop Permit (EPR/TP3639BH).

13.3.3 In terms of in-built mitigation, the asphalt plant is internally enclosed, thus minimising the potential for dust emission and any dust collected internally within the process is fed back into the mixing process. The bulk materials used for the plant will be stored in specially constructed covered concrete storage bays. In addition, the surrounding yard and handling areas will be fitted with dust suppression sprays when required to reduce dust emissions.

13.3.4 Vehicle access and egress to the site will be via the existing access off Tide Fields Road, via existing internal roads that will be surfaced in asphalt. Housekeeping measures will be applied to the wider operational site in accordance with the DEFRA Process Guidance Note (PG 3/15a(12)) for Roadstone Coating as part of the Permit conditions. Therefore, the potential for dust emissions from vehicle movements on-site is considered to be low.

13.3.5 The following mitigation would also be applied to the operation of the site as dust control measures:

- use water-assisted dust sweeping onsite and on local roads if required, to remove as soon as practicable any material tracked out of the site;
- finished product is removed from site in sheeted HDVs;
- storage areas with vehicle movements should be kept clean and in good repair;
- no vehicles should track over deposited sweepings;
- vehicle speeds restricted to 10mph around the site;
- reduce drop heights at all times;
- water suppression available to dampen down storage area;

- ensure wash down area is kept clean at all times;
- no idling of vehicles; and
- dust monitoring through visual inspection by responsible member of staff.

Operational Stack

13.3.6 No additional mitigation is required with regard to the operational stack.

13.3.7 Any mitigation required as a result of impact on the Severn Estuary from emissions of NO_x from stack A5 and additional traffic from the development are proposed within Chapter 11: Ecology and detailed further below.

Operational Odour

13.3.8 No additional mitigation is required with regard to operational odour.

13.3.9 Notwithstanding, there are a number of control measures in line with DEFRA Process Guidance Note (PG 3/15a(12)) that would be implemented as part of the Site's Permit in order to ensure that the operation of the site does not have the potential for odour emission to occur beyond the site boundary

13.4.0 Water Environment

Construction Phase

13.4.1 To manage the potential effects of the construction works on the water environment a range of mitigation measures are suggested which may form part of a site-specific Construction and Environmental Management Plan (CEMP).

13.4.2 The CIRIA publications '*Control of Water Pollution from Construction Sites*' provides a range of measures to control ground and water pollution impacts from construction that would form part of the CEMP. These can be summarised as:

- Management of construction works so as to comply with the necessary standards and consent conditions to be identified by Natural Resources Wales (NRW) and Cardiff Council;
- Consideration will be given to the appropriate storage of materials in wet weather and certain site activities may be postponed during heavy rainfall to prevent pollution entering surface water runoff;
- Any oil, fuel lubrication and other potential pollutants shall be handled on the site in such a manner as to prevent pollution of any watercourse or aquifer. For any liquid other than uncontaminated water, this shall include storage in suitable, bunded tanks;
- No extraction, tipping or temporary storage of materials shall take place within an agreed distance of any gully or other surface water drainage component unless part of the approved works. Under no circumstances shall tipped material enter any drain without prior consent;
- Effective wheel/body washing facilities to be provided and used as necessary;
- A road sweeper to be available whenever the need for road cleaning arises; and
- Vehicles carrying waste material off-site to be sheeted.

13.4.3 All contractors and sub-contractors will also be required to go beyond best practice site management principles, as defined by the Considerate Constructors scheme.

13.4.4 The site does not currently benefit from a formal surface water drainage system; incident rainfall infiltrates into the underlying ground or ponds on areas of hardstanding. Nevertheless, the contractor should where practical manage surface water runoff within the working area by creating a local sump (or sumps) and grips to prevent ponding. Trafficking areas of ponded runoff, particularly on made ground, has the potential to generate fine silts that can be difficult to manage and are easily transported off site. This also has the potential to increase the mobility of any contaminants in the made ground.

Operational Phase

13.4.5 Section 9.0 of the FCA enclosed at Appendix 10-1 describes the proposed surface water management scheme. Surface water runoff from the Asphalt Plant Area will drain to a settlement lagoon before being discharged to a soakaway. The settlement lagoon will remove fine silts and metals from the runoff. A baffle arrangement at the outlet from the settlement lagoon will retain

any hydrocarbons.

13.4.6 Any oil, fuel lubrication and other potential pollutants shall be handled and stored on the site in such a manner as to prevent them being released into the drainage system. For any liquid other than uncontaminated water, this shall include storage in suitable tanks with bunding as required.

13.5.0 Ecology

Construction Noise

13.5.1 In accordance with the mitigation hierarchy, the avoidance of noise creating activities during construction should be the priority. All measures to reduce noise should be taken in line with best practice principles, for example ensure equipment is fitted with exhaust silencers, pneumatic breakers are fitted with sound insulation, and plant is not left idle with the engine running, etc.

13.5.2 The noise sensitive receptors of the Natura 2000 sites predominantly pertain to the Severn Estuary's populations of over-wintering birds. Avoiding demolition or construction activities during the winter would avoid the risk of causing significant negative impacts on the qualifying features and minimise the risk of negatively impacting the conservation goals of the of the designated Natura 2000 sites.

13.5.3 Whilst the Severn Estuary is designated for the over-wintering bird populations it supports, populations of many of these species remain present year-round. At low tide more of the mud flats are exposed and the birds can more easily relocate to a comfortable distance and continue to forage. At high tide the mud flats are not exposed and birds are more concentrated along the shoreline, closer to the application site. The potential for having a negative impact on the bird populations would be significantly reduced by avoiding concrete breaking, pile-driving, or any other activity creating noise levels over 90dBa at 10m during the three-hour period around high tide. Whilst this would be critical in winter, it should also be adopted during the rest of the year in order to minimise disturbance.

13.5.4 Whilst the application site is considered to have negligible potential value of bats, the external lighting scheme should still be designed to be bat friendly. The minimal amount of external lighting required should be used, it should be low level and directional in order to minimise light spill. Cowls and hoods should be used to minimise the amount of lighting shining upwards, and particular care should be taken to avoid increasing the amount of light pollution falling on trees and scrub outside the application site to the east and south.

13.5.5 A Construction Environmental Management Plan should be produced and agreed with the Local Authority. This document should cover all mitigation and enhancement measures to be included within the development proposals, from pre-construction, through construction, to the post-development management of the ecological features and enhancements.

Air Quality

13.5.6 The worst-case scenario assessment methodology for vehicle emissions indicates that the threshold for significant impacts is breached by the already-consented adjacent development, and therefore mitigation for vehicle movements from the application site will reduce the potential impact but not remove it.

13.5.7 Consideration should be given to routing plans that direct traffic to the west, so that it does not pass along the road adjacent to the Severn Estuary SAC Atlantic salt-marsh. Whilst potentially unrealistic to assume that all vehicles can be routed to the west, if vehicles do not pass to the east along Rover Way, they will not have an impact on the salt-meadow.

13.5.8 Whilst figures are not currently available, with the introduction of legislation aimed to increase the number of electric vehicles and reduce the reliance on fossil fuels, over time the levels of NOx

emissions along Rover Way are anticipated to decrease. Consideration could be given to encouraging or incentivising site staff to adopt electric or hybrid vehicles. However, limitations on this front with regard to the heavy haulage vehicles are noted.

Compensation

13.5.9 For any portion of the impact that cannot reliably be mitigated for, then compensation should be considered. This could take the form of contributing to restoration or enhancement of areas of the salt-meadow outside the anticipated impact area, in association with local conservation organisations.

Ecological Enhancement

13.5.10 The preliminary ecological appraisal (Appendix 11-1) made the following recommendations for ecological enhancement.

- If space permits, the inclusion of a bank of species-rich wildflower grassland, ideally south-facing. This will potentially benefit local populations of bees, including the brown-banded carder-bee (*Bombus humilis*), and other insects such as the long-winged conehead (*Conocephalus discolor*). The adjacent moto-cross site was noted to have an assemblage of aculeate hymenoptera (bees) of potentially county level importance, and introduction of species-rich wildflower grassland would provide an additional resource for this, and other, groups of invertebrates;

- Installation of bird boxes on buildings, trees and boundary fencing within application site and/or the wider metals recycling facility. Three house sparrow terrace nesting boxes and three boxes appropriate for other commensal species such as starlings should be incorporated; and

- Inclusion of two invertebrate boxes within the landscaping to provide over-wintering and nesting sites for a range of invertebrates.

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