

WARD

Dust Mitigation Plan Cardiff Dock

Cold Store Road, Cardiff, CF10 4LY

Record of Revisions

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1. Introduction

The Dust and Emissions Management Plan (DEMP) relates to the activities undertaken by Donald Ward Limited t/a Ward at Cardiff Docks. The Dock is located at Cold Store Road, Cardiff, CF10 4LY. This DEMP has been produced in accordance with the Environment Agency's Guidance 'Control and Monitor emissions for your environmental permit' (published 1st February 2016). It identifies potential sources, pathways and receptors of dust emissions, and details the required control measures to minimise any adverse environmental impacts.

1.1 Aims

The aims of this DEMP are to:

- Identify activities with the potential for dust generation;
- Develop and implement an effective dust management strategy;
- Minimise the likelihood of fugitive dust emissions from site and reduce potential environmental impact;

- Ensure compliance with the environmental permit.

1.2 Roles and Responsibilities

A copy of the DEMP will be held on site in the Site Office. An electronic copy will also be held on the company server which can be accessed via the WARD internet. The company server is located at the Company Head Office site in Ilkeston, Derbyshire, and is also backed up off-site by a third-party company. Copies of the plan will be made available to the Emergency Services upon request.

Site Environmental Advisor - The Site Environmental Advisor is responsible for updating and maintaining the Dust Management Plan.

Site/Senior Management - Site and Senior Management are responsible for communicating to the Environmental Advisor, any changes to the site or activities undertaken which may affect the Dust Management Plan and implementing appropriate control measures to minimise dust pollution on site.

1.3 Reviewing the Plan and Staff Training

The DEMP is a live working document and will be reviewed annually or if there are any significant changes to activities on site or associated infrastructure.

The DEMP will be communicated to staff/contractors. Training staff on the DEMP is crucial to ensure effective implementation and compliance. An initial internal training session for all relevant staff members will be conducted and this will cover all aspects of the dust management plan. Internal refresher training will be provided to reinforce the dust management procedures and keep staff updated on any changes to the plan.

1.4 Relevant Sector Guidance on Which This DEMP is Based

Other information relevant to the DEMP has been prepared in accordance with guidance on best practice, and in particular the following specific regulations and guidance (where applicable) contained in:

- Environmental Permitting (England and Wales) Regulations 2016.
- Environmental Permitting Core Guidance (DEFRA, Updated March 2020).
- Best Available Techniques (BAT) Reference Document (BREF) for Waste Treatment (August 2018);

- Establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council, Commission Implementing Decision (EU) 2018/1147;
- Environment Agency's 'Control and Monitor emissions for your environmental permit'
- Non-hazardous and inert waste: appropriate measures for permitted facilities.

2. Operations at Cardiff Dock

2.1 Site Location

The Site is an approx. 9-acre plot located 2.5km southeast of Cardiff City Centre, on the southern edge of the Queen Alexander Dock, within the wider Associated British Port (ABP) of Cardiff. The Site is located at National Grid Reference ST 2019 74018 and is leased from ABP Ports by Ward.

The Port of Cardiff is well connected by the rail network, and within easy reach of the M4 motorway. The Site is surrounded by other industrial sites and businesses within the Port of Cardiff and is adjacent to the Severn Estuary, which is a designated Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), Special Protection Area (SAC) and Ramsar Site.

Figure 1 – Map of site location and receptors (see Appendix 1)

2.2



Sensitive Receptors

There are no Areas of Outstanding Natural Beauty or Sites of Special Scientific Interest within the site boundary. The site’s location is approximately 50m from the Severn Estuary (Wales) Special Protection Area and Special Area of Conservation. The Severn Estuary/Mor Hafren is designated a SSSI, SAC, SPA and Ramsar site due to its high tidal range, its importance as a migratory route for many fish and birds, and as a permanent home, overwintering home and breeding ground for internationally important populations of waterfowl and other wading birds on the mudflats, sandbanks, rocky platforms and salt marsh along the estuary.

There are no National Nature Reserves (NNRs), Designated Ancient Woodlands, Biosphere Reserves, Marine Conservation Zones, Green Belt, World Heritage Sites, Areas of Outstanding Natural Beauty (AONBs), National Parks, Listed Buildings, Conservation Areas, Scheduled Ancient Monuments or Registered Parks and Gardens within 2km of the Site boundary. The closest Local Nature Reserve (LNR) is Cardiff Bay Wetlands and Hamadryad Park LNR located over 1km to the west of the Site.

Other sensitive receptors including residential, industrial, commercial and recreational receptors are listed below in Table 1. The sensitive receptors within 1km of the Site.

Table 1 - Distance to selected, representative sensitive receptors

Receptor	Type	Distance/ Direction	Contact Details
Garden Tiger Butterfly	Protected Species	Within Boundary	-
Queen Alexandra Dock	Surface Water	10m NW	0870 609 6699
HDM Tubes / Pipe Manufacturing Solutions Ltd warehouses	Commercial/Industrial	20m SW	029 2049 4794
Beach Sidings	Local Wildlife Site	21m E	-
Dunnoch Bird	Priority Species	29m E	-
Severn Estuary SSSI and SAC	Protected Habitat/ Surface Water	36m SE	-
Visitors to storage units of Wild Water Group and Owens Group Cardiff	Recreational	50m NW	029 2048 1555
Herring Gull	Priority Species	55m W	
Wild Water Group	Commercial	146m NW	029 2048 1555
UKprefulfillment - Densea	Commercial/Industrial	150m SW	07380 427172
Workers at other industrial sites off Cold Stores Rd in Cardiff Docks	Commercial/Industrial	220m NW	0870 609 6699
Severn Estuary SPA and Ramsar site	Protected Habitat	310m SE	-
Bob Martin Dispatch Warehouse	Commercial/Industrial	380m SW	029 2049 7792
Cargo Road	Public Road	413m NW	-
BBC Studios Roath Lock	Commercial	440m W	07976 265 011
HMS Cambria offices	Commercial / Residential	450m NW	029 2044 5200
Greenergy Cardiff Tank Farm	Commercial/Industrial	480m SW	020 7404 7700
Tyneside Road	Public Road	519m NW	-
Pedal Power Bike Hire	Commercial	524m NW	-
Workers at Alexandra Docks container yard	Commercial/Industrial	560m W	0870 609 6699
Tiger Yard Food Court	Commercial/Recreational	574m NW	029 2022 0491
VANZA Motor vehicle dealer	Commercial	600m NE	029 2268 0646
Tiger Yard Street Food	Recreational	630m W	029 2022 0491
Coffi Co at Porth Teigr	Commercial	640m WNW	-
Adventurers Key housing estate	Residential	660m NW	-
Parker Plant Hire	Commercial/Industrial	710m SW	029 2045 2255
Norwegian Church Art Centre	Recreational / Commercial	727m NW	029 2049 2261
Workers at Valero Fuel Supplier	Commercial/Industrial	750m NE	029 2046 2624
The Waterguard Pub	Commercial/Recreational	760m NW	029 2049 9034
Business Park/Offices on northern side of Roach Basin	Commercial	760m NW	-
Norwegian Church Arts Centre	Recreational	770m WNW	029 2049 2261
ITV Cymru	Commercial	802m NW	0844 881 0200
Atradius Insurance Company offices	Commercial	805m NW	029 2082 4000

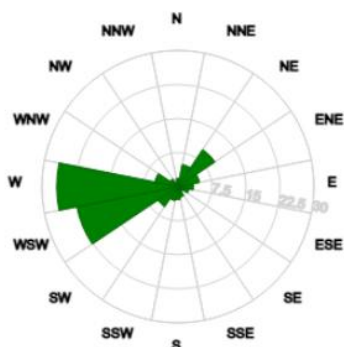
Associated British Ports of Cardiff Offices	Commercial/Industrial	825m SW	0870 609 6699
Atkin Trade Specialists	Commercial/Industrial	830m NE	029 2044 2060
Biffa Waste Management Cardiff	Commercial/Industrial	840m NE	0800 307307
Visitors to Cardiff Bay Trail Walk & Alexandra Head	Public Footpath/Recreational	850m SW	-
Cardiff Recreational Area inc. Cardiff Bay Sailing Centre, Skate Plaza, Basketball Court, Aqua Park and Playground	Recreational	870m SW	-
The Senedd government building	Commercial	900m NW	0300 200 6565
Cardiff Barrage Children's Playground	Recreational	960m SW	-
Cardiff Heliport Fields	Habitat / Commercial	975m NNE	029 2046 5880
Cardiff Bay Wetlands Reserve (LNR and LWS)	Habitat	995m W	-
Coop Food	Commercial	996m NW	029 2046 4324
Roald Dahl Plass (Plaza)	Commercial/Recreational	1km NW	-
Millenium Centre	Recreational	1km NW	029 2063 6464
St David's (VOCO) Hotel	Commercial / Recreational	1km WNW	029 2045 4045
Mount Stuart Graving Docks	Commercial / Recreational	1.1 km NW	029 2044 8000
Hamadryad Park Local Nature Reserve	Habitat	1.52 km WNW	-

2.3 Wind Direction

A review of the data recorded monthly between November 2000 and September 2023 on the Windfinder.com website indicates that the most dominant wind direction is from the west, blowing towards the east.

The closest meteorological recording station to the site is St Athan Royal Air Force Base weather station located over 14km to the southwest of the site. The weather station is deemed the most appropriate for use in order to characterise the site due to its proximity to the site. Wind patterns at the Airbase are similar to those experienced at the site.

Figure 2: Wind Rose for St Athan Royal Air Force Base



The prevailing wind is W. In the event of a fire a Westerly wind may carry smoke towards the West, this could impact upon the residents listed on the summary of Sensitive Receptors (Table 2).

Table 2 – Wind Direction Percentage

Direction	Percentage	Direction	Percentage
N	1.83%	S	2.81%
NNE	4.98%	SSW	3.13%
NE	9.82%	SW	5.28%
ENE	4.84%	WSW	22.72%
E	3.4%	W	26.72%
ESE	2.5%	WNW	5.19%
SE	1.36%	NW	2.04%
SSE	2.32%	NNW	1.05%

2.4 Site Activities

Cardiff Dock is a metal recycling and End-of-Life Vehicle (ELV) depollution facility. The activities undertaken on site have been reviewed to identify those with the potential to generate fugitive dust emissions. Dust risks are primarily associated with the handling, movement, processing and storage of materials, as well as vehicle and plant movements, particularly during dry or windy conditions.

Dust emissions may arise from the receipt, handling, processing, storage and movement of waste materials, as well as from vehicle and mobile plant movements, particularly during periods of dry weather or elevated wind speeds. The assessment below considers each activity in relation to its dust-generating potential and the controls in place to minimise emissions.

Receipt, Handling and Storage of Scrap Metal

The site receives Furnace Ready Scrap (FRS) and other scrap metal grades, as identified in Table 4, via road, rail and vessel. These materials are typically large, dense metallic items with minimal fine content and are therefore assessed as having a very low dust potential.

Activities associated with this waste stream, as listed in Table 3, include unloading, loading, storage and internal movement of material. Dust emissions may arise from:

- Material handling during tipping and loading;
- Vehicle movements in operational areas;
- Wind acting on exposed stockpiles.

Dust emissions are minimised through:

- Storage of materials in designated bays;
- Control of stockpile heights to limit wind entrainment;
- Orientation of bays to reduce exposure to the prevailing wind;
- Use of water suppression during dry or windy conditions;
- Daily visual inspections to identify and address dust generation.

Processing of Ferrous and Non-Ferrous Metals

Ferrous and non-ferrous metals requiring processing are identified in Table 3 and Table 4 and include shearing, cutting and baling activities. While the metals themselves have a low inherent dust potential, dust may arise from surface residues, fines present on incoming material or from handling activities.

Potential dust sources include:

- Mechanical handling and transfer of materials;
- Accumulation of fines on hardstanding surfaces;
- Movement of processed material.

Dust control measures include:

- Handling materials at low drop heights;
- Pre-damping of material where appropriate;
- Routine cleaning of processing areas and hardstanding;
- Visual monitoring by trained operators during processing activities.

End-of-Life Vehicle (ELV) Storage and Depollution

ELVs received and processed on site, as listed in Table 4, are assessed as having a very low dust potential. ELVs are stored for short durations prior to depollution and baling, with activities detailed in Table 3.

Potential dust emissions may arise from:

- Vehicle and plant movements within the depollution area;
- Handling of removed components.

Dust is controlled through:

- Use of impermeable concrete hardstanding;
- Prompt treatment of ELVs, typically within 24–48 hours;
- Good housekeeping and waste segregation practices;
- Routine site inspections to identify any dust issues.

Treatment of Metals Contaminated with Incinerator Bottom Ash (IBA)

Metals recovered from IBA, identified in Table 4, present a medium dust potential due to the presence of fine ash particles. This waste stream represents the highest dust risk associated with site activities listed in Table 3.

Potential dust sources include:

- Unloading of IBA-contaminated material;
- Screening and separation processes;
- Internal movement of material.

To minimise dust emissions:

- All unloading, storage and treatment are undertaken within an enclosed building;
- Dust suppression measures are applied as required;
- Material handling is minimised;
- Internal areas are cleaned routinely;
- Visual monitoring is undertaken throughout operations.

Vehicle and Mobile Plant Movements

Vehicle and plant movements associated with the activities listed in Table 3 may generate dust from site surfaces, particularly during dry conditions.

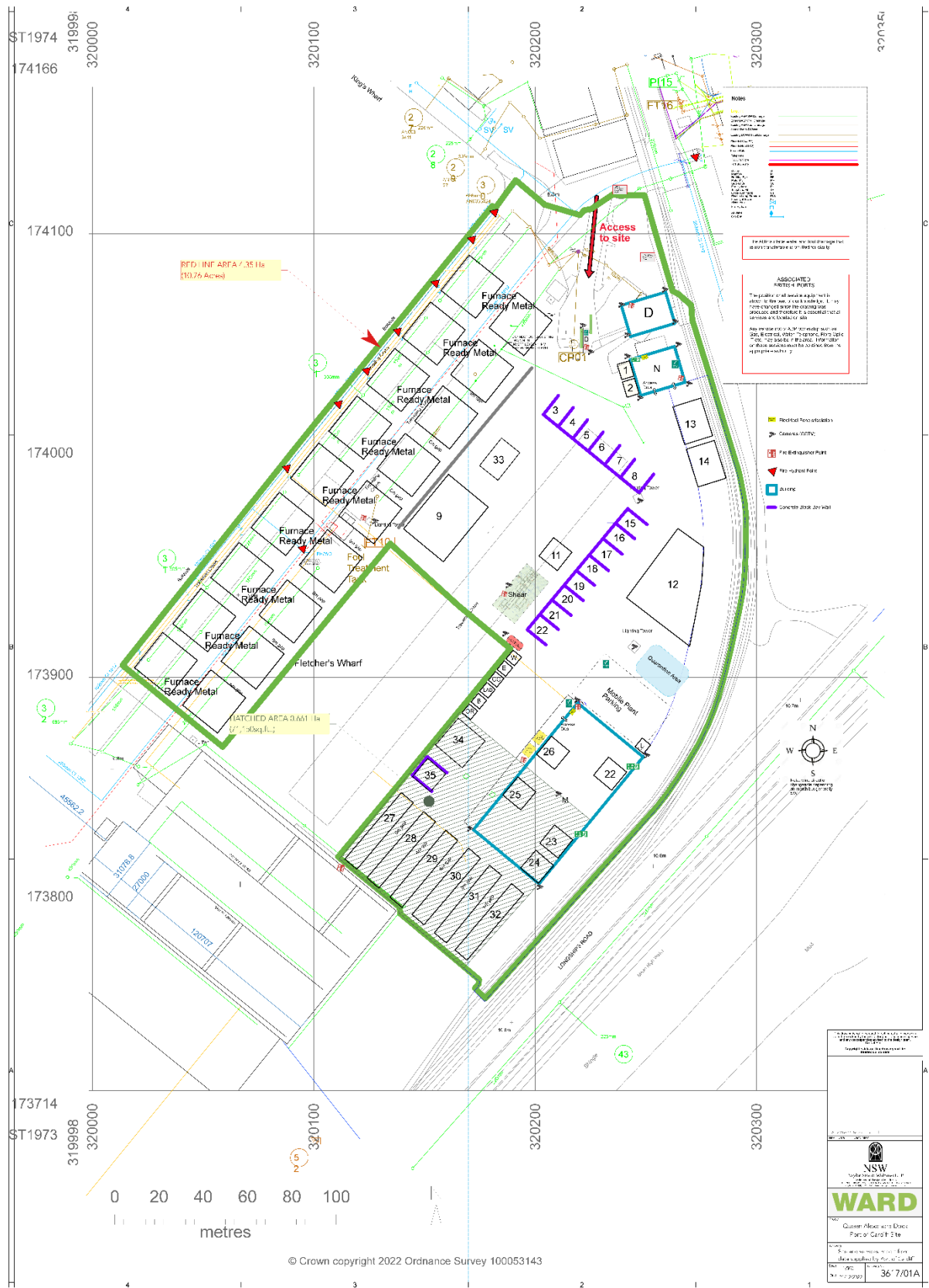
Controls include:

- Concrete surfacing throughout operational areas;
- Site speed limits enforced;
- Regular sweeping and cleaning of roadways;
- Deployment of water suppression during dry weather;
- Use of modern, well-maintained plant.

Table 3 – Site Activities

STORAGE
<ul style="list-style-type: none"> ▪ Receipt and off-loading of metal scrap via vessel, road and rail ▪ Loading and dispatch of metal scrap via vessel, road and rail ▪ Storage of Furnace Ready Scarp ▪ Storage of ELV's prior to depollution ▪ Storage of Metals from IBA Treatment inside a building
TREATMENT
<ul style="list-style-type: none"> ▪ Manual sorting of scrap metal ▪ Shearing of scrap metal (ferrous and non-ferrous) ▪ Stripping of cable (by hand) ▪ Flame cutting of scrap metal ▪ Depollution of End-of-Life Vehicles ▪ Baling of End-of-Life vehicles ▪ Screening of Ferrous and Non-Ferrous Metals contaminated with Incinerator Bottom Ash
OTHER
<ul style="list-style-type: none"> ▪ HGV and plant (vehicle) movements ▪ Vessel loading and unloading ▪ Rail freight unloading at the onsite rail sidings ▪ Weighbridge Operation ▪ Loading containers for export ▪ Refuelling of plant equipment ▪ Repair of plant and equipment (Maintenance Area)
OTHER ACTIVITIES
<ul style="list-style-type: none"> ▪ General office operations (operation of IT equipment and storage of paper records) ▪ Staff welfare activities (including hot food preparation)

Figure 3 - Site Layout Plan (Appendix 2)



2.5 Overview of Waste Processing, Dust and Other Emissions Controls

When waste arrives on site, it will arrive via road or rail. If it is being delivered to site internally, it will be delivered via WARD articulated lorries which have an emission rating of Euro VI. All lorries have a secure netting that is placed on top to secure loads and ensure no debris escapes.

At site, all waste will be subject to WARDs waste acceptance procedures (see Appendix 5) and checks and inspection by the Weighbridge Operator, furthermore, the Duty of Care documentation will be reviewed. When material arrives the Weighbridge Operative will inspect the material and take overhead photos, which will be stored in the internal waste tracking system (ENWIS). The Weighbridge Operative will then instruct the driver to the appropriate tipping area. Acceptance procedures for waste is subject to strict acceptance procedures in operating a Quality Management System in accordance with End of Waste Regulations and an Environmental Management System.

Any non-conforming wastes discovered will be isolated and stored in the appropriate bin. Efforts will be made to trace back to the supplier where possible. If the source cannot be determined then the wastes will be suitably quarantined under the direction of the SM until they can be removed and treated at an appropriately permitted facility. Records of all non-confirming waste will be stored in the internal waste tracking system (ENWIS), suppliers will be recharged accordingly and reviewed by the Ward Quality Manager. The non-conforming list will be reviewed at the monthly metal commercial meetings.

The site consists of a concreted surface, which provides an impermeable surface. Stockpiled material stored in designated bays, will be stored in bays that are constructed on pre-cast Legioblocks at the rear and side. The designated bays are effective at disrupting wind flow over the site as they face away from the westerly prevailing wind direction. The SM will ensure that waste shall not exceed the height of the designated bay, to reduce wind-whipping of stockpiled material.

Table 4 - Typical Waste Types Brought to Cardiff Dock

Description	EWC code	Dust Potential	Site Location	Process
Furnace Ready Scrap	19 12 02	Very Low	Outside	Hot Cutting or Shearing
Scrap Metal (various particle sizes)	20 01 40	Very Low	Outside	Shearing
Metals from IBA Treatment	19 01 02	Medium	Inside building	Treated within 24-48hrs. The material will be unloaded, stored and treated inside a large industrial building
ELV waiting depollution	16 01 04*	Very Low	ELV Depollution Area	Depollution Process
Depolluted Vehicles	16 01 06	Very Low	ELV Depollution Area	Baled
Wheels (ELV Depollution Area)	16 01 03	Very Low	ELV Depollution Area	Storage and transported to another permitted facility
Engines (ELV Depollution Area)	16 01 06	Very Low	ELV Depollution Area	Storage and transported to another permitted facility
Metal Catalytic Convertors (ELV Depollution Area)	16 01 21*	Very Low	ELV Depollution Area	Storage and transported to another permitted facility
Lead Acid Batteries (ELV Depollution Area)	16 06 01*	Very Low	ELV Depollution Area	Storage and transported to another permitted facility
Other Batteries (ELV Depollution Area)	16 06 05	Very Low	ELV Depollution Area	Storage and transported to another permitted facility
Oily Rags (ELV Depollution Area)	15 02 02	Very Low	ELV Depollution Area	Storage and transported to another permitted facility
Wheels (Maintenance Activity)	16 01 03	Very Low		Storage and transported to another permitted facility
General Office Waste	20 03 01	Very Low		Storage and transported to another permitted facility
Batteries (Maintenance Activity)	20 01 33* 20 01 34	Very Low		Storage and transported to another permitted facility

Oil Waste (Maintenance Activity)	13 01 13*	Very Low		Storage and transported to another permitted facility
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2.6 Mobile Plant and Equipment

Nitrogen Dioxide gas is a by-product of internal combustion engines and the site uses several items of plant with internal combustion engines. The following table lists the type, mobile and emission ratings for the mobile plant and equipment used on site:

Table 5 – Mobile Plant and Equipment List

Ref	Description	Make	Serial Number	Emissions Rating
C100	Material Handler	Liebherr LH40	145580	Tier 4f
C65	Material Handler	Liebherr LH26	76497	Tier 4f
C95	Material Handler	Liebherr LH40	141095	Tier 4f
C98	Material Handler	Liebherr LH40M	144838	Tier 4f
TH12	Telehandler	Manitou - MT1440	MAN00000L01110940	Emission Level V
S10	Front end loader	CAT 930M	KTG03823	Tier 4 Final/Stage V
S5	Front end loader	CAT 950K	CAT0950KEJ5M01244	Tier 4 Interim/Stage IIIB

3. Sources of Dust and Other Emissions

3.1 Sources and Control of Fugitive Dust

Potential dust emissions from the site may be generated from activities associated with:

- Vehicle movements in and out of the site and around the site;
- Handling, movement and tipping of waste;
- Wind blowing across waste piles;
- Waste stored in bays;
- Site surfaces;
- Loading waste materials into vehicles and vessels;
- Particulate emissions from the exhaust of vehicles/plant/machinery on site;
- Trommel Treatment.

Dust production may increase during periods of strong winds or dry weather.

3.2 Pathway

In order to minimise the dust, potentially generated at the site, the following control measures shall be implemented by the SM to mitigate the effects of potential dust emitting activities identified. General measures will also be taken

3.3 Daily Throughput Limit for the Site

The amount of waste received daily is detailed below;

Material	Maximum Daily Intake
Furnace Ready Scrap	1200 t/day
Scrap Metal (Particle size less than 150mm)	200 t/day
Scrap Metal (Particle size in excess of 150mm)	300 t/day
Oversized Scrap Metal (Particle size in excess of 150mm)	100 t/day
Metals from IBA Treatment	50 t/day
ELV waiting depollution	28 Cars per day

Table 6 - Source Pathway Receptor Model

Activity / Source	Potential Emission / Hazard	Pathway	Receptor	Likelihood	Severity	Risk Rating	Existing Control Measures (Appropriate Measure / BAT)	Residual Risk
Vehicle movements in/out of site	Dust generation from road and yard traffic	Airborne dispersion	Local receptors (HMS Cambria, Cardiff Bay Wetlands, staff)	3	3	9	Roads maintained and swept; speed limit 5 mph; water bowser used during dry periods; daily inspections.	Low
Handling, movement and tipping of waste	Dust release from material drop heights	Airborne dispersion	Local receptors, adjacent workers	3	3	9	Waste tipped in designated areas; low drop heights; use of misting/netting; visual inspections.	Low
Wind blowing across waste piles	Wind-blown dust from stockpiles	Airborne dispersion via wind	Cardiff Bay, Wales Coastal Path, local receptors	3	4	12	Continuous monitoring; water bowser dampening; orientated bays shield prevailing wind; daily inspection.	Medium
Plant sorting waste	Localised dust from material handling	Airborne dispersion	On-site workers, nearby receptors	2	3	6	Pre-dampening of material; handled by trained operators; monitored daily	Low
Waste stored in bays	Wind-blown dust from storage piles	Airborne dispersion	Local receptors, Severn Estuary	3	3	9	Stockpiles dampened by bowser; inspection during environmental checks; height control of bays	Low
Site surfaces	Dust from unsealed or dry surfaces	Airborne dispersion	On-site workers, local receptors	2	3	6	Concrete surfacing maintained; dampened in warm months; daily checks.	Low

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Loading waste into vehicles/vessels	Dust from tipping and loading	Airborne dispersion	Adjacent port users, local receptors	3	3	9	Stockpiles dampened before loading; reduced drop heights; visual monitoring.	Low
Exhaust emissions from vehicles and plant	Particulate emissions (NOx, PM)	Airborne dispersion	On-site workers and local environment	2	3	6	Regular vehicle servicing; emission-rated engines (Tier 4f/V); inspection of filters.	Low
Handling/tipping of metals contaminated with IBA	Fine dust emissions during processing	Airborne dispersion	Site staff, nearby receptors	2	4	8	Operations within enclosed building; dust suppression in use; visual monitoring.	Medium
Trommel treatment	Dust from screening operations	Airborne dispersion	On-site workers, nearby receptors	3	3	9	Conducted within building; local dust suppression; cleaning regime.	Medium

3.3 Other Considerations

Water usage/ availability:

With regards to dust suppression methods, WARD will use water for suppression and hosing. The site benefits from a dedicated high-volume fire-water main which runs along the dock. There are six hydrants on site and three additional hydrants to the NE and SW of the site. The hydrants meet relevant BS standards. In addition, the site also benefits from impermeable concrete hardstanding with a sealed drainage system and extensive high volume drainage network.

Under normal conditions the on-site fire hydrants are expected to provide approx. 12,000 litres per minute.

In the event of a drought, it has been confirmed by South Wales Fire & Rescue Service that we would be able to utilise water from the dock for suppression. Other options would include using the dock water with prior permission from ABP and the Port Authority.

4.0 Monitoring

4.1 Visual Dust Monitoring

The Site Manager will conduct visual dust monitoring daily via the Daily Site Inspection, which will be documented on the C-ORG-FM-04 Daily Site Environment, Health and Safety Check sheet. Visual dust monitoring will be conducted throughout the whole perimeter of the site. The operative will look for visible dust plumes from operations and transport, deposition on surfaces, and evidence of dust crossing the site boundary. If dust emissions are observed beyond the site boundary, activities contributing to the emissions will be paused, and additional control measures (such as damping down, covering stockpiles, or adjusting vehicle movements) will be implemented immediately.

When vessels are being loaded on site, site personnel will be present 24 hours a day. However, all treatment activities are strictly limited to normal operating hours, which are Monday to Friday, 07:00am to 17:00pm, and Saturday, 08:00am to 12:00pm. Daily visual checks will be undertaken during these operational periods only. No treatment, processing, or related activities will occur outside of these hours.

During non-operational hours, a dedicated out-of-hours security guard will be on site to conduct routine patrols. The guard's role is limited to monitoring for visible dust particles becoming suspended in the air and dispersing, and any observations will be recorded in the security log for review by the Site Manager.

Operational staff will report if there are significant dust or particulate emissions during operational hours to the Site Manager. Where dust emissions are high during the handling and movement of waste, operations will cease, and the site boundary will be inspected to ensure that dust isn't being emitted from the site. If dust emissions are observed outside of the site boundary, then material shall be dampened before works can recommence, and dust suppression shall continue during the process, until the Site Manager is satisfied that dust emissions are controlled.

4.2 Pro-Active Dust Monitoring

The site receives regular Environmental Site Inspections (see Appendix 3: EORG-006 Environmental Site Inspection) from a member of the internal Environment and Sustainability Team. All amenity issues are assessed as part of the environmental inspection, this includes dust. The Environment and Sustainability Team ensures that appropriate measures are implemented in the day-to-day operations of the site where necessary to prevent dust becoming suspended in the air and dispersing.

The Environmental Advisors will speak to site staff about dust on site if they believe that a potential risk exists and deliver regular on-site Dust TBT. It is sometimes difficult to witness dust incidents that are episodic and short-lived, as such the Environmental Advisors are trained to speak with site staff during their assessments of site amenity issues.

4.2.1 Particulate Matter Monitoring

It has been confirmed through The Air Quality Management Area Interactive Map, that the Site is not located within a PM10 area, and therefore a system has not been installed to monitor PM₁₀ particulates. As an alternative, Dry Foam Frisbee-Type Dust Deposit Gauges will be located at specific locations on the boundary of the site. The Dry Foam Frisbee-Type Dust Deposit

Gauges are designed to measure dust deposition. Results will be collected and reviewed regularly.

4.2.2 Monitoring Location

The Dry Foam Frisbee-Type Dust Deposit Gauges will be located in various locations on the perimeter of the site boundary. Locations are as follows:

- The site weighbridge (north of the site)
- M-shed building (south- west of the site)
- Quayside (west of the site).

See Appendix 2 for the Site Layout Plan.

As the prevailing wind is Westerly, a gauge will be placed in a westerly location on the quayside that will capture results from a prevailing wind, this will allow WARD to collect the most useful and relevant data.

4.2.3 Operation of the Dust Monitoring Equipment

The Environment and Sustainability Advisor is responsible for the management of the Dry Foam Frisbee-Type Dust Deposit Gauges and will liaise with a third party to conduct the survey and subsequent assessment work in accordance with current standards and guidance. The results will be assessed against relevant values for deposited dust contained in NCB and Stockholm Institute guidance. If deposited dust levels have exceeded the guidance values, appropriate control measures will be reviewed and implemented.

Dry Foam Frisbee-Type Dust Deposit Gauges will be placed by the M Building, the access into the site and the quayside.

The Dry Foam Frisbee-Type Dust Deposit Gauges do not require calibration, and they shall be routinely inspected via the Daily Site Visual Inspection conducted. The Site Manager shall ensure gauges remain in the required location and are standing upright with the 5-litre HDPE collecting bottle intact. The Dry Foam Frisbee-Type Dust Deposit Gauges will also be inspected by the third-party surveyor, who will report any defects to the Environment and Sustainability Advisor.

5. Meteorological Monitoring

Weather conditions will be monitored using publicly available local meteorological data and daily weather forecasts (e.g. from the Met Office). The site manager or designated supervisor will check forecasted wind speed, wind direction, and rainfall prior to commencing dust-generating activities each day. During operations, staff will remain alert to changing weather conditions, particularly strong winds or extended dry periods, which may increase the risk of dust emissions. If such conditions arise, dust control measures will be adjusted accordingly.

Records of weather forecasts, observations, and corresponding control actions will be kept as part of the site's daily inspection to demonstrate ongoing compliance with the Dust Management Plan.

6. Reporting

Observations and findings from daily site inspections are recorded on the C-ORG-FM-04 Daily Site Environment, Health and Safety Check Sheet. Any identified issues, non-conformances, or areas requiring attention are documented in detail, including the location, nature of the issue, and any immediate corrective actions taken. Follow-up actions are generated through the My Compliance action management module to ensure accountability and timely resolution. Where necessary, significant findings or recurring issues are escalated to the Environmental and Safety Team for further investigation and corrective planning.

Dust monitoring data collected from the Frisbee Dust Gauge network is compiled and entered into a designated tracking spreadsheet by a member of the Environmental and Sustainability Team. The data is reviewed regularly to identify trends, assess compliance with site dust limits, and evaluate the effectiveness of control measures. Any exceedances or anomalies are investigated promptly, with findings reported internally and corrective actions implemented as required.

7. Engagement with Neighbours

Engagement with neighbouring properties and the broader community is an essential aspect of establishing and maintaining positive working relationships. Regular communication will be undertaken through community outreach initiatives designed to address concerns, reduce barriers to feedback, and promote transparent dialogue. This approach supports more accurate reporting of dust-related impacts and fosters constructive community relations.

The objective of this engagement is to ensure that individuals who may be affected by dust emissions from site operations are informed about potential impacts, aware of the control measures in place, and have access to clear and accessible mechanisms for raising concerns or providing feedback.

Ward has successfully implemented resident liaison groups at other sites to manage and mitigate environmental nuisances. These groups typically meet on a monthly or quarterly basis, either in person or virtually, to discuss ongoing site activities, share updates, and collaboratively address any community issues

8. Complaints Procedure

Any complaints related to dust from any stakeholder (regulators, neighbours or other third party) will be thoroughly investigated by the SM and / or the Environmental and Sustainability Dept. All findings, corrective actions, and supporting documentation recorded in the My Compliance Management System as a non-conformance. The Site manager is responsible for all dust complaints, and is provided with assistance from the Environmental and Sustainability Dept. All complaints and feedback is reviewed at Site SHEQ Meetings.

If multiple complaints are received within a short period, a comprehensive investigation will be initiated. Additional visual inspections and proactive dust monitoring will be carried out on site to determine whether the dust originated from site activities. Where the site is confirmed as the source, appropriate control measures will be implemented to prevent recurrence and minimise future risk.

9. Record Keeping

Monitoring results of the Frisbee-Type Dust Deposit Gauges are provided to the Environment and Sustainability team in the form of a quarterly report. A member of the department will review the results to assess the data in the report to assess the effectiveness of dust mitigation measures and identify any trends or areas requiring improvement. Findings from these reviews will be discussed at regular site meetings, and corrective actions will be documented and implemented as necessary to ensure operations continue to meet environmental performance standards and community expectations.

10. Staff Training

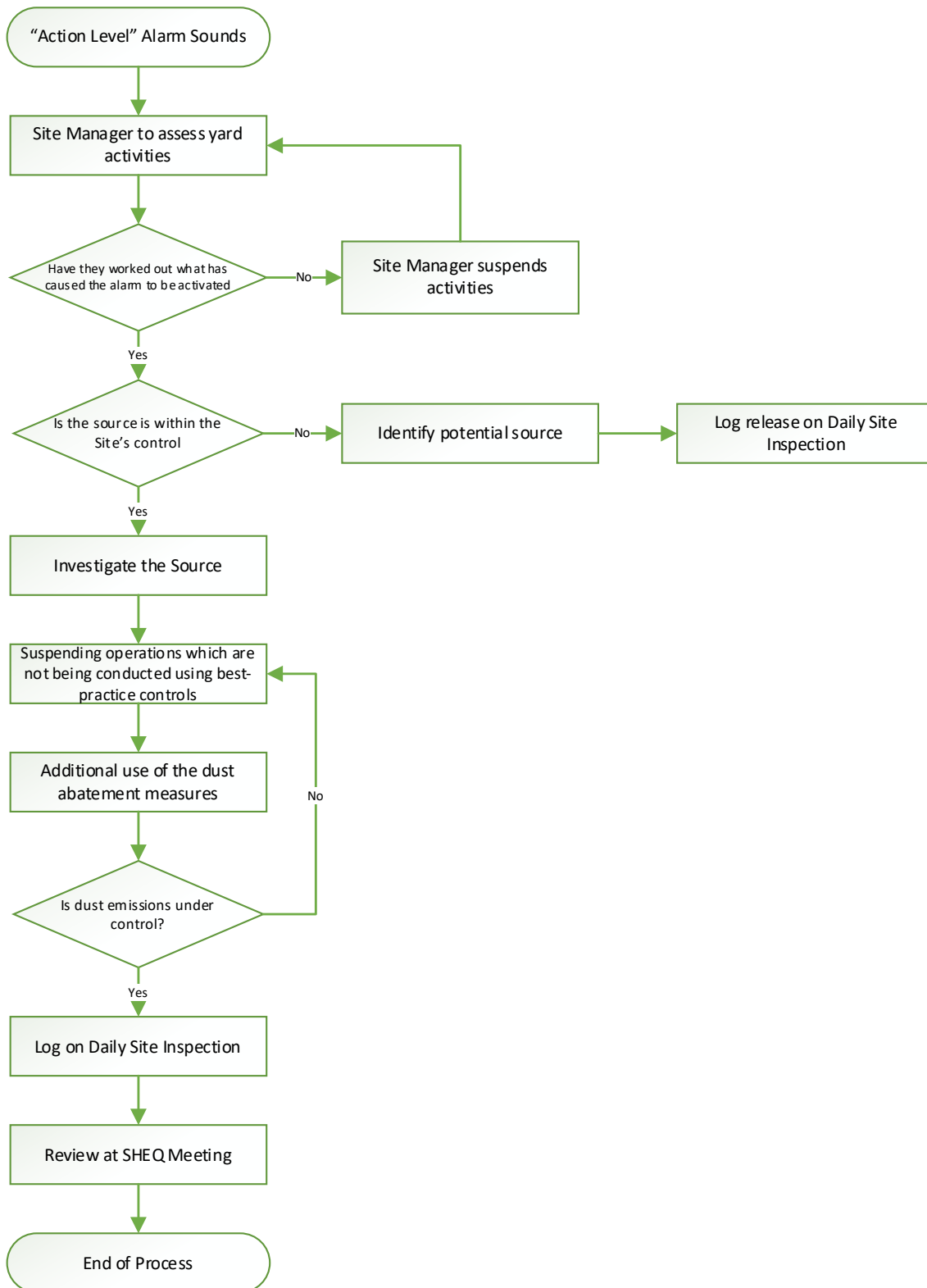
All operational staff receive regular training on dust management procedures through toolbox talks and other site briefings. The purpose of this training is to ensure that all personnel understand the importance of effective dust control and are equipped to implement mitigation measures in their daily activities.

Training sessions cover the following key topics:

- **Sources of Dust Emissions:** Identification of the main causes of dust generation on site, including material handling, vehicle movement, and excavation activities.
- **Contributing Factors:** Discussion of conditions that can exacerbate dust emissions, such as dry weather, high winds, or changes in site layout or activity levels.
- **Response Procedures:** Clear guidance on the actions to be taken in the event of visible dust pollution, including immediate mitigation measures and notification protocols.
- **Compliance and Complaints:** Explanation of the potential regulatory, environmental, and reputational risks associated with dust exceedances and community complaints.

Toolbox talks are delivered periodically to reinforce awareness and ensure all staff remain familiar with the control measures and reporting requirements. Refresher sessions are scheduled as needed, particularly when there are changes in site operations, environmental conditions, or regulatory requirements.

11. Actions to Undertake in the Event of a Report of Dust Pollution

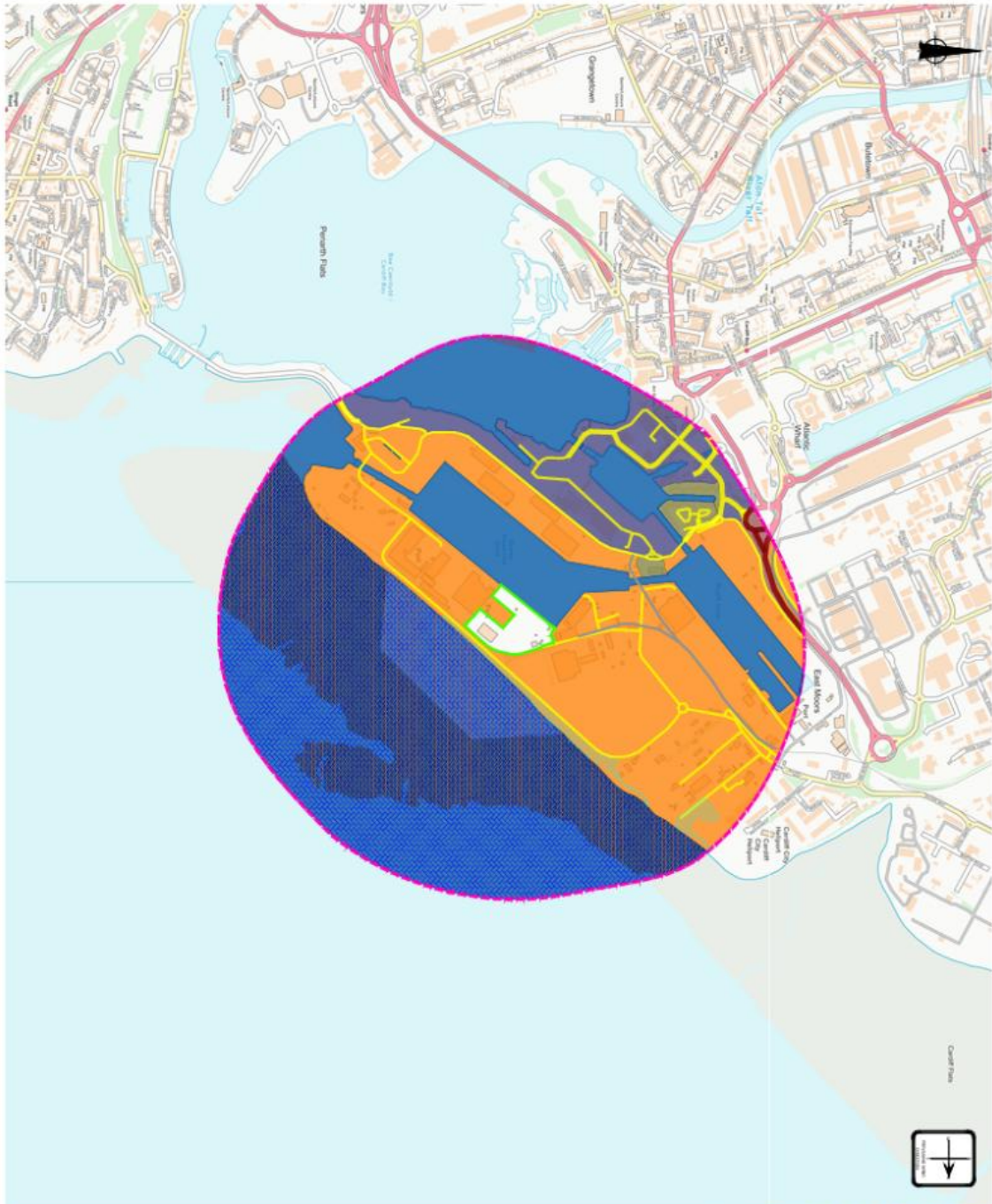


12. Abnormal Events

12.1 Abnormal Event and Recovery Steps

Abnormal Event	Recovery Steps
Equipment Breakdown	Critical parts are stocked, and Wards have a dedicated maintenance team who are available. Waste will be diverted to another Wards site until repaired
Fire	<p>The Fire Prevention Plan will come into effect. Management must be notified immediately. Ward transport department will re-route all WARD vehicles. All WARD account managers are informed of the incident and will notify all customers to re-route incoming material to alternative sites. This is done via phone and email communication.</p> <p>Neighbours and businesses in close proximity of the site will be verbally notified of the fire. If the emergency services recommend that windows are kept closed this information will be conveyed. They will be kept updated of any key developments.</p> <p>Where appropriate, residents will be informed of the incident via direct contact of via local council members.</p>
Adverse Weather	Activity may be ceased during high winds particularly when the prevailing wind direction is towards potentially sensitive receptors near the site.

Appendix 1 – Site Location and Receptors Map



WARD	
CARDIFF DOCKS PENITENTIARY	
SENSITIVE RECEPTORS PLAN	
DATE: 13.10.2025	SCALE: 1:10000
PROJECT NO: 6002-CAU-10-000-04-1-001	PROJECT CODE: F04

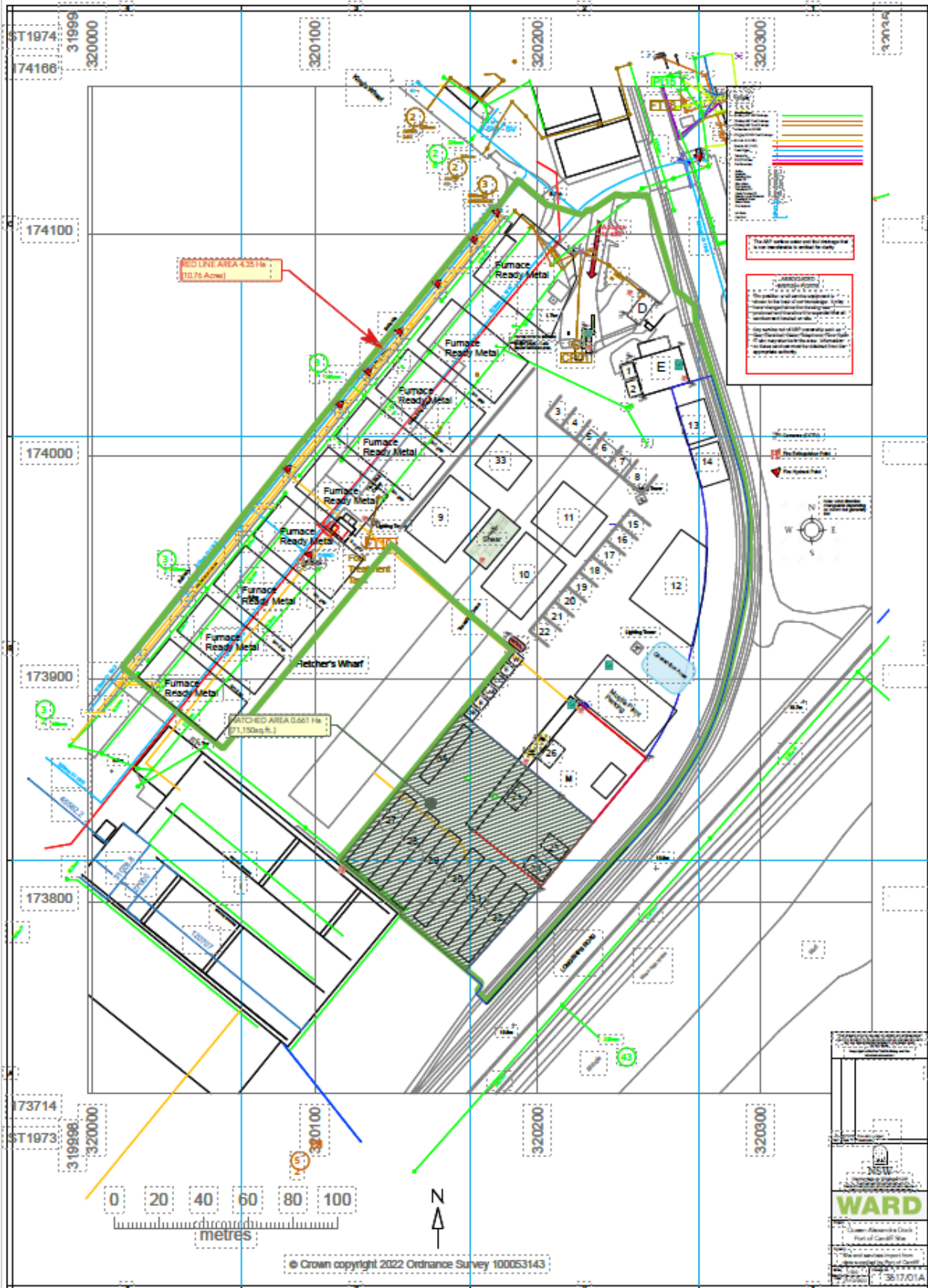
NO	DESCRIPTION OF SENSITIVE RECEPTOR	NO	NO	NO	NO
01	Cardiff Docks Penitentiary	001	001	001	001
02	Cardiff Bay	002	002	002	002
03	Cardiff Bay	003	003	003	003
04	Cardiff Bay	004	004	004	004
05	Cardiff Bay	005	005	005	005
06	Cardiff Bay	006	006	006	006
07	Cardiff Bay	007	007	007	007
08	Cardiff Bay	008	008	008	008
09	Cardiff Bay	009	009	009	009
10	Cardiff Bay	010	010	010	010
11	Cardiff Bay	011	011	011	011
12	Cardiff Bay	012	012	012	012
13	Cardiff Bay	013	013	013	013
14	Cardiff Bay	014	014	014	014
15	Cardiff Bay	015	015	015	015
16	Cardiff Bay	016	016	016	016
17	Cardiff Bay	017	017	017	017
18	Cardiff Bay	018	018	018	018
19	Cardiff Bay	019	019	019	019
20	Cardiff Bay	020	020	020	020
21	Cardiff Bay	021	021	021	021
22	Cardiff Bay	022	022	022	022
23	Cardiff Bay	023	023	023	023
24	Cardiff Bay	024	024	024	024
25	Cardiff Bay	025	025	025	025
26	Cardiff Bay	026	026	026	026
27	Cardiff Bay	027	027	027	027
28	Cardiff Bay	028	028	028	028
29	Cardiff Bay	029	029	029	029
30	Cardiff Bay	030	030	030	030
31	Cardiff Bay	031	031	031	031
32	Cardiff Bay	032	032	032	032
33	Cardiff Bay	033	033	033	033
34	Cardiff Bay	034	034	034	034
35	Cardiff Bay	035	035	035	035
36	Cardiff Bay	036	036	036	036
37	Cardiff Bay	037	037	037	037
38	Cardiff Bay	038	038	038	038
39	Cardiff Bay	039	039	039	039
40	Cardiff Bay	040	040	040	040
41	Cardiff Bay	041	041	041	041
42	Cardiff Bay	042	042	042	042
43	Cardiff Bay	043	043	043	043
44	Cardiff Bay	044	044	044	044
45	Cardiff Bay	045	045	045	045
46	Cardiff Bay	046	046	046	046
47	Cardiff Bay	047	047	047	047
48	Cardiff Bay	048	048	048	048
49	Cardiff Bay	049	049	049	049
50	Cardiff Bay	050	050	050	050

FOR INFORMATION

NO: 52

- LEGEND**
- PROPOSED PERMIT BOUNDARY
 - 1500M OFFSET
 - SURFACE WATER
 - WOODLAND / SCRUBLAND
 - COMMERCIAL
 - EDUCATIONAL FACILITY
 - INDUSTRIAL
 - RESIDENTIAL
 - MAJOR ROAD
 - MINOR ROAD
 - RAIL
 - NET OF AERIAL SEARCHLIGHT
 - INTERESTED PARTY WALLS
 - SPECIAL AREAS OF CONSERVATION
 - MAJOR WIND TUNNELS AND SPECIAL PROTECTION WIND TUNNELS
 - LOCAL WINDLIFT SITE (SAC)
 - LOCAL WINDLIFT RESERVE

Appendix 2 – Site Layout Plan



Appendix 3 - Environmental Site Inspection

Site Visit ref:		Environmental Site Visit Report		WARD
Site		Permit Ref		
Date		Time in/out		
Recipient names				
Author		Date Issued		

Section 1 – Environmental Compliance Summary

Criteria		Ref	Score
a. Housekeeping and General Management	1. Secure boundaries		
	2. Housekeeping		
	3. Staff competency / training		
	4. Daily/weekly Environmental site checks		
	5. Accident, emergency & incident planning		
	6. Emissions to air, land groundwater, surface water and/or sewer.		
b. Waste Management	1. Waste stored correctly, in bays		
	2. Impermeable surface with sealed drainage?		
	4. Skips/bays in a good state of repair		
	5. Waste segregated		
	6. Battery storage		
	7. Plasterboard segregated		
	8. Asbestos double bagged and stored in a locked skip		
	9. Unpermitted waste streams		
	10. Hazardous waste		
	c. Oil/Fuel/ Chemical Storage	1. Oils/fuels & chemicals stored correctly	
2. Oils/fuels/ chemicals away from watercourses/ drains?			
3. Are oil/fuel storage tanks bunded/double-skinned?			
4. Do oil/fuel tanks display contents and volume?			
5. Drip trays/secondary containment?			
6. Are all tanks/containers in good condition			
7. Are chemicals/substances clearly labelled?			
8. Are substances stored according to hazardous properties?			
d. Bunding and Secondary Containment	1. Bunds and drip trays		
	2. Bunds free from rainwater?		
	3. Equipment/containers stored in the bund that should not be?		
e. Emergency Response	1. Evidence of leaks and spills		
	2. Are spill kits/granules available?		
	3. Is spill response equipment clearly labelled?		
	4. Spill kits restocked		
	5. Drip trays available		
f. Site Infrastructure and drainage	1. Site surface in a good general state of repair		
	2. Drainage grates & gully's clear and free from debris?		
	3. Interceptors maintained and emptied?		
g. Amenity issues	1. Complaints		
	2. Site boundary		
	3. Netting		
	4. Pests, birds & scavengers		
	5. Odour		
	6. Dust / fibres / particulates & litter		
	7. Noise		

	8. Deposits on road		
h. Fire Prevention Plan	1. Freeboard space		
	2. Training		
Number of Breaches Recorded		Non-Compliance Score <small>(see section 4 for scoring method)</small>	

Section 2 – Environmental Compliance Report

Weather conditions:

Items not closed out from previous inspections(s)

<i>Criteria</i>	<i>Description</i>	<i>Resp.</i>	<i>Due date</i>
<i>Criteria</i>	<i>Description</i>	<i>Resp.</i>	<i>Due date</i>
<i>Criteria</i>	<i>Description</i>	<i>Resp.</i>	<i>Due date</i>

Section 3 – Action(s) Required

Criteria Ref.	Category	Actions Required	Res. Person	Due Date

Section 4 – Compliance Score / Key

Category	Description	Score
NC1	A non-compliance which could have a major environmental effect	60
NC2	A non-compliance which could have a significant environmental effect	31
NC3	A non-compliance which could have a minor environmental effect	4
NC4	A non-compliance which has no potential environmental effect	1
A	Assessed but there is no evidence of non-compliance	0
N	Not assessed as part of this site visit	0
N/A	Not assessed as part of this site visit	0

Appendix 4 - Daily Environment, Health and Safety Check Sheet

WARD

Daily Environment, Health and Safety Check Sheet

Site / Area:		Week Commencing:	
Inspector:		Signature:	

Ref:	Item / Condition:	Mon	Tues	Weds	Thurs	Fri	Sat
01	Weather Conditions						
02	Site Security (inc. Boundary Fencing and CCTV)						
03	Signs & Information Boards Populated & Relevant						
04	Suitable & Sufficient Lighting						
05	Slip, Trip & Fall Hazards						
06	Roadway(s) Clear & Free from Potholes						
07	Mandatory PPE being Worn						
08	Offices, Canteen & Washrooms Clean						
09	Date of Last Fire Evacuation						
10	Fire Extinguishers in Place & in Date						
11	First Aid Kit in Place & in Date						
12	Accidents / Dangerous Occurrences						
13	Unsafe Practices						
14	Car Park Free from Debris						
15	Public Areas Free from Debris						
16	Waste / Dust Escaped Boundary						
17	Water Courses Clear (if applicable)						
18	Acoustic Wall Intact (if applicable)						
19	Pre-use Checksheets Completed						
20	Plant Parked 6m from Stockpiles when Not in Use						
21	Weighbridge Checks Completed						
22	Contractors / Visitors Inducted & Signed In / Out						
23	Pest Control – Evidence of Rats and / or Flies						
24	Odour(s) Present						
25	Dust / Fume(s) Present						
26	Noise Present						
27	Water Bowser / Dust Suppression in Place						
28	Spill Kits in Place						
29	Storage Tanks & Bunds in Place & Suitable						
30	Fuels & Flammable Liquids Stored Appropriately						
31	Gas Bottles Caged & Stored 6m Away from Buildings						
32	Fire Breaks 6m						
33	Waste Stored Within Bays						
34	Has Waste Been On-site for 3 Months or More? <i>If Yes, Check and Record Temperature(s)</i>						
35	Covid-19 Measures Being Adhered to						

WARD

Daily Environment, Health and Safety Check Sheet

Ref:	Description of Improvement or Action Required	Responsible Person(s)	Due

Appendix 5 - Waste Acceptance Procedure

E-PRO-210 – Acceptance and Control of Waste



PURPOSE

To require that all WARD sites only accept appropriate waste types and that all the necessary checks are made prior to acceptance of the waste on site.

Procedure – General Rules

The Person in Charge is responsible for:

- Ensuring all waste material received is inspected on arrival.
- Ensuring that any nonconforming material is dealt with in accordance with the Non-conformance Procedure.
- Ensuring that all relevant staff adhere to Q003 Scrap Metal Purchasing procedure.
- Directing all site staff as appropriate.
- Undertaking all necessary actions as described in SOP Radiation Detection Procedure if the radiation detector is activated.
- Rejecting loads in accordance with EP/243 Waste Rejection Procedure where appropriate.

The Weighbridge Attendant is responsible for:

- Ensuring vehicle drivers provide all the relevant information and the vehicle is correctly located on the weighbridge.
- Undertaking all necessary actions as described in SOP Radiation Detection Procedure if the radiation detector is activated.
- Updating Erwis with all the relevant information.
- Ensuring the vehicle driver has the correct Personal Protective Equipment (PPE) when entering the site and issuing where necessary.
- Instructing the driver where to tip the load.
- Processing all paperwork relating to the waste material, including the Waste Transfer Note (Duty of Care).
- Visually inspecting all waste material, taking all the appropriate photographs using Erwis.
- Rejecting loads in accordance with EP/243 Waste Rejection Procedure where appropriate.

The Load Inspector is responsible for:

- Ensuring the vehicle driver tips and loads in the correct location.
- Dealing with non-conforming material in accordance with the Non-conformance Procedure.
- Taking photos of nonconforming material and uploading on Erwis as appropriate.

The Vehicle Drivers are responsible for:

- Ensuring the vehicle is located correctly on the weighbridge.
- Following directions from Load Inspectors/Weighbridge Attendants.
- Handing in, signing and collecting any documentation as appropriate.

Buyers are responsible for:

- Monitoring the amount of nonconforming material received as appropriate.
- Dealing with suppliers of nonconforming material.

Ref: E-PRO-210	UNCONTROLLED WHEN PRINTED	Author: Jean Ho Upton
Revision: 2.0	Page 1 of 3	Owner: Donald Ward

E-PRO-210 – Acceptance and Control of Waste



Process Flow



Ref: E-PRO-210	UNCONTROLLED WHEN PRINTED	Author: Joanne Upton
Revision 2.0	Page 2 of 3	Owner: Donald Ward

E-PRO-210 – Acceptance and Control of Waste



REFERENCES

- EP-210 Acceptance and Control of Waste Procedure
- EP-242 Material Non-Conformance
- EP-243 Waste Rejection
- SOP Radiation Detection Procedure
- Site Plans

LIST OF FORMS

- Waste Transfer Note
- Self-Billing Agreement Form

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Revision 2.0	Page 3 of 3	Owner: Donald Ward