



ARDERSIER PORT ENERGY TRANSITION FACILITY PORT EXTENSION



November 2025

Appendix 5.1 Construction Dust Management Plan

Construction Dust Management Plan

Construction Dust Management Plan

Contents

- 1. Introduction.....3
- 2. Site Setting and Sensitive Receptors3
- 3. Scope of Works3
- 4. Dust Risk Assessment (DRA)4
 - 4.1 Source magnitude (earthworks & stockpiles)4
 - 4.2 Receptor sensitivity (IAQM definitions)4
 - 4.3 Overall risk rating (before mitigation)4
- 5. Dust Management4
 - 5.1 Roles and responsibilities.....4
 - 5.2 Mitigation and Operational Controls4
 - 5.3 Monitoring & Trigger Levels.....5
 - 5.4 Reporting & Record Keeping5
- 6. Occupational Hygiene & Health Surveillance6
- 7. Training & Competency6
- 8. Contingency & Stop Work Criteria6
- 9. Review & Audit6
- 10. Associated Documents6

Construction Dust Management Plan

1. Introduction

Ardersier Ports Phase 2 development proposes large-scale earthworks involving excavation, movement and stockpiling of sands and aggregates to enable future development of the former fabrication yard. Works are scheduled to run from March 2026 to July 2028 and will generate fugitive dust and particulate matter (PM).

This Dust Management Plan (DMP) outlines the control measures and monitoring protocols for mitigating construction dust emissions at the Ardersier Port redevelopment. The plan aligns with IAQM guidance and Scottish legislation, focusing on high-risk activities such as earthworks, aggregate stockpiling, and internal haulage. Key controls include water suppression, crusting agents, real-time PM monitoring, and strict work stoppage criteria.

2. Site Setting and Sensitive Receptors

This section identifies the physical location of the site and outlines nearby sensitive receptors that may be affected by dust emissions. Understanding receptor sensitivity is essential for risk assessment and targeted mitigation.

Receptor	Direction & Distance from active Areas	Sensitivity	Justification	Latitude / Longitude
B9092 trunk road & users	South – 3 km	Low	Public exposure limited due to distance	57.5720, - 3.9570
Moray Firth SPA (ecological)	North – 120 m	High	Sensitive to nutrient deposition; prevailing winds increase risk	57.6050, - 4.0150
On-site workforce	Inside boundary	High	Continuous exposure monitoring during operations	
Inverness Airport	East – 2 km	Low (dust unlikely to affect operations)	Dust unlikely to affect operations at this distance (exceeds typical dispersion range)	57.5425, - 4.0476
Ardersier	West – 1 km	Low	Residential area, but dust dispersion minimised by prevailing winds	57.5773, - 4.0505

Prevailing wind is from the south-west ~65 % of the year, meaning off-site dust transport is mainly toward Moray Firth.

3. Scope of Works

The types of construction activities being undertaken and the scale of operations. It identifies specific tasks that may be significant sources of dust.

- Stripping and re-grading ~100 000 m² of soils
- Upfilling of stripped areas (height ≤ 3 m) with sand & aggregate to proposed finished platform level, and construction fill for quay wall
- Potential formation of stockpiles (height ≤ 10m) of sand and aggregate

Construction Dust Management Plan

- Internal haul routes (~3 km) and wheel-to-wheel plant movements
- Loading/unloading of aggregates to barges and road wagons
- On-site crushing and concrete batching are also planned during this phase

4. Dust Risk Assessment (DRA)

The Dust Risk Assessment evaluates the potential for dust generation and dispersion based on activity magnitude and receptor sensitivity. It forms the basis for selecting proportionate control measures.

4.1 Source magnitude (earthworks & stockpiles)

- **Large** (>100 000 m² total area, dry friable material, frequent vehicle movements).

4.2 Receptor sensitivity (IAQM definitions)

- **Human health** – High for on-site staff, Low for nearby public road
- **Ecological sites** – High (SPA sensitive to nutrient deposition)

4.3 Overall risk rating (before mitigation)

Activity	Magnitude	Receptor sensitivity	Unmitigated Risk
Earthworks	Large	High	High
Stockpiling	Large	High	High
Track-out	Large	Medium	Medium

Given the High risk, robust mitigation and continuous monitoring are required.

5. Dust Management

This section outlines the specific control measures and procedures to be implemented to minimise dust emissions. It also details roles, responsibilities, monitoring, and reporting structures.

5.1 Roles and responsibilities

Defines the individuals accountable for implementing and overseeing the DMP, ensuring controls are in place, and responding to dust events.

Project Manager

Overall implementation of the DMP, resources

HSEQ Manager

Data review, liaison with SEPA or Highland Council

Supervisors

Ensure controls are in use, stop works if trigger breached and issue toolbox talks

Occupational Hygienist

Personal exposure monitoring, face-fit testing

5.2 Mitigation and Operational Controls

Lists engineering and operational controls to suppress dust during each construction phase.

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Phase	Control Measure	Detail
Site layout	Locate stockpiles ≥ 100 m from northern boundary	Use 3 m high barriers (50% porosity) along northern boundary
Soil Handling	Avoid double-handling; use direct-tip conveyors where possible	
Water Suppression	Dedicated 10 000 L bowser with high-pressure misters; treat stockpiles & haul roads (target moisture $\geq 5\%$)	Target moisture $\geq 5\%$ for stockpiles/haul roads; increase frequency during dry spells (>72 h no rain)
Surface stabilisation	Non-ionic biodegradable crusting agent applied to inactive areas ≥ 48 h	Freko - Apply to inactive areas ≥ 48 h; reapply after rainfall >5 mm
Vehicle Management	16 mph site speed, speed cameras installed	
Road/Hardstanding cleaning	Vacuum road-sweeper twice daily or as required (<50 g m ⁻²)	Northern Cycling
Plant & Maintenance	Fit exhaust/engine covers; shut down engines when idle > 2 min	Flannerys, employees
Housekeeping	Daily visual sweep, immediate clean-up of spillages	
Additional Controls	Guardian monitoring units	2 Guardian PM units near SPA/earthworks

5.3 Monitoring & Trigger Levels

The use of real-time and passive monitoring to assess dust levels and the trigger levels for implementing additional controls.

Fixed Monitors

Guardian real-time monitors (2 ×) positioned upwind & downwind at 1.5 m AGL.

- Logged parameters: PM₁, PM_{2.5}, PM₁₀ (1-min averages)

Trigger Levels (PM₁₀)

- *Alert* – 1-hr mean ≥ 150 $\mu\text{g m}^{-3}$ → **review activities, inspect controls**
- *Action* – 15-min mean ≥ 250 $\mu\text{g m}^{-3}$ (sustained for 30 min) → **stop earthworks/haulage**, enhance suppression, inform PM

Data Response

- Email/SMS alarms automatically issued from monitor software to HSEQ Manager/Lead.

5.4 Reporting & Record Keeping

Monitoring data and daily observations are recorded and reported to demonstrate compliance and inform continual improvement.

- Daily site diary includes weather, activities, visual dust observation, control status
- All PM data archived on secure server for 5 years
- Non-conformance & corrective-action log maintained by HSEQ Manager

Construction Dust Management Plan

6. Occupational Hygiene & Health Surveillance

Personal exposure control measures, respiratory protective equipment (RPE) policies, and health monitoring protocols for the workforce.

- **Personal sampling** – gravimetric respirable dust & crystalline silica (quartz) on a task-based strategy (BS EN 689). Target $<4 \text{ mg m}^{-3}$ 8 hr TWA for total inhalable, $<0.1 \text{ mg m}^{-3}$ RCS, EH40
- **RPE programme** – All earthworks operatives wear FFP3 disposable or P3 half-mask; face-fit tested using qualitative Bitrex or quantitative PortaCount (record retained for 24 months)
- **Health surveillance** – Pre-placement and annual lung function (spirometry) & respiratory questionnaire overseen by OH nurse

7. Training & Competency

The training and induction requirements for personnel to ensure understanding of dust hazards and compliance with control measures.

Induction

- Induction covers dust hazards, site rules, and control hierarchy

Toolbox talks

- Toolbox talks on recognising elevated dust, use of suppression equipment to be provided

Records

- Competency records maintained with refresher training as required

8. Contingency & Stop Work Criteria

The thresholds or site conditions that necessitate halting work until additional control measures are implemented.

Immediate Stoppage

- Visible dust plume leaving the boundary for >5 min

Tiered Response

- 1st Exceedance – stop activity, dampen area, inspect controls
- 3+ Exceedance/Week – Halt all earthworks

Restart Protocol

- Verify $\text{PM}_{10} < 100 \mu\text{g}/\text{m}^3$ for 30mins
- Document corrective actions in Mango (QHSE integrated management system)

9. Review & Audit

The DMP will be regularly reviewed and audited to maintain its effectiveness and ensure compliance with regulatory requirements.

Frequency

- Quarterly or after level-2 exceedance (3+ action breaches)
- Incorporate feedback from SEPA, Highland Council, and local community
- Revised DMP via ISO 14001 EMS – next scheduled revision: 25 September 2025

10. Associated Documents

HAV-PR-HSEQ-040

Environmental Management

ARDERSIER PORT ENERGY TRANSITION FACILITY PORT EXTENSION



November 2025

Appendix 5.2 Lighting Strategy

Ardersier Port Extension

Revision Number	FINAL
Date	October 2025
Version:	1
Author	David Hendry
Technical Reviewer	Kevin Ramsay

CONTENTS

- 1 Lighting Strategy 4
 - 1.1 Introduction & Purpose 4
 - 1.2 Location 4
 - 1.3 Extant Consent 4
 - 1.4 Proposed Development 5
 - 1.5 Project Description 5
 - 1.6 Design Standards and Guidance 7
 - 1.7 Ecologist Engagement 10
 - 1.8 Stakeholder Engagement 10
 - 1.9 Proposed Designs 11
 - 1.10 Conclusion 13
- Abbreviations 14
- References 15

FIGURES

- Figure 1: Proposed Site Boundary 6
- Figure 2: CPRE Light Pollution Map 7
- Figure 3: CPRE Light Pollution Key 7
- Figure 4: Obtrusive Light Diagram (GN01:2021, Figure 1) 9
- Figure 5: LED Luminaire 12
- Figure 6: LED Bulkhead 12
- Figure 7: Crucial Luminaire Angle for Minimising Sky Glow 13

TABLES

- Table 1.1: Environmental Zones 9
- Table 2.2: Acronyms 14

1 LIGHTING STRATEGY

1.1 INTRODUCTION & PURPOSE

This Lighting Strategy provides a clear set of guidelines and standards for developers and other stakeholders to follow, ensuring consistency and coherence in lighting design and implementation for the current (Phase 1) and future developments within the port (Phase 2). It also provides mitigation requirements to be applied to construction activities to reduce the potential for significant impacts from obtrusive light.

1.2 LOCATION

Ardersier Port, located on the Moray Firth, features a rich coastal ecosystem with diverse habitats supporting wildlife, including various bird and mammal species including bottlenose dolphins, seals and harbour porpoise (and others).

Whiteness Head is designated as a Site of Special Scientific Interest (SSSI) and is part of the Inner Moray Firth Special Protection Area (SPA) and a RAMSAR site, the Moray Firth is a Special Area of Conservation (SAC) and the area encompasses the Sutors of Cromarty, Rosemarkie, and Fort George Special Landscape Area (SLA).

The site is bordered by the Moray Firth to the north, Carse of Delnies to the east, Carse Wood to the south, and the sand dunes and tidal sandflats of Whiteness Sands to the west. Fort George's live firing range is to the southwest, and Whiteness Head Spit, which shelters a harbour.

Nearby, there are a few houses and residents, with the village of Ardersier around 3 km to the south and Nairn approximately 6.5 km to the east. The site is visible from the surrounding coastline, although tree cover, and topography provide some screening to the south and west.

1.3 EXTANT CONSENT

This Planning permission in principle (PPiP) was renewed on 4 February 2019 and the following components are currently being constructed:

- Access channel
- Quay wall construction
- Main port activity area
- Port support/administrative buildings
- Port related light industrial uses
- Temporary on-site storage area for dredged material
- Roundabout on B9092 and new security gatehouse, and A96 roundabout late 2025

1.4 PROPOSED DEVELOPMENT

This proposed development would be an extension to the consented port and would generally comprise:

- Additional quay construction through the existing platform (mainly on land and already consented under the Harbour Revision Order (HRO)) by a combination of diaphragm wall (same method as the already constructed quay walls) and vibropiling and conventional sheet piling.
- Removal of old sheet piles to the north of the new quay wall which may involve temporary sand bunds
- A small area of infilling behind the new quay wall
- Selected deepening of the inner harbour by dredging (approximately 2,000,000m³)
- Sea disposal, Whiteness Sands nourishment and possible beneficial re-use on land or at remote site
- Possible maintenance dredge to west of Tern Island
- Scour protection in inner harbour
- A potential slipway as described in the existing Harbour Revision Order
- Localised crushed rock mattress for east of harbour
- Site clearance of extension lands (tree felling and clearing)
- Land raising and levelling of extension lands to suitable height with dredged sand
- Creation of working platform through stone placement
- Install new drainage to extension land perimeter
- Port and offshore wind related buildings including manufacturing, workshops, assembly facilities (principally bases), storage, offices and business units.

1.5 PROJECT DESCRIPTION

Following the agreement of options covering additional land to the south and east of the currently consented area, the proposed development application seeks to bring this new land into use for the same purpose and further modify the quayside areas for maximum efficiency. This application will be described as follows:

“Continued port development and expansion of port related services for energy related uses, including marine dredging within the inner harbour, sea disposal of dredged sands, possible temporary stockpiling of dredged material, quay construction, erection of offices, industrial and storage buildings and associated infrastructure including manufacturing, assembly, storage, delivery and export of port related cargo, parking, infrastructure, services, upfilling and re-grading/surfacing of new landward areas and landscaping.”

The boundary of the proposed development area is shown on the Figure 1 below.

Figure 1: Proposed Site Boundary



The Campaign to Protect Rural England (CPRE) mapping of Britain's light pollution and dark skies (England's Light Pollution and Dark Skies, CPRE, 2019) illustrates the influence of light pollution on the night skies within the study area.

The darkness lighting levels within this study area are relatively low due to the rural surroundings of Ardersier Port at 0 – 0.5 NanoWatts/cm²/sr. This is the radiance of light shining up into the night sky. Towards Nairn village centre this radiance increases to 16-32 NanoWatts/cm²/sr at its peak. Figure 2 identifies the lighting pollution map and Figure 3 below identifies the Key for the map.

Figure 2: CPRE Light Pollution Map

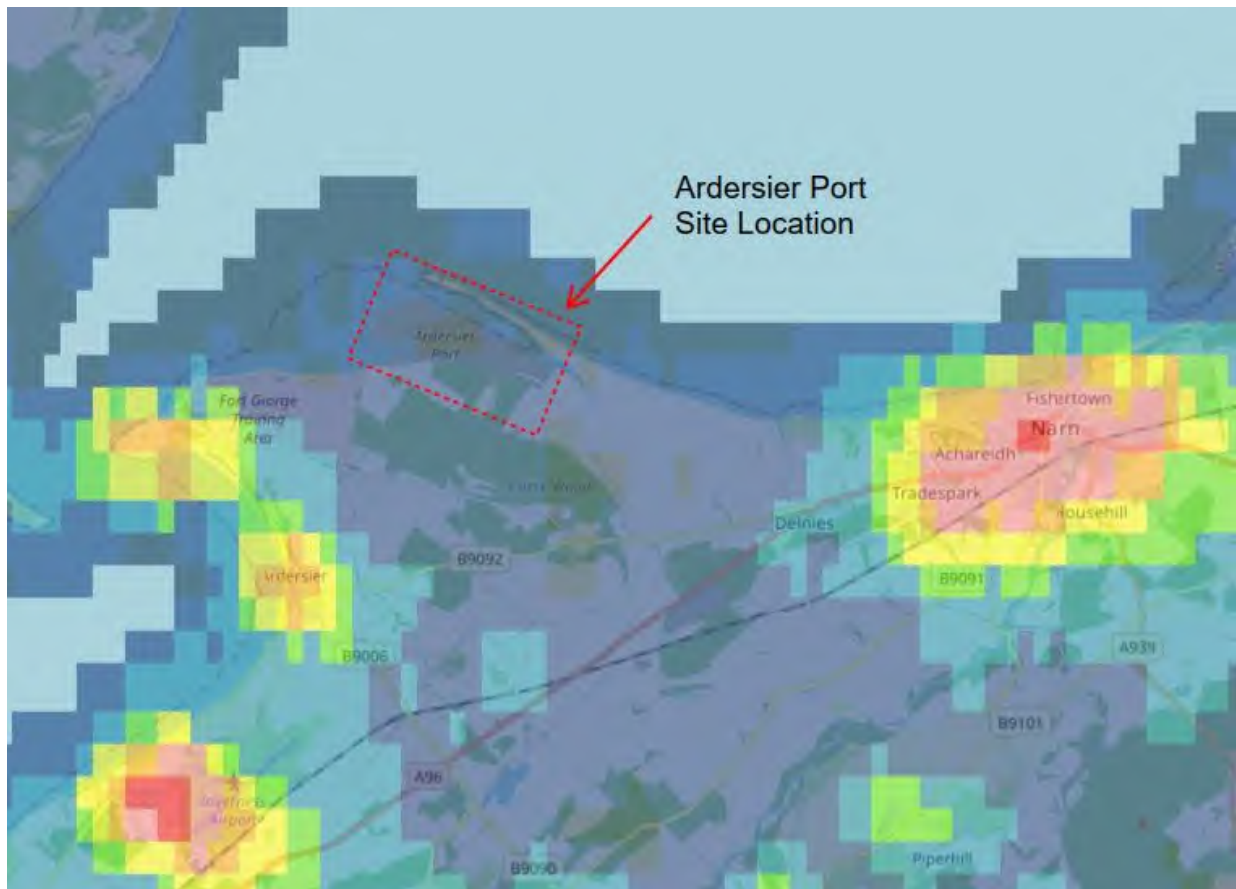
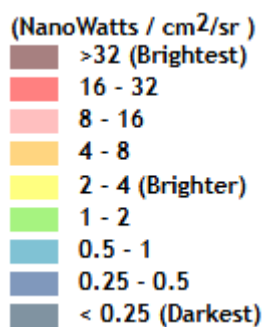


Figure 3: CPRE Light Pollution Key



1.6 DESIGN STANDARDS AND GUIDANCE

Adequate and appropriate lighting is essential for safe work, facility use, movement, and to minimise eye strain. The proposed lighting design should adhere to the following list of documents:

- BS EN 13201-2 (2015) - Road Lighting Part 2 Performance Requirements
- BS EN 12464-2:2024 - Light and Lighting - Part 2: Outdoor Work Places

- BS EN ISO 1302:2002 - Surface Texture Indication
- Institution of Lighting Professionals (ILP) Guidance Note 01 – GN01/21:2021 The Reduction of Obtrusive Light
- ILP Guidance Note 08 – GN08/23:2023 Bats and Artificial Lighting
- Society of Light & Lighting (SLL) Lighting Handbook
- Chartered Institute of Building Services Engineers (CIBSE) LG06: The Exterior Environment
- CIBSE LG01: The Industrial Environment
- CIBSE LG14: Control Of Electric Lighting
- CIBSE LG21: Protecting The Night-Time Environment
- UK Government National Protective Performance Requirements Security Authority (NPSA) Document “Security Lighting - Guidance for Security Managers”
- Civil Aviation Authority (CAA) Advice Note 2 “Lighting Near Aerodromes”.

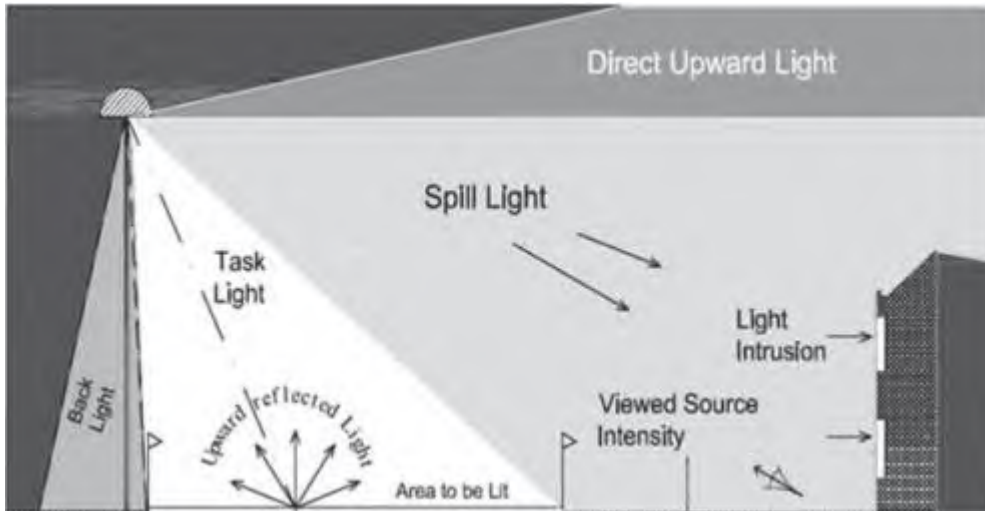
Guidance notes produced by the ILP are among the most commonly referenced guidance notes for good practice within the lighting design industry.

1.6.1 The Reduction of Obtrusive Light (GN01/21,2021)

Obtrusive light (or sometimes referred to as light pollution) refers to any light emitted in a direction in which it is not required or wanted and as such is detrimental to other users. Consideration is given to light intrusion, direct upward light (sky glow) and glare within the context of varying environmental zones.

- **Light intrusion** refers to the spilling of light beyond the boundary of the area to be lit. This includes the intrusion of light into bedroom windows.
- **Sky glow** refers to the brightening of the sky above towns caused by direct or reflected upward light.
- **Glare** refers to the uncomfortable brightness of a light source when viewed against a dark background.

Figure 4: Obtrusive Light Diagram (GN01:2021, Figure 1)



The ILP Guidance also quantifies the levels of obtrusive light regarded as acceptable for varying environmental zones E0 to E4. Reference Table 1.1 below for zone categories.

Table 1.1: Environmental Zones

Zone	Surrounding Environment	Lighting Environment	Examples
E0	Protected	Dark (SQM 20.5 +)	Astronomical observable dark skies, UNESCO Starlight reserves, International Dark-Sky Association (IDA) Dark Sky Parks
E1	Natural	Intrinsically dark (SQM 20 to 20.5)	Relatively uninhabited rural areas, National Parks, National Landscapes etc
E2	Rural	Low district brightness (SQM 15 to 20)	Sparsely inhabited rural areas, village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Well inhabited rural and urban settlements, small town centres or suburban locations
E4	Urban	High district brightness	Town / city centres with high levels of night-time activity

In the absence of suitable statutory guidance, the ILP “Guidance Notes for the Reduction of Obtrusive Light” GN01:2021 is typically used, in order to provide suitable assessment criteria against which to assess the likely effects of artificial lighting.

1.6.2 Environmental Zone

The proposed development is located within an area of low level of district brightness, given the rural local environment. Therefore, the Environmental Zone is categorised as **E2** (Environmental Zone) in accordance with the ILP Guidance Notes and Table 1.1: Environmental Zones above.

1.6.3 Bats and Artificial Lighting in the UK (GN08/23,2023)

The ILP and Bat Conservation Trust (BCT) prepared this document. It provides guidance for artificial exterior lighting in close proximity to light sensitive ecology.

It is therefore important that the use of an area by bats is thoroughly assessed before artificial lighting is changed or added in the vicinity of a roost or where bats may commute or forage.

The document sets out the process for determining whether bats may be present on site and the application for accepted mitigation measures to avoid excessive light nuisance into identified habitats.

Where bats are present the species of bat is key and must be determined to assess what mitigation measures should be implemented to improve habitat quality.

1.6.4 SLL LG21 – Protecting the Night-Time Environment

The Society of Light and Lighting have produced this Lighting Guide which offers guidance on minimising the impact of artificial lighting on the night-time environment which begins with whether there is a need for lighting in the first place. Specifically referring to light pollution, the guidance includes best practices in lighting design to balance the need for artificial lighting and the benefits we see from darker night-time environments.

- **Light pollution** refers to the excessive or misdirected artificial light that interferes with the natural darkness of the night-time environment. It encompasses several types including Sky Glow, Glare, Light Spill as described in Section 1.61.

1.7 ECOLOGIST ENGAGEMENT

The Project Ecologist has been consulted who has highlighted a 15-20m retained woodland area, Carse Wood, to the south of the site boundary as a key habitat and potentially sensitive receptor for consideration. This will provide a buffer zone from the site but additional mitigation will be required to ensure that any light spill will be in accordance with ILP Guidance Note 08 – GN08/23:2023 Bats and Artificial Lighting.

This will can be achieved by the use of shields and cowls to block artificial light from spilling in the direction of Carse Wood.

1.8 STAKEHOLDER ENGAGEMENT

Further stakeholder engagement should be sought to provide input and feedback to ensure that lighting designs are.

- inclusive,
- balanced,
- ecologically & environmentally friendly,
- design to meet the standards required.

1.9 PROPOSED DESIGNS

To be in accordance with relevant design standards and guidance all proposed external luminaires should adhere to the following:

- shall be "dark sky approved" with minimal upwards or obtrusive light spill
- shall have a minimum colour rendering index (CRI) of 80 so as to be sufficient for CCTV images to be of a quality that can be used for prosecution
- shall have a colour temperature of 4000K or lower to suit the task and environment
- shall have a minimum glare rating of class G4 to reduce the potential for disability glare to road users
- shall be suitable for the installation of luminaire shields where deemed necessary.
- Utilise smart controls to reduce energy use and wasteful light.

All designs to be provided with light spill modeling drawings as installed at day one from full output showing lux contours values 1, 2.5, 5, 10, 15, 20 and 25.

Upward Light Ratio (ULR) calculation or confirmation through design methodology and LED luminaire selection shall also be provided.

Smart lighting controls shall be provided for each design and incorporate the following as a minimum:

- **Motion Sensors:** Lights automatically turn on when motion is detected, enhancing security and energy efficiency. Typically, utilising Radar sensors rather than Passive infra-Red (PIR) to minimise nuisance activation.
- **Dusk-to-Dawn Sensors:** Lights automatically adjust based on natural light levels, ensuring they only activate when needed.
- **Remote Control:** Manage lighting remotely through smartphone apps or web interfaces, offering convenience and flexibility.
- **Timing Schedules:** Schedule lights to turn on and off at specific times, reducing energy consumption and improving security.
- **Zone Control:** Group lights into zones and manage each zone independently for optimised lighting in different areas.
- **Manual Override:** For emergencies lighting shall be able to be manually switched off and on at a central control point.

1.9.1 Types and Positioning Requirements

LED's are an ever evolving technology and utilising the latest LED luminaires available within the design will provide the following benefits:

- Maximum luminous efficacy allowing for more energy savings

- Full “cut-off” properties, directing light only towards the task area
- Maintaining compatibility with the latest adaptive controls and smart sensors providing the right light at the right time

Figure 5 below is a typical IDA Dark Sky Approved LED luminaire and Figure 6 is a typical LED bulkhead.

Figure 5: LED Luminaire

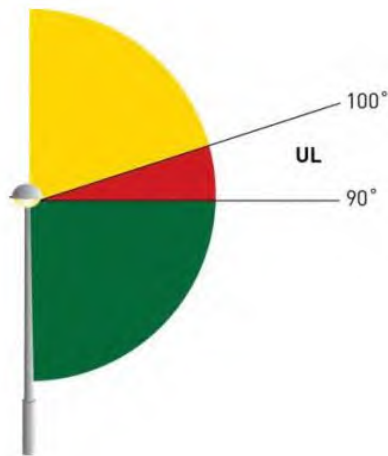


Figure 6: LED Bulkhead



The modern LED luminaires and bulkheads are designed to limit upward light as the Figure 7 below indicates the suitable angle of light output before this can contribute to sky glow or upward light spill.

Figure 7: Crucial Luminaire Angle for Minimising Sky Glow



The choice of luminaire with the right optical distribution at the right mounting height is critical to minimising light spill and obtrusive light effects yet providing the right lighting performance on the task area. Sky glow is the general diffusion that is visible in the direction of large cities, airports, and industrial complexes. It occurs from both natural and artificial light sources and does not depend exclusively on the lighting design. It also depends on the atmospheric conditions (humidity, aerosols, clouds, haze, atmospheric pollution, etc.). Light propagating into the atmosphere either directly from upward directed or incompletely shielded sources, or after reflection from the ground or other surfaces, is partially scattered back towards observers on the ground.

LED luminaires and bulkheads should therefore aim to be installed at 90° to the vertical plane and a 0° inclination angle to minimise sky glow.

1.9.2 Limitations

The need for artificial lighting will be dependent on seasonality, where natural light is not sufficient and to ensure safe working conditions. The security office will have an override switch to activate the lighting as required.

No fixed external lighting shall be provided at the Quayside, mobile Lighting Towers only. For fixed external lighting, mounting heights shall be no more than 10m to reduce unnecessary light spill into the surrounding landscape.

1.10 CONCLUSION

The proposed lighting strategy for the new Port construction works aims to help achieve a safe, energy efficient and environmentally conscious lighting solution. By proposing modern LED technology paired with shielding fixtures, and smart controls to minimise light pollution and protect local wildlife while enhancing the functionality and safety of the Port.

To achieve these aims this report sets out a clear set of guidelines and relevant documentation and standards to follow to provide a compliant lighting design with suitable mitigation against the effects of obtrusive light.

ABBREVIATIONS

Table 2.2: Acronyms

Terminology	Comment
EIAR	Environmental Impact Assessment Report
THC	The Highland Council
ILP	Institution of Lighting Professionals
SSSI	Site of Special Interest
SPA	Special Protection Area
SAC	Special Area of Conservation
SLA	Special Landscape Area
km	Kilometres
PPiP	Planning Permission in Principle
HRO	Harbour Revision Order
m	Metre
m ³	Metres Cubed
CPRE	Campaign to Protect Rural England
cm ² / SQM	Centimetres Squared
sr	Steradians
BS EN	British Standards European Norm
SLL	Society of Lighting and Lighting
CIBSE	Chartered Institution of Building Services Engineers
LG	Lighting Guide
NPSA	National Protective Security Authority
CAA	Civil Aviation Authority
GN	Guidance Note
BCT	Bat Conservation Trust
UNESCO	United Nations Educational, Scientific and Cultural Organization
IDA	International Dark-sky Association
DSA	Dark Sky Approved
K	Kelvin
CCTV	Closed-Circuit Television
CRI	Colour Rendering Index
ULR	Upward Light Ratio
LED	Light Emitting Diode
PIR	Passive infraRed
NanoWatts/cm ² /sr	nanowatts per square centimetre per steradian

REFERENCES

British Standards Institution, BS 5489-1: 2020 – Lighting of Roads and Public Amenity Areas (Code of practice).

British Standards Institution, BS EN 13201 Part 2: 2015 - Road Lighting Performance Requirements

British Standards Institution BS EN 12464-2:2024 - Light and Lighting - Part 2: Outdoor Work Places

British Standards Institution BS EN ISO 1302:2002 - Surface Texture Indication
Society of Light & Lighting (SLL) Lighting Handbook
Chartered Institute of Building Services Engineers (CIBSE) LG06: The Exterior Environment
Chartered Institute of Building Services Engineers (CIBSE) LG01: The Industrial Environment
Chartered Institute of Building Services Engineers CIBSE LG14: Control of Electric Lighting
Chartered Institute of Building Services Engineers CIBSE LG21: Protecting The Night-Time Environment

UK Government National Protective Performance Requirements Security Authority (NPSA) Document “Security Lighting - Guidance for Security Managers”

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ARDERSIER PORT ENERGY TRANSITION FACILITY PORT EXTENSION



November 2025

Appendix 5.3 Waste Management Plan

Waste Management Plan

Contents

- 1. Introduction.....3
- 2. Roles and Responsibilities3
- 3. Waste Hierarchy and Minimisation.....4
- 4. Waste Types4
 - 4.1 General Waste4
 - 4.2 Recyclable Waste4
 - 4.3 Contaminated and Hazardous Materials.....5
- 5. Waste Segregation, Storage and Handling5
- 6. Waste Disposal and Recovery6
- 7. Records and Legal Compliance6
- 8. Contractor and Supplier Compliance.....7
- 9. Training.....7
- 10. Monitoring7
- 11. Site Specific Considerations for Ardersier Port8
- 12. Associated Documents8

Waste Management Plan

1. Introduction

This Waste Management Plan (WMP) has been developed to ensure that waste generated at Ardersier Port is managed responsibly, sustainably, and in accordance with relevant legislation and best practices. The goal is to reduce environmental impact, promote resource efficiency, and maintain compliance with the Waste Framework Directive and national waste regulations. The definition of waste under the Waste Framework Directive (2008/98/EC) is "any substance or object which the holder discards or intends or is required to discard." This includes surplus materials from construction, packaging waste, and hazardous substances.

Three main waste types will be produced during operations at Ardersier Port:

- **Inert Waste:** Includes uncontaminated soil, concrete, rubble, and bricks.
- **Non-Hazardous Waste:** Encompasses general waste such as wood, plastic, paper, and packaging.
- **Hazardous Waste:** Covers potentially dangerous materials like solvents, oils, paints, contaminated soil, and asbestos.

This waste management plan is in conjunction with the following documents:

- Construction Phase Plan
- Construction Environmental Management Plan

2. Roles and Responsibilities

Clear roles and responsibilities are critical for effective waste management:

Project Manager

The Project Manager shall ensure that:

- They include waste management within their site audits and inspections.
- They brief the requirements of the SWMP to their teams and share with their sub-contractors as package managers.
- They appoint competent personnel to manage skips, control the removal from site and ensure Waste Transfer notes are collected and stored.

HSEQ Manager/Lead

The HSEQ Manager / lead shall ensure that they:

- They provide guidance on the management of waste to all project teams.
- Conduct regular audits of the waste management on site.
- Assist, where required, in planning site investigations and advise on waste classifications.

Employees

- Follow the waste hierarchy principles when managing waste. (Prevent, Reduce, Reuse, Recycle, Recover, Dispose)
- Ensure waste is handled in compliance with the requirements detailed in this SWMP.

3. Waste Hierarchy and Minimisation

This plan is structured around the waste hierarchy, a core principle of waste management legislation. The hierarchy prioritises actions to prevent and reduce waste generation, aiming to conserve natural resources and reduce environmental harm:



1. **Prevention:** Measures will be implemented to avoid waste generation, such as optimised design, just-in-time material deliveries, and employee training to reduce misuse.
2. **Minimisation:** Operational controls will ensure efficient material use, avoiding over-ordering and wasteful handling.
3. **Reuse:** Items such as timber, pallets, or bricks will be reused where possible, with minimal processing.
4. **Recycling:** Materials that cannot be reused will be segregated and sent to appropriate recycling facilities.
5. **Energy Recovery:** Non-recyclable combustible waste may be sent to facilities for waste-to-energy processing.
6. **Disposal:** Landfilling will only be considered where other options are not feasible.

These principles will be embedded into daily operations and reinforced through inductions and site briefings

4. Waste Types

4.1 General Waste

General waste is uncontaminated, non-electrical waste which cannot be recycled.

General waste is gathered in skips delivered by the waste service provider. In indoor areas such as kitchens, smaller receptacles may be used for the temporary storing of general waste. Typically, this type of waste is sent to a landfill site due to a lack of re-use or recycling possibilities. Handling through a sorting plant will ensure that the amount of waste to be landfilled is minimised.

General waste includes, but may not be limited to:

- Organic (food) waste from kitchens and canteens
- Food wrappers
- Empty drink containers (milk, juice, etc.)

4.2 Recyclable Waste

Recyclable waste is uncontaminated and clean waste. Depending on the requirements of the waste service provider and/or space available for segregation, recyclables may be stored together in the same bin.

Waste Management Plan

Recyclable wastes are gathered in skips delivered by the waste service provider. In indoor areas, smaller receptacles may be used for the temporary storing of recyclables in which case they will be marked as such.

Recyclable waste includes:

- Wood
- Metal
- Aluminium cans
- Paper & cardboard
- Glass
- Hard plastics

4.3 Contaminated and Hazardous Materials

Hazardous waste is waste that has the potential to cause harm to personnel or the environment due to its toxic nature or hazardous components. Hazardous waste is stored separately from other types of waste in clearly marked, waterproof and lidded receptacles delivered by the waste service provider. At all times, management of hazardous waste is aimed at safeguarding personnel and the environment of negative impacts as a result of exposure to these substances.

Due to the specific nature of hazardous wastes, processing possibilities depend on the product. The waste service provider will be engaged to help identify the most environmentally friendly alternative and advise on how to handle and process the item accordingly.

Liquid hazardous waste includes, but may not be limited to:

- Oils (lubricating and waste oil from machinery and equipment)
- Chemicals
- Oil & water mixtures
- Solvents & thinner
- Paint (prior to drying)

A distinction is made between solid and liquid hazardous waste. Solid hazardous waste includes, but may not be limited to:

- Paint cans
- Batteries
- Fluorescent light bulbs
- Electrical waste
- Aerosols
- Empty chemical containers
- Empty hydrocarbon containers
- Used oil filters
- Oily or greasy rags and absorbents

5. Waste Segregation, Storage and Handling

Effective waste segregation is crucial to facilitate recycling and ensure hazardous materials are properly managed.

All waste shall be classified and segregated according to the correct coding as described in the European Waste Catalogue (EWC) list of wastes which is a harmonised, non-exhaustive list of waste types established by the European Commission (2000/532/EC) and under advice from the licenced waste service provider.

Waste Management Plan

Transfer of waste to licenced waste service providers for treatment shall be done in accordance with Section 34 of the Environmental Protection Act 1990 – Duty of Care which includes making sure the waste is stored correctly and does not escape control, only transferring waste to an authorised person (a waste disposal company that can legally take it) and making sure a written record of the waste is kept every time the waste is passed to a waste disposal company.

On-site procedures include:

- Designated Waste Storage Areas: Located away from watercourses and sensitive receptors.
- Clearly Marked Containers: All skips and bins will be colour-coded and labelled for specific waste streams.
- Protection from Elements: Covered containers will prevent rain ingress and wind dispersion.
- Bunds and Secondary Containment: Hazardous waste containers will have bunded areas to contain spills.
- **Waste Handling Procedures:** Trained personnel will be responsible for moving waste using designated pathways to avoid contamination.

Routine inspections will be conducted to ensure compliance, identify misuse, and verify container integrity.

6. Waste Disposal and Recovery

Waste will be removed from site using licensed waste carriers. A WTN must be completed and signed by both the person handing over the waste and the person receiving it.

The WTN must contain enough information about the waste for it to be handled safely and either recovered or disposed legally.

Priority will be given to recovery operations over disposal:

- Licensed Facilities: Only authorised waste treatment, recycling, and disposal sites will be used.
- Inert and Recyclable Waste: Sent to recycling facilities or for use in secondary construction applications.
- Hazardous Waste: Managed under strict protocols and accompanied by Special Waste Consignment Notes.
- Documentation: All waste movements will be recorded, ensuring full traceability.

Copies of all WTN's must be kept for at least two years.

Prior to the start of any waste transport (hazardous and non-hazardous waste) the transporter or intermediary always needs to undersign the WTN and deliver a copy to the waste producer.

For the movement of hazardous waste in Scotland a Special Waste Consignment Note (SWCN) document is required. This document ensures that all hazardous waste is tracked from its origin to its final disposal.

Clear instructions and responsibilities for waste disposal will be given to all contractors and operatives.

7. Records and Legal Compliance

To ensure accountability and legal compliance, the following records will be maintained:

- Waste Transfer Notes (WTNs): For all non-hazardous waste movements.
- Special Waste Consignment Notes (SWCNs): For all hazardous waste.

Waste Management Plan

- Carrier Licences: Proof of registration for all waste carriers.
- Environmental Permits: For all receiving waste facilities.
- Waste Summaries: Monthly reports on volume, type, treatment method, and destination.

This documentation will be stored on-site and be available for audit by SEPA or other relevant authorities. Compliance is assured under the Environmental Protection Act 1990 and the Waste (Scotland) Regulations 2012.

8. Contractor and Supplier Compliance

All contractors and suppliers must align with the principles of this WMP:

- Waste Container Usage: Contractors must use designated areas unless authorised otherwise.
- Waste Documentation: Contractors must provide evidence for any waste they generate or remove.
- Packaging Minimisation: Suppliers are encouraged to reduce packaging and increase recyclable content.
- Monitoring: Contractor compliance will be monitored during site inspections and audits.

Contractors shall maintain records of the following which shall be provided on request.

- Waste transfer Notes
- Any breaches of this Site Waste Management Plan
- Details of their waste management suppliers.
- Inspections / Audits of the waste carriers disposal / sorting facilities

9. Training

Operatives on site, including sub-contractors will be given training and information on the SWMP as part of their induction. In addition, toolbox talks will be given, reinforcing existing training and informing the workforce of the SWMP progress.

The onsite training will include the following topics: -

- The SWMP
- Roles and responsibilities
- Waste procedures on site, including provision of site/ skip layout plans
- Hazardous waste
- Spill response drills
- Duty of care/responsibilities
- Materials storage

The contents of SWMP will be issued to all sub-contractors and key stakeholders of the project.

10. Monitoring

All stakeholders shall be encouraged to report any issues, breaches of restrictions or risks relating to this plan to site management.

Site management contact details will be advertised at the site access in order to allow members of the public to report any issues.

11. Site Specific Considerations for Ardersier Port

Due to its coastal location and sensitive environmental surroundings, special precautions are required:

- **Buffer Zones:** No waste storage within 10m of watercourses or marine boundaries.
- **Dust and Noise Controls:** Measures in place to reduce airborne waste and minimise disruption to local communities.
- **Marine Waste Regulations:** Any waste from port or vessel activities must comply with MARPOL Annex V.
- **Fuel and Chemical Handling:** Use of bunded containers, drip trays, and mobile containment systems.

All staff will be briefed on site-specific risks and emergency response plans.

12. Associated Documents

- | | |
|-------------------|--|
| • HAV-PL-HSEQ-040 | Construction Environmental Management Plan |
| • HAV-PR-HSEQ-030 | Waste Management and Recycling Procedure |
| • HAV-PR-HSEQ-040 | Environmental Management |