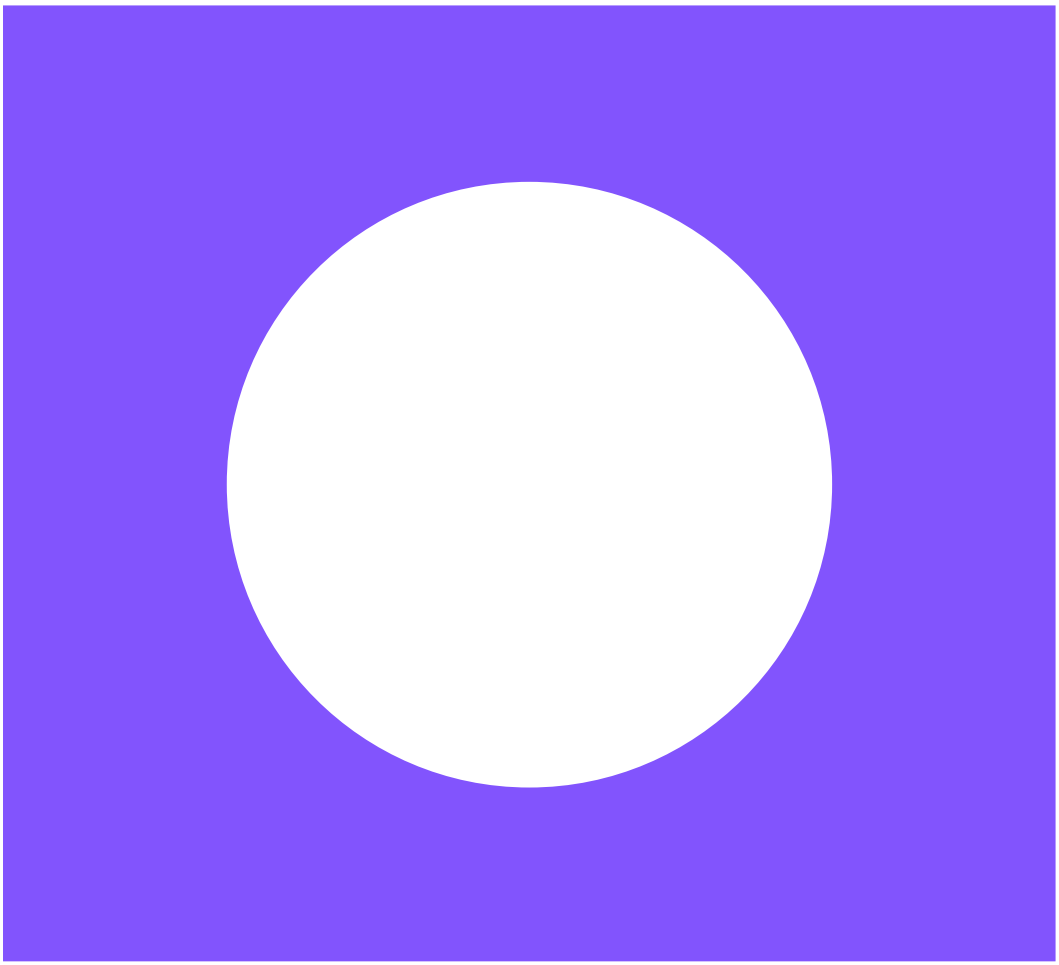
MOTT MACDONALD



Dragon LNG Jetty Concrete Repair and Preservation

Construction Environmental Management Plan

July 2026

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Construction Environmental Management Plan

July 2026

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
P01	22/08/2025	M Phillips	N Spofforth	E C Probert	First issue
B	31/10/2025	M Phillips	J Spencer	N Seaholme	Tender Issue (Document renumbering).
C	20/02/2026	R. Brueckner	J. Spencer	N. Seaholme	Incorporation of tender clarifications
D	15/06/2026	M. Phillips	N Spofforth	R, Brueckner	Incorporation of contractor information
E	15/07/2026	M. Phillips	R. Monckton	R. Brueckner	Updated section 7 to provide indicative worst case incident type and response. Contact details added. Removed reference to works being completed below MHWS as all works will be above MHWS. All changes in yellow highlight for clarity.

Document reference: 100123226-MMD-ZZ-XX-RP-C-0002 | E

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1 Introduction

1.1 Project summary

Dragon Liquefied Natural Gas (Dragon LNG) operate an LNG terminal in Waterston, Milford Haven, South Wales. The terminal comprises storage, re-liquefication, gasification and re-transmission facilities with a capacity of 5.6 million tons per annum. On-site assets include a deep-water jetty, housing two storage tanks with a combined capacity of 320,000m^3. A previous inspection by Henderson Thomas Associates Ltd (HTA) in 2024[1] identified multiple areas of spalling concrete, cracked concrete and exposed rebar on soffit and side elevations of the jetty. and repair works are required (below the top deck only). Mott MacDonald has been appointed by Dragon LNG to produce a specification and cathodic-protection design for the repair and preservation of the jetty structure.

To support the repair works, Mott MacDonald Ltd has also been commissioned to provide a Construction Environmental Management Plan (CEMP) for the works, identifying the constraints and possible mitigation measures associated with the repairs. The intent is that this CEMP will be updated and further detail added by the appointed repair contractor and will remain live). Therefore, the mitigation measures listed herein should be considered indicative only and will require update by the Contractor in response to (for example) changes in site conditions or other reasonable requirements.

It is anticipated that the repair works will commence in 2026.

1.2 Interface between CEMP and existing LNG Terminal major incident response plans

In accordance with Control of Major Accident Hazard (COMAH) requirements, Dragon LNG operate major incident response plans and maintain a public information zone (PIZ) with information available on the actions to be taken if a major incident occurs. It is considered that the appointed repair works Contractor will be briefed on the requirements of this major incident response plan.

As the proposed concrete repair works are relatively small scale and do not involve interface with LNG (i.e. no works involving the movement or handling of LNG), this CEMP does not reproduce information contained in the major incident response plans and does not affect actions to be taken within the PIZ. If a major incident were to occur at the LNG terminal during the concrete repair works, the repair Contractor would be expected to act in accordance with the requirements of the Dragon LNG major incident response plans.

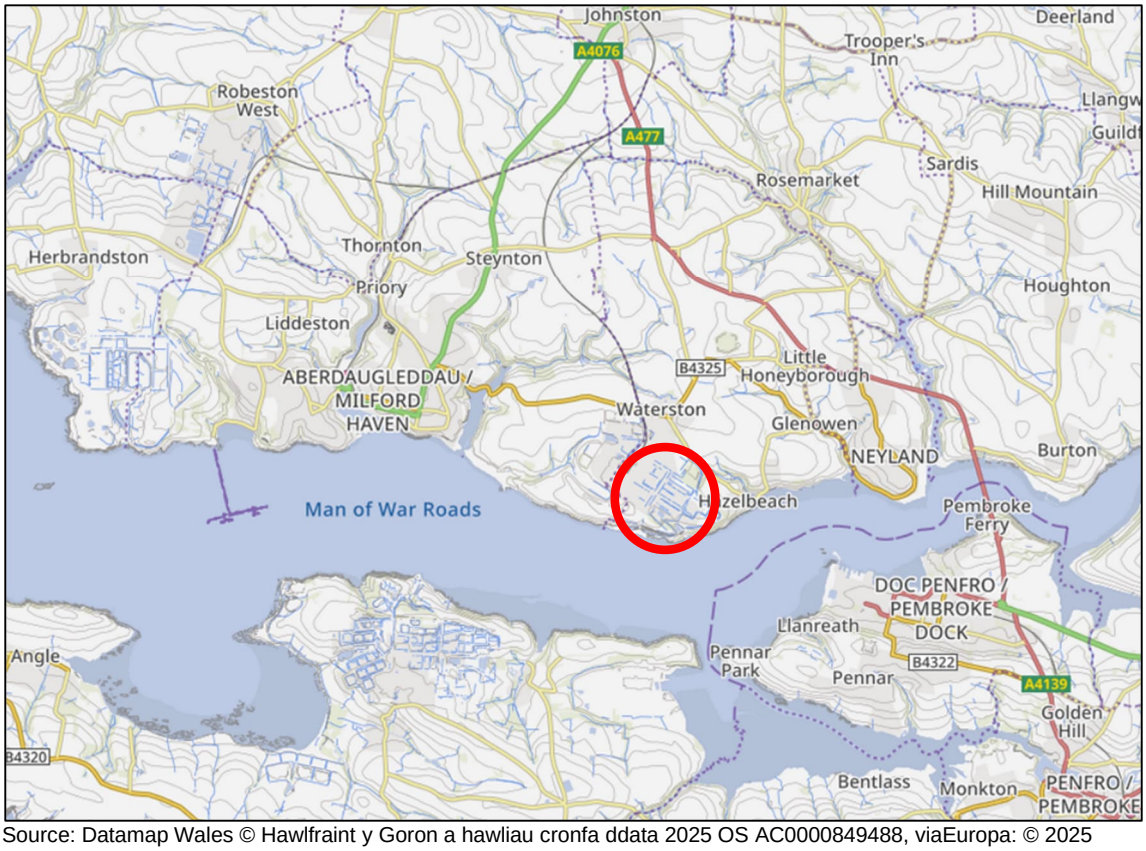
[1] S/2957/24, “Report on the Concrete Testing Works on the Dragon LNG Concrete Pier”, Henderson Thomas Associates, (April 2024)

2 The Site

2.1 Site location

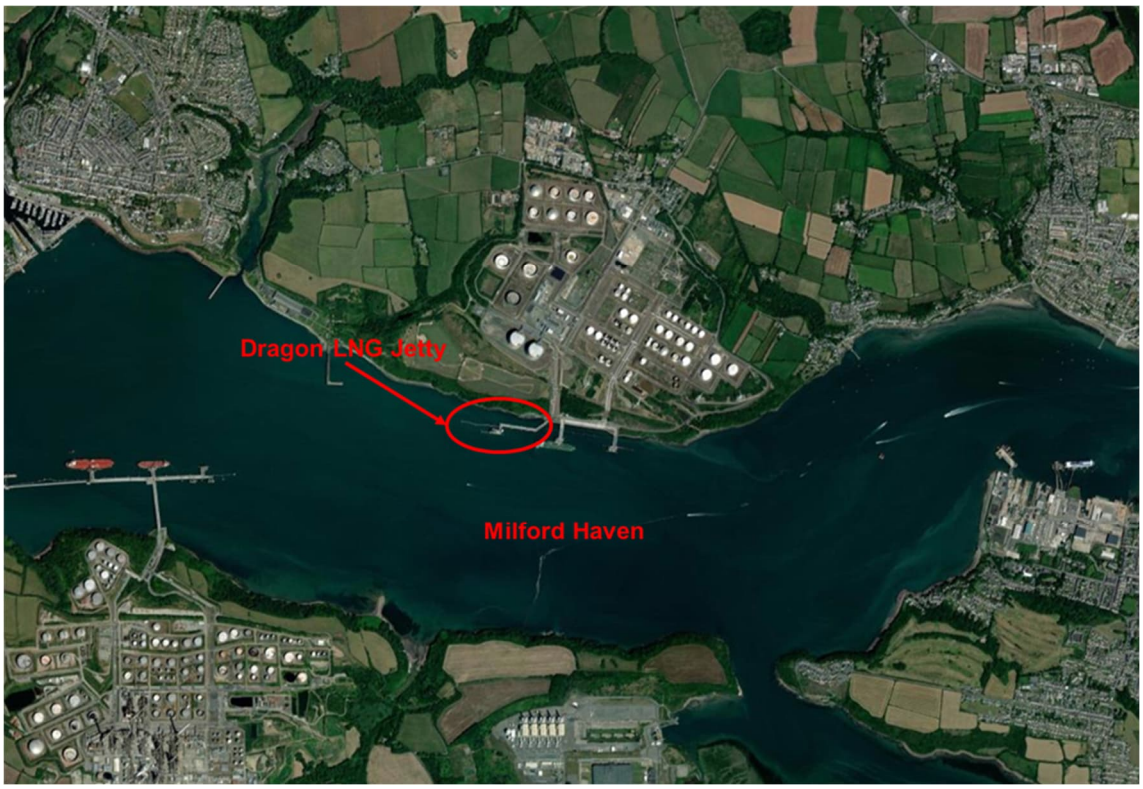
The jetty is located in Waterstone, Milford Haven, South Wales (Figure 2.1 and 2.2). It has been in operation since the early 2000's and was previously the site of the Gulf Oil refinery which itself opened in 1968. In the area surrounding the jetty, additional to the LNG processing plant are a solar farm and three onshore wind turbines. Adjacent businesses include garages, a car breakers and Valero Oil Terminal. Pembrokeshire Power Station is located approximately 1.5km south of the site, across the Milford Haven channel.

Figure 2.1: Site Location - Map



Source: Datamap Wales © Hawlfraint y Goron a hawliau cronfa ddata 2025 OS AC0000849488, viaEuropa: © 2025

Figure 2.2: Site location – aerial image



Source: Esri, Intermap, NASA, NGA, USGS | Esri UK, Esri, TomTom, Garmin, GeoTechnologies, Inc, METI/NASA, USGS | Maxar, Microsoft

2.2 The works

The concrete repairs to the jetty include all concrete surfaces below the deck, i.e. soffits and side faces of the deck and pile caps. No repairs to the top face of the deck are planned. No repairs are proposed below the water line.

Potential methodology for repairs to spalled areas (where concrete has broken away from the integral steel reinforcement) include:

- Breaking out of spalled concrete to expose sound substrate using pneumatic jack hammers and cutting of repair perimeter using angle grinders, powered by a diesel generator.
- Cleaning of reinforcement using mechanical tools to remove rust.
- Reinstatement of repair areas using a cementitious concrete repair mortar; and
- Curing of repairs using a concrete curing compound.

Repairs to cracks include:

- Where the crack is wider than 0.3mm, the work will require saw cutting to widen the crack and filling with a cementitious repair mortar.
- Where <0.3mm, no repair is required and the crack will be coated with protective coating.

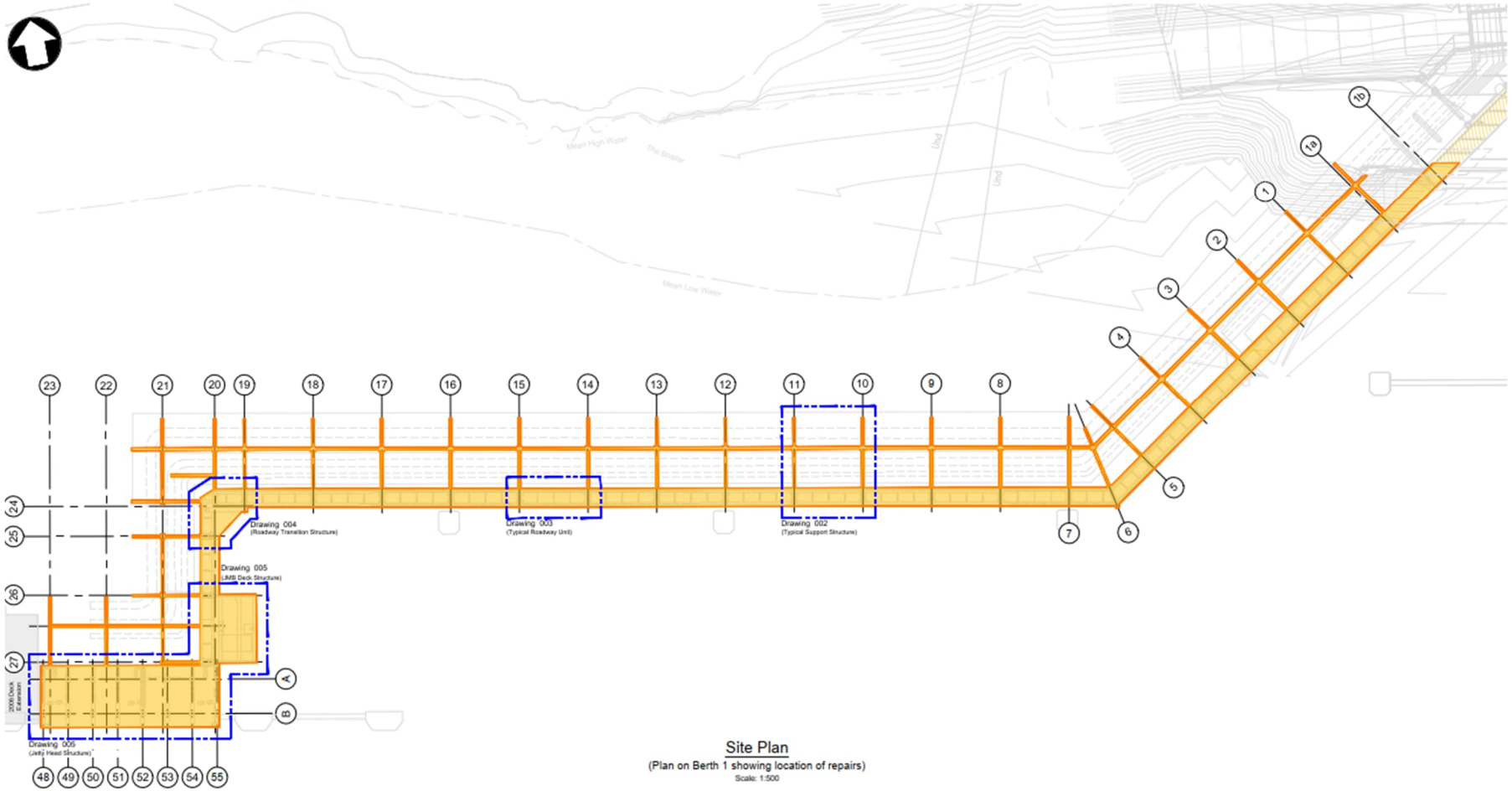
Cathodic protection:

- Surface preparation may involve jet washing to remove any dirt, grease, laitance (a weak, milky or powdery layer that forms on the surface of concrete or screed due to the upward movement of water and fine particles during curing).
- Localised breaking out of concrete to install electrical connections to the reinforcement.
- Application of sticky tape containing zinc on all faces below the deck (for example Mapei™ Mapeshield E25 or similar).
- Application of a polymer-modified cementitious coating (for example Mapei™ Mapelastic Guard or similar).

Access to the underside of the jetty deck will be provided by temporary scaffolding or V-Decks™ suspended from the deck. The Project compound site is anticipated to be on land within proximity to the jetty and vegetation clearance may be required for the compound or access. A small vessel will be used for safety purposes should any personnel enter the water.

It is anticipated the works will be undertaken during the summers of 2026 – 2028 inclusive. Figure 2.3 shows the approximate location of repairs.

Figure 2.3: Approximate location of repairs



Source: 100123226-MMD-ZZ-XX-DR-C-0001 – General Arrangement

2.3 Assumptions and limitations

At the time of writing (August 2025), limited information is available due to the early stage of the Project. The following assumptions have been made:

- The repairs will be above high water on the underside of the deck structure and so it is anticipated that equipment, personnel or machinery will be in the water with the exception of a potential rescue / safety boat and marine spill containment / sediment containment equipment.
- The installation of temporary scaffolding or V-Decks™ will be completed from the jetty deck topside accessed via existing roadways, and will not require access to the foreshore intertidal areas or installation using a vessel. Such installations will not be anchored to the sea bed or cliff faces.
- Part of the temporary scaffolding suspended from the deck may be situated below Mean High Water Springs (MHWS), meaning that part of it will be underwater some of the time.
- A section of scaffold will be erected on the foreshore. This is covered under the marine licence.
- No vessels are anticipated for use for access, delivery of materials, or to facilitate the positioning of machinery or equipment (i.e., a jack-up barge), although a rescue / safety boat is understood to be required when working outside of a fixed handrail (safety boat to be arranged by the Contractor).
- No dredging will be required to facilitate the works.
- Navigation risk and permission is not covered in this CEMP, it is assumed that this will be managed by the Contractor and Dragon LNG as required.
- No marine disposal will be required.
- The safety vessel will not use ballast.
- There might be limited working during the hours of darkness.

2.4 Environmental constraints

The following section represents a summary of the known environmental constraints. It is based on a desk study of publicly available information only[2]. The site is located in a sensitive area with numerous environmental constraints that will require consideration by the appointed contractor. The below is a list of issues / constraints particular to the area, including designated sites which are adjacent to or close to the site[3], with other designated sites being described only briefly (although listed in greater detail in Appendix A). The list includes known invasive species, marine features and marine mammals / species that may reasonably be present within or near to the proposed works area.

- Shipping: The watercourse is a busy shipping channel.
- Wear Point Regionally Important Geological Site (RIGS) – adjacent to the site (immediately east of the site).
- Pembrokeshire Marine Special Area of Conservation (SAC) which is the watercourse underlying the site.
  - Annex I habitats that are a primary reason for selection of this site (asterisk denotes a priority feature).
    - 1130 Estuaries.

[2] Welsh Government, 2025. DataMapWales [Accessed 22 July 2025]

[3] Records taken from Natural Resources Wales 1954 to 2022, Joint Nature Conservation Committee 1982 to 2017

    - 1160 Large shallow inlets and bays.
    - 1170 Reefs.
  - Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:
    - 1110 Sandbanks which are slightly covered by sea water all the time.
    - 1140 Mudflats and sandflats not covered by seawater at low tide.
    - 1150 Coastal lagoons*
    - 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae).
    - 8330 Submerged or partially submerged sea caves.
  - Annex II species that are a primary reason for selection of this site:
    - 1364 Grey seal (*Halichoerus grypus*).
    - 1441 Shore dock (*Rumex rupestris*).
  - Annex II species present as a qualifying feature, but not a primary reason for selection of this site:
    - 1095 Sea lamprey (*Petromyzon marinus*).
    - 1099 River lamprey (*Lampetra fluviatilis*).
    - 1102 Allis shad (*Alosa alosa*).
    - 1103 Twaite shad (*Alosa fallax*).
    - 1355 Otter (*Lutra lutra*).
- Milford Haven Waterway Site of Special Scientific Interest (SSSI), 0.1km north of the site. Designated for;
  - Estuaries (contains all shore types and communities).
  - Specialised marine habitats (including eelgrass beds, rockpools, overhangs and underboulder communities).
  - Sand gapers and bristle worms in muddy gravel shores.
  - Bristle worms in poorly sorted mixed sediment shores.
  - Bristle worms in variable salinity muddy gravel shores.
  - Serrated wrack, sponges and sea-squirts on tide-swept lower mid-shore rock.
  - Serrated wrack with sponges, sea-squirts and red seaweeds on tide-swept lower mid-shore mixed substrata.
  - Kelp, sea-squirts and sea mats on tide-swept subtidal fringe rock.
  - Oyster beds on shallow subtidal muddy sediment.
  - Saltmarsh (including Atlantic salt meadows).
  - Reedbeds.
  - Semi-natural ancient woodland.
  - Saline lagoons.
  - Marsh pea (Lathyrus palustris).
  - Spurge-laurel (*Daphne laureola*).
  - Wayfaring tree (*Viburnum lantana*).
  - Dwarf eelgrass (*Zostera noltii*).
  - Assemblage of coastal flowering plants.
  - Assemblage of saltmarsh and intertidal flowering plants.
  - Assemblage of mosses and liverworts.
  - Assemblage of nationally rare and scarce lichens.

  - Shelduck (*Tadorna tadorna*).
  - Teal (Anas crecca).
  - Curlew (*Numenius arquata*).
  - Wigeon (*Anas penelope*).
  - Dunlin (*Calidris alpina*).
  - Little grebe (*Tachybaptus ruficollis*).
  - Otter (*L. lutra*).
  - Tentacled lagoon worm (*Alkmaria romijni*).
  - Brown hair-streak butterfly (*Thecla betulae*).
  - Assemblage of saltmarsh invertebrates.
  - Greater and lesser horseshoe bat (*R. ferrumequinum* and *R. hipposideros).*
- Other SACs (including SACs related to bats) and Special Protection Areas (SPAs) designated in relation to birds are also located within the potential zone of influence of the site, albeit not adjacent and must be considered with respect to potential mitigation associated with the proposed works. The full list of designated sites is included in Appendix A;
- Invasive Non-Native Species (INNS); Milford Haven is known to be occupied by many INNS;
- A desk-based review was conducted for priority marine feature habitats within a 10km radius of the Project. Priority marine features that may be at risk from the Project were identified as Nationally Important Intertidal Habitats and include:
  - Seagrass beds.
  - *Laminaria digitata*, ascidians and bryozoans on tide-swept sublittoral fringe rock.
  - *Fucus serratus*, sponges and ascidians on tide-swept lower eulittoral rock.
  - *Fucus serratus* with sponges, ascidians and red seaweeds on tide-swept lower eulittoral mixed substrata.
  - *Hediste diversicolor*, *Macoma balthica* and *Mya arenaria* in sandy mud shores.
  - *Mya arenaria* and polychaetes in muddy gravel shores.
  - *Fucus serratus* and piddocks on lower eulittoral soft rock.
  - *Ulothrix flacca* and *Urospora* spp. on freshwater-influenced vertical littoral fringe soft rock.
  - *Laminaria digitata* and piddocks on sublittoral fringe soft rock.

  Of those, the following are located proximal to(<2km) the Project:
  - *Laminaria digitata*, ascidians and bryozoans on tide-swept sublittoral fringe rock.
  - *Fucus serratus* with sponges, ascidians and red seaweeds on tide-swept lower eulittoral mixed substrata.
  - Seagrass beds within Milford Haven Waterway are located 2.1km south-east of the Project inside Pennar Mouth or 3.6km south-west of the Project on the eastern edge of Angle Bay.
- Harbour Porpoise and Common Dolphin have also been recorded within Milford Haven within the last 3 years[4].

[4] SeaWatch Foundation, 2025. Sightings Map. [online] Available from: Sightings Viewer [Accessed 22 July 2025]

3 General

3.1 Introduction

This section of the CEMP sets out the roles and responsibilities with regards to the management, monitoring, investigation and reporting of environmental impacts during the repair works.

3.2 Roles and responsibilities

Table 3.1 sets out roles and responsibilities pertaining to this CEMP.

Table 3.1 Roles and responsibilities

Role	Responsibility
Construction Site Manager	Overall responsibility for all personnel and responsible for compliance with this CEMP, any associated consents, licenses and / or permits during the works. Responsible for ensuring all staff are appropriately trained and competent in the work which they are undertaking and that all staff receive appropriate information setting out the environmental risks (and controls) relevant to the works and the site. Responsible for provision of site inductions to all personnel prior to commencement of works. Responsible for sign-off of RAMS and ensuring that all RAMS have been reviewed by the Environment Manager and Ecological Clerk of Works and contain appropriate mitigation given the environmental and ecological issues set out within this CEMP.
Environmental Management Representative	Responsible for briefing all staff regarding the environment risk. Reviewer of RAMS with respect to environmental control measures. Responsible for inspection of works to ensure compliance with the measures set out in the CEMP. Responsible for updates to the CEMP during the works. Responsible for investigation of environmental incidents. Responsible for providing training and information to site staff on the environmental issues pertinent to the works and to the site, and the main point of contact between the Contractor and the Dragon LNG environment team during the works. Responsible for assuring that all environmental and ecological constraints are acknowledged and mitigated in RAMS.
Ecological Clerk of Works	Given the potential for ecological risk (particular presence of protected species within and around the works area) the use of an Ecological Clerk of Works is required. The ECoW will be provided by Dragon LNG. Prior inspection of works areas (pre-commencement) for protected species and regular monitoring during the works. The ECoW will be responsible for identifying the requirement for protected species licenses, gaining relevant protected species licenses (if required) and for monitoring compliance with such licenses. Responsible (via the Environmental Management Representative) for ensuring that all ecological constraints are acknowledged and mitigated in RAMS.
Site Personnel	All personnel have a responsibility to look after the environment, to work to the agreed plans, methods and procedures as documented in the Risk Assessments and Method Statements (RAMS) for all works and to make sure that such RAMS are reviewed and accepted by the Environmental Management Representative and (if required) ECoW prior to commencement of works. All responsible for following the requirements of the CEMP to reduce the risk of environmental incidents. Responsible for reporting and acting on environmental incidents. Environment personnel are to be proactive in monitoring their work areas and to escalate as soon as possible if environmental or ecological risks are observed.

Role	Responsibility
Safety Vessel Master	Responsible for producing spill response plan for the safety vessel and responsible for ensuring training of all the vessel's personnel in implementation of said plan.

3.3 Training

Training will be delivered in accordance with the Balfour Beatty Health, Safety and Environmental Sustainability Training Procedure (HSES-PR-0026) which requires a review of staff competencies and training in accordance with needs. A copy of this procedure is included within Appendix B of this CEMP.

As a minimum, prior to commencement of work all site personnel shall be given site induction covering:

- Ecologically sensitive areas and potential associated restrictions (including protected species).
- Control of pollution.
- Noise prevention.
- Light spill.
- Dust control.
- Environmental incident response training.
- Waste segregation and management.
- Incident reporting.

This training will be supplemented by more detailed toolbox talks as required if works are being completed in areas deemed by the Environmental Management Representative or ECoW to be subject to greater environmental / ecological risks, or if the works themselves are of a nature that additional risks are likely.

All training shall be recorded (content, date and names of attendees) and records kept on file.

3.4 Reporting and record keeping

The Environmental Management Representative and ECoW will write and maintain environmental diaries recording works which have been completed, inspections, audits, corrective actions and incident reporting. The Environmental Management Representative and ECoW will also keep records of training / toolbox talks which have been issued to site personnel (i.e. the content of such training, attendee names and dates at which such training was completed). The records of environmental diaries shall be maintained on site and reported to the Construction Site Manager weekly.

Risk Assessments and Method Statements (RAMS) shall be reviewed by the Environmental Management Representative and ECoW and evidence of this review (sign off of the RAMS) shall be stored on site.

Records of any non-conformance or corrective action will be maintained by the Environment Manager and ECoW. Any non-compliance shall be reported to the Construction Site Manager as soon as practicable. Note that reporting of incidents and incident management is covered in later sections of this CEMP.

3.5 Consents, licences and permits

The Environmental Management Representative and ECoW will be responsible for identifying and gaining the required consents, licences and / or permits prior to the commencement of

works. The below is not an exhaustive list but is provided as an indication of the types of permissions which may be required prior to commencement. The Contractor shall satisfy themselves that they have obtained all relevant permissions prior to commencement of the works:

- Although the works to the jetty structure are above Mean High Water Springs, the jetty foundations are in an area which is submerged at Mean High Water Springs and therefore a Marine Licence CML2566 has been obtained by Dragon LNG on 22 January 2026. The Contractor will adhere to all requirements of the marine licence.
- Protected species licences may be required if breeding birds / bats are present within or adjacent to the works area.
- SSSI assent will be required.
- It is understood that no direct discharge of runoff from the work site will be required therefore no Environmental Permit is necessary. Later sections of this CEMP cover the control of washwaters etc.
- Noisy activities may require a Section 61 authorisation from the local authority.

4 Facilities, Security and Storage of Materials

It is assumed that the appointed Contractor will provide its own offices / welfare. These facilities will be erected in a location to be agreed with Dragon LNG, but the location of the compound will include appropriate capacity for storage of plant and materials required for the works.

A register of hazardous materials (including safety data sheets) shall be maintained by the Contractor and clearly visible at stores containing substances corresponding to Control of Substances Hazardous to Health (COSHH).

4.1 Storage of fuels / oils and other hazardous liquids

Fuels / oils and potentially concrete coating / admixtures for curing / setting of concrete may be stored on site only in the quantities in which they are required for use. All such materials will be stored in a dedicated bunded area, with capacity of the bund at least 110% of the combined volume of all liquids stored within. This is in excess of the oil storage regulations (which normally requires only 25% of the volume of the largest container) but is considered more to prudent in view of the potential harm which may arise from a spill into this extremely sensitive marine environment around the site. Bunds shall encapsulate all pipework and connections from such materials (i.e. if a fuel bowser is linked to a welfare cabin, the bund shall encapsulate the connecting pipework.

Such materials shall also be stored away from collision risk (i.e. off vehicle routes), or if this is not possible, then they should be protected from accidental harm via means of barriers.

Containers used should also be appropriately protected from vandalism (i.e. containers should be lockable and locked).

All such materials shall be stored at least 10m from drains / watercourses.

A copy of the Balfour Beatty procedure for storage of fuels, oils and liquids (ENV-RM-0007a) is appended to this CEMP.

Larger stores of materials will be located at the Contractor's compound which is located over 1km inland from the worksite and will be in accordance with the Balfour Beatty procedure.

4.2 Storage of other hazardous materials

Cement may be stored on site. Given the potential for cement to cause pollution of controlled waters, it is to be stored in appropriate containers if loose (sealed, covered containers) or palletted in waterproof bags, away from drains and water.

All such materials shall be stored at least 10m from drains / watercourses.

The Contractor shall undertake a COSHH risk assessment, to identify appropriate storage requirements for all COSHH substances and to prevent mixing of substances which may react with each other.

All COSHH substances shall be stored in a suitable COSHH store. Items within shall be labelled. The COSHH store shall also be signed and shall be locked. Access to the COSHH store shall be restricted to appropriately trained personnel. The COSHH store shall be located in

an area where it is safe from accidental harm (e.g. collision) or otherwise protected by means of barriers / fencing.

4.3 Security

The jetty is a secured site. However, if the Contractor stores / compound and welfare is outside of the secured area, the Contractor shall provide its own security (including any necessary fencing / hoarding). Any stores shall be incorporated within any security barriers.

5 Waste Management

5.1 Waste types

The Contractor will adhere to the requirements of the Balfour Beatty Waste Management Procedure ENV-RM-0035a, a copy of which is appended to this CEMP.

5.2 Waste hierarchy

The Contractor shall follow the waste hierarchy at all times:

- Eliminate.
- Reduce.
- Reuse.
- Recycle.
- Recover.
- Dispose.

5.3 Storage facilities

Storage facilities shall be informed by the Waste Management Procedure. The following types are considered likely:

- Oily waste – sealed containers for oily waste, including contaminated PPE.
- Concrete / rubble (inert waste).
- Metal / ferrous waste (rebar).
- Concrete washwater.
- Food waste.
- Dry recyclable waste (non-ferrous). Note that the local authority shall be consulted in order to establish the requirements of local recycling facilities. Separate containers may be required for specific recyclable materials.

No mixing of waste types shall be permitted. All waste containers shall be signposted / labelled to reduce the likelihood of accidental mixing.

Consideration will be given to covering of skips or loose material to prevent contamination.

5.4 Foul waste

Foul waste (i.e. sewage) will be generated at the welfare compounds. The welfare compounds will be connected directly to the mains sewerage and therefore no off-site disposal of foul waste is required.

5.5 Waste disposal

All waste disposal shall be undertaken only by licensed waste carriers and to appropriately licensed disposal / treatment facilities. The Contractor shall maintain a record of haulier waste carrier licenses and licenses of all disposal / treatment facilities on file.

The Contractor shall maintain records of:

- Waste transfer notices on site.
- Consignment notes (for disposal of hazardous waste) on site.
- Consignee returns on site.

If any waste is rejected by a disposal facility, the Contractor shall inform Natural Resources Wales (NRW) once it has determined the appropriate means of resolving the issue. Records shall be kept of the reason for rejection and then (as above) consignment / waste transfer notes for the alternative site kept on site for 3 years – together with a record of any actions taken to resolve the reason for rejection. If the Contractor is able to dispose of the waste at an alternative (appropriately licensed) facility, the Contractor is required to first inform the disposal facility operator of the original reasons for the rejection.

It is understood that less than 500kg of hazardous waste is to be produced, therefore there is no requirement to register the site with NRW as a hazardous waste producer.

6 Pollution Prevention

6.1 Receptor identification

Prior to commencement of works (including setting up of compounds), the compound / welfare facility area, works area and access routes shall be inspected by the Contractor and any potential pollution receptors (such as drains, watercourses etc) shall be recorded on a plan. This plan shall be displayed at the compound / welfare area and works area. The receptor plan shall be used to inform actions if an incident occurs (i.e. placement of drain blockers, bunds, booms etc) and to determine appropriate placement of potential sources of pollution away from receptors. The plan shall be recorded in the Master Pollution Incident Plan, a blank copy of which is contained in Appendix D to this report.

6.2 Inspections

It is assumed that the Vessel Master of the safety vessel shall be responsible for carrying out its own inspections of plant, machinery, spill kits, maintenance etc and these are not documented below.

6.2.1 Plant and machinery

All plant and equipment will be checked daily prior to commencement and during works for leaks. Any leaking plant shall be removed from the works area and repaired / replaced accordingly. This shall include inspection of associated pipework and hydraulic hoses / seals. Plant that is emitting smoke shall also be removed from site and replaced / repaired accordingly.

All motorised plant and machinery shall not be left idling when not in use and shall be situated within drip trayswhen not moving. The presence of drip trays shall be checked prior to commencement of works on a daily basis.

The pressure washer will be located on the foreshore and shall be maintained within an impermeable bunded area, or drip tray sized to provide appropriate containment.

6.2.2 Site conditions

Daily visual monitoring to be completed (and all personnel to monitor their work sites on an ongoing basis during the works) for visual and / or olfactory evidence of pollution (including spills and / or leaks). This will include the waters around the site as well as the ground around the work area and compound / welfare / stores and vehicle routes into / out of the site. An outline of required monitoring is as follows (all to be completed daily on commencement of works):

- Confirm that all staff have received environmental constraints / risks toolbox talk and pollution control & incident response training.
- Confirm that all staff have received a read through of the RAMS for the works and that the RAMS contains all necessary environmental control measures for the works.
- Check that spill kits are present in the work areas and at the compound and that they are fully stocked and that they are appropriate for the work required.
- Check all work and compound / stores areas for evidence of spills / leaks.
- Stored material is contained in appropriate containers, all containers closed and sealed as required and located away from drains / watercourses.

- Check water around the work area for evidence of pollution (sheen / olfactory evidence / turbidity).
- Check plant and machinery for evidence of leaks / smoke.
- Check that drip trays are present underneath motorised plant.
- Use biodegradable oils where possible.
- Check that work areas are clean and free of waste materials.
- Check that waste materials are stored in appropriate containers.

6.3 Maintenance and refuelling operations

A dedicated, impermeable bunded area shall be established at the Contractors compound. Maintenance and refuelling shall only take place in the dedicated bunded area at the Contractors compound / welfare facility (i.e. not in the work site).

If motorised machinery such as jetwashing or cutting equipment runs out of fuel in the works area it is to be moved back to the dedicated refuelling area to be refuelled. No jerry cans or other fuel / oil containers are to be used in the works area. Maintenance and refuelling shall only take place by appropriately trained personnel.

N.B. The safety vessel shall not be refuelled or maintained at the works area. It is assumed that this will take place in appropriate area back at its port of origin.

6.4 Concrete repair works

6.4.1 Breaking out / jetwashing

The first phase of repair works is likely to comprise cleaning (jetwashing) and / or breaking out (use of breaker, hydro-demolition or disc cutting as required). Initial jetwashing is unlikely to generate significant amounts of suspended solids, but breaking out, hydro-demolition and / or disc cutting may generate significant amounts of suspended solids. It is considered that the Contractor shall implement the following measures as a minimum:

- Erection of a catch net, or use of appropriate decking system above the water line prior to breaking out of loose concrete, to catch concrete debris. The use of terram (to filter debris from any runoff) and quick deck system (which is waterproof) will allow interception of debris and will control runoff.
- It is understood that the Contractor will be using the PAM Pro-X, which uses a misting system for dust suppression. This system doesn’t produce large quantities of runoff and therefore large quantities of runoff are not anticipated.
- All equipment to be inspected for leaks prior to use to prevent any fuel / oil spills.

6.4.2 Placement of concrete patch repairs and / or coatings

The next phase of the works will be to either place more concrete (to replace any which has been removed during the first phase), or to provide a protective coating to any smaller cracks or other areas where such a measure is appropriate. Placement of concrete or coatings must be undertaken carefully to prevent any spillage into the underlying water. The quick deck waterproof deck system shall be used to catch any repair concrete / coatings which may fall during the works and prevent it from entering the water.

Concrete washout (cleaning of plant and tools associated with concreting) shall only take place at the compound within the bunded area. It is understood that the Contractor will not discharge concrete washwater, therefore the Contractor shall collect such washwater in a tanker and dispose of off-site to an appropriately licensed waste management facility.

The location of the washwater facility (and the requirement to not undertake washout at the worksite) shall be briefed out to all site personnel as part of site induction.

Concrete shall be made in the quantities that it is required in order to minimise waste generation. If excess concrete is produced, it shall be removed from the work site and stored on an impermeable surface until it is cured. It can then be disposed of as inert waste (subject to consideration of the waste hierarchy and whether it is feasible to capture for re-use / recycling).

More detailed information is contained in the Balfour Beatty Concrete Washout Procedure in Appendix E of this CEMP.

6.4.2.1 Tidal working

The Contractor shall consult tide times and plan works accordingly. Some repair works will likely be near to the waterline and in order to allow repaired concrete appropriate time to cure (or for any applied coatings to cure) before being immersed. Tide time charts shall be included in RAMS where relevant and briefings on timings shall be given out to site staff before commencement of work on each working day. No works are planned below MHWS.

It is understood that the works will take place from a below deck scaffold or suspended decking system. Such systems may be designed to allow for submergence at high tide. Regardless, the Contractor shall remove all loose and potentially polluting materials (including but not limited to tools, repair materials, equipment, waste and spills) prior to high tide in order to reduce the risk of pollution of the underlying water.

6.4.2.2 Weather

The jetty is an exposed environment. The Contractor shall be aware (and shall make its team aware) of the risks of working in such an environment. Where inclement weather conditions are anticipated, works shall be paused and the works area made safe (materials, tools, waste, spills etc removed from the area in advance) with works only recommencing when weather conditions are suitable.

The Contractor shall review weather conditions regularly (including during works) and subscribe to weather warning services in order to maintain understanding of weather conditions.

Removal of all loose and potentially polluting materials from the works area in advance of inclement weather is mandatory and will reduce the risk of pollutants entering the water during adverse weather conditions.

6.5 Drilling and installation of cathodic protection

Drilling shall be completed in a careful manner, dust control may be required. Dust and other arisings shall be captured and disposed of off-site to a suitably licensed waste disposal facility and shall not be allowed to enter the watercourse.

6.6 Dust management and air pollution

6.6.1 Dust management

Dust may be generated during drilling and breaking operations. Appropriate dust suppression systems shall be used to reduce the amount of dust generated during the works.

Stockpiles of loose material are unlikely to be significant, but if such stockpiles are present, they shall be covered to prevent dust generation. Similarly, all skips or other waste containers shall be covered.

Cement and other fine powder materials must be delivered in enclosed tankers / containers and stored in enclosed containers. Where bagged cement (or other loose materials) are used they shall be resealed after use and stored appropriately to prevent escape of loose material.

Given the practical difficulties of capturing runoff and the potential for dust suppression involving water to cause sediment laden waters to enter the watercourse, alternative dust mitigation measures may be required, such as:

- Use of solid screens or barriers around any potentially dusty activities.
- Use of extraction equipment / ventilation systems.

6.6.2 Air pollution

In order to limit air pollution associated with the works, the following shall be adhered to:

- All plant / machinery shall be switched off when not in use, no idling shall be permitted.
- Machinery shall be operated at the lowest practicable revs required to complete the task.
- The use of mains electricity or battery powered equipment shall be prioritised vs combustion engine equipment where practicable.

6.7 Light pollution

It is understood that no additional lighting will be required for the works. However, if the need for additional lighting is identified during the works, any lighting used shall adhere to the following:

- Lighting shall be the minimum lux level required for the task.
- Lighting shall be directional and shielded, pointing away from sensitive areas (sensitive areas being defined by the ECoW prior to commencement of lighting installation).
- If it is considered that a risk of harm to ecological receptors may result from the use of task lighting, the work area may be shielded in its entirety by means of screens erected on the scaffold / decking.
- Although not an environmental risk, the use of lighting may require permission of the port authority in order to limit potential issues with regards to shipping / signalling.

6.8 Noise

The following section of this CEMP outlines measures which the Contractor shall be required to follow, in accordance with BS5228:2009:

6.8.1 General good practice measures - training

Operatives will be trained to employ appropriate techniques to keep site noise to a minimum and will be supervised to ensure that best working practice regarding noise reduction is following. Toolbox talks will be given regarding the following:

- The proper use and maintenance of tools and equipment, with special attention given to the use and maintenance of any sound reduction equipment fitted to power tools and machines.
- The positioning of machinery on site to reduce the emission of noise to the neighbourhood / neighbouring receptors, and to site personnel.
- Avoidance of unnecessary noise when carrying out manual operations and when operating plant and equipment.
- Internal haul routes shall be defined, well maintained and avoid steep gradients. Site speed limits shall be adhered to.

- The protection of persons against noise – including the use, care and maintenance of hearing protection equipment.
- The operation of sound measurement equipment (may be required for selected personnel only).

6.8.2 General good practice measures - mitigation

The following measures shall be adhered to:

- The Contractor shall apply noise control at source as a priority.
- Silenced plant shall be selected as a priority.
- The minimum revs needed to complete the task shall be used as a matter of course.
- Plant shall be switched off when not in use (no idling).
- Soft start up (i.e. sequential start-up) shall be completed.
- Directional plant (i.e. plant which emits noise which is particularly directional and not widespread) shall be oriented where practicable such that noise is directed away from sensitive receptors.
- All plant shall be maintained appropriately to minimise noise and vibration.

The Contractor shall complete a pre-commencement noise risk assessment and identify any sensitive receptors. The risk assessment will inform the need for further mitigation such as screens or acoustic enclosures, or changes to working hours.

6.8.3 Underwater noise

Underwater noise is not likely to be generated directly as all repair works will be undertaken above the water line. Propagation of airborne noise into the underwater environment is expected to be minimal as transmission of noise from air to water is poor. However, some noise may propagate directly via transmission through the piers into the water.

Whilst the risk of excessive underwater noise is considered low, given the known local presence of marine mammals, the ECoW shall complete a pre-commencement check for the presence of protected species which may otherwise be disturbed and works may be paused if such species are present and show signs of disturbance from the works. Following the pre-commencement check by the ECoW, the EcoW will brief all site personnel on the risks of protected species, the legal requirements and the need to prevent disturbance and will brief the Environmental Management Representative and client HSE lead on the requirements for ongoing daily inspections prior to commencement of works. Note – due to lack of access, it is considered that the ECoW will complete the pre-commencement check from the safety boat, otherwise it would not be possible to inspect the underside of the jetty prior to construction of the access platform.

7 Incident Response

7.1 Spill kits

Spill kits shall be provided at the compound and work area and shall be appropriate for the works being undertaken (i.e. at the work area, as well as appropriate equipment for cleaning up spills onto the ground, spill kits shall also contain equipment for containing and cleaning up spills into the marine environment).

Spill kits shall be inspected daily and restocked as required.

7.2 Training

All staff (without exception) shall be given training in incident response. As a minimum, the training shall cover:

- Staff shall be briefed on the requirements of the incident response plan.
- Appropriate use of spill kits (for both marine and terrestrial response).
- Location of receptors.
- Emergency contact numbers.
- Reporting requirements.

The safety vessel shall be subject to its own Shipboard Oil Pollution Emergency Plan (SOPEP). The vessel master shall prepare the SOPEP and ensure that all personnel are briefed in the implementation of this plan.

7.3 Typical incident response

Each incident is inherently different and the response outlined below should be considered indicative only. The Contractor has engaged the services of specialist marine pollution response contractors and they will be responsible for the management of marine pollution incidents. Contact details are listed in Table 7.1.

The below covers the response for terrestrial spills only.

In accordance with the Balfour Beatty Procedure (ENV-RM-0018A Spill Management and Response, a copy of which is provided in Appendix F of this CEMP), the following response would typically be applied to the clear up of a pollution incident:

1. **Stop works.**

2. **ASSESS THE RISK** to people and to the environment based on the nature and quantity of the spilt substance

3. **SELECT PPE** identified in the COSHH assessment for the substance before attempting to contain it

4. **STOP** the spill or leak at the source if safe and possible to do so,

5. **CONTAIN** the spill with the materials provided, or alternative materials to hand in an emergency. Block the environmental pathway by, for example, using a drain cover or absorbent boom.

6. **CLEAN UP** the area with spill materials provided

7. **DECONTAMINATE** all personnel, equipment and surfaces impacted by the spill. Excavate any visibly contaminated land.

8. **REPORT** the event according to site procedures using **HSES-SF-0005a** Incident Report and Investigation form. SBU legacy reporting requirements must also be followed. All incidents must be recorded on Balfour Beatty reporting system iSMS within 48 hours of the incident date

9. **RESTOCK** used spill kits ASAP.

The image below summarises the spill response procedure:

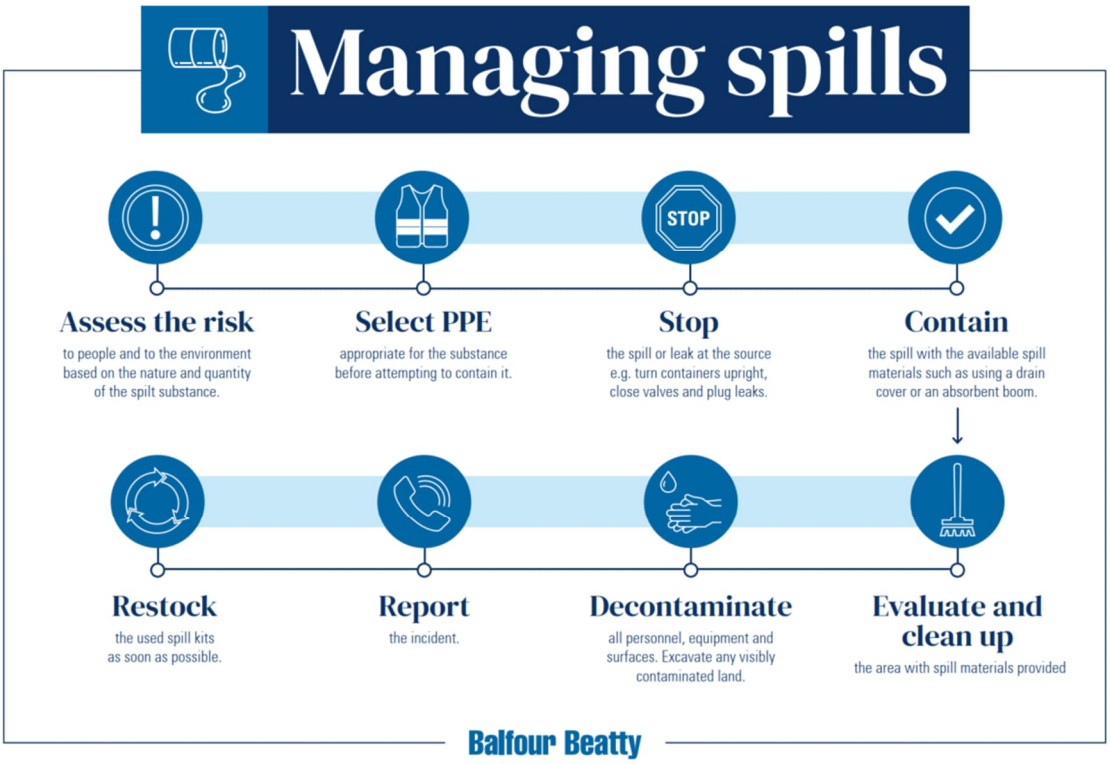


Figure 4 Balfour Beatty Spill Response Poster

If a spill enters the marine environment, then effort will be made to prevent further contaminant from entering the water. Managing (containing and clean up) of the spill within the water shall be handled by the specialist marine spill response contractor. The person who identifies the incident shall be responsible for contacting the marine spill response contractor.

Note that if chemicals are to be used to clean up a spill in the sea, NRW must be contacted and prior agreement made with them before use of the product / chemical. Emergency contacts are shown in Table 7.1.

7.4 Potential Worst Case Incident

Work areas and potential incident types are set out below:

- **Compound area** (wholly terrestrial); Typical activities being fuel / oil / COSHH storage, refuelling, maintenance, waste disposal.
  - Refuelling / maintenance or accidental damage of stores / vehicle resulting in spills of fuel / oil / COSHH substances. Potentially the worst case incident could result in release of substantial volumes of fuel / oil / COSHH liquid however the compound is located a

significant distance from the marine environment (in a terrestrial area). The spill response procedure set out above in 7.3 would apply.

- **Working area** (jetty, above marine environment); Typical activities being erection of scaffold, pressure washing / cleaning / cutting of concrete, mixing of concrete repair mortar and cementitious coatings, concrete repairs and coating application . No refuelling / maintenance to be completed in this area.
  - Pressure washing / concrete cleaning and cutting activities, possible introduction of silt / debris to the marine environment – low quantities of debris are expected to be generated via this activity and the scaffold will be covered with decking and overlain with terram which will filter debris, reducing the risk of debris reaching the marine environment;
  - Generation of dust via concrete cutting – to be mitigated via mist suppression (provided by the cutting machine), vacuum to be used to clear up arisings (no sweeping) therefore risk of incident is low;
  - Concrete repair mortar and cementitious coating mixing and concreting activities will be small scale and by hand (unlikely to be more than a 25kg bag of concrete to be used at any single point and the repair mortar mix will be relatively thick and hand applied to the surface (i.e. the repairs will not be in liquid form)) therefore spills are unlikely. Repair mortar / coating fall / debris will be captured on the decking and terram and allowed to cure before being removed for terrestrial disposal. Risk of incident is low. Unused material will be removed from the work area at the end of each shift;
  - Exposure to and transfer of INNS off site. Pre-commencement inspection of area for INNS by ECoW. If INNS are found then (if possible) a buffer is to be established. Where it is not possible to isolate the area, INNS to be cleared by hand for terrestrial disposal (consult NRW for appropriate disposal guidance depending on the INNS species identified) where practicable. If this is also not possible then pressure washing may proceed but the water shall be filtered through terram to limit risk of accidental transfer of INNS to the marine environment. All PPE and equipment to be cleaned before leaving the work area. Inspection also to be completed prior to disassembly of scaffold to determine cleaning requirements prior to removal from site. Further INNS management detail is set out in Table 8.2 of this CEMP and must be followed if INNS are found / suspected. Risk associated with INNS therefore reduced as far as reasonably practicable. Very small chance of INNS entry into the watercourse (worst case);
  - Spill (liquid): Although no refuelling will be allowed within the work area or jetty, sources of hazardous liquids in the area will comprise fuel / oil in the compressor and small quantities of concrete admixtures and liquid adhesive / sealant.
    - The compressor will be located outside the immediate work area (onshore) and placed over a drip tray, protected by barriers to protect against accidental damage. It will be inspected prior to commencement of works on a daily basis to ensure no leaks. If leaks are evident it will be removed from site. The risk of major spillage is therefore low.
    - With regards to concrete admixtures and other liquids, these will also be stored in sealed containers, in drip trays and only small quantities will be used, limiting the likelihood of spillage. If small spills do occur, these will be onto the surface of the scaffold decking. The decking is formed of solid, non perforated panels therefore although there are small gaps between the panels, the presence of a solid surface facilitates clean up of small scale spills. If spills do occur they will be cleaned up following the previously set out spill response procedure. Spill response contractor to be called if there is likelihood that any spill reaches the marine environment.

7.5 Emergency contact numbers

Emergency contacts shall be provided for the following personnel (Table 7.1):

Table 7.1 Emergency contacts

Role	Contact Number
Site Manager	Dylan Crabtree 07707 167927
Environmental Management Representative	Seif El Zarka 07510 368347
Ecological Clerk of Works	Jessica Dangerfield – Avian Ecology 01925 730281
NRW	0300 06530000
Specialist Marine Spill Response Contractor	Reconomy 01952 29200 (8am – 5pm, excluding weekends and bank holidays) 07817 770148 / 07506 306538 (out of standard working hours) Adler & Allan 0800 592 827
Coastguard Operations Centre (Milford Haven)	TBC
Port / Harbour Authority	01646 696100

Note – additional emergency contacts shall be added by the Contractor as required once it has produced the SOPEP.

7.6 Reporting

All spills shall be reported to the Environmental Management Representative and Site Manager. Spills which have entered or may enter controlled waters shall be reported to NRW as soon as practicable.

Spills entering the marine environment shall also be reported to the nearest coastguard operations centre.

Incident reports shall also be submitted to the Milford Haven Port Authority. Incident report forms are available here: generic-event-report-for-website.pdf and the contact number for the port is: 01646 696100.

The SOPEP shall be produced by the safety vessel master. Additional reporting requirements may need to be added in an updated version of the CEMP if the SOPEP requires it.

7.7 Investigation

Once incident response has been concluded and the spill has been successfully cleaned up, the root cause of the incident shall be investigated by the Contractor. Any lessons learned shall be briefed out to all personnel via toolbox talk, with any necessary changes to working methodologies to reduce risk of recurrence being captured in updates of the CEMP and any relevant working RAMS.

8 Invasive Non-Native Species (INNS)

8.1 Baseline

A total of 38 INNS have been identified in the Milford Haven marine environment and are listed in Table 8.1.

Table 8.1 The INNS identified in Milford Haven marine environment

Common name	Taxonomic name	Source
Siphoned Japan weed	*Dasysiphonia japonica*	Non-Native Species Secretariat, 2022.
Carpet sea squirt	*Didemnum vexillum*	Angling Cymru, 2024.
Orange-tipped sea squirt	*Corella eumyota*	Bangor University, 2014.
Leathery sea squirt	*Styela clava*	Bangor University, 2014.
Colonial sea squirt	*Botrylloides violaceus*	Bangor University, 2014.
Solitary sea squirt	*Asterocarpa humilis*	Bangor University, 2014.
Australian tubeworm	*Ficopomatus enigmaticus*	Bangor University, 2014.
Tufty-buff bryozoan	*Tricellaria inopinata*	Bangor University, 2014.
Skeleton shrimp	*Caprella mutica*	Bangor University, 2014.
Darwin's barnacle	*Austrominius modestus*	Bangor University, 2014.
Bryozoan	*Bugula stonolifera*	Bangor University, 2014.
Devil's tongue weed	*Grateloupia turuturu*	Natural Resources Wales, 2014.
Slipper limpet	*Crepidula fornicata*	Bohn et al. 2015.
Seaweed	*Sargassum muticum*	Marine Energy Wales, 2019.
Jenkins' spire snail	*Potamopyrgus antipodarum*	Marine Energy Wales, 2019.
Pacific oyster	*Magallana gigas*	Marine Energy Wales, 2019.
Bay barnacle	*Amphibalanus improvisus*	Marine Energy Wales, 2019.
Bryozoan	*Bugula simplex*	Marine Energy Wales, 2019.
Red ripple bryozoan	*Watersipora subatra*	Marine Energy Wales, 2019.
Colonial sea squirt	*Aplidium glabrum*	Marine Energy Wales, 2019.
Colonial sea squirt	*Botrylloides diegensis*	Marine Energy Wales, 2019.
Colonial sea squirt	*Perophora japonica*	Marine Energy Wales, 2019.
Compass sea squirt	*Asterocarpa humilis*	Marine Energy Wales, 2019.
Crustacean	*Eusarsiella zostericola*	Marine Energy Wales, 2019.
Crustacean	*Mytilicola intestinalis*	Marine Energy Wales, 2019.
Filamentous red alga	*Soliera chordalis*	Marine Energy Wales, 2019.
Green sea fingers	*Codium fragile fragile*	Marine Energy Wales, 2019.
Japanese alga	*Caulacanthus okamurae*	Marine Energy Wales, 2019.
Mediterreanean mussel	*Mytilus galloprovincialis*	Marine Energy Wales, 2019.
Mudshrimp	*Monocorophium sextonae*	Marine Energy Wales, 2019.
Orange-striped anemone	*Diadumene lineata*	Marine Energy Wales, 2019.
Oyster thief	*Colpomenia peregrina*	Marine Energy Wales, 2019.
Red seaweed	*Anotrichium furcellatum*	Marine Energy Wales, 2019.

Red seaweed	*Antithamnionella spirographidis*	Marine Energy Wales, 2019.
Red seaweed	*Antithamnionella ternifolia*	Marine Energy Wales, 2019.
Red seaweed	*Polysiphonia harveyi*	Marine Energy Wales, 2019.
Soft-shelled clam	*Mya arenaria*	Marine Energy Wales, 2019.
Wakame	*Undaria pinnatifida*	Marine Energy Wales, 2019.

Source: Angling Cymru 2024, Non-native Species Secretariat 2022, Marine Energy Wales 2019, Bohn et al. 2015, Bangor University 2014, Natural Resources Wales 2014.

8.2 Activities with risk of INNS introduction or spread

The works have the potential to introduce and/or spread INNS to the site.

Site activities which may have a significant risk of introducing or spreading INNS are outlined below:

- The risk of introducing INNS by vessel is considered high. It is assumed that a single small safety vessel with no ballast will be used for the rescue of personnel only. However, the vessel may have INNS growing on the hull and anchor and its origin and mooring location may be outside of the local waterbody. To mitigate this it is considered that any vessels used will have been subject to appropriate antifouling measures prior to use on the scheme.
- INNS brought in via ballast. No vessels with ballast are expected to be used.
- Spread of INNS already on the underside of the jetty deck that will come into contact with repair equipment or personnel, increasing risk of INNS transmission and establishment across the structure or in waterbodies outside of Milford Haven Waterway. It is understood that the area was subject to intertidal and subtidal survey in 2025 and that no evidence of invasives was found. A biosecurity risk assessment was completed (a copy of which is appended to this CEMP) and considered that the risk of invasives surviving the cleaning and repair process would be low
- Spread of INNS on the suspended scaffolding / decking in situ for the duration of the Project that is in contact with the water, and equipment, materials and personnel in contact with the scaffolding, increasing risk of INNS transmission and establishment across the structure or in waterbodies outside of Milford Haven Waterway.

8.3 INNS control measures

In order to prevent the introduction and / or spread of INNS during the repair works of the Project, certain biosecurity protocols need to be adhered to. These include the following:

- Pre-repair walkover surveys by the ECoW to look for presence of existing INNS across the accessible areas of the jetty will be undertaken. If identified, the location of the INNS will be communicated to site workers and suitable buffers set up around them to avoid potential spread through the site.
  - If INNS are found on the jetty, it will be removed by hand (as far as reasonably practicable) for terrestrial disposal. Where it is not possible to fully remove INNS prior to pressure washing the pressure wash arisings will be filtered through terram to limit INNS entry to the watercourse.
- Toolbox talks will be held with site workers to raise the awareness of how to avoid, deal with and identify INNS (if present).
- Production of a marine biosecurity plan which would include measures to reduce/eliminate the risk of introducing or spreading INNS on site. The Principal Contractor's Biosecurity Manager or ECoW will update and maintain a site-specific marine biosecurity plan. Measures are outlined in Table 8.2.

Table 8.2 Control measures

Task	Justification	Control Measure	Who
Pre-commencement walkover by the ECoW Same action to be repeated prior to removal of scaffold and any INNS to be removed for terrestrial disposal prior to scaffold leaving site.	INNS may already be present in the site / compound / works area	● Spread of existing invasives is a risk therefore a pre-commencement walkover survey shall be completed by the ECoW and suitable buffer zones set up to prevent entry into any areas of INNS. If provision of such buffers is not possible (i.e. the INNS occur directly within a works area) then the Contractor shall develop an appropriate INNS management plan (If INNS are found on the jetty, it will be removed by hand (as far as reasonably practicable) for terrestrial disposal. Where it is not possible to fully remove INNS prior to pressure washing the pressure wash arisings will be filtered through terram to limit INNS entry to the watercourse) and gain agreement of NRW prior to commencement of works. Noting that access will not be possible until the access platform is constructed, the ECoW shall undertake initial inspection from the safety boat and a follow up inspection immediately on completion of the access platform. This to be completed prior to any concrete repair works being carried out.	ECoW
Use of safety vessel	INNS may be present on the vessel. Without knowing the origin and mooring destination of the vessel, there is a risk that it introduces INNS from another waterbody.	● Removal of INNS at source (prior to mobilisation to the work area): Inspection of vessels (external hull/ tug/ anchor), immediately prior to entering the waterbody of site, and before leaving the site. ● All vessels used on site will ensure they have a copy of their Bio-fouling Management Plan on	Site manager and site staff

Task	Justification	Control Measure	Who
		board with clear information outlining efforts to reduce fouling of the vessel, e.g. through anti-fouling treatments or use of biocides. ● Routine inspections of vessels and equipment for INNS and biosecurity measures taken if INNS found. ● Checking logs of last inspection of hull and ensuring relatively recent records are kept. ● Anchors for vessels used on site will be cleaned when opportunity arises.	
Use of repair equipment on deck underside	There is a possibility, depending on tidal height, that fouling INNS will be on the deck underside.	● Pre-repair walkover surveys to look for presence of existing INNS across the accessible areas of the jetty will be undertaken. If identified, the location of the INNS will be communicated to site workers and suitable buffers set up around them to avoid potential spread through the site. ● Toolbox talks will be held with site workers to raise the awareness of how to avoid, deal with and identify INNS (if present). ● If INNS are present on an area to be repaired, where repairs necessitate removal of damaged concrete, extra care should be taken to retrieve fouled concrete and ensure it doesn't enter the marine environment. Fouled concrete should be disposed of in a bio-secure manner, ensuring mortality.	Site manager and site staff
Use of scaffolding to provide access	There is a possibility, depending on tidal height, that fouling INNS will colonise the scaffolding over the duration of the Project. Fouling species growing on the scaffold walkway may come into contact with	● Walkover surveys to look for the presence of INNS across accessible areas of the scaffolding will be undertaken. If identified, the location of the INNS will be communicated to site workers and suitable	Site manager and site staff

Task	Justification	Control Measure	Who
	personnel footwear or equipment.	buffers set up around them to avoid potential spread through the site where INNS is inaccessible to remove. Where accessible, removal should be undertaken, ensuring that fouling organisms do not fall into the water and are disposed of in a bio-secure manner, ensuring mortality. ● Equipment used in the concrete repair activities is cleaned thoroughly before first use and after final use in a biocidal detergent. This will include cleaning of scaffold and decking systems. ● Biocidal boot washing facilities should be available for personnel to wash footwear that comes into contact with the scaffold walkway to decontaminate any INNS propagules or tissues.	
Use of any equipment	There is a possibility that INNS may be brought in / or taken away from site on equipment used for the works	● Equipment, scaffolding and personnel that come into direct contact with the intertidal area will be thoroughly cleaned before and after use to avoid the spread of any INNS (e.g. boot washing facilities will be provided).	Site manager and site staff

Note that reference to cleaning using biocides considers that all potentially contaminated materials shall be removed from the works area prior to cleaning. No biocides are to be used where there is a possibility of them entering the watercourse. Instead, a dedicated bunded cleaning area is to be used and washwaters are to be captured for off-site disposal at appropriately licensed facility.

8.4 Biosecurity plan

The appointed Contractor shall produce a Biosecurity Plan based on the final proposals for completing the jetty concrete repairs.

The Marine Biosecurity Plan will contain[5]:

[5] Payne, R.D., Cook, E.J. and Macleod, A. (2015). Marine Biosecurity Planning – Guidance for producing site and operation-based plans for preventing the introduction of non-native species in England and Wales. Available from: marine_biosecurity_planning_guidance_for_wales_and_england_november_2015.pdf [Accessed 23 July 2025]

- Site Name.
- Site/Operation Location.
- Plan period.
- Biosecurity Manager or ECoW (to be appointed by the Principal Contractor) who will be the main point of contact relating to INNS, undertake biosecurity inspection, surveillance, recording, and update this plan as required.
- Site features affecting biosecurity (brief description of salinity, submerged structures and non-native species known to be present).
- Vessel types using the site/involved in the operation.
- Site activities which have a significant risk of introducing or spreading INNS
- Biosecurity Control Measures – instructions for staff/contractors/site users (Who, What Where, When).
- Site surveillance and reporting procedure.
- Action/Contingency Plan (Action, Responsibility, Location of Equipment).
- Location of biosecurity logbook.
- Biosecurity Plan Review Date.

The outline biosecurity action plan will set out the person/party responsible for carrying out the control measure, the details of the action including any materials needed and when the control measure will be applied.

8.5 Communication and reporting responsibilities

In the event of a potential INNS contamination incident, it will be immediately reported to either the Environmental Management Representative or Biosecurity Manager/ECoW. The ECoW will be trained in the identification of INNS. Relevant identification sheets can be found on the Great Britain Non-Native Species Secretariat Website[13]. In the event of an emergency, the following procedures will be followed:

- The ECoW must determine if the species reported is an INNS, if necessary, NRW (enquiries@naturalresourceswales.gov.uk) will be contacted immediately at this stage if identification needs confirmation.
- If the INNS is confirmed by the ECoW/NRW it must be reported to the Marine Biological Association (www.mba.ac.uk/recording).
- The ECoW will inform other water-users and vessel operators. A construction marine coordinator, if any, will be contacted;

A record of the findings will be logged and include:

- The scientific and or common name of the species.
- Location of the find with an accurate grid reference or GPS coordinates.
- How it was found (e.g. attached to equipment).
- Date.
- Name of individual who identified the INNS and who confirmed the identification (e.g. ECoW).
- Photographs of the INNS and surrounding area.
- Approximate numbers and or area of INNS recorded;

In the event of a high impact species being found:

- Immediate containment measures will be initiated, including restricted vessel movements (to be coordinated by the construction marine coordinator, if any).
- Wider surveys of vessels and structures will be undertaken.
- In the event of further INNS being found, the Environmental Manageement Representative will seek further advice from NRW.

9 Protected Species and Designated Sites

9.1 General good practice measures

Many good practice measures are set out earlier in this CEMP and will contribute to safeguarding of protected species. These are repeated briefly below:

- Use of debris netting / decking to catch falling materials, preventing entry into the marine environment and preventing harm of marine life due to falling objects.
- Securing / removing all loose materials and potential pollutants at the end of the working day and if adverse weather / high tides are forecast with a risk of inundation of the working area. Preventing physical harm as above and also reducing potential for marine life to be impacted by pollutants from the work are.
- Reduction of noise via best practice measures, reducing potential for disturbance of protected species.
- Management of lighting to prevent light spill onto potentially sensitive receptors, reducing potential for disturbance of protected species.
- Measures to prevent spread of INNS, reducing risk of fouling of the waterway.
- Measures to prevent pollution, reducing risk of harm to protected species.
- Measures to clean up pollution incidents, reducing risk of harm to protected species.

The following measures shall be adhered to by the safety vessel operator, in order to reduce the risk of collision with protected species in / on the water:

- Safety vessels in transit and manoeuvring in coastal waters during repair works will stay within speeds outlined by the harbour authority[6].
- The NRW Sea Wise Code[7] will be adhered to. Examples of these measures include:
  - Allow marine animals or birds to approach you at sea and, if they choose to do so, keep your vessel at a steady course and speed. All vessels shall be kept at a speed of no more than 6 knots when close to marine mammals.
  - Do not approach within 100m of seals, cetaceans, basking sharks or nesting birds, and stay in that area for no longer than 15 minutes.
  - Do not steer directly towards marine wildlife and avoid sudden changes in speed or direction.
  - Keep vessel engines and propellers well maintained. Fitting propeller guards can minimise the risk of injury to marine animals.
  - Do not dispose of fuel, oil or litter, especially plastics and angling equipment, at sea. Take your litter home.
- The use of a suitable Code of Conduct, such as the WiSe Scheme[8]. Although primarily for wildlife watching it outlines measures for vessel operation around marine wildlife and will be considered for use as mitigation for any collision risk posed to marine mammals during repair works and transit.

[6] mar-ops-gui-003-port-entry-and-departure-guidelines-2025.pdf

[7] Natural Resources Wales, 2025. Sea Wise Code [online] Available from: Marine animals, birds and plants share [Accessed 22 July 2025]

[8] See Home | The WiSe Scheme

9.2 Protected species

Note that whilst the ECoW will be required to complete pre-commencement inspections as noted below, due to the lack of access below the jetty, the initial inspections will be completed from the foreshore and from the safety boat. Once the access platform is completed it will be possible to complete inspections from the work site area.

9.2.1 Terrestrial

9.2.1.1 Otter

Otter are known to be present within the water environment around the site.

Before the commencement of repair activities, a pre-construction survey will be undertaken by the ECoW in accordance with best practice guidelines. An otter presence survey will also be undertaken to update the baseline for this species to confirm presence/absence of any legally protected otter shelters within the Zone of Influence (ZoI) of the planned works. In the event that a legally protected otter rest site is confirmed to be present within the immediate vicinity of the planned works, prior to works commencing the client and contractor must be in receipt of a European Protected Species licence from NRW for the disturbance/destruction of a rest site. This will require an accompanying Otter Species Protection Plan which will include an appropriate mitigation strategy for the repair works.

A number of best practice measures will be included for all elements of the planned works. This includes:

- Toolbox talks will be completed by the ECoW prior to works commencing as part of a site induction package, where all staff will be made aware of the potential presence of otters local to the site and the potential mitigation measures that they are required to implement.
- If at any point during the works an otter is observed passing through the site, works will stop until the otter has dispersed from the area.

9.2.1.2 Bats

Before the commencement of repair activities, pre-construction survey will be undertaken in accordance with best practice guidelines to assess whether the structure is suitable for / being used by roosting bats. If a bat roost is confirmed to be present within the structure, prior to works commencing the client and Contractor must apply for and be in receipt of a European Protected Species licence from Natural Resources Wales (NRW) for the disturbance / destruction of a bat roost. This will require the Contractors ECoW to produce an accompanying detailed method statement for the repair works and a bat conservation plan.

The ECoW will deliver a toolbox talk to all personneltalk covering the potential presence of bats and the required mitigation measures.

9.2.2 Marine mammals

The protection of marine mammals during the works is effectively covered by the general good practice and vessel strike measures set out earlier in this section of the CEMP. During the assembly and disassembly of the scaffolding/crash decks for access to the jetty deck underside, the ECoW / Environmental Management Representative will periodically check the surrounding waters to ensure marine mammals are not in the vicinity, in case of falling objects or debris.

9.2.3 Birds

There are opportunities for a range of bird species to nest on or within the structure of the jetty. Before the commencement of repair activities, a pre-construction survey will be undertaken by the ECoW in accordance with best practice guidelines to assess the risk of the structure being used by nesting birds.

Works taking place during the main breeding season (March to August inclusive) will be immediately preceded by a nesting bird survey by the ECoW. If nesting is occurring, works will only be carried out if the ECoW confirms that risk of disturbance is negligible. Any activity deemed (by the ECoW) likely to cause disturbance will be suspended until the current nesting cycle has been completed.

All personnel will be given a toolbox talk covering the required reporting of nesting activity and the actions / mitigation that must be completed (as above) if such activity is suspected. The responsibility for completing the daily pre-commencement checks will pass to the Environmental Management Representative (after the first assessment by the ECoW). Works will stop if nesting bird activity is suspected, until the nesting cycle has been completed.

9.3 Habitats and designated sites

The watercourse is a SAC (within the works area) and SSSI (circa 100m north). No additional specific measures other than those mentioned previously in this CEMP (i.e. control of pollution, appropriate management of marine vessels, monitoring) are considered necessary to specifically protect the various habitats that form the reason for the designation.

Note, although not an ecological site it is subject to designation. The area of cliff adjacent to the jetty is also designated as a Regionally Important Geological Site (RIGS) – however as no works are planned which involve any interface to the cliff no specific mitigation measures are set out in this CEMP.

All staff will be given a toolbox talk on the presence of designated sites, their importance and the associated mitigation measures they are required to incorporate into their works.

10 Toolbox Talks / Training

The following toolbox talks / training shall be given to all personnel prior to commencement of works:

- Pollution prevention measures (storage, inspections, maintenance, monitoring).
- Waste management (storage, disposal, record keeping).
- Incident response training.
- Noise prevention.
- Operation (screening) of lighting).
- Protected species – including safe handling of marine vessels (to be briefed out to the personnel on the safety vessel).
- Designated sites.
- Spill kit training.
- Management of concrete washwater (including training in washwater treatment plant if required).
- Environmental legislation.

Records of all toolbox talks and training shall be stored on site by the Contractor, including the date, time, content and names of attendees.

11 Inspections / Monitoring

The Environmental Management Representative shall complete inspections on a regular basis to ensure that the following is in order:

- Pre-commencement inspection of RAMS to confirm that the RAMS contain the appropriate mitigation measures for the identified environmental / ecological risks.
- Catch nets or other means of capturing debris are in place.
- Means to capture and filter water from jetwashing / hydrodemolition is in place.
- Confirmation that conditions of any consents are being adhered to (Marine license is likely to be required for the works and there may be associated conditions).
- Spill kits – presence in appropriate areas, signage and stocking levels.
- Site is clean, including removal of loose materials / waste etc at close of shift / in advance of adverse weather conditions.
- Waste storage – appropriate containers, covers / seals in place, no mixing of waste streams, waste containers signed / labelled appropriately.
- COSHH stores are signed, with a visible inventory of what is contained within and there is no mixing of solid and liquid COSHH.
- Oil / fuel bunds free of water and signs of pollution.
- Drip trays in place where required and free of pollution.
- No evidence of pollution in the watercourse (sheen / olfactory evidence).
- Waste disposal records maintained appropriately.
- Waste facilities hold the correct license.
- RAMS contain appropriate environmental mitigation for the works.
- All lighting is directional, screens in place if required.
- Noise levels are not causing disturbance / harm.
- Dust control measures are present, suitable and in use.
- No plant / machinery is showing evidence of pollution (smoke / leaks).
- Incident response plan available at the worksite and compound area.
- SOPEP in place on the safety vessel.
- Concrete washwater is being captured and either treated (with appropriate discharge permit having been agreed) or disposed of to a licensed facility.
- Tide times displayed at the worksite.

The ECoW shall complete the following inspections:

- Pre-commencement checks for protected species.
- Checks of work areas and rest of site for INNS and confirmation that buffer zones are in place as required.
- That RAMS contain the relevant mitigation.
- Works are being completed in accordance with any protected species licenses.
- Monitoring for signs of disturbance of protected species.

Audits shall be completed by the Environmental Management Representative to confirm that all staff have received the various toolbox talks and any additional environmental training that becomes relevant. The Site Manager shall complete audits regularly to determine that the

above-mentioned inspections are being undertaken, that works are being completed in accordance with RAMS and that any actions raised as a result of inspections are being closed out as soon as possible.

A. Health Safety and Environmental Sustainability Training Procedure

SCOPE

This procedure applies to all Company projects, offices, facilities, asset and concession companies and Joint Venture (JV) projects where the Company Management System has been adopted by the JV Board. Where the Company is required to operate another party's Management System then the requirements of the Joint Venture/Alliance Business Management System (BMS) Assessment must be followed in relation to assessing the validity of third-party management systems.

PURPOSE

The purpose of this procedure is to define the minimum expectations for HS W and Environmental Sustainability training and competency for employees and sub-contractors.

The requirements in this procedure are our current standards and must be adopted as part of a safe system of work. However, Projects and Contracts are also encouraged to identify new methods of working as long as these are: developed through rigorous risk assessment, demonstrably improve on current standards, deliver legal compliance and are approved in accordance with the Controlled Derogation from BMS procedure (MSC-PR-0004).

This document excludes specific arrangements for working on Network Rail Managed Infrastructure as these are dealt with in separate procedures (HSF-PR-0029) and (HSF-PR-0032).

PROCEDURAL REQUIREMENTS

1. GENERAL

1.1 All employees and sub-contractors must have the relevant skills/knowledge/experience/training required by the industry sector they are working in that are appropriate to the tasks and activities undertaken.

1.2 All employed and subcontracted operatives must have the relevant training required for their role in accordance with HSES Duty Holders Minimum Training Requirements Reference Material (HSES-RM-0026a.).

1.3 With the exception of the Balfour Beatty Rail and Power Transmission and Distribution businesses, all operatives must have a valid CSCS or affiliated card providing proof that individuals have the required training and qualifications for the type of work they carry out. A limited number of non-CSCS card schemes are accepted as detailed within the 'Approved Card Schemes' reference material (HSES-RM-0026b). Note that some CSCS, CSCS-affiliated and approved cards may be relevant and required for operatives undertaking construction tasks and activities such as plant operation within the Power and Rail businesses, as determined by the relevant competency procedures below.

1.4 All employed and sub-contracted operatives working within the Rail business must be sponsored in accordance with the Rail Sentinel Scheme Requirements (HSF-PR-0029), Rail Personal Track Safety Procedure (HSF-PR-0032 Rail Personal Track Safety) and Competence Management Procedure (OPS-PR-6601). Rail plant operators must have their competencies assessed and maintained in accordance with the Rail Plant Operations Scheme Procedure (HSF-PR-0057).

1.5 All employed and sub-contracted operatives working within the Power Transmission and Distribution business must be in possession of the required training and competencies determined by their defined role profile in accordance with the Power business Competency and Training Procedure (TRN-PR-5960-PTD).

1.6 All employees and sub-contractors must attend the Zero Harm Induction (E-Learning style module) and relevant site level induction (HSES-RM-0008b) or office induction (HSES-RM-008a) in accordance with the Induction procedure (HSES-PR-0008).

1.7 All employed or sub-contracted supervisors working with every Balfour Beatty business must possess either Site Managers Safety Training Scheme (SMSTS) or Site Supervisors Safety Training Scheme (SSSTS) or Company accepted equivalent detailed in Table 1 of HSES Duty Holders Minimum Training Requirements Reference Material (HSES-RM-0026a).

1.8 All employed or sub-contracted supervisors working with every Balfour Beatty business must complete all twelve modules of the Supervisors Passport as detailed in the Supervisors Passport and Competency Review (HSES-TF-0026c).

1.9 All employee and sub-contractor supervisors must receive a Supervisor Induction (HSES-RM-0008d) as part of the induction process in accordance with the Induction procedure (HSES-PR-0008).

1.10 The Supervisor must ensure that only employees and sub-contractors with the relevant skills/knowledge/experience/training are allocated to a task or activity.

1.11 The following Balfour Beatty role holders must have attended ESA (Environmental Site Awareness) training or SEATS (Site Environmental Awareness Training Scheme) if SEATS is a client requirement):

- PM3 Managers responsible for running a project
- Site Engineers
- Supervisors (Level 2 & 3)

1.12 Any employee or sub-contractor who does not have the sufficient skills/knowledge/experience to complete a task safely when working independently, for example inexperienced operatives and those recently trained or undergoing training, must be effectively supervised.

2. INDIVIDUAL TRAINING NEEDS

2.1 Each project must produce and maintain a training plan, as a minimum, utilising the R12 Training Matrix Detail Report, adding to this any additional requirements beyond the ones listed in the reference material, for example Driver CPC or Supervisor Development Pathways, and must include:

- Technical training and competency requirements
- Task specific training
- Client specific training

This document must be maintained and must be readily accessible particularly during August each year as it informs the following year's training budget.

This document can be stored in the projects records on Sharepoint, within the Training Administration Report on R12 or within the Project Management Plan (PMP). The 'HSES Training matrix Template' (HSES-TF-0026a) may be used and duties/training not required on the project may be deleted from the template to assist in producing the project specific matrix.

Training plans within the Power Transmission and Distribution business must be formulated and maintained in accordance with the Competency and Training procedure (TRN-PR-5960-PTD).

Training plans within the Rail business must be formulated and maintained in accordance with the Competence Management Procedure (OPS-PR-6601).

2.2 Each SBU/Project must have a process in place for managing training/competency renewals and expiry dates. Employees and sub-contractors with expired training shall not be put to work until this has been renewed. Additional training must be identified during a training needs analysis/PDR process.

New employees or those that are new to a role/Project shall have a training needs analysis completed as part of the setting to work process and a training plan agreed.

2.3 Competency and training accreditations remain valid until the expiry date, providing it complies with procedural requirements and meets specific training standards required for the role or activity/operation as detailed in the 'HSES Duty holders Minimum Training Requirements' (HSES-RM-0026a.

3. COMPETENCY ASSESSMENT

3.1 The Site Lead must ensure that any trained but inexperienced or 'new to project' operatives have direct supervision to ensure they have the competence and abilities to work to a high standard of safety in line with their training and Balfour Beatty Golden Rules (Note: This is a requirement of 2016-UK-Update-001 Fatal Injury Third Don Crossing Aberdeen).

3.2 The Site Lead must ensure that a review is undertaken to confirm that competent Supervisors are appointed (*HSES-TF-0026c Minimum Training and Certification Requirements (Supervisors Passport and Competency Review) and they are making the required progress in attaining the Supervisors Passport. The Site Lead must also ensure that every Supervisor understands and accepts the relevant duties and responsibilities of their role (HSES-TF-0026b Supervisor Role and Responsibilities).

3.3 The Site Lead must act as, or appoint a Supervisor Competency Reviewer to ensure that the Supervisor can demonstrate the expected skills, knowledge, experience and behaviours commensurate with their role (HSES-TF-0026c Minimum Training and Certification Requirements (Supervisors Passport and Competency Review).

3.4 To ensure that employees and sub-contractors are competent to carry out the task, the supervisor must undertake a review of their performance in the role.

Where a deficiency in competency is identified this must be addressed. This may take the form of additional training or mentoring/supervision for employees and notifying sub-contractor management of supply chain deficiencies.

Where there is no deficiency of training or mentoring, and performance concerns remain, then applicable HR capability (HRS-PL-0002) or disciplinary (HRS-PL-0008) policies must be followed.

3.5 **RECORDS**

3.6 The Site Lead must ensure that training records for employees are maintained on Oracle R12.

3.7 The Site Lead must ensure that copies of sub-contractor training records are obtained, maintained, accessible and secure.

3.8 The Site Lead must ensure that competence/training cards such as CPCS are validated with the card supplier. Validation contact details for each Card Scheme are available in the 'Approved Card Schemes' reference material (HSES-RM-0026b)

3.9 Individual employee's competence cards are maintained on Oracle R12 and can be made available on request.

Sub-contractor competence cards (or copies) must be available on request

3.10 Employees and sub-contractors with training certificates which do not have a fixed expiry date must either:

- Refresh the training after 5 years,
- Be able to demonstrate current updated knowledge and skills via either Continual Professional Development (CPD), or the PDR process
- Complete supplementary training suitable to the business (i.e. NEBOSH & IOSH beyond 5yrs takes SMSTS) or,
- No longer undertake activities related to the training.

3.11 All data on individuals (electronic or paper based) must be kept and processed in accordance with the Data Protection Policy (LGL-PL-0045).

4. TRAINING REQUESTS

4.1 Each SBU must have processes in place to request employee training. These processes must be made clear to all employees. The process can be found here.

ABBREVIATIONS / DEFINITIONS

Site Lead	The person directly responsible for the Health and Safety of all employees, subcontractors and third parties, and for the care of the environment, affected by our works.

INPUTS

Reference	Type	Title
1974 c.37	Legislation	Health and Safety at Work Act 1974
1999 No.3242	Legislation	Management of Health and Safety at Work Regulation
HSF-PL-0001	Policy	Health & Safety Policy statement
ENV-PL-0001	Policy	Environmental Policy statement
LGL-PL-0045	Policy	Data Protection Policy
HSES-RM-0026a	Reference Material	HSES Duty holders Minimum Training Requirements'
HSES-RM-0026b	Reference Material	Approved Card Schemes
HSES-RM-0026c	Reference Material	Construction Skills Certification Scheme
HSES-RM-0026d	Reference Material	Supervisor Review
OPS-PR-6601	Procedure	Competence Managament Procedure
HSF-PR-0057	Procedure	Rail Plant Operations Scheme (POS)
	Standard	Build UK – Training Standards

OUTPUTS

Reference No.	Document Title	Responsibility	Retention Period
HSES-TF-0026a	Project HSES Training Matrix	Site Lead	Project Duration
HSES-TF-0026b	Supervisor Role and Responsibilities	Site Lead	Project Duration
HSES-TF-0026c	Supervisor Competency Review	Site Lead	Project Duration
HSES-SF-0026c	Training Attendance Record	Site Lead	Project Duration

B. Storage of Fuels, Oils and Liquids

Introduction

Balfour Beatty uses a number of environmentally harmful liquids including fuels, oils and other liquids, which have the potential to cause significant pollution to drainage systems, watercourses, ground and water supplies e.g. boreholes in the event of a leak or spill. Additionally, they may cause health & safety risks, particularly around the clean-up of the spilt material.

It is therefore important that all liquids, fuels and oils are stored appropriately to minimise the risk of pollution.

Oil includes:

Petrol	Diesel/Red Diesel (Gas Oil)	Heating oil / boiler fuel
Biofuels	Kerosene	Waste oil
Oil used as solvents	Biodegradable oil, usually lubricating or hydraulic oils	Liquid bitumen-based products, for example waterproofing or damp proofing products, or coatings for a road surface
Cutting fluids, for example lubricants designed specifically for metalworking processes, that are made from or contain oil as oil-water emulsions	Insulating oils, used as electrical insulator and coolant	Synthetic oils (e.g. lubricating oils such as motor oil)
Vegetable oils		

Other liquids which may lead to environmental harm include:

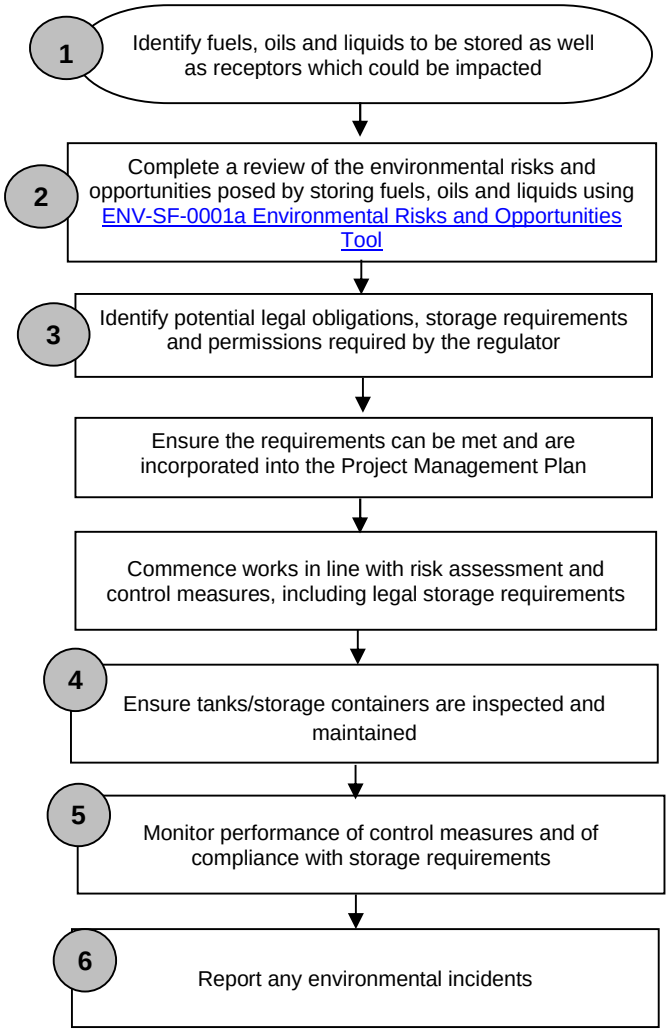
Solvents e.g. white spirit, paraffin	Pesticides, herbicides, biocides	Chemicals e.g. antifreeze, wood preservatives, chlorine, brake fluid, cleaning materials
Battery acid	Paint	Flocculants & coagulants
Admixtures (accelerators & retarders)	Foaming agent	Adblue
Sewage effluent	Trade effluent	Highly alkaline water e.g. concrete wash water

Abbreviations / Definitions

Ancillary equipment	Valves, filters, sight gauges, vent pipes and taps that are connected to the oil storage container. All ancillary equipment must be within a secondary containment system.
Bunds	A structure that storage tanks, barrels or containers can be stored within. It is designed to prevent oil, fuel or chemicals from escaping into the environment if the storage tank or barrels leak or burst.
Double	Refers to a tank that has a second outer skin for extra strength, with a very small gap

skinned / twin walled tank	between the two. None of the pipework or ancillary equipment is contained. Unlikely to have 110% overfill capacity, in which case it isn't classed as a bunded tank or secondary containment.
Foul water drains	Designed to carry waste water safely to a water sewage works.
Integrally bunded tank	Refers to a tank within an attached larger bund. The liquid is stored within the primary or inner tank and the outer tank forms the required bund with capacity of 110% of the primary tank's capacity. The pipework and ancillary equipment is usually encased. The tank is usually made from polyethylene or steel.
Pathway	Any route through the environment which pollutants can move such as air, water, soil and drains.
Receptors	Environmental media that may be adversely affected by a pollutant/contaminant e.g. rivers, lakes, ponds, streams, groundwater, soils, ground
Secondary Containment Systems	Secondary containment systems are used to catch any leaking oil, overfilling or other spills from a primary container. Includes a bund, bunded pallet, drip tray or plant nappy beneath a container or an integrally bunded tank.
Surface Water Drains	Designed to carry only uncontaminated rainwater, as it will lead directly to a local river, stream or soakaway.
Underground Storage Tank (UST)	An oil storage tank, associated underground pipework and ancillary equipment that is completely or partially below ground level. This also includes above ground tanks that are covered with earth or containers located in basements where the base sides of the tank cannot be inspected

Flow Diagram



1. Identify fuels, oils and liquids to be stored as well as receptors which could be impacted

Identify the type and volume of all liquids, fuels and oils that are going to be stored.

Identify the location of the following on site plans (or equivalent):

- Oil and liquid storage
- Spill kits
- Surface and foul drains
- Discharge points
- Sumps
- Pollution control devices (e.g. penstock)
- Water courses (rivers, streams, canals, lakes etc.) (or equivalent)
- Other sensitive receptors

All substances hazardous to health must be managed as set out in HSF-PR-0021 Control of Substances Hazardous to Health.

2. Environmental Risks & Opportunities

Project specific environmental risks and opportunities from storing fuels, oils and liquids must be identified using ENV-SF-0001a Environmental Risks and Opportunities Tool. Consider impacts on the immediate surroundings to where the materials will be stored. Include the ground, watercourses, drainage systems, drinking water supplies and sensitive receptors (including those downstream) if any of these materials were to leak or spill and enter the environment.

Adequate site-specific mitigation measures must be implemented to eliminate or mitigate the environmental impact of storing these materials by reducing the risk to the lowest reasonably practicable level.

The outputs of the risk assessment must help ensure that our works do not:

- Cause pollution
- Have a negative impact on wildlife, water ecosystems or aquatic life

3. Identify how the materials will be stored, potential legal obligations and what permissions may be required by the regulator

3.1 General requirements – storage of liquids in containers less than 200 litres capacity

A best practice approach must be taken for the storage of liquids, chemicals and oils in containers with a capacity of less than 200 litres. In Scotland, oil must be stored in line with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Full requirements are specified in General Binding Rules (GBRs) 26, 27 and 28 which can be found in The CAR Practical Guide.

All containers of oils, chemicals and hazardous liquids must be of sufficient strength and structural integrity to ensure that they are unlikely to leak or burst during ordinary use.

Containers must be stored within a secondary containment system designed to catch leaks or spillages from the primary container. Secondary containment systems may include drip trays, bunded storage cupboard, masonry bunds, pallet bunds, plant nappies and EnviroPads etc. Plant nappies should only be used as a temporary solution.

It is best practice to cover storage areas to prevent rain water entering bunds, becoming contaminated and needing to be disposed of as hazardous waste (special waste in Scotland).

Small quantities of liquid materials, for example paints, oils, solvents etc. should be stored securely and have some form of secondary containment provided, such as a storage cupboard with an in-built tray to collect fluids. The in-built tray / bund must be cleaned out regularly to avoid the mixing / build up of hazardous materials. It must be ensured that the correct equipment / PPE is used (i.e. as specified in the COSHH assessment) and that any hazardous wastes are disposed of correctly

When multiple small containers are being stored together, the secondary containment must have the capacity to contain at least 110% of the contents of the largest container. Lids should be securely replaced when the material is not in use. HSF-RM-0025a Storage and Disposal of Hazardous Substances clarifies what chemicals can be stored together and which must be stored separately.

Storage facilities should be sited away from areas where they may be prone to damage from vehicles or mobile plant and equipment. Barriers may be erected to reduce the chances of any impact occurring.

Spill kits must be available at fuel and liquid storage areas and in construction vehicles and plant. Spill kits range in size. The required capacity of a spill kit will be governed by the size of the spill which is likely to be encountered and other factors like the presence of sensitive environmental pathways or receptors. The correct type of spill kit must also be selected e.g. for oil, chemical or general liquid spills. A risk assessment must be made when determining the type and size of the spill kit required. As a guide, it is recommended that the following size spill kits are provided:

- All vans, construction vehicles and commercial fleet (including hired vehicles) – 15+ litre spill kit
- Bulk fuel storage – 90+ litre spill kit (typically in a cylindrical bin or wheelie bin)
- Smaller quantities of liquid materials (i.e. less than 200 litres) – 15-50 litre spill kit

Refuelling plant is covered in HSF-PR-0046 Plant procedure.

Measures must be taken to minimise the risk of vandalism and theft such as keeping fuel containers locked when not in use, minimising the volume of fuel stored on site, placing herras fencing around fuel containers, securing plant when not in use (including overnight) and the use of CCTV & security personnel.

3.2 Storage of oil in containers with a storage capacity of over 200 litres

In England, Wales, Scotland and Northern Ireland there are specific rules on storing oil in a container with a storage capacity of over 200 litres, (the size of an oil drum).

The definition of storage container includes:

- Oil drums and fixed tanks
- Intermediate bulk containers (IBCs)
- Mobile bowsers – containers designed to store and dispose of oil that can be moved between locations but not under their own power
- Some types of generator and transformer. The rules apply to any of the following generators or transformers that have a connected oil supply tank with a capacity of more than 200 litres:
    - generators in daily use with a tank that supplies the generator where not all of the oil from the tank is used in 1 day
    - ‘stand-by’ generators, which are generators kept for emergency use
    - transformer header tanks that are connected to the transformer by a one-way feed pipe

All bulk fuel must be stored within a mobile bowser or fixed tank/container that conforms to the Oil Storage Regulations for the relevant country. Although they are broadly similar, individual country requirements do differ.

There are also country-specific requirements for fuel storage within the relevant country's Building Regulations.

- England & Wales **(EN)** **(W)**
  - Oil storage regulations for businesses - GOV.UK (www.gov.uk) - The Oil Storage Regulations cover requirements for above ground oil storage in containers over 200 litres, unless there is an applicable exemption. The regulations don't apply to waste mineral oil storage, oil stored wholly underground or oil stored in buildings (although good practice recommendations are advised).
  - Combustion appliances and fuel storage systems: Approved Document J - GOV.UK (www.gov.uk) - Building Regulations must be met where required. Approved Document J of the Building Regulations provides guidance on how to meet Building Regulations for fuel storage systems.
  - Wales - Additional information Oil-storage-regulations.pdf (gov.wales) - The Regulations cover above ground oil storage in containers over 200 litres, waste oil storage and oil stored in buildings. They don't cover requirements for oil stored wholly underground, unless it's in a building.
  - Wales - GPP 2: Above ground oil storage tanks provides additional guidance.

- Scotland **(S)**
  - Oil storage in Scotland | Scottish Environment Protection Agency (SEPA) - The Oil Storage Regulations apply to all above ground oil storage (although portable containers with a capacity of less than 200 litres don't have to comply with some of the more prescriptive requirements of the Regulations such as secondary containment. However they must be strong enough not to leak in ordinary use). The Regulations don't apply to oil stored wholly underground, unless it's in a building. SEPA expect visual checks to be carried out at least weekly and would encourage tank checks to become part of a routine maintenance schedule.
  - Oil must be stored in line with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Full requirements are specified in General Binding Rules (GBRs) 26, 27 and 28 which can be found in The CAR Practical Guide.
  - Building Regulations must be met where required. In Scotland, section 3.24 of the Non-Domestic Environment Technical Handbook provides guidance on how to meet Building Standards for fuel storage.
  - GPP 2: Above ground oil storage tanks provides additional guidance.

- Northern Ireland **(NI)**
  - Oil storage | Department of Agriculture, Environment and Rural Affairs (daera-ni.gov.uk) - The regulations cover above ground oil storage in containers over 200 litres, waste oil storage and oil stored in buildings. They don't cover oil stored underground.
  - Building Regulations must be met where required. In Northern Ireland, Technical Booklet L of the Northern Ireland Building Regulations provides guidance on how to meet Building Regulations for fuel storage systems. http://www.buildingcontrol-ni.com/assets/pdf/TechnicalBookletL2012.pdf
  - GPP 2: Above ground oil storage tanks provides additional guidance.

3.2.1 Design Standards for Containers

Storage containers must be strong enough not to burst or leak in ordinary use. There are recognised British Standard or trade association tank standards for different types of tank. For example:

Fixed Tanks
Fixed Tanks that meet the design standard are made to British Standard 5410 or:

- Oil Firing Technical Association (OFTEC) standard OST T100, if the container is plastic
- OFTEC standard OFS T200 or British Standard 799-5, if the container is metal

The Oil Care Campaign provides information on 'Getting to know your oil tank'.

Drums and IBCs
If a drum or IBC is marked with the letters 'UN' for United Nations it will meet the design standard.

3.2.2 Bund Requirements

All oil containers above 200 litre capacity must be stored in a secondary containment system which meets the following:

- For single containers excluding drums, the secondary containment must have a capacity of at least 110% of the maximum contents of the container.
- If more than one oil storage container is used, the secondary containment must be able to store at least 110% of the capacity of the largest container or 25% of the total storage capacity, whichever is the greatest.
- Where drums are used to store oil, a drip tray can be used as the secondary containment system. The drip tray must have a capacity of at least 25% of the total storage capacity of the drum/s.
- Any equipment ancillary to the container must be within the secondary container.

Masonry/concrete bunds must not be penetrated by any valve, pipe or opening which is used for draining the system. If any fill pipe or draw off pipe penetrates the base or walls, the junction of the pipe with the base or walls must be sealed to prevent oil escaping from the system.

Any valve, filter, sight gauge, vent pipe or other equipment ancillary to the container, must be situated within the secondary containment system.

Where a fill pipe is not within the secondary containment system, a drip tray must be used to catch any oil spilled when the container is being filled with oil.

Ensure that fill hoses are re-stored within the bunded area after use.

Bowsers and tanks should be kept locked when not in use.

For masonry/concrete bunds, the base and walls must be impermeable to water and oil. A rendering or coating may need to be applied on the internal surfaces of the base and walls to make them impermeable.

The manufacturer and/or supplier of fuel bowsers, bunding, tanks etc. must confirm that a particular storage facility meets legal requirements.

3.2.3 Calculating the Capacity of Existing Secondary Containment Systems

The capacity of the tank located within an open containment system can be calculated by making the measurements shown in the table below. If the tank support structure takes up significant space, then the calculation must also consider this.

Calculation	Result	
Maximum capacity of primary tanks(s). If unknown, use tank length x width x depth in metres and multiply by 1,000 to convert to litres.	……Litres	A
Containment capacity = length x width x depth of secondary containment in metres	……..m^3	
Then multiply by 1,000 to convert to litres	……...Litres	B
Volume lost by tank supports (if significant) in m^3	……..m^3	
Then multiple by 1,000 to convert to litres	……Litres	C
Actual containment capacity = B – C (C=0 if tank supports do not occupy a significant volume)	……Litres	D
Minimum containment capacity (110%) = (110/100) x A	……Litres	E

If **D** is **equal or greater than E**, then the containment system volume is adequate and will comply with legislative requirements. The regulator may request that additional containment volume is provided in some environmentally sensitive situations.

If **D** is less than **E** then the containment system is insufficient and will not comply with legislation. Contact your Environmental Advisor to ensure compliance.

For installations where the tank takes up a significant part of the bund, the capacity available in the event of overfilling may be inadequate. This will require consideration of delivery procedures and alarm systems if the risk is to be managed. No other containers should be stored within the bund.

3.2.4 Positioning of Oil Storage Containers

The following requirements must be met:

- Oil must not be stored:
    - Within 10 metres of any watercourse
    - Within 10 metres of a surface water drain
    - Within 50 metres of a spring, well or borehole
- Bowsers and tanks should be placed on hard standing wherever possible.

3.2.5 Requirements for Fixed Tanks

- Any sight gauge must be properly supported and fitted with a valve that closes automatically when not in use.

- To prevent collisions from vehicles, barriers should be positioned to protect storage tanks from possible impact.
- Any fill pipe, draw off pipe or overflow pipe must be positioned so as to minimise the risk of damage by impact.
- An automatic overfill prevention device must be fitted to the tank if the tank or vent pipe cannot be seen during the filling operation.
- Where a screw fitting or other fixed coupling is fitted to the tank, ensure that it is in good condition and is used when the tank is being filled.
- Where oil from the tank is delivered through a flexible pipe which is permanently attached to the container, ensure that:
    - A tap or valve is fitted at the delivery end of the pipe which closes automatically when not in use.
    - The tap or valve cannot be fixed in the open position, unless the pipe is fitted with an automatic shut off device.
    - When a delivery pipe is not in use, ensure that it is kept in a secure, locked cabinet with a drip tray or has a lockable valve (locked shut when not in use) where it leaves the container and that it is kept within a secondary containment system.
- Where a pump is used, ensure that it is:
    - Fitted with a valve in its feed line that stops the tank contents draining out if the pump or pipework to the pump is damaged.
    - Positioned to minimise any risk to the immediate environment or cause damage.
    - Protected from unauthorised use. Oil storage areas should be as resistant as possible to unauthorised interference and vandalism.

o Any permanent vent pipe, tap or valve through which oil can be discharged from the tank must:

- Be situated within the secondary containment system
- Be arranged so that any oil discharged vertically downwards is contained within the secondary containment
- In the case of any tap or valve, it must be fitted with a lock and locked shut when not in use.

3.2.6 Requirements for Mobile Bowsers

- Taps or valves permanently fixed to the unit through which oil can be discharged must be fitted with a lock and locked shut when not in use.
- Where oil is delivered through a flexible pipe which is permanently attached to the unit:
    - The pipe must be fitted with a manually operated pump or with a valve at the delivery end which closes automatically when not in use.
    - The pump or valve must be provided with a lock and locked shut when not in use.
    - The pipe must be fitted with a lockable valve at the end where it leaves the container and must be locked shut when not in use.

3.2.7 Tank Installation and Decommissioning

When installing an oil tank on site, use technicians who are registered with a professional scheme such as the one operated by OFTEC. All tanks must be marked up with their capacity and type of product they contain. When decommissioning, ensure that the tank is fully drained before it is taken out of use or removed. Suitably qualified technicians should undertake this work. After decommissioning or removal, check the area to ensure the procedure has not caused significant oil or groundwater contamination (this

includes taking soil and groundwater samples as needed). If contamination is found, take action as soon as possible to remove the pollution.

3.2.8 Requirements for Underground Storage Tanks

As a rule, underground oil storage tanks should not be installed at Balfour Beatty facilities. If a facility is taken on with an underground storage tank, contact your Environmental Advisor to obtain further advice and to ensure that an adequate level of assurance is put in place (for example, there may be additional requirements such as carrying out pressure testing of underground storage tanks and associated pipework).

3.3 Waste Oil

The storage of waste oil may require specific permission from the relevant regulator as set out in ENV-RM-0039a Waste Management Licences, Permits and Exemptions and ENV-RM-0039b Common Regulatory Position Statements, Waste Exemptions and Permits.

4. Ensure Tanks/Storage Containers are Inspected and Maintained

All oil storage tanks and containers should be maintained and tested in line with the manufacturers' requirements.

The bunded area of fuel storage facilities should be regularly inspected and emptied when necessary to prevent accumulation of fuel spillage or rainwater

If oil is being stored outside, check to ensure no water has gone into the bund. If water is found, use a manually controlled bailing or pumping system to remove the water. The water removed may be contaminated with oil. Such water must be disposed of as hazardous waste (special waste in Scotland) via an approved subcontractor. Do not discharge rainwater that accumulates in the bunds to drains, unless the site has a specific trade effluent or discharge consent from the relevant enforcing body, which permits such discharges.

All drips trays must be emptied regularly to prevent overflow. An insert from a plant nappy may be used to soak up any spillage. Plant nappies are to be changed regularly to ensure continued protection.

All waste must be disposed of in line with legal requirements and all movements of hazardous waste must be covered by a hazardous waste consignment note in line with country specific requirements. See ENV-RM-0035a Waste Management for further detail.

All plant and machinery shall be maintained as per the supplier's instructions and inspected for any signs of leakage of fuel, engine oil, hydraulic oil etc. and ensuring that exhausts are intact. Any signs of leakage must be reported to the site manager and actions taken to repair.

5. Monitor performance of control measures and of compliance with storage requirements

Regular inspections of oil storage areas should be undertaken to ensure that tanks, bowsers, containers and bunds are legally compliant and in a serviceable condition. The frequency of inspections should be

determined in line with identified risk at a project/site level. The following forms should be used to aid this process:

ENV-SF-0007b Detailed checklist for storage and management of more than 200 litres of oil
ENV-SF-0007c Detailed checklist for storage and management of less than 200 litres of oil

Monitoring the amount of oil being used can help to identify a leak. If an unexpected increase occurs, investigate, as this may be an indication of a leak. Undertake surveillance of the general area around the tank to see if there is any residual oil, as again, this may be indicative of a leak. Check pipes, mechanical joints and other parts of the system for evidence of corrosion in order to avoid a release.

Where fuel has been stored on permeable ground and visible contamination is present, soil analysis must be undertaken prior to the removal of contaminated ground. Following removal, consideration should be made to making the area impermeable with an asphalt or concrete base.

6. Report environmental incidents

Spills, leaks and inappropriate or non-compliant fuel/oil/liquids storage should be notified and reported as environmental incidents as set out in HSES-PR-0005 Incident Reporting and Investigation.

Legislation and Regulation

England and Wales **(EN)** **(W)**
Under the Environmental Permitting (England and Wales) Regulations 2016 (as amended) and the Water Resources Act 1991 (as amended), it is on offence to discharge polluting substances to controlled waters (surface water and groundwater) without prior approval from the relevant Regulators (Natural Resources Wales, Environment Agency and Sewerage Undertakers).

Oil stored in containers with a capacity of more than 200 litres must be stored in line with the:

- Control of Pollution (Oil Storage) (England) Regulations 2010 (as amended).
- Water Resources (Control of Pollution) (Oil Storage) (Wales) Regulations 2016 (as amended).

Scotland **(S)**
Under the Water Environment (Controlled Activities) Regulations 2011 (as amended) and the Water Resources (Scotland) Act 2013 (as amended) it is an offence to discharge polluting substances to controlled waters (surface water and groundwater) without prior approval from the relevant Regulator (Scottish Environment Protection Agency and Scottish Water).

Oil must be stored in line with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Full requirements are specified in General Binding Rules (GBRs) 26, 27 and 28 which can be found in The CAR Practical Guide.

Northern Ireland **(NI)**
Under the Water (Northern Ireland) Order 1999 (as amended) it is an offence to cause pollution of a waterway or groundwater.

Oil stored in containers with a capacity of more than 200 litres must be stored in line with the Control of Pollution (Oil Storage) (Northern Ireland) Regulations 2010 (as amended).

UK Documentation

Reference	Type	Title
ENV-RM-0007b	Reference Material	Training Material – Fuel storage – Continual Environment & Sustainability Improvement
ENV-SF-0007b	Standard Form	Detailed Checklist for Storage and Management of more than 200 litres of oil
ENV-SF-0007c	Standard Form	Detailed Checklist for Storage and Management of less than 200 litres of oil
ENV-TB-0007a	Tool Box Talk	Storage of Fuels, Oils and Liquids
ENV-RM-0039a	Reference Material	Waste Management Licences, Permits and Exemptions
ENV-RM-0039b	Reference Material	Common Regulatory Position Statements, Waste Exemptions and Permits
HSES-PR-0005	Procedure	Incident Reporting and Investigation

External Documentation

Reference	Type	Title
External Document	NIEA / SEPA / NRW	Above Ground Oil Storage Tanks: GPP2
External Document	Welsh Government	Keeping your oil storage safe

C. Waste Management Procedure

Introduction

The poor management of waste can have an adverse effect on the environment by wasting valuable resources and contaminating water, the ground and air. All waste must be stored, transferred, disposed of, processed and re-used in accordance with relevant environmental legislation at all sites, company offices, depots and fixed locations.

The legal definition of waste is ‘any substance or object which the holder discards or intends to discard or is required to discard’. If a material is classed as waste, Waste Duty of Care rules must be followed when the waste is being disposed of.

Waste Duty of Care is about taking all reasonable steps to ensure that when waste is transferred from one party to another, it is managed legally throughout its complete journey to final disposal or recovery.

Waste Duty of Care applies to anyone who imports, produces, carries, keeps, treats, disposes of, or is a dealer or broker that has control of controlled waste. Balfour Beatty carries out a number of these activities, and all individuals must comply with Waste Duty of Care requirements.

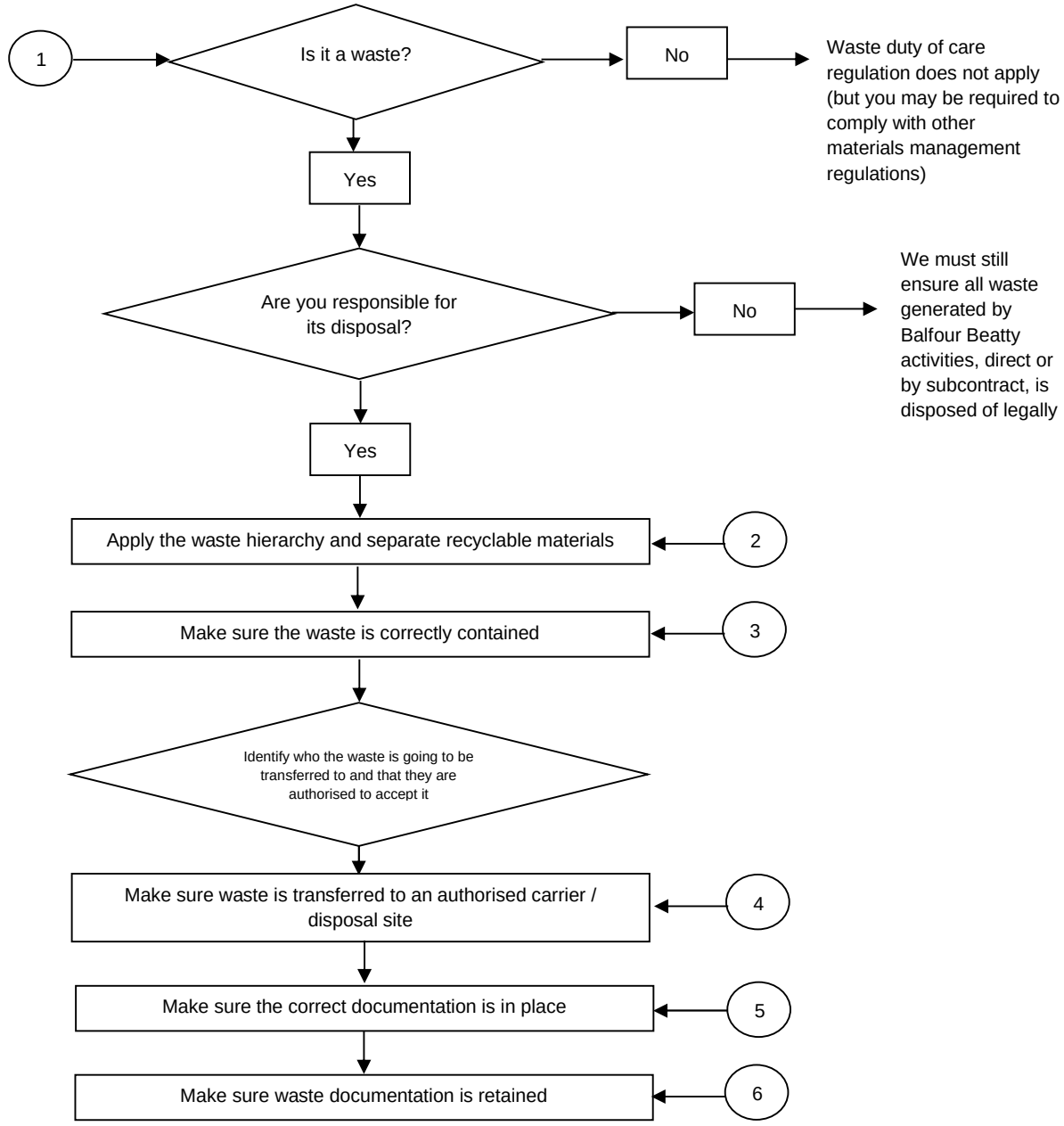
Abbreviations / Definitions

Controlled Waste	Any household, commercial or industrial waste such as waste from a house, commercial premises, office, factory, building site or any other business premises.
Waste	The legal definition of waste is ‘any substance or object which the holder discards or intends to discard or is required to discard’.
Waste Producer*	Any person whose activities produce waste. This includes private sector businesses such as shops, offices, factories and tradesman (e.g., electricians, builders, glaziers and plumbers) and public sector services such as schools, hospitals and prisons, as well as charities and voluntary and community groups. It also includes permitted operations or exempt facilities (sites or operations which operate under an Environmental Permit or exemption) that produce waste as part of their activities. If you carry out a waste operation that changes the nature or composition of the waste, you are regarded as a producer of the waste.
Waste Carrier*	Any person, who normally and regularly collects, carries or transports waste in the course of any business or with a view to profit, including those that produce and transport their own waste e.g. builders and landscape gardeners.
Waste Dealer*	Any person, business or organisation that buys waste with the aim of subsequently selling it, including in circumstances where the dealer does not take physical possession of the waste.
Waste Broker*	Any person, business or organisation that arranges waste transportation and management of waste on behalf of another party, such as organisations contracting out waste collection services e.g. Reconomy, local authorities, supermarkets and producer responsibility compliance schemes.
Waste Manager*	Any person involved in the collection, transport, recovery or disposal of controlled waste, including the supervision of these operations, the after-care of disposal sites and actions taken as a dealer or broker
Standard Industrial Classification (SIC) Code	A government indicator of what type of industry a company is categorised in i.e. what type of industry the producer of the waste is in.

European Waste Catalogue (EWC) Code	A 6-digit code used to describe a waste stream. *Waste Classification Guidance on the classification and assessment of waste (WM3)* lists the 650 (approx.) EWC codes which are divided into 20 chapters and further sub-chapters defining the type of waste and the industry which has generated it. Codes are divided into 4 types of entry: • Mirror hazardous (coloured blue and labelled MH) or Mirror non-hazardous (coloured green and labelled MN) – wastes which may be hazardous or non-hazardous depending on whether they contain dangerous substances. • Absolute hazardous entries (coloured red and labelled AH) – entries which are always hazardous • Absolute non-hazardous (coloured black and labelled AN) – entries which are always non-hazardous Hazardous wastes have an asterisk (*) next to them.
Inert waste	Waste that does not undergo any significant physical, chemical or biological change. It will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact with or is likely to cause environmental pollution, or harm to human health. Examples are uncontaminated concrete, bricks, glass, soil and stones (excluding topsoil, peat, soil and stones from contaminated sites).
Non-hazardous Waste	Waste which is neither inert nor hazardous. Examples are general waste and topsoil.
Hazardous / Special waste	Waste (or the material or substances it contains) which is harmful to humans or the environment. Examples are batteries, asbestos, non-edible oils and fluorescent light tubes.
Transferor	Current holder of the waste.
Reconomy	Reconomy is a waste management company who is working in conjunction with all Balfour Beatty Strategic Business Units. They provide skip hire, waste and recycling services and hazardous waste disposal.
WEEE (Waste Electrical and Electronic Equipment)	Includes most products that have a plug, need a battery, have a wind-up mechanism or have a solar mechanism: small and large household appliances, and IT and telecommunications equipment. It includes electronic parts such as chips, capacitors and circuit boards.

* Definitions taken from *Waste Duty of Care code of Practice* March 2016 (Department for Environment Food and Rural Affairs)

What You Need To Do



Note 1 – Is it a waste?
Waste is legally defined as 'any substance or object which the holder discards or intends to or is required to discard'. This includes materials being sent to landfill, for recycling and given to third parties.

It is a requirement to record waste on the Sustainability Portal. The following categories should be applied to waste transfers:

Demolition waste is classed as material arising from the removal or strip out of an existing structure above or below ground, including any hazardous waste produced by this process. This excludes waste from correcting defects, design changes, rework etc – this should be recorded as construction waste.
Excavation waste is classed as naturally occurring material which arises from below the man-made surface on site (e.g. pavements), including any hazardous waste produced by this process.
Construction waste is classed as any other waste, not included in demolition, excavation, office or manufacturing and depot waste, including any hazardous waste produced by these processes. This includes offcuts of materials (plasterboard, timber, metals), packaging from construction materials and products, surplus concrete, asphalt etc that is disposed of in site waste containers.
Office waste is classed as any municipal waste that is created as a result of fixed or temporary offices and site accommodation including sewage / septic tank waste, sanitary waste, biodegradable kitchen waste, paper / cardboard / plastic, toner cartridges etc.
Manufacturing and depot waste is classed as any waste that leaves a fixed manufacturing facility or depot, including any hazardous waste produced by these processes. If any waste enters a depot as a construction, demolition or excavation waste, it must remain under this waste type upon removal from the depot. The following waste types typical of highway depots includes: • Street lighting lamps and lanterns • Traffic barrier • Roadkill • Traffic management batteries • Road sweeper / gully cleaning waste • Incident waste • Fly tipped / litter picked waste • Holding tank oily wastes • Sewage / septic tank wastes and sanitary wastes created at the facility or on the network

ENV-RM-0035p Management of Specific Waste Types covers guidance on specific waste-types that may not arise as a direct result of Balfour Beatty's activities, or that are not business-as-usual waste types.

Note 2 – Apply the waste hierarchy and separate recyclable materials
All reasonable steps must be taken to apply the waste hierarchy (outlined below) to all waste streams.

We have a clear ambition to generate zero avoidable waste from our UK operations by 2040. To deliver this, we'll be working with our partners right from the start of every new scheme to ensure we're looking for solutions that generate Zero Waste through design and construction, applying the waste management hierarchy. Where this is not possible, our priority will be to maximise the value of materials throughout their lifecycle.

There are specific legal requirements for recyclable materials to be collected separately across the UK. The specific requirements depend on which UK nation you are working in. These are outlined below.

England
From 31st March 2025, the Simpler Recycling Regulations made it a legal requirement for all Balfour Beatty locations in England to separate their core recyclable waste streams and arrange for the separate collection of these.

The waste streams that must be separated are:

- Residual (non-recyclable) waste i.e. 'black bag' waste
- Food waste
- Paper & card (packaging, office paper, envelopes, newspapers, magazines)
- Any other dry recyclable materials (plastic e.g. plastic bottles and packaging, metal e.g. drinks cans and glass e.g. glass bottles & jars)

This applies to all Balfour Beatty operations in England: projects, mobile operations, welfare units, depots, sites and offices regardless of the number of people based at a location / on a project or the amount of waste generated.

<u>Paper & card waste</u>
Under the Simpler Recycling Regulations, the default position is that paper and cardboard must be separated from all dry recyclable materials. This means it must be separated at source where it is produced.

However, if the waste collector deems that the separate collection of paper and cardboard is not technically, environmentally and economically practicable (TEEP), then they will need to produce a short, written assessment explaining their decision.

Guidance on this is available for waste collectors. They must retain a record of the written assessment and any evidence. The Environment Agency can ask to see a copy of this at any time. The waste collector should update the written assessment at least annually, or where circumstances change, such as when collection, treatment or recycling contracts end or are changed. It is best practice for Balfour Beatty to also retain a copy of the assessment produced by the waste collector.

Glass
The Simpler Recycling Regulations allow glass waste to be mixed in with plastic and metal. However, not all suppliers will allow glass to be accepted with other dry materials.

Further information is available from Simpler recycling: workplace recycling in England - GOV.UK.

Wales
From 6th April 2024 the Waste Separation Requirements (Wales) Regulations 2023 made it a legal requirement for Balfour Beatty locations in Wales to separate their waste for recycling.

The waste streams that must be separated are:

- Food (only for premises that produce more than 5kg of food waste a week)
- Paper & card
- Glass
- Plastic, cartons and metals and other fibre-plastic composite packaging of a similar composition
- Unsold small waste electrical and electronic equipment (sWEEE) (unlikely to be relevant to Balfour Beatty)
- Unsold textiles (unlikely to be relevant to Balfour Beatty)
- Residual waste (including food waste if less than 5kg of food waste is produced at a single location in a week)

Further information is available from Natural Resources Wales / Guidance for waste collectors and handlers: Separated waste collections.

Scotland
The Waste (Scotland) Regulations 2012 make it a legal requirement for every business operating in Scotland to separate their waste for recycling.

It is therefore a legal requirement that Balfour Beatty separates the following materials for recycling:

- Glass (including drinks bottles and empty food jars)
- Metal (including cans & tins)
- Plastic (including drinks bottles and empty food containers)
- Paper
- Cardboard
- Food waste produced by an urban food business

Food businesses
Urban food businesses (such as cafés, restaurants or food takeaways) which produce over 5 kg of food waste per week also have to present food waste separately for collection unless excluded by a rural location.

A food business is defined as “An undertaking, whether for profit or not, and whether public or private, carrying out any activity related to the processing, distribution, preparation or sale of food”. This excludes businesses which only prepare and sell drinks.

When a premises is used to consume food brought from elsewhere e.g. an office where staff bring in food for personal consumption, are not regarded as food businesses. However, a staff canteen where food is prepared, sold and consumed is classed as a food business.

Use the Scottish Government Urban Rural Classification Postcode Lookup to see whether your business area is considered to be rural or non-rural

Further information is available from Waste (Scotland) Regulations | Zero Waste Scotland.

Northern Ireland
In Northern Ireland it is a legal requirement for businesses to segregate the following key materials for recycling:

- Glass
- Metals
- Plastic
- Cardboard
- Paper
- Food waste (food businesses only)

Food businesses
Food businesses (including canteens) which produce over 5 kg of food waste per week also have to present food waste separately for collection. Further information is available from RPS - FOOD WASTE - Are You Compliant - August 2017.pdf)

UK-wide
‘Co-mingled’ collections, where 2 or more dry recyclables are collected together in the same container (but still separate from mixed or general waste) are allowable where:

- Separate collection is not technically, environmentally and economically practicable (TEEP); or
- Separate collection is not necessary to provide high quality recyclates.

In these cases, responsibility is passed to the waste contractor to separate the waste types.

There are additional legal requirements which require other waste streams such as hazardous waste and WEEE waste to be collected separately. Consideration should also be given to separate collection of other waste streams e.g. wood.

Note 3 – Make sure the waste is correctly contained
Waste must be stored safely and securely in a suitable labelled container and must not be allowed to escape to the surrounding environment (source-pathway-receptor):

- Consideration must be given to covering skips or loose material to prevent it from escaping and contaminating the surrounding environment (this applies to waste in-situ and waste being transported).

- Liquid wastes must be prevented from escaping into drains, watercourses or surrounding ground. See ENV-RM-0007a Storage of Fuels, Oils and Liquids.
- Hazardous/special wastes must be stored separately from each other and in well ventilated areas where appropriate, asbestos containers must be lockable.

Note 4 - Make sure waste is transferred to an authorised carrier / disposal site
The person or organisation taking away the waste must be legally authorised to do so and it must be taken to a site which is licenced to accept it or has an exemption in place.

Verification of a Waste Carrier:
Anyone transporting waste must be legally allowed to do so by having a waste carriers licence. This allows an organisation to transport inert, non-hazardous and hazardous waste. Balfour Beatty must know who is carrying our waste and check waste carriers' licences. This check should be made at least annually, and a record of the check should be made (e.g. by saving a print screen of the check on the regulators website and dating it). They can be used as evidence that Balfour Beatty has met its duty of care. ENV-SF-0035c Waste Contractor Inspection can be used to record the check.

- **If a Balfour Beatty company is carrying its own waste, or someone else's waste** – The Balfour Beatty Company transporting the waste must hold an Upper Tier Waste Carriers Licence. The licences held by Balfour Beatty are included in ENV-SF-0035f Waste Transfer Note and copies are accessible from the BMS. Their application and renewal is managed by the Sustainability Enabling Function (Balfour Beatty waste carriers licences only).

  Waste Carriers Licences in England, Scotland, Wales and Northern Ireland
  - If Balfour Beatty is transporting waste in England, Scotland or Wales the waste carriers licence must be applied for in the country where the registered head office is located for the Balfour Beatty company who will be carrying the waste (England, Scotland or Wales). The regulators are Environment Agency (England), Natural Resources Wales (Wales) and Scottish Environment Protection Agency (Scotland). Any of these waste carriers licences allow waste to be transported in England, Scotland and Wales.
  - If Balfour Beatty is transporting waste in Northern Ireland a separate waste carrier's licence is required from the Northern Ireland Environment Agency.

  Joint Ventures (JV) and Waste Carriers Licences
  - Where a Joint Venture (JV) is operating using the Balfour Beatty UK BMS, the JV can use the relevant Balfour Beatty waste carriers licence (see BMS).
  - Where a JV is operating using another parent company's BMS, they can use the waste carriers licence of the parent company of the BMS they are using, or apply for a waste carriers licence in the name of the JV.
  - Where a JV is operating its own JV-specific BMS they should apply for their own waste carriers licence in the name of the JV

- **Waste disposed of via Reconomy** – Reconomy verify that every waste carrier they use is licensed to carry waste. Copies of the waste carriers' licences can be found on the Reconomy Portal https://portal.reconomy.com/login. A username and password is required. Contact Reconomy to arrange access at managedaccounts@reconomy.com or 0800 028 2290.

- **Other Registered Waste Carriers** – each Strategic Business Unit (SBU) must examine the carrier's certificate of registration and check with the issuing body whether the registration is still valid. Carriers can be either upper tier or lower tier. Each SBU must decide who has responsibility for checking the waste carriers licences.

Lower Tier (England, Wales, Northern Ireland) / Professional Carrier (Scotland)
Operators must register as a Lower Tier (England, Wales and Northern Ireland) or as a Professional Carrier (Scotland) if they:

- Only carry waste they produced while carrying out their business **unless** it is construction or demolition waste
- Only carry, arrange (broker) or deal (dealer) in:
  - Animal by-products
  - Waste from mines and quarries
  - Waste from agricultural premises
- Are a charity or voluntary organisation
- Are a waste collection, disposal or regulation authority

Upper Tier (England, Wales, Northern Ireland) / Waste Carrier (Scotland)
If none of the lower tier criteria apply, a person or organisation will be in the upper tier. Key examples are if a business:

- Transports other people's waste, like a skip company
- Carries construction and/or demolition waste
- Arranges for waste from other businesses' to be transported, recovered or disposed of (broker)
- Buys or sells waste, or uses an agent to do so (dealer)

Use the following regulator websites to check against the public register to assess the validity of a waste carrier:
Environment Agency
https://environment.data.gov.uk/public-register/view/search-waste-carriers-brokers

Scottish Environment Protection Agency
Register of Waste Carriers and Brokers | SEPA

Natural Resources Wales
https://naturalresources.wales/permits-and-permissions/check-for-a-permit-licence-or-exemption/?lang=en

Northern Ireland Environment Agency
https://www.daera-ni.gov.uk/articles/registered-waste-carriers-transporters

This check should be made at least annually, and a record of the check should be made (e.g. by saving a print screen of the check on the regulators website and dating it). They can be used as evidence that Balfour Beatty has met its duty of care.

Verification of the Disposal Site
The site where the waste is being taken to must be legally allowed to accept it. Balfour Beatty must be aware of the destination of the waste and check the site's licence, permit or exemption number. This check should be made at least annually, and a record of the check should be made (e.g. by saving a print screen of the check on the regulators website and dating it). They can be used as evidence that Balfour Beatty has met its duty of care. ENV-SF-0035c Waste Contractor Inspection can be used to record the check. A more detailed audit form is also available for conducting an audit at a waste contractor's facility, ENV-SF-0035h Waste Contractor Audit.

- **If a Balfour Beatty company is carrying its own waste and identifying its own disposal site** – The Balfour Beatty Company generating the waste is responsible for checking the disposal sites licence or permit to verify that the waste can be accepted.

- **Waste disposed of via Reconomy** – Reconomy verify that disposal sites have the correct licences, permits or exemptions in place to accept the waste. Copies of the site licences and permits/exemptions can be found on the Reconomy Portal https://portal.reconomy.com/login. A username and password is required. Contact Reconomy to arrange access at managedaccounts@reconomy.com or 0800 028 2290.

- **Other Registered Waste Carriers** – The waste carrier must have a process in place to check disposal sites licences or permits to verify that the waste can be accepted. The contract/SBU engaging with the waste carrier must obtain a copy of the licence, permit or exemption from the carrier and ensure that the waste code is listed within the document. Ensure a copy of the permit, licence, exemption is kept for the duration of the project. Each contract/SBU must decide who has responsibility for making and recording these checks. Examples of 'other' waste carriers include:
    - A skip/waste company who isn't engaged through Reconomy e.g. a local waste company who is employed directly / a 'muck-away' contractor removing spoil from site / a landscaping contractor who removes garden waste from site / a tanker company who is employed directly to empty effluent tanks or suck out drains.
    - A subcontractor carrying out construction work on behalf of Balfour Beatty.

Further details on waste management licences, environmental permits and waste exemptions can be found in ENV-RM-0039a Waste Management Licences Permits and Exemptions.

Use the following websites to check the validity of an environmental permit or licence:

Environment Agency
https://environment.data.gov.uk/public-register/view/search-waste-operations

Scottish Environment Protection Agency
Contact SEPA's registry department:
- Aberdeen registry: email registryaberdeen@sepa.org.uk or call 01224 266600
- Dingwall registry: email registrydingwall@sepa.org.uk or call 01349 862021
- Angus Smith registry: email RegistryAngusSmith@sepa.org.uk or call 01698 839000

Natural Resources Wales
https://naturalresources.wales/permits-and-permissions/check-for-a-permit-licence-or-exemption/?lang=en

Northern Ireland Environment Agency
Waste Management Licensing | Public registers | DAERA

Note 5 – Make sure the correct documentation is in place
A waste transfer note is required for non-hazardous and inert waste, and a consignment note is required for hazardous / special waste.

ENV-RM-0035p Management of Specific Waste Types covers guidance on specific waste-types that may not arise as a direct result of Balfour Beatty's activities, or that are not business-as-usual waste types.

Waste Transfer Note
When non-hazardous or inert waste is transferred to another company, a waste transfer note must be completed and be signed by both parties. The following types of waste transfer note can be used:

Single movement of waste
- A paper waste transfer note for a single movement of waste: or
- A digital waste transfer note for a single movement of waste, either a:

- Balfour Beatty digital waste transfer note (Sustainability Portal) – includes all legally required information and generates a PDF that can be signed by both parties. Data can also be automatically uploaded to the Sustainability Portal; or
- Third party digital waste transfer note.

Alternative documentation such as an invoice can be used if it contains all the required information). Only a single type of waste should be listed on each waste transfer note.

Series of repeated waste transfers

- A paper 'season ticket' – a single waste transfer note that covers a series of repeated waste transfers. A season ticket issued by Balfour Beatty should last no longer than 3 months and be updated to the Sustainability Portal at this scheduled frequency. If several sites are serviced by the same carrier with the same type of waste collected, they can be listed in the schedule to the schedule to the season ticket. Typically, a season ticket covers welfare waste and removals in skips that remain permanently on the premises for the duration of use.
- A digital 'season ticket' – a single waste transfer note that covers a series of repeated waste transfers, either a:
  - Balfour Beatty digital waste transfer note (Sustainability Portal) – includes all legally required information and generates a PDF that can be signed by both parties. It should not last longer than 3 months (the digital wase transfer note won't allow a timeframe of more than 3 months from the date of the first movement to be set). Data has to be uploaded to the Sustainability Portal manually; or
  - Thid party digital waste transfer note which can legally be valid for up to 12 months.

Only one waste transfer note is required for each waste movement. Waste transfer notes are normally provided by the waste carrier. If a third party provides a compliant waste transfer note, there is no need for Balfour Beatty to also produce a waste transfer note.

A waste transfer note is not required for non-hazardous waste if the waste holder does not change on the transfer of the waste e.g., the waste is moved from one premises to another belonging to the same business. This includes Balfour Beatty moving its own non-hazardous waste from a site back to a Balfour Beatty depot.

However, it is considered best practice to keep a record of internal transfers, and this is a requirement in Balfour Beatty Living Places (BBLP).

A waste transfer note doesn't have to be in a set format, but it must contain the following information:

- An accurate written description of the waste being transferred.
- The six -digit EWC (European Waste Catalogue) code. EWC codes are listed in link to Appendix A of Waste Classification Guidance on the classification and assessment of waste (WM3).
- An indication of how the waste is contained e.g., is it loose, in a sack, skip or drum.
- The SIC code of the transferor (current holder of the waste). Further information is provided in ENV-RM-0035b Standard Industrial Classification (SIC codes can be found on Companies House.
- A tick box or sign-off to confirm that the waste hierarchy has been considered.
- The quantity and nature (solid, liquid) of waste being passed on, for example the number of sacks or other containers, the volume of waste or its weight.
- The name and address of the producer of the waste.
- The name and address of the company the waste is being passed to and their status, for example a registered waste carrier, including their registration number.
- The address where the waste was passed to the other company.
- The time and date of transfer.
- Printed, legible full names signatures of both parties.
- The name, address, permit/licence number of the receiving waste facility.

The Balfour Beatty Waste Transfer Note template is ENV-SF-0035f Waste Transfer Note.

An example of how to complete a waste transfer note is outlined in ENV-TB-0035a How to complete a Waste Transfer Note.

Instructions on completing the digital waste transfer note (Sustainability Portal) are available in the linked video resource and should be reviewed prior to use. The digital waste transfer note can be accessed at https://wastetransfernotes.balfourbeatty.net.

Season Tickets and Waste Volumes

Season Tickets include an estimate of the quantity of waste which will be removed over the period it is valid for (no longer than 3 months if the waste carrier is Balfour Beatty and 12 months for third party season tickets). In order to track the volume of actual waste removed:

- For waste disposed of via Reconomy, the actual waste volumes removed are uploaded to the Reconomy Portal for each movement. The portal can be accessed at http://portal.reconomy.com/login.
- For waste disposed of via non-Reconomy waste contractors, the waste contractor should be contacted for this information. The format in which this information is provided may vary but could include the provision of individual invoices or collection notes which contain the quantity of waste removed for each collection.

Taking Waste to a Balfour Beatty Waste Transfer Station

Some Balfour Beatty depots have an Environmental Permit in place to allow them to operate as a waste transfer station. This allows larger quantities of waste to be brought back to the depot and stored prior to disposal as well as allowing other activities which aren't covered by an environmental exemption, for example dewatering gulley waste.

It is required to complete a waste transfer note when taking Balfour Beatty waste to a Company-operated waste transfer station which operates under an Environmental Permit. This allows Balfour Beatty to:

- Monitor that the amount of waste being stored doesn't exceed the Permit requirements.
- Have the necessary information available for Balfour Beatty to complete the quarterly waste returns for the Environment Agency.

For further information see ENV-RM-0039a Waste Management Licences Permits and Exemptions and ENV-TB-0039a Using a Balfour Beatty-operated Waste Transfer Station.

Hazardous Waste Consignment Note

A consignment note must be used for all movements of hazardous waste (special waste in Scotland). This includes:

- Collections from businesses by registered waste carriers
- Movements from one premises to another within the same business
- Movements from customer premises where another business has produced the waste

A consignment note must contain all the information required by a waste transfer note, and additionally:

- Hazardous waste premises code (Wales only – see below)
- Details of the disposal site

Only one consignment note is needed for each waste movement. Consignment notes must be provided by the waste carrier. If a third party provides a consignment note, there is no need for Balfour Beatty to also produce a consignment note.

The Balfour Beatty Consignment Note template is ENV-SF-0035g Hazardous Waste Consignment Note.

Scotland – Intra Group Movements
When special waste is moved from a site back to a depot for storage prior to its disposal or recovery then a consignment note must be raised but it doesn't need pre-notifying to SEPA. Further information on intra-group movements on the SEPA website.

There may be instances where special waste can be moved from an operational site back to a depot specifically for that project without the need to consign the waste from the operational site. For example, if it is deemed that keeping it at the operational site before consignment would likely cause further environmental harm. This must be checked with SEPA. The waste must be consigned from the depot.

Regulatory Position Statement (RPS) Diffuse Network Infrastructure – England
RPS 'Diffuse Network Infrastructure' allows engineers or operators to move small quantities of waste from minor works, at diffuse locations not associated with other premises, back to base. Information on the RPS is available here.

Note that the RPS doesn't remove the need for a consignment note as it says *'You must always consign hazardous waste when it's removed from the place where it was produced on the network. This includes waste being moved from one place on the network to another place on the same network by road, rail, water or air.'*

The RPS does allow for a summary consignment note to be used when specific conditions have been met. Otherwise, a normal consignment note must be used.

Waste consignment note exemptions - Wales
There are a small number of activities at certain locations where you do not have to complete a consignment note, e.g. parts of a highway where spillages are cleaned up or places on railway tracks where maintenance works are carried out. Go to the list of all exempt places and activities.

Moving Small amounts of hazardous waste
It is usual for small amounts of hazardous waste to be generated on a construction site and returned to a Balfour Beatty depot for disposal. Examples include used spill kits and empty aerosol cans. There are different rules for how this waste must be moved depending on where the waste was generated. In BBLP, internal transfers must be recorded, load by load and regardless of size / quantity.

England - Highways, railways, waterways or utility infrastructure
If hazardous waste is produced at a clearly defined premises on the network, for example a station, depot, substation, pumping station, building or equivalent then waste must be consigned when it is removed from the premises.

England – Mobile services
A mobile service is where hazardous waste is produced at a customer premises, other than a domestic premises. The following must be followed:

- Consign the hazardous waste when its removed from the customer premise
- Enter the customer's business name and address for where the waste was created, and use this to create the consignment note code
- Enter Balfour Beatty's name and address for the producer of the waste

Hazardous Waste Premises Registration in Wales
In Wales, premises which produce or store more than 500kg of hazardous waste in a 12 -month period must be registered with Natural Resources Wales. When a site is registered, a hazardous waste producers number will be provided, called a 'premises code'. The premises code must be entered on the consignment note. Further information and details on how to register can be found on the NRW website.

Wales – Mobile services
A mobile service is one where a limited amount of waste is produced at a site which is neither owned nor operated by Balfour Beatty. The mobile service operator can produce limited amounts of waste at each customer premises without those premises being notified to NRW. For further information refer to the NRW website.

Wales – Sites exempt from registration
Some premises are exempt from the ned to register them as hazardous waste producing sites. Further information is provided here Natural Resources Wales / Register or renew as a hazardous waste producer.

There is no requirement to register premises in England, Scotland or Northern Ireland.

The rules about consignment notes and pre-notifying the regulator prior to the movement of hazardous waste differ depending on which country in the UK the waste is being moved from:

	Consignment note requirements	**Pre-notification requirement**
England	An EA consignment note or a company's own consignment note can be used. This can be either a Balfour Beatty consignment note if Balfour Beatty is moving the waste or a subcontractor or waste contractors' consignment note if they are moving the waste. The format of the consignment note code is XXXXXX**/**YYYYY. The first 6 characters of the consignment note number must be the first 6 letters or numbers of the business name. BALFOU should be used across the business. YYYYY is 5 numbers or letters that you choose. Each consignment note number must be unique, so for YYYYY consider choosing two or three letters that relate to the project and then number sequentially e.g. BALFOU/HP001, BALFOU/HP0002 etc. Further information is available at https://www.gov.uk/government/publications/hazardous-waste-consignment-note.	None
Wales	An NRW consignment note, or a company's own consignment note can be used. This can be either a Balfour Beatty consignment note if Balfour Beatty is moving the waste, or a subcontractor or waste contractors' consignment note if they are moving the waste. If your site is in Wales and generates >500kgs of hazardous waste per year, you must register as a hazardous waste producer to obtain a premises code for use on consignment notes.	None

	The consignment note code is made up of the premises code followed by a set of five letters or numbers that are unique. If the waste is from an exempt site, the consignment note number must be EXE followed by eight letters or numbers. Each consignment note number must be unique, so consider choosing two or three letters that relate to a project and then number sequentially e.g., EXE/HPC00001, EXE/HPC00002 etc. Further information is available at: Natural Resources Wales / How to complete a hazardous waste consignment note Exclusions apply:	
Scotland	All special (hazardous) waste produced in Scotland must be consigned using a SEPA-issued consignment note or code, regardless of its final destination within the UK. Unique SEPA special waste consignment note codes can be purchased online. SEPA is updating the format and process for submitting consignment notes. In addition, PDF formats, there is now an Excel version which is our preferred format. Further information is provided at Special Waste | Beta | SEPA | Scottish Environment Protection Agency SEPA is no longer selling paper Special Waste Consignment Notes.	If special waste is being moved within Scotland, no pre-notification to SEPA is required. If special waste is being moved from outside Scotland, into Scotland the waste movement must be pre-notified to SEPA at least 72 hours in advance. If special waste is being moved out of Scotland, refer to the requirement relevant destination agency for England, Wales or Northern Ireland. Further information is available at: consigning_special_waste_guidance.pdf Hazardous/special waste notifications | NetRegs | Environmental guidance for your business in Northern Ireland & Scotland
Northern Ireland	Contact NIEA directly to obtain a consignment note containing a unique number - or a consignment number if using your own forms.	Pre-notification must be provided to the NIEA at least 72 hours prior to removal of hazardous waste. Further information is provided at https://www.gov.uk/hazardous-waste-movement-notice-northern-ireland.

Note 6 – Make sure waste documentation is retained

Signed copies must be kept as follows (an electronic system and scanned copies are acceptable):

- Waste Transfer Notes – 2 years
- Consignment Notes – 3 years
- Hazardous waste consignee returns (Quarterly Hazardous Waste Returns) – 3 years

Electronic Consignment Notes (England)
Electronic hazardous waste consignment notes can be used but their use must comply with the law.

As with paper copies, before a waste is removed from a premises, the producer, holder or consignor must confirm the details are correct, sign part D and retain their copy.

In all cases a signature must be provided, and a copy retained before the waste is removed. A copy may be retained either by keeping an electronic copy on a local computer system, printed out locally, or by being accessible from the site via either a local or remote secure server or website.

It is an offence for the carrier to remove the waste before a copy has been provided to the producer/holder.

Hazardous Waste Consignee Returns (Quarterly Hazardous Waste Returns)
As a producer of hazardous waste, it is a legal requirement that Balfour Beatty receives hazardous waste consignee returns (known as 'quarterly hazardous waste returns') from each business that receives our hazardous waste (such businesses are known as 'consignees'). This could be a waste contractor such as a skip company. It is a legal requirement that we receive these returns and keep them for 3 years. If consignee returns are not being received, they must be requested in writing.
Consignee returns can be received in one of two formats:

- A form which details multiple hazardous waste consignments where a site sends regular loads to a specific disposal site.
  OR
- A fully completed consignment note, including Part E which includes a description of the method of disposal or recovery undertaken in relation to the waste, if the waste was accepted "A" or rejected "R", record of the receiving site's permit / exemption.

In both cases, Balfour Beatty must receive the documentation within one month of the end of the quarter in which the waste was accepted by the person receiving the waste (the consignee). It is an offence to withhold waste documentation from the producer due to late payment.

For waste disposed of via Reconomy, fully completed consignment notes (including part e) are uploaded via the Reconomy Portal and can be accessed at https://portal.reconomy.com/login. Further notification may also be received at the site where the waste arose.

For waste disposed of via non-Reconomy waste contractors, consignee returns are provided to the site where the waste arose.

From 15th July 2019, if persistent organic pollutants (POPs), listed in Annex 4 of the POP recast regulations are present above the set thresholds, the code POP must be recorded in addition to the hazard (HP) code/s.

Balfour Beatty must ensure that consignee returns are complete and accurate. If they aren't, a record of any missing information must be kept.

Legislation and Regulation
England and Wales **(EN)** **(W)**
The Waste (England and Wales) Regulations 2011 (as amended) require that waste is stored correctly, it is transported by a registered waste carrier (two-tier registration system), all collections are recovered and accompanied by a valid waste transfer note and waste is taken only to a permitted, exempt or authorised facility. They also require that waste collectors (i.e. skip companies) offer to collect paper (including cardboard), plastic, metal and glass separately.

The Hazardous Waste (England and Wales) Regulations 2005 (as amended) require that hazardous waste is stored and transported correctly, that different types of hazardous waste aren't mixed and that hazardous waste is only taken to a site which can legally accept it. Hazardous waste consignment notes must be used for the transfer of hazardous waste.

England **(EN)**
From 31st March 2025, The Simpler Recycling Regulations will make it a legal requirement for all Balfour Beatty locations in England to separate their core recyclable waste streams and arrange for the separate collection of these.

Wales **(W)**
The Waste Separation Requirements (Wales) Regulations 2023 made it a legal requirement for Balfour Beatty locations in Wales to separate their waste for recycling from 6th April 2024

In Wales, producers of hazardous waste are required to register premises (sites) which produce in excess of 500kg of hazardous waste in 12 months, with Natural Resources Wales prior to its removal.

Scotland **(S)**
The Environmental Protection (Duty of Care) Scotland Regulations 2014 (as amended) require that waste is stored correctly, it is collected by a registered waste carrier, all collections are covered by a valid waste transfer note, waste is taken only to an authorised facility, and that consignment notes are used for the transfer of special (hazardous) waste.

The Special Waste (Scotland) Regulations 1996 (as amended) outline the requirements around the movement of special waste in to and out of Scotland and any requirement to pre-notify SEPA at least 72 hours in advance of the waste movement, when the special waste is entering Scotland.

The Waste (Scotland) Regulations 2012 require that waste producers take reasonable steps to present the following key dry recyclables for separate collection: paper (including cardboard), plastic, metal and glass.

The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991 (as amended) introduce provisions for the registration of carriers of controlled waste and for the seizure of vehicles that are used for illegal waste disposal. They both supplement and introduce new provisions, which assist in the implementation of the Control of Pollution (Amendment) Act 1989. These Regulations entered into force in England, Wales and Scotland on the 14 October 1991, and have been subsequently amended. Although almost fully revoked in England and Wales they still apply in Scotland.

Northern Ireland **(NI)**
The Controlled Waste Duty of Care Regulations (Northern Ireland) 2002 (as amended) requires waste holders and transporters to use waste transfer notes and keep records.

The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations Northern Ireland 1999 (as amended) requires all waste carriers to register with the Northern Ireland Environment Agency (NIEA).

The Waste Regulations (Northern Ireland) 2011 require that waste collectors set up separate collections of paper (including cardboard), plastic, metal and glass.

UK Documentation

Reference	Type	Title
ENV-RM-0035c	Reference Material	Disposing of Waste Electrical and Electronic Equipment
ENV-RM-0035d	Reference Material	Use and Disposal of Coal Bound Tar Materials
ENV-RM-0035e	Reference Material	Waste Assessment and Classification
ENV-RM-0035p	Reference Material	Management of Specific Waste Types
ENV-SF-0035c	Standard Form	Waste Contractor Inspection
ENV-SF-0035f	Standard Form	Waste Transfer Note
ENV-SF-0035g	Standard Form	Hazardous Waste Consignment Note
ENV-SF-0035h	Standard Form	Waste Contractor Audit
ENV-TB-0035a	Toolbox Talk	How to Complete a Waste Transfer Note
ENV-TB-0035c	Toolbox Talk	Fly-tipping
ENV-TB-0035d	Toolbox Talk	Waste Segregation and Storage
ENV-TB-0035e	Toolbox Talk	Street Lighting – Lamp Recycling
ENV-TB-0035f	Toolbox Talk	Coal Tar
ENV-TB-0035g	Toolbox Talk	Control of Road Sweeper Arisings
ENV-TB-0035h	Toolbox Talk	Waste Management: Classification
ENV-TB-0035i	Toolbox Talk	Waste Management: Waste Hierarchy
ENV-TB-0035m	Toolbox Talk	Waste Management – Container Efficiency
ENV-AL-0035d	Alert	Simpler Recycling Requirements in England
Video resource	Video	Digital Waste Transfer Note (Sustainability Portal)

External Documentation

Reference	Type	Title
External Document	EA / SEPA / NRW / NIEA technical guidance	Waste Classification Guidance on the classification and assessment of waste (WM3)
External Document	DEFRA Code of Practice	Waste Duty of Care Code of Practice
External Document	Natural Scotland	Duty of Care a Code of Practice
External Document	EA – Regulatory position statement	065 Dewatering of road sweepings
External Document	NIEA	Waste Management – The Duty of Care – A Code of Practice
External Document	NIEA	Regulatory Position Statement – Waste – Short Guide to Duty of Care Responsibilities
External Document	SEPA	Activities exempt from waste management licensing
External Document	SEPA	A Guide to Consigning Special Waste

External Document	NRW	Where mobile service operators produce all of your hazardous waste
External Document	Environment Agency	Hazardous Waste: consignment note guidance
External Document	Environment Agency	Disposal of waste to landfill
External Document	Wood Recyclers Association	Waste Wood Assessment Guidance for the UK Waste Wood Industry v1.2
External e-learning	Supply Chain Sustainability School	England, Scotland, Wales & Northern Ireland

D. Master Pollution Incident Plan

Foul drainage
Surface Drainage
X Spill Kits
Interceptors
Rivers, Streams, Brooks, Ditches (including dry ditches)

Emergency Spill Response

- Step 1: **ASSESS THE RISK** to people and to the environment based on the nature and quantity of the spilt substance. Do Not take personal risks.
- Step 2: **SELECT PPE** that is appropriate for the substance before attempting to contain it.
- Step 3: **STOP** the spill or leak at the source.
- Step 4: **CONTAIN** the spill with the materials provided, or alternative materials to hand in an emergency.
- Step 5: **EVALUATE AND CLEAN UP** the area with spill materials provided.
- Step 6: **DECONTAMINATE** all personnel, equipment and surfaces impacted by the spill. Excavate any visibly contaminated land. Dispose as hazardous.
- Step 7: **REPORT** the event according to site and business unit's incident reporting procedures.
- Step 8: **RESTOCK** used spill kits ASAP.

Key Contacts

Environmental Sustainability Lead **– Seif El Zarka**
Emergency Spill Response Contractor **– Reconomy**
Site contact **- Dylan Crabtree 07707 167927**

Emergency Spill Response

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Surface Drainage
X Spill Kits
Interceptors

Key Contacts

Environmental Sustainability Lead – **Seif El Zarka**
Emergency Spill Response Contractor – **Reconomy 01952 292 000 / 07817 770 148 / 07506 306 538**
Site contact - **Dylan Crabtree 07707 167927**

E. Concrete Washout Procedure

Introduction

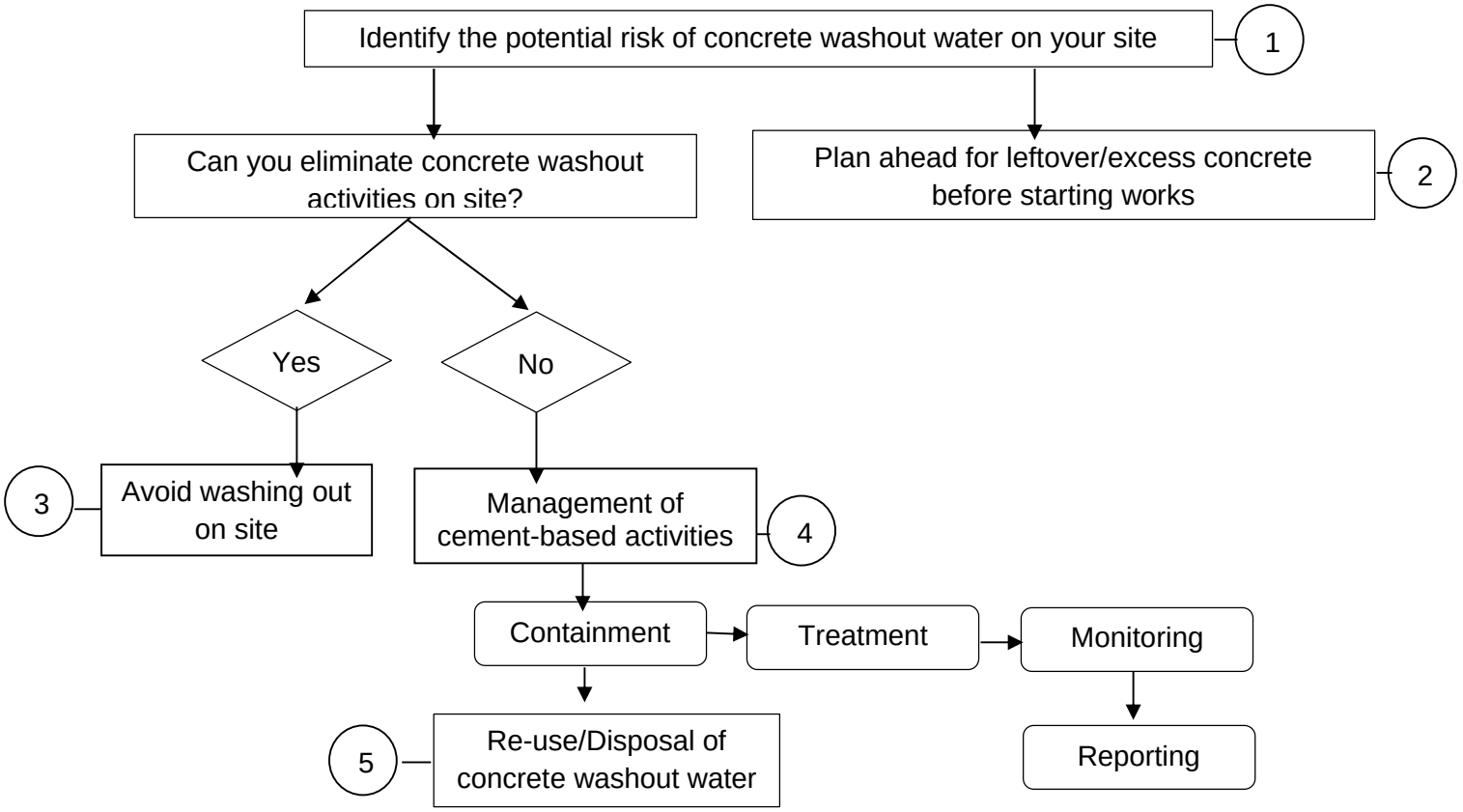
Cement and cement containing products such as concrete and grout are among the most common materials used in construction, however the wash water from their use is highly alkaline, which is incredibly harmful to the environment.

Even the release of relatively small volumes of cement wash water can have devastating long lasting effects on the health of the receiving watercourse. The high alkaline wash water can increase the pH of surrounding waters harming terrestrial and aquatic life. The solids in the water can affect the turbidity of the water, block gills of fish, smother the bed of the water body and cause blockages of streams, drains and pipes, which may increase the risk of flooding.

Abbreviations / Definitions

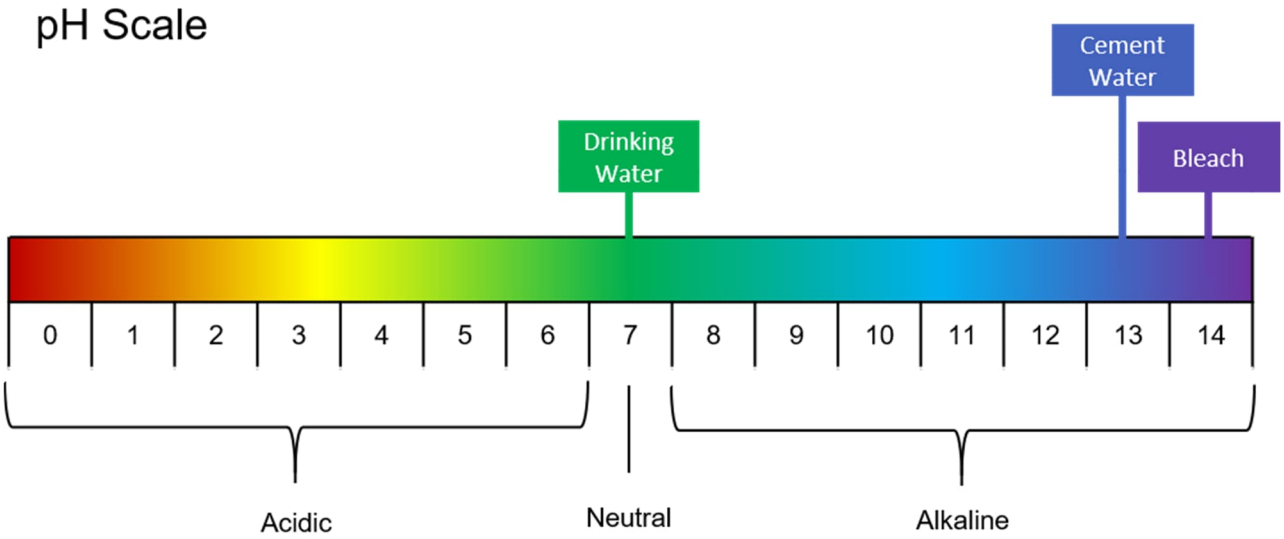
pH	Measure expressing the acidity or alkalinity of a solution on a logarithmic scale on which 7 is neutral, lower values are more acid and higher values more alkaline.
Logarithmic scale	The pH scale is logarithmic, meaning that an increase or decrease of a whole value changes the concentration by a tenfold. For example, a pH of 3 is ten times more acidic than a pH of 4.
Alkaline	Substance having a pH more than 7.
Turbidity	The quality of being cloudy, opaque, or thick with suspended matter.
Trade Effluent	Any effluent that is produced from a process or activity undertaken at premises that are used to carry out a trade or industry. However, it doesn't include domestic sewage - for example used water from hand-washing and flushing of toilets.

What you need to do



Note 1: Identify the risk

If released to the environment cement wash water has the potential to pollute land and leach into the ground contaminating groundwater.



One unit change in pH (e.g. 6 to 7) represents a tenfold increase in strength. As such, it would take 4 Olympic swimming pools of water (over 10,000m³) to dilute just 1m³ of cement wash water to pH7.

Permits typically stipulate a pH of between 6 and 9 for discharges into the aquatic environment and Trade Effluent consents require the pH to be 10 or below.

Although not suitable for accurate measurements, pH test strips are a cheap and convenient way of identifying water requiring treatment out on site.

Highly alkaline water can be created in the following situations:

- From leftover concrete incorrectly stored on site
- Washing down of machinery used with fresh concrete, e.g. concrete chutes, drums, pumps and mortar silo equipment
- Cutting or coring of concrete structures
- From cement bound sand used as bedding to protect underground cable installations
- During hydrodemolition (high pressure water cutting)
- Run-off from recently lime stabilised sites
- Placement of fresh concrete beneath groundwater e.g. piled foundations
- Placement of fresh concrete in a water course e.g. Bridge abutments

Even the release of relatively small volumes of concrete wash water can have devastating long lasting effects on the health of the receiving watercourse. The high alkaline wash water can increase the pH of surrounding waters and, depending where it is discharged, can harm terrestrial and/or aquatic life. The solids in concrete washout water can affect the turbidity of the water, block gills of fish, smother the bed of the water body and cause blockages of streams, drains and pipes, which may increase the risk of flooding.

Note 2: Plan for leftover / excess concrete

Any unused excess concrete (including concrete test cubes) must be stored:

- On an impermeable surface such as an impermeable sheet
- At least 10 metres from drains, ditches and watercourses
- On site in a single agreed location
- Away from works and people and segregated from other materials.

Leftover concrete CANNOT be placed in a skip as waste. Set up an excess concrete solution prior to starting works.

Once the concrete is dry it can be broken up by an excavator and used on any site on the same project or placed in the rubble skip for disposal. Uses for the broken up concrete differ depending on fragment size and could include backfill for excavations, repair material for infilling pot holes on access tracks or infill for crane pads or piling platforms.

Note 3: Avoid washing out on Site

Preference should be given to avoiding the need to wash out on site by engaging with the concrete supplier to identify alternative options. For example, there are solutions for concrete wagons to contain washout water and dispose of back at the depot, and to prevent concrete spillages . Two such examples are:

Spill Stopper System – contains wash water on the wagons and prevents in-transit spills.
Concretesock® or similar – a chute cover which reduces risks of concrete spills in-transit.

Note 4: Management of cement-based activities

All sites must develop a strategy for dealing with concrete washout water prior to mobilisation on site and communicate it to key stakeholders e.g. concrete suppliers, workforce etc. The following must be followed:

- Concrete washout requirements must be specified in any orders and built into terms and conditions as required.
- Plan and implement wastewater control measures prior to mobilisation on site
- Engage with the local regulator to discuss concrete washout management options and apply for appropriate consents if required.
- Plan and prepare for a spill.
- Minimise water consumption and waste water generation e.g. recirculate collected washout water.
- Receptacles for wash water must be regularly monitored to ensure that overtopping does not occur and any deterioration in the waterproofness of the structure is identified and repaired as necessary.
- Surplus cement products (mortar and concrete) should be disposed on an impermeable surface, such as plastic sheeting more than 10 metres from watercourses and away from people, plant and the construction works. Once hardened it should be disposed as inert waste, preferably for beneficial re-use.
- Any wash water / slurry must be contained. Run-off must be directed to a secure waterproof sump or secure tank and the liquid fraction disposed as planned, (following treatment if required).

Site documentation should show:

- The location of the concrete washout facility.
- Copies of consents.
- Records of regulator engagement.

- How concrete wastes are going to be stored.
- How concrete wastes will be collected from these storage points.
- Where wastes will be taken to and/or how they will be treated and disposed.
- How any treatment systems to treat the liquid fraction and/or recover the solids will be operated and maintained.
- How site personnel, particularly those responsible for concrete delivery and pumping, will be made aware (via induction, toolbox talks, pre-start meetings etc.) that a wash-down area is available on-site and when and how it is to be used.

Cement water containment

Wash water should be contained:

- In a designated and signed washout area;
- Within an impermeable bund;
- At least 10m from any watercourses pr surface water drain;

To minimise the amount of washout water generated, excess concrete should be scraped off the equipment before it is washed. These excess solids should be placed in a designated surplus cement products location until hardened. A high pressure, low volume water spray nozzle reduces water use. Where possible, washout bays / skips / containers should be covered during heavy rainfall and at night to avoid flooding.

Treatment of concrete washout water

Proven methods to treat concrete washout water are:

- Treatment with mineral acid, such as sulphuric or hydrochloric are dangerous to handle and when used to reduce the pH level it is easy to overshoot the target resulting in acidic water which will need to be disposed as hazardous waste water (special waste in Scotland).
- Treatment with citric acid, like acid there is a risk of over dosing and acidifying the treated water with citric (fruit) acid. Citric acid also increases the Biochemical Oxygen Demand (BOD) of the water above the limits for safe discharge into the aquatic environment.
- Carbon dioxide is mildly acidic when dissolved in water and is the safest neutralising agent for concrete water as it is self-buffering, making it virtually impossible to acidify the water though overdosing.

A third party should be engaged to install, operate and provide instruction on using these systems. Examples of such systems include:

The Siltbuster Roadside Concrete Washout Unit (RCW) - captures and treats wash water generated from the cleaning of concrete truck mixer chutes on site via settlement and a pH adjustment system.

MCW (Micro Concrete Washout System) by Siltbuster – a compact and versatile system that neutralises and recycles concrete wash water enabling water to be treated, stored and reused for wash down purposes

Monitoring

All concrete washout areas should be monitored to ensure that they are working correctly and have adequate storage capacity. Monitoring should take place weekly during dry weather and prior to, during and after forecast rainfall events.

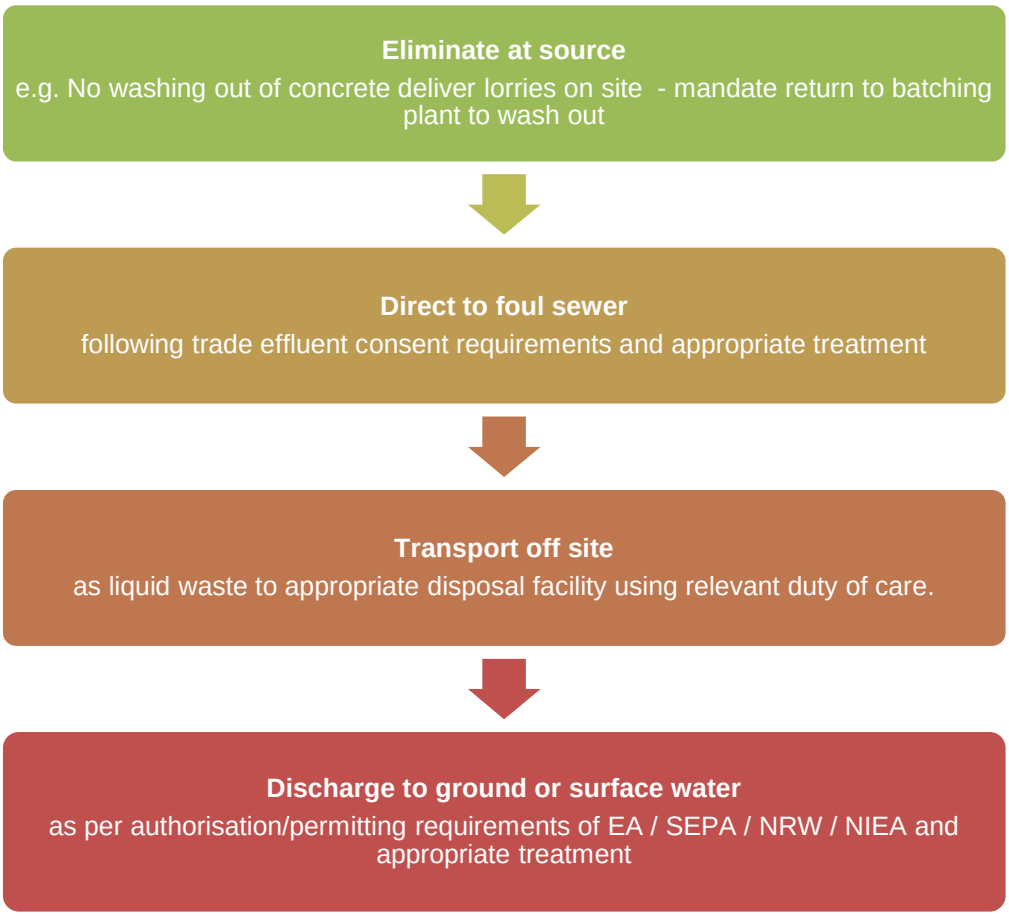
Set concrete and wash water should be removed as required to ensure that the facility has sufficient capacity and prevent overtopping.

An environmental incident occurs if:

- Concrete is washed out in an area other than the designated concrete washout area.
- Concrete washout leads to a release of concrete washout water to land, surface water or the drainage network.
- In the event that an environmental incident occurs then this occurrence should be reported and notified as per business unit reporting requirements and as set out in HSES-PR-0005 Incident Reporting and Investigation

Note 5: Re-use / Disposal

Hierarchy of Disposal for Concrete Washout Water:



England **(EN)**

Concrete wash water cannot be discharged directly to ground without an environmental permit.

RPS 235 allows you to treat and use water that contains concrete and silt at construction sites without an environmental permit for a waste operation. Specifically, this RPS allows you to:

- store and treat water that contains concrete and silt, within the construction site, before use
- use treated water that contains concrete for washing equipment or mixing concrete
- use treated water that contains silt produced from washing equipment for washing equipment or damping down haul roads

This RPS does not apply to any other activity and there are very specific conditions you must comply with. You may still need other permits or licences for other activities you carry out.

Third party systems exist ready to be deployed on site.

Where possible store and reuse washout water in batching fresh concrete to reduce waste.

If available, apply for a Trade Effluent Consent from the sewerage undertaker to dispose of concrete wash water into foul water drain. The water will need to be treated to remove solids and reduce pH to below 10 (or to level specified) before disposal to avoid blocking drains or damaging treatment works.

Contain; dispose off-site as liquid waste via Reconomy or other waste contractor.

Wales **(W)** Scotland **(S)** Northern Ireland **(NI)**

Guidance for Pollution Prevention on Works and maintenance in or near water: GPP 5 provides guidance on environmental legislation in Wales, Scotland and Northern Ireland. Information on concrete, cement and grout is provided in section 3. Wash waters from concrete and cement works should never be discharged into the water environment as this could have serious impact on the water quality and ecology. Wash water shouldn't be dispersed directly to 'ground'.

Option 1: Contain; apply for a Trade Effluent Consent or enter into a trade effluent agreement with Scottish Water/Northern Ireland Water/Welsh Water before you discharge trade effluent or 'liquid waste' to a public foul sewer or a private sewer that connects to a public foul sewer; treat to remove solids and reduce pH <10 (or to level specified by sewerage undertaker). You may also need SEPA approval in Scotland.

- Trade Effluent is any liquid waste 'produced in the course of any trade or industry' which is discharged to the waste water system. It is the legal responsibility of a company which discharges trade effluent to public sewer to obtain a Consent from Scottish Water. Failure to apply for Consent may result in a fine, which is currently set at a maximum of £40,000.
- Project teams that will be disposing of trade effluent into the foul water system are to apply for a Trade Effluent Consent by completing Trade Effluent Notice (Form H). Smaller discharges, generally <2m3 in volume, may be controlled by issuing a Letter of Authorisation. This will be confirmed by Scottish Water once the application has been received. Temporary discharges greater than 2m3 are issued with a FULL consent which lasts 6 months before being terminated.
- Scottish Water will not issue a Consent until a Licensed Provider has been appointed.
- There is no charge to submit the Form H application. Applicants may be required to submit sample analysis results to prove the nature of the discharge at their expense. If samples have to be taken by Scottish Water to monitor discharge compliance these charges may be costed back to the applicant. Any other charges will be confirmed by the Licensed Provider.
- The Trade Effluent Consent must be in place before any waste water is disposed to the foul sewer. The statutory period for processing a Form H application is 90 days. Scottish Water aim to process each application as quickly as possible. Straightforward applications generally take 3 – 6 weeks. Complicated applications may take longer than 3 months before a decision can be made. It is recommended applications are submitted at the earliest opportunity.
- The Trade Effluent Consent lasts 6 months before being terminated. If the discharge will last for more than 6 months do not tick 'temporary' on the Form H; a FULL consent will be issued. When no longer required the project team must use the Trade Effluent Notice (Form H) to terminate the consent with Scottish Water.
- The project team is responsible for self-inspecting the turbidity and pH to determine it is acceptable for discharge.
- Waste water, treated if necessary, can be disposed directly into the foul sewer via the man-hole access. Ideally a discreet location will be selected. It is the project teams responsibility to manage any risks and nuisances associated with lifting the man-hole cover. It is not necessary to 'break in' and make a fixed connection to the sewer.

Option 2: Contain; dispose off-site as liquid waste via Reconomy or other waste contractor.

Option 3: Contain; treat to remove solids and reduce pH <9 (or to level specified); apply for formal authorisation from SEPA / NRW / NIEA to discharge via a fully constructed soakaway to groundwater. Only an option in small number of circumstances.

Legislation and regulation

England and Wales **(EN)** **(W)**

Under the Environmental Permitting (England and Wales) Regulations 2010 (as amended) and the Water Resources Act 1991 (as amended), it is on offence to discharge polluting substances to controlled waters (surface water and groundwater) without prior approval from the relevant Regulators (Natural Resources Wales and Environment Agency).

Scotland **(S)**

Under the Water Environment (Controlled Activities) Regulations 2011 (as amended) and the Water Resources (Scotland) Act 2013 it is an offence to discharge polluting substances to controlled waters (surface water and groundwater) without prior approval from the relevant Regulator (Scottish Environment Protection Agency and Scottish Water).

Northern Ireland **(NI)**

Under the Water (Northern Ireland) Order 1999 (as amended) it is an offence to cause pollution of a waterway or groundwater. Effluent cannot be discharged without the prior approval from the relevant regulator (Northern Ireland Environment Agency).

UK Documentation

Reference	Type	Title
ENV-RM-0009b	Reference material	Concrete Washout Disposal Training (Scotland, Wales, N. Ireland, England)
ENV-SF-0009a	Standard Form	Concrete Wash Water Record
ENV-TB-0009a	Toolbox Talk	Concrete Washout

External Documentation

Reference	Type	Title
External Document	EA Guidance	Environment Agency Guidance on Regulatory Position Statement (RPS)
External Document	SEPA / NRW / NIEA Guidance	Guidance for Pollution Prevention Works and maintenance in or near water: GPP5

F. Spill Response Procedure

INTRODUCTION

Balfour Beatty uses numerous substances which have the potential to cause significant environmental pollution if they leak or spill into soil, surface water or groundwater either directly or via drainage systems and environmental pathways. Leaks or spills, and their management, may also expose Balfour Beatty and other personnel to harmful substances and so give rise to health & safety risks.

Environmentally harmful liquids used on our sites include:

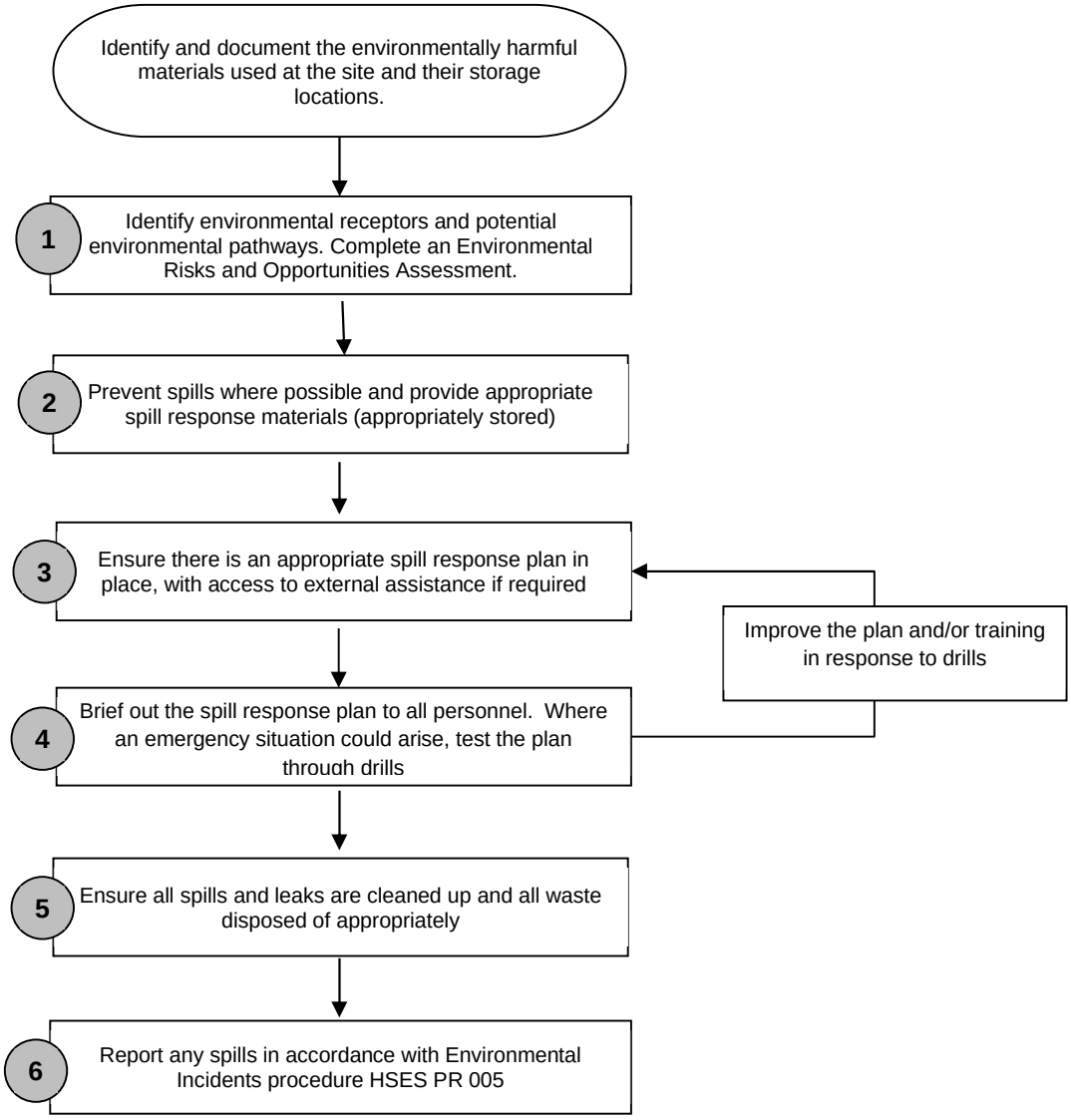
- Hydrocarbons such as oil, petrol, diesel and hydraulic fluid
- Solvents such as white spirit, paraffin
- Pesticides, herbicides and biocides
- Chemicals such as antifreeze, wood preservatives, chlorine, brake fluid and cleaning materials
- Battery acid
- Paint
- Sewage effluent

Project relevant documents that are hyperlinked in ENV-RM-0018a are attached in this appendix.

ABBREVIATIONS / DEFINITIONS

EA	Environment Agency
Environmentally harmful substances	Any material or substance that is either hazardous to the environment (as indicated by the following hazard symbol) or could cause pollution of water. 
Environmental receptor	Environmental media (air, water and soil), plants, animals and humans that may be impacted by a spill or leak
Environmental pathway	Any route that a spill or leak can take to reach an environmental receptor. The route can be through environmental media or manmade structures such as drainage systems
GBR(s)	General Binding Rule(s)
NRW	Natural Resources Wales
NIEA	Northern Ireland Environment Agency
SEPA	Scottish Environment Protection Agency

What you need to do



1.0 ENVIRONMENTAL RISKS AND OPPORTUNITIES

Project specific environmental risks and opportunities must be identified for all works we carry out using ENV-SF-0001a Environmental Risks and Opportunities Tool. Evaluate the likelihood of a spill or leak impacting on the environment by considering the potential for a spill to occur, the presence of sensitive environmental receptors in the vicinity and the existence of environmental pathways such as drainage systems linking the two. Consider both normal (day-to-day), abnormal (less frequent but still planned e.g. maintenance activities) and emergency conditions e.g. plant/vehicle impact and flood events.

Adequate site-specific measures must be identified and deployed to eliminate or mitigate the environmental impact of a spill both on-site and downstream of our activities.

The risk assessment must ensure that our operations do not:

- Cause pollution of soil, groundwater or surface water
- Impact surface water quality with potential for impact on aquatic life

2.0 SPILL PREVENTION AND CONTINGENCY PLANNING

Reduce the risk of a leak or spill by:

- Eliminating the use of environmentally harmful materials where possible by substituting less harmful alternatives
- Storing only the required quantities on-site
- Preventing decanting wherever practicable by procuring the correct sized container for the task.
- Ensuring all harmful materials and kit (e.g. compressors, hand-held tools, generator) are stored in suitable containers within appropriate secondary containment (e.g. plant nappy, bund)

Assess the liquids being stored and used on site and ensure that suitable and sufficient spill materials are provided for use in the event of a spill or leak. Spill material must be suitable for the liquids they are designed to contain and be of a size and shape that are appropriate to risk that has been identified. A guide to the size of spill kits is provided in ENV-RM-0007a Storage of Oils, Fuels and Liquids.

A spill kit may contain a range of materials in a number of configurations such as drain covers, absorbent granules, absorbent booms (or socks), plant nappies, absorbent pillows etc. Spill kits should be provided at, or within easy reach of, all locations where they are needed in order to:

- Block environmental pathways by, for example, protecting drains; and
- Protect sensitive receptors

Spill kits must also be provided in Balfour Beatty vans, grab wagons and plant as well as hired vehicles and plant such as grab wagons, excavators, mini diggers etc. The locations and contents of spill kits must be recorded within site documentation, and they should be checked regularly to ensure that they remain adequately stocked.

3.0 SPILL RESPONSE PLANNING

Each site storing and using environmentally harmful materials must have a suitable and sufficient spill response plan. For depots, ENV-TF-0005a Master Pollution Incident Plan should also be filled out. Where necessary, and as indicated by the Environmental Risks and Opportunities Assessment, this must include site-specific details: Roles & Responsibilities, Control Measures (Process flows), Site Plan, Site Risks, Training, Reporting, Drills, Contacts etc.

The general principles of spill response are as follows:

1. **ASSES THE RISK** to people and to the environment based on the nature and quantity of the spilt substance
2. **SELECT PPE** identified in the COSHH assessment for the substance before attempting to contain it
3. **STOP** the spill or leak at the source if safe and possible to do so,
4. **CONTAIN** the spill with the materials provided, or alternative materials to hand in an emergency. Block the environmental pathway by, for example, using a drain cover or absorbent boom.
5. **CLEAN UP** the area with spill materials provided
6. **DECONTAMINATE** all personnel, equipment and surfaces impacted by the spill. Excavate any visibly contaminated land.
7. **REPORT** the event according to site procedures using HSES-SF-0005a Incident Report and Investigation form. SBU legacy reporting requirements must also be followed. All incidents must be recorded on iSMS within 48 hours of the incident date
8. **RESTOCK** used spill kits ASAP.

If the Environmental Risks and Opportunities Assessment has identified that there may be situations when site personnel may not be able to manage a spill, the services of an emergency spill contractor may be required. Contact details for the contractor should be included in the spill response plan.

Provision is in place for the following emergency response contractors to be used:

SBU	Emergency Response Contractor	Coverage	Contact Details
UKCS / Major Projects / Living Places Preferred Supplier	Reconomy	UK	01952 292000 (8am-5pm excluding weekends and bank holidays) 07817 770148 / 07506 306538 (out of standard working hours)
Power T&D / Gas & Water / ATS / Rail Preferred Supplier	Adler & Allan Briggs Environmental	England & Wales Scotland	0800 592 827 01877 339 539
Rail (alternative supplier)	Ambipar	UK	Enqs 0203 9814388 Emergencies 01202 653558

4.0 TRAINING

All site personnel should be briefed on what to do in the event of a spill, including the locations of spill kits and how they should be used. Records of training in spill response should be retained. The poster ENV-RM-0018c can be used to display the details of those trained in the use of spill kits and to summarise basic spill response.

Where there is a foreseeable risk of an emergency situation occurring in relation to a spill, periodic testing of emergency arrangements must be conducted in line with the frequencies set out in HSES-PR-0003 Emergency Arrangements. ENV-SF-0018a Spill Environmental Emergency Drill must be used to record the test.

Any learnings arising from the Emergency Drills should be used to review and improve the spill response plan.

5.0 SPILL CLEAN UP

Excavating Contaminated Material - If the spill has happened on porous ground (e.g. soil, verge, grassland) then the contaminated ground will need to be excavated and disposed of off-site. Testing of the ground is likely to be required to identify the waste classification and the appropriate disposal route. This should be arranged through your Balfour Beatty Environmental Sustainability Advisor.

Disposal of used spill materials and contaminated PPE - Contain, bag and label all waste and dispose of in accordance with legal requirements.

Highway Spills – If a large spill is on the public highway or footpath, the local council or highways authority (if a trunk road) should be contacted to clean the site. There will be a charge made for this service which will be passed back to the project.

Spill entering drains – **Notify your Environmental Sustainability Advisor immediately if a spillage has entered the drains.** Refer to the drainage plan for the site or area (if available) to identify the route and outfall point where the spillage will discharge. If available, shut off the appropriate outlet valve (with appropriate permissions). If this is not possible, provide containment facilities such as floating booms at the outfall point. The drain/s may need to be pumped out to remove the contamination and prevent on-going discharge.

6.0 REPORTING SPILLS

Spills must be reported and notified immediately as set out in HSES-PR-0005 Incident Reporting and Investigation and as per business unit reporting requirements.

Spills that have, or may have, entered controlled waters should be notified to the relevant regulator in accordance with the above procedure.

Spills resulting from activities outside of Balfour Beatty's control (e.g. Road traffic accidents, member of public breakdowns etc) are not required to be reported.

Works carried out on the Network Rail managed infrastructure

Network Rail has a memorandum of understanding with the Environment Agency and the Scottish Environment Protection Agency which details when the regulator should be informed of **environmental incidents.** This is set out in full within Network Rail's document Level 2 Contract Requirements Environment. Network Rail's document Control of Environmental Incident Procedures provides guidelines for when the Environment Agency and SEPA should be informed of environmental incidents. ENV-AD-0018a- RAIL Network Rail Environmental Reporting Threshold Criteria briefly outlines these requirements.

Following notification from Network Rail of **low oil pressure alarms**, ENV-TB-5500-CAB Network Rail Oil Leak Reporting Requirements must be followed when carrying out oil feeding/oil pumping activities for Network Rail.

Works carried out on National Highways managed infrastructure

The National Highways has a memorandum of understanding with the Environment Agency on the reporting of environmental incidents, see Memorandum of Understanding between the Environment Agency and the Highways Authority Annex 3 Incident Management. Appendix A of this document provides guidelines for when the Environment Agency should be informed of environmental incidents.

LEGISLATION AND REGULATION

England and Wales **(EN)** **(W)** – under the Environmental Permitting (England and Wales) Regulations 2010 (as amended) and the Water Resources Act 1991 (as amended), it is on offence to discharge polluting substances to controlled waters (surface water and groundwater) without prior approval from the relevant Regulators (Natural Resources Wales, Environment Agency and Sewerage Undertakers).

Scotland **(S)** – under the Water Environment (Controlled Activities) Regulations 2011 (as amended) and the Water Resources (Scotland) Act 2013 it is an offence to discharge polluting substances to controlled waters (surface water and groundwater) without prior approval from the relevant Regulator (Scottish Environment Protection Agency and Scottish Water).

Northern Ireland **(NI)** – under the Water (Northern Ireland) Order 1999 (as amended) it is an offence to cause pollution of a waterway or groundwater. Effluent cannot be discharged without the prior approval from the relevant regulator (Northern Ireland Environment Agency).

UK DOCUMENTATION

Reference	Type	Title
ENV-SF-0001a	Standard Form	Environmental Risks and Opportunities Tool
ENV-RM-0007a	Reference Material	Storage of Fuels, Oils and Liquids
ENV-RM-0018b	Reference Material	Spill Kit Training Presentation
ENV-RM-0018c	Reference Material	Spill Control Poster
ENV-TB-0018a	Toolbox Talk	Spill Management and Response
ENV-SF-0018a	Standard Form	Spill Environmental Emergency Drill
HSES-PR-0003	Procedure	Emergency Arrangements
HSES-SF-0005a-e	Standard Form	Incident Report and Investigation
ENV-TB-5500-CAB	Toolbox Talk	Network Rail Oil Leak Reporting Requirements

EXTERNAL DOCUMENTATION

Reference	Organisation and Type	Title
External Document	SEPA / NRW / NIEA Guidance	Working at Construction and demolition sites: PPG 6 Pollution prevention Guidelines *
External Document	SEPA / NRW / NIEA Guidance	Works and maintenance in or near water: GPP 5 Guidance for Pollution Prevention *
External Document	Environment Agency Guidance	Prevent groundwater pollution from solvents
External Document	Environment Agency Guidance	Pollution prevention for businesses
External Document	Network Rail Requirements	Level 2 Contract Requirements Environment (NR/L2/ENV/015)

External Document	Environment Agency Requirements	Memorandum of Understanding between the Environment Agency and the Highways Authority Annex 3 Incident Management.

* Note that Pollution Prevention Guidelines were withdrawn by the Environment Agency in 2015 and no longer apply in England. They continue to provide a source of information on good practice for Scotland, Wales and Northern Ireland. See here for full list.

Environmental Incident Action sheets (EIAS)

EIAS 01 – Fuel, oil or chemical spill to watercourse or drainage system

EIAS 02 – Silt runoff to watercourse or drainage system

EIAS 03 – Fuel, oil or chemical spill to ground

EIAS 04 – Fuel, oil or chemical spill to highway

EIAS 05 – Unexpected discovery of contaminated land

EIAS 06 – Discovery of potential asbestos containing material

EIAS 07 – Unexpected discovery of protected species or habitat

EIAS 08 – Uncontrolled release of dust

EIAS 09 – Complaint due to construction noise

EIAS 10 – Enforcement action by LPA / EHO / Regulator / police

EIAS 11 – Flooding of worksite

EIAS 12 – Unexpected archaeological discovery outside planned archaeological works

EIAS 13 – Fly tipping

EIAS 14 – Illegal disposal of waste

Environmental Incident Action sheets (EIAS)

EIAS 01	
Incident:	**Fuel, oil or chemical spill to watercourse or drainage system**
Action:	1. Asses the risk to people and to the environment based on the nature and quantity of the spilt substance. Do not take personal risks. 2. Select PPE that is appropriate for the substance before attempting to contain it. 3. Stop the spill or leak at the source. 4. Contain the spill with the materials provided, or alternative materials to hand in an emergency. Block the environmental pathway by, for example, using a drain cover or absorbent boom. 5. Evaluate and clean up the area with spill materials provided. 6. Decontaminate all personnel, equipment and surfaces impacted by the spill. Excavate any visibly contaminated land. 7. Report the event according to site incident reporting procedures. 8. Restock used spill kits asap.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Sewerage undertaker where spillage is likely to enter sewers or drains Any Regulator contact must be agreed in advance with the Head of Sustainability for your BU

Environmental Incident Action sheets (EIAS)

EIAS 02	
Incident:	**Silty runoff to watercourse or drainage system**
Action:	1. Stop work and contact supervisor immediately. 2. Identify cause of silty runoff and stop flow where possible and safe to do so e.g. dewatering of excavations. 3. Block drains, create settlement ponds to enable settlement of solids, establish silt fence and I or place straw bales to filter runoff. 4. Establish controlled discharge allowing for settlement of solids and filtration using straw bales or silt fencing as appropriate. 5. Record in company incident reporting system.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Sewerage undertaker where a large volume of silty runoff has entered or is likely to enter sewers or drains Any Regulator contact must be agreed in advance with the Head of Sustainability for your BU

Environmental Incident Action sheets (EIAS)

EIAS 03	
Incident:	**Fuel oil or chemical spill to ground**
Action:	1. Stop work and contact supervisor immediately. 2. Establish nature of substance spilled, considering personal safety before beginning any action to stop or clean up spillage. Use appropriate PPE e.g. gloves. 3. Identify the source of spillage and stop flow immediately. Switch of sources of ignitions. 4. Prevent spillage spreading by diverting the flow, creating a dam with earth or blocking drains. 5. Locate the nearest spill kit and use absorbent booms, pads and granules as appropriate to soak up the spillage. 6. Do not wash spillage into drains and do not use detergents, as this will make things worse. 7. Call in emergency vacuum tanker / gully gulper if required to remove spillage. 8. Collect all used spill kit materials and contaminated soil for disposal as hazardous waste. 9. Record in company incident reporting system. 10. Replace any spill kit used.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Any Regulator contact must be agreed in advance with the Head of Sustainability for your BU Sewerage undertaker where spillage is likely to enter sewers or drains

Environmental Incident Action sheets (EIAS)

EIAS 04	
Incident:	**Fuel, oil or chemical spill to highway.**
Action:	1. Stop work and contact supervisor immediately. 2. Establish nature of substance spilled and risk of road traffic accident, considering personal safety before beginning any action to stop or clean up spillage. Use appropriate PPE and traffic management. 3. Identify the source of spillages and stop flow immediately. Switch to sources of ignition. 4. Prevent spillage spreading by diverting flow or blocking drains. 5. Locate the nearest spill kit and use absorbent booms, pads, and granules as appropriate to soak up the spillage. 6. Do not wash spillage into drains and do not use detergents, as this will make things worse. 7. Call in emergency vacuum tanker/ gully gulper if required to remove spillage. 8. Collect all used spill kit materials and contaminated soil for disposal as hazardous waste. 9. Record in company incident reporting system. 10. Replace any spill kits used.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Any Regulator contact must be agreed in advance with the Head of Sustainability for your BU Sewerage undertaker where spillage is likely to enter sewers or drains

Environmental Incident Action sheets (EIAS)

EIAS 05	
Incident:	**Unexpected discovery of contaminated land**
Action:	1. Stop work and contact supervisor immediately 2. Establish nature of contaminated material and risk to personal safety before implementing control measures to prevent the escape of contamination. Control measures may involve backfilling or covering the excavation or the use of absorbent spill kit materials. 3. Fence the affected area off and signpost to indicate "Contaminated Area - No Unauthorised Access". 4. Record in company incident reporting system. 5. Agree requirements for continuing works in the area with the Construction Manager and the Environmental Sustainability Manager.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Any Regulator contact must be agreed in advance with the Head of Sustainability for your BU Local Authority Environmental Health Officer where significant risk of pollution from contaminated land

Environmental Incident Action sheets (EIAS)

EIAS 06	
Incident:	**Discovery of potential asbestos contaminated material (ACM)**
Action:	1. Stop work and contact supervisor immediately. 2. Establish nature of contaminated material and risk to personal safety before implementing control measures to prevent the escape of contamination. 3. Fence the affected area off and signpost to indicate “Contaminated Area – No Unauthorised Access”.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Any Regulator contact must be agreed in advance with the Head of Sustainability for your BU Local Authority Environmental Health Officer where significant risk of pollution from contaminated land

Environmental Incident Action sheets (EIAS)

EIAS 07	
Incident:	**Unexpected discovery of protected species or habitat**
Action:	1. Stop work and contact supervisor immediately 2. Contact Ecologist to agree working methods and mitigation measures that may be required before recommencing work. 3. Record in company incident reporting system. 4. Work may only restart with authorisation of Ecologist.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Ecologist and the Regulator if advised (Any Regulator contact must be agreed in advance with the Head of Sustainability for your BU)

Environmental Incident Action sheets (EIAS)

EIAS 08	
Incident:	**Uncontrolled release of dust**
Action:	1. Stop work and contact supervisor immediately. 2. Damp down working area before recommencing work. 3. Review working methods to ensure best practicable means is being used. 4. Review weather forecasts to confirm whether additional control measures are required. 5. Record in company incident reporting system.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Community Relations Officer if dust released beyond site boundary Local Authority Environmental Health Officer if significant release of dust outside site boundary

Environmental Incident Action sheets (EIAS)

EIAS 09	
Incident:	**Complaint due to construction noise**
Action:	1. Stop work and contact supervisor immediately. 2. Contact Community Relations Officer. 3. Review working hours and Section 61 consent to confirm that work has been agreed with Local Authority Environmental Health Officer. 4. Review working hours and methods and investigate potential for improvement. 5. Record in company incident reporting system.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Community Relations Officer Local Authority Environmental Health Officer

Environmental Incident Action sheets (EIAS)

EIAS 10	
Incident:	**Enforcement action by LPA/ EHO/ EA/ POLICE**
Action:	1. Stop work and contact supervisor immediately. 2. Supervisor to follow HSES-PR-0002 Communication with Enforcing Authorities. 3. Record in company incident reporting system. 4. Do not restart work until supervisor provides further direction as method of works may need to change and further details / briefings made need to be completed.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Community Relations Officer

Environmental Incident Action sheets (EIAS)

EIAS 11	
Incident:	**Flooding of worksite**
Action:	1. Stop work and contact supervisor immediately. 2. Consider personal safety before attempting to access flooding worksite. 3. Remove potentially polluting materials from worksite e.g. fuel, oils, chemicals and cement. 4. Remove floating materials from works area e.g. timber. 5. Remove plant and equipment from works area. 6. Use floating booms to contain and absorb any floating contaminants. 7. Do not pump contaminated water out of the area as flooding recedes, contain and use spill kit to absorb pollutants before pumping or removal by vacuum tanker. 8. Record in company incident reporting system.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Any Regulator contact must be agreed in advance with the Head of Sustainability for your BU

Environmental Incident Action sheets (EIAS)

EIAS 12	
Incident:	**Unexpected archaeological discovery outside planned archaeological works.**
Action:	1. Stop work and contact supervisor immediately. 2. Notify Archaeologist. 3. Agree mitigation requirements with Archaeologist, Client Archaeologist and County Archaeologist prior to restarting work. 4. Record in company incident reporting system.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Archaeologist

Environmental Incident Action sheets (EIAS)

EIAS 013	
Incident:	**Fly tipping**
Action:	1. Notify supervisor immediately. 2. Contact Environmental Sustainability Manager I Waste Manager to arrange disposal of fly tipped material. 3. Ensure site is secured to prevent recurrence. 4. Record in company incident reporting system.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Waste Manager

Environmental Incident Action sheets (EIAS)

EIAS 14	
Incident:	**Suspected illegal disposal of waste**
Action:	1. Notify supervisor immediately. 2. Notify Environmental Sustainability Manager I Waste Manager so that full Duty of Care check I waste audit can be carried out on supplier I subcontractor. 3. Record in company incident reporting system.
Notification:	Supervisor / Works Manager Site Manager Environmental Sustainability Manager Waste Manager

Introduction

Balfour Beatty uses a number of environmentally harmful liquids including fuels, oils and other liquids, which have the potential to cause significant pollution to drainage systems, watercourses, ground and water supplies e.g. boreholes in the event of a leak or spill. Additionally, they may cause health & safety risks, particularly around the clean-up of the spilt material.

It is therefore important that all liquids, fuels and oils are stored appropriately to minimise the risk of pollution.

Oil includes:

Petrol	Diesel/Red Diesel (Gas Oil)	Heating oil / boiler fuel
Biofuels	Kerosene	Waste oil
Oil used as solvents	Biodegradable oil, usually lubricating or hydraulic oils	Liquid bitumen-based products, for example waterproofing or damp proofing products, or coatings for a road surface
Cutting fluids, for example lubricants designed specifically for metalworking processes, that are made from or contain oil as oil-water emulsions	Insulating oils, used as electrical insulator and coolant	Synthetic oils (e.g. lubricating oils such as motor oil)
Vegetable oils		

Other liquids which may lead to environmental harm include:

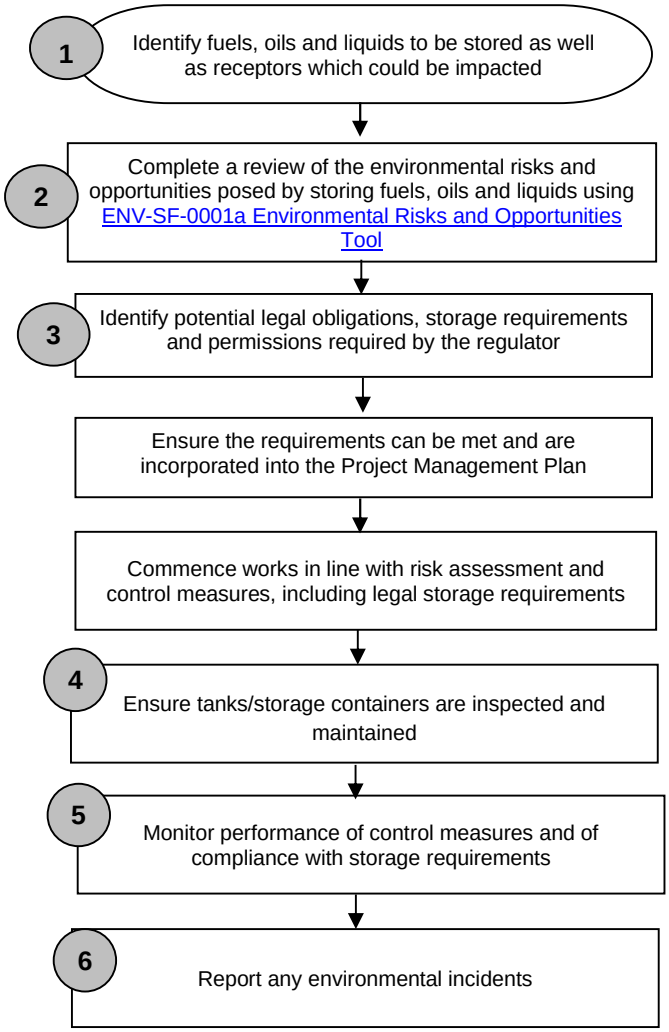
Solvents e.g. white spirit, paraffin	Pesticides, herbicides, biocides	Chemicals e.g. antifreeze, wood preservatives, chlorine, brake fluid, cleaning materials
Battery acid	Paint	Flocculants & coagulants
Admixtures (accelerators & retarders)	Foaming agent	Adblue
Sewage effluent	Trade effluent	Highly alkaline water e.g. concrete wash water

Abbreviations / Definitions

Ancillary equipment	Valves, filters, sight gauges, vent pipes and taps that are connected to the oil storage container. All ancillary equipment must be within a secondary containment system.
Bunds	A structure that storage tanks, barrels or containers can be stored within. It is designed to prevent oil, fuel or chemicals from escaping into the environment if the storage tank or barrels leak or burst.
Double	Refers to a tank that has a second outer skin for extra strength, with a very small gap

skinned / twin walled tank	between the two. None of the pipework or ancillary equipment is contained. Unlikely to have 110% overfill capacity, in which case it isn't classed as a bunded tank or secondary containment.
Foul water drains	Designed to carry waste water safely to a water sewage works.
Integrally bunded tank	Refers to a tank within an attached larger bund. The liquid is stored within the primary or inner tank and the outer tank forms the required bund with capacity of 110% of the primary tank's capacity. The pipework and ancillary equipment is usually encased. The tank is usually made from polyethylene or steel.
Pathway	Any route through the environment which pollutants can move such as air, water, soil and drains.
Receptors	Environmental media that may be adversely affected by a pollutant/contaminant e.g. rivers, lakes, ponds, streams, groundwater, soils, ground
Secondary Containment Systems	Secondary containment systems are used to catch any leaking oil, overfilling or other spills from a primary container. Includes a bund, bunded pallet, drip tray or plant nappy beneath a container or an integrally bunded tank.
Surface Water Drains	Designed to carry only uncontaminated rainwater, as it will lead directly to a local river, stream or soakaway.
Underground Storage Tank (UST)	An oil storage tank, associated underground pipework and ancillary equipment that is completely or partially below ground level. This also includes above ground tanks that are covered with earth or containers located in basements where the base sides of the tank cannot be inspected

Flow Diagram



1. Identify fuels, oils and liquids to be stored as well as receptors which could be impacted

Identify the type and volume of all liquids, fuels and oils that are going to be stored.

Identify the location of the following on site plans (or equivalent):

- Oil and liquid storage
- Spill kits
- Surface and foul drains
- Discharge points
- Sumps
- Pollution control devices (e.g. penstock)
- Water courses (rivers, streams, canals, lakes etc.) (or equivalent)
- Other sensitive receptors

All substances hazardous to health must be managed as set out in HSF-PR-0021 Control of Substances Hazardous to Health.

2. Environmental Risks & Opportunities

Project specific environmental risks and opportunities from storing fuels, oils and liquids must be identified using ENV-SF-0001a Environmental Risks and Opportunities Tool. Consider impacts on the immediate surroundings to where the materials will be stored. Include the ground, watercourses, drainage systems, drinking water supplies and sensitive receptors (including those downstream) if any of these materials were to leak or spill and enter the environment.

Adequate site-specific mitigation measures must be implemented to eliminate or mitigate the environmental impact of storing these materials by reducing the risk to the lowest reasonably practicable level.

The outputs of the risk assessment must help ensure that our works do not:

- Cause pollution
- Have a negative impact on wildlife, water ecosystems or aquatic life

3. Identify how the materials will be stored, potential legal obligations and what permissions may be required by the regulator

3.1 General requirements – storage of liquids in containers less than 200 litres capacity

A best practice approach must be taken for the storage of liquids, chemicals and oils in containers with a capacity of less than 200 litres. In Scotland, oil must be stored in line with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Full requirements are specified in General Binding Rules (GBRs) 26, 27 and 28 which can be found in The CAR Practical Guide.

All containers of oils, chemicals and hazardous liquids must be of sufficient strength and structural integrity to ensure that they are unlikely to leak or burst during ordinary use.

Containers must be stored within a secondary containment system designed to catch leaks or spillages from the primary container. Secondary containment systems may include drip trays, bunded storage cupboard, masonry bunds, pallet bunds, plant nappies and EnviroPads etc. Plant nappies should only be used as a temporary solution.

It is best practice to cover storage areas to prevent rain water entering bunds, becoming contaminated and needing to be disposed of as hazardous waste (special waste in Scotland).

Small quantities of liquid materials, for example paints, oils, solvents etc. should be stored securely and have some form of secondary containment provided, such as a storage cupboard with an in-built tray to collect fluids. The in-built tray / bund must be cleaned out regularly to avoid the mixing / build up of hazardous materials. It must be ensured that the correct equipment / PPE is used (i.e. as specified in the COSHH assessment) and that any hazardous wastes are disposed of correctly

When multiple small containers are being stored together, the secondary containment must have the capacity to contain at least 110% of the contents of the largest container. Lids should be securely replaced when the material is not in use. HSF-RM-0025a Storage and Disposal of Hazardous Substances clarifies what chemicals can be stored together and which must be stored separately.

Storage facilities should be sited away from areas where they may be prone to damage from vehicles or mobile plant and equipment. Barriers may be erected to reduce the chances of any impact occurring.

Spill kits must be available at fuel and liquid storage areas and in construction vehicles and plant. Spill kits range in size. The required capacity of a spill kit will be governed by the size of the spill which is likely to be encountered and other factors like the presence of sensitive environmental pathways or receptors. The correct type of spill kit must also be selected e.g. for oil, chemical or general liquid spills. A risk assessment must be made when determining the type and size of the spill kit required. As a guide, it is recommended that the following size spill kits are provided:

- All vans, construction vehicles and commercial fleet (including hired vehicles) – 15+ litre spill kit
- Bulk fuel storage – 90+ litre spill kit (typically in a cylindrical bin or wheelie bin)
- Smaller quantities of liquid materials (i.e. less than 200 litres) – 15-50 litre spill kit

Refuelling plant is covered in HSF-PR-0046 Plant procedure.

Measures must be taken to minimise the risk of vandalism and theft such as keeping fuel containers locked when not in use, minimising the volume of fuel stored on site, placing herras fencing around fuel containers, securing plant when not in use (including overnight) and the use of CCTV & security personnel.

3.2 Storage of oil in containers with a storage capacity of over 200 litres

In England, Wales, Scotland and Northern Ireland there are specific rules on storing oil in a container with a storage capacity of over 200 litres, (the size of an oil drum).

The definition of storage container includes:

- Oil drums and fixed tanks
- Intermediate bulk containers (IBCs)
- Mobile bowsers – containers designed to store and dispose of oil that can be moved between locations but not under their own power
- Some types of generator and transformer. The rules apply to any of the following generators or transformers that have a connected oil supply tank with a capacity of more than 200 litres:
    - generators in daily use with a tank that supplies the generator where not all of the oil from the tank is used in 1 day
    - ‘stand-by’ generators, which are generators kept for emergency use
    - transformer header tanks that are connected to the transformer by a one-way feed pipe

All bulk fuel must be stored within a mobile bowser or fixed tank/container that conforms to the Oil Storage Regulations for the relevant country. Although they are broadly similar, individual country requirements do differ.

There are also country-specific requirements for fuel storage within the relevant country's Building Regulations.

- England & Wales **(EN)** **(W)**
  - Oil storage regulations for businesses - GOV.UK (www.gov.uk) - The Oil Storage Regulations cover requirements for above ground oil storage in containers over 200 litres, unless there is an applicable exemption. The regulations don't apply to waste mineral oil storage, oil stored wholly underground or oil stored in buildings (although good practice recommendations are advised).
  - Combustion appliances and fuel storage systems: Approved Document J - GOV.UK (www.gov.uk) - Building Regulations must be met where required. Approved Document J of the Building Regulations provides guidance on how to meet Building Regulations for fuel storage systems.
  - Wales - Additional information Oil-storage-regulations.pdf (gov.wales) - The Regulations cover above ground oil storage in containers over 200 litres, waste oil storage and oil stored in buildings. They don't cover requirements for oil stored wholly underground, unless it's in a building.
  - Wales - GPP 2: Above ground oil storage tanks provides additional guidance.

- Scotland **(S)**
  - Oil storage in Scotland | Scottish Environment Protection Agency (SEPA) - The Oil Storage Regulations apply to all above ground oil storage (although portable containers with a capacity of less than 200 litres don't have to comply with some of the more prescriptive requirements of the Regulations such as secondary containment. However they must be strong enough not to leak in ordinary use). The Regulations don't apply to oil stored wholly underground, unless it's in a building. SEPA expect visual checks to be carried out at least weekly and would encourage tank checks to become part of a routine maintenance schedule.
  - Oil must be stored in line with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Full requirements are specified in General Binding Rules (GBRs) 26, 27 and 28 which can be found in The CAR Practical Guide.
  - Building Regulations must be met where required. In Scotland, section 3.24 of the Non-Domestic Environment Technical Handbook provides guidance on how to meet Building Standards for fuel storage.
  - GPP 2: Above ground oil storage tanks provides additional guidance.

- Northern Ireland **(NI)**
  - Oil storage | Department of Agriculture, Environment and Rural Affairs (daera-ni.gov.uk) - The regulations cover above ground oil storage in containers over 200 litres, waste oil storage and oil stored in buildings. They don't cover oil stored underground.
  - Building Regulations must be met where required. In Northern Ireland, Technical Booklet L of the Northern Ireland Building Regulations provides guidance on how to meet Building Regulations for fuel storage systems. http://www.buildingcontrol-ni.com/assets/pdf/TechnicalBookletL2012.pdf
  - GPP 2: Above ground oil storage tanks provides additional guidance.

3.2.1 Design Standards for Containers

Storage containers must be strong enough not to burst or leak in ordinary use. There are recognised British Standard or trade association tank standards for different types of tank. For example:

Fixed Tanks
Fixed Tanks that meet the design standard are made to British Standard 5410 or:

- Oil Firing Technical Association (OFTEC) standard OST T100, if the container is plastic
- OFTEC standard OFS T200 or British Standard 799-5, if the container is metal

The Oil Care Campaign provides information on 'Getting to know your oil tank'.

Drums and IBCs
If a drum or IBC is marked with the letters 'UN' for United Nations it will meet the design standard.

3.2.2 Bund Requirements

All oil containers above 200 litre capacity must be stored in a secondary containment system which meets the following:

- For single containers excluding drums, the secondary containment must have a capacity of at least 110% of the maximum contents of the container.
- If more than one oil storage container is used, the secondary containment must be able to store at least 110% of the capacity of the largest container or 25% of the total storage capacity, whichever is the greatest.
- Where drums are used to store oil, a drip tray can be used as the secondary containment system. The drip tray must have a capacity of at least 25% of the total storage capacity of the drum/s.
- Any equipment ancillary to the container must be within the secondary container.

Masonry/concrete bunds must not be penetrated by any valve, pipe or opening which is used for draining the system. If any fill pipe or draw off pipe penetrates the base or walls, the junction of the pipe with the base or walls must be sealed to prevent oil escaping from the system.

Any valve, filter, sight gauge, vent pipe or other equipment ancillary to the container, must be situated within the secondary containment system.

Where a fill pipe is not within the secondary containment system, a drip tray must be used to catch any oil spilled when the container is being filled with oil.

Ensure that fill hoses are re-stored within the bunded area after use.

Bowsers and tanks should be kept locked when not in use.

For masonry/concrete bunds, the base and walls must be impermeable to water and oil. A rendering or coating may need to be applied on the internal surfaces of the base and walls to make them impermeable.

The manufacturer and/or supplier of fuel bowsers, bunding, tanks etc. must confirm that a particular storage facility meets legal requirements.

3.2.3 Calculating the Capacity of Existing Secondary Containment Systems

The capacity of the tank located within an open containment system can be calculated by making the measurements shown in the table below. If the tank support structure takes up significant space, then the calculation must also consider this.

Calculation	Result	
Maximum capacity of primary tanks(s). If unknown, use tank length x width x depth in metres and multiply by 1,000 to convert to litres.	……Litres	A
Containment capacity = length x width x depth of secondary containment in metres	……..m^3	
Then multiply by 1,000 to convert to litres	……...Litres	B
Volume lost by tank supports (if significant) in m^3	……..m^3	
Then multiple by 1,000 to convert to litres	……Litres	C
Actual containment capacity = B – C (C=0 if tank supports do not occupy a significant volume)	……Litres	D
Minimum containment capacity (110%) = (110/100) x A	……Litres	E

If **D** is **equal or greater than E**, then the containment system volume is adequate and will comply with legislative requirements. The regulator may request that additional containment volume is provided in some environmentally sensitive situations.

If **D** is less than **E** then the containment system is insufficient and will not comply with legislation. Contact your Environmental Advisor to ensure compliance.

For installations where the tank takes up a significant part of the bund, the capacity available in the event of overfilling may be inadequate. This will require consideration of delivery procedures and alarm systems if the risk is to be managed. No other containers should be stored within the bund.

3.2.4 Positioning of Oil Storage Containers

The following requirements must be met:

- Oil must not be stored:
    - Within 10 metres of any watercourse
    - Within 10 metres of a surface water drain
    - Within 50 metres of a spring, well or borehole
- Bowsers and tanks should be placed on hard standing wherever possible.

3.2.5 Requirements for Fixed Tanks

- Any sight gauge must be properly supported and fitted with a valve that closes automatically when not in use.

- To prevent collisions from vehicles, barriers should be positioned to protect storage tanks from possible impact.
- Any fill pipe, draw off pipe or overflow pipe must be positioned so as to minimise the risk of damage by impact.
- An automatic overfill prevention device must be fitted to the tank if the tank or vent pipe cannot be seen during the filling operation.
- Where a screw fitting or other fixed coupling is fitted to the tank, ensure that it is in good condition and is used when the tank is being filled.
- Where oil from the tank is delivered through a flexible pipe which is permanently attached to the container, ensure that:
    - A tap or valve is fitted at the delivery end of the pipe which closes automatically when not in use.
    - The tap or valve cannot be fixed in the open position, unless the pipe is fitted with an automatic shut off device.
    - When a delivery pipe is not in use, ensure that it is kept in a secure, locked cabinet with a drip tray or has a lockable valve (locked shut when not in use) where it leaves the container and that it is kept within a secondary containment system.
- Where a pump is used, ensure that it is:
    - Fitted with a valve in its feed line that stops the tank contents draining out if the pump or pipework to the pump is damaged.
    - Positioned to minimise any risk to the immediate environment or cause damage.
    - Protected from unauthorised use. Oil storage areas should be as resistant as possible to unauthorised interference and vandalism.

o Any permanent vent pipe, tap or valve through which oil can be discharged from the tank must:

- Be situated within the secondary containment system
- Be arranged so that any oil discharged vertically downwards is contained within the secondary containment
- In the case of any tap or valve, it must be fitted with a lock and locked shut when not in use.

3.2.6 Requirements for Mobile Bowsers

- Taps or valves permanently fixed to the unit through which oil can be discharged must be fitted with a lock and locked shut when not in use.
- Where oil is delivered through a flexible pipe which is permanently attached to the unit:
    - The pipe must be fitted with a manually operated pump or with a valve at the delivery end which closes automatically when not in use.
    - The pump or valve must be provided with a lock and locked shut when not in use.
    - The pipe must be fitted with a lockable valve at the end where it leaves the container and must be locked shut when not in use.

3.2.7 Tank Installation and Decommissioning

When installing an oil tank on site, use technicians who are registered with a professional scheme such as the one operated by OFTEC. All tanks must be marked up with their capacity and type of product they contain. When decommissioning, ensure that the tank is fully drained before it is taken out of use or removed. Suitably qualified technicians should undertake this work. After decommissioning or removal, check the area to ensure the procedure has not caused significant oil or groundwater contamination (this

includes taking soil and groundwater samples as needed). If contamination is found, take action as soon as possible to remove the pollution.

3.2.8 Requirements for Underground Storage Tanks

As a rule, underground oil storage tanks should not be installed at Balfour Beatty facilities. If a facility is taken on with an underground storage tank, contact your Environmental Advisor to obtain further advice and to ensure that an adequate level of assurance is put in place (for example, there may be additional requirements such as carrying out pressure testing of underground storage tanks and associated pipework).

3.3 Waste Oil

The storage of waste oil may require specific permission from the relevant regulator as set out in ENV-RM-0039a Waste Management Licences, Permits and Exemptions and ENV-RM-0039b Common Regulatory Position Statements, Waste Exemptions and Permits.

4. Ensure Tanks/Storage Containers are Inspected and Maintained

All oil storage tanks and containers should be maintained and tested in line with the manufacturers' requirements.

The bunded area of fuel storage facilities should be regularly inspected and emptied when necessary to prevent accumulation of fuel spillage or rainwater

If oil is being stored outside, check to ensure no water has gone into the bund. If water is found, use a manually controlled bailing or pumping system to remove the water. The water removed may be contaminated with oil. Such water must be disposed of as hazardous waste (special waste in Scotland) via an approved subcontractor. Do not discharge rainwater that accumulates in the bunds to drains, unless the site has a specific trade effluent or discharge consent from the relevant enforcing body, which permits such discharges.

All drips trays must be emptied regularly to prevent overflow. An insert from a plant nappy may be used to soak up any spillage. Plant nappies are to be changed regularly to ensure continued protection.

All waste must be disposed of in line with legal requirements and all movements of hazardous waste must be covered by a hazardous waste consignment note in line with country specific requirements. See ENV-RM-0035a Waste Management for further detail.

All plant and machinery shall be maintained as per the supplier's instructions and inspected for any signs of leakage of fuel, engine oil, hydraulic oil etc. and ensuring that exhausts are intact. Any signs of leakage must be reported to the site manager and actions taken to repair.

5. Monitor performance of control measures and of compliance with storage requirements

Regular inspections of oil storage areas should be undertaken to ensure that tanks, bowsers, containers and bunds are legally compliant and in a serviceable condition. The frequency of inspections should be

determined in line with identified risk at a project/site level. The following forms should be used to aid this process:

ENV-SF-0007b Detailed checklist for storage and management of more than 200 litres of oil
ENV-SF-0007c Detailed checklist for storage and management of less than 200 litres of oil

Monitoring the amount of oil being used can help to identify a leak. If an unexpected increase occurs, investigate, as this may be an indication of a leak. Undertake surveillance of the general area around the tank to see if there is any residual oil, as again, this may be indicative of a leak. Check pipes, mechanical joints and other parts of the system for evidence of corrosion in order to avoid a release.

Where fuel has been stored on permeable ground and visible contamination is present, soil analysis must be undertaken prior to the removal of contaminated ground. Following removal, consideration should be made to making the area impermeable with an asphalt or concrete base.

6. Report environmental incidents

Spills, leaks and inappropriate or non-compliant fuel/oil/liquids storage should be notified and reported as environmental incidents as set out in HSES-PR-0005 Incident Reporting and Investigation.

Legislation and Regulation

England and Wales **(EN)** **(W)**
Under the Environmental Permitting (England and Wales) Regulations 2016 (as amended) and the Water Resources Act 1991 (as amended), it is on offence to discharge polluting substances to controlled waters (surface water and groundwater) without prior approval from the relevant Regulators (Natural Resources Wales, Environment Agency and Sewerage Undertakers).

Oil stored in containers with a capacity of more than 200 litres must be stored in line with the:

- Control of Pollution (Oil Storage) (England) Regulations 2010 (as amended).
- Water Resources (Control of Pollution) (Oil Storage) (Wales) Regulations 2016 (as amended).

Scotland **(S)**
Under the Water Environment (Controlled Activities) Regulations 2011 (as amended) and the Water Resources (Scotland) Act 2013 (as amended) it is an offence to discharge polluting substances to controlled waters (surface water and groundwater) without prior approval from the relevant Regulator (Scottish Environment Protection Agency and Scottish Water).

Oil must be stored in line with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Full requirements are specified in General Binding Rules (GBRs) 26, 27 and 28 which can be found in The CAR Practical Guide.

Northern Ireland **(NI)**
Under the Water (Northern Ireland) Order 1999 (as amended) it is an offence to cause pollution of a waterway or groundwater.

Oil stored in containers with a capacity of more than 200 litres must be stored in line with the Control of Pollution (Oil Storage) (Northern Ireland) Regulations 2010 (as amended).

UK Documentation

Reference	Type	Title
ENV-RM-0007b	Reference Material	Training Material – Fuel storage – Continual Environment & Sustainability Improvement
ENV-SF-0007b	Standard Form	Detailed Checklist for Storage and Management of more than 200 litres of oil
ENV-SF-0007c	Standard Form	Detailed Checklist for Storage and Management of less than 200 litres of oil
ENV-TB-0007a	Tool Box Talk	Storage of Fuels, Oils and Liquids
ENV-RM-0039a	Reference Material	Waste Management Licences, Permits and Exemptions
ENV-RM-0039b	Reference Material	Common Regulatory Position Statements, Waste Exemptions and Permits
HSES-PR-0005	Procedure	Incident Reporting and Investigation

External Documentation

Reference	Type	Title
External Document	NIEA / SEPA / NRW	Above Ground Oil Storage Tanks: GPP2
External Document	Welsh Government	Keeping your oil storage safe

Introduction

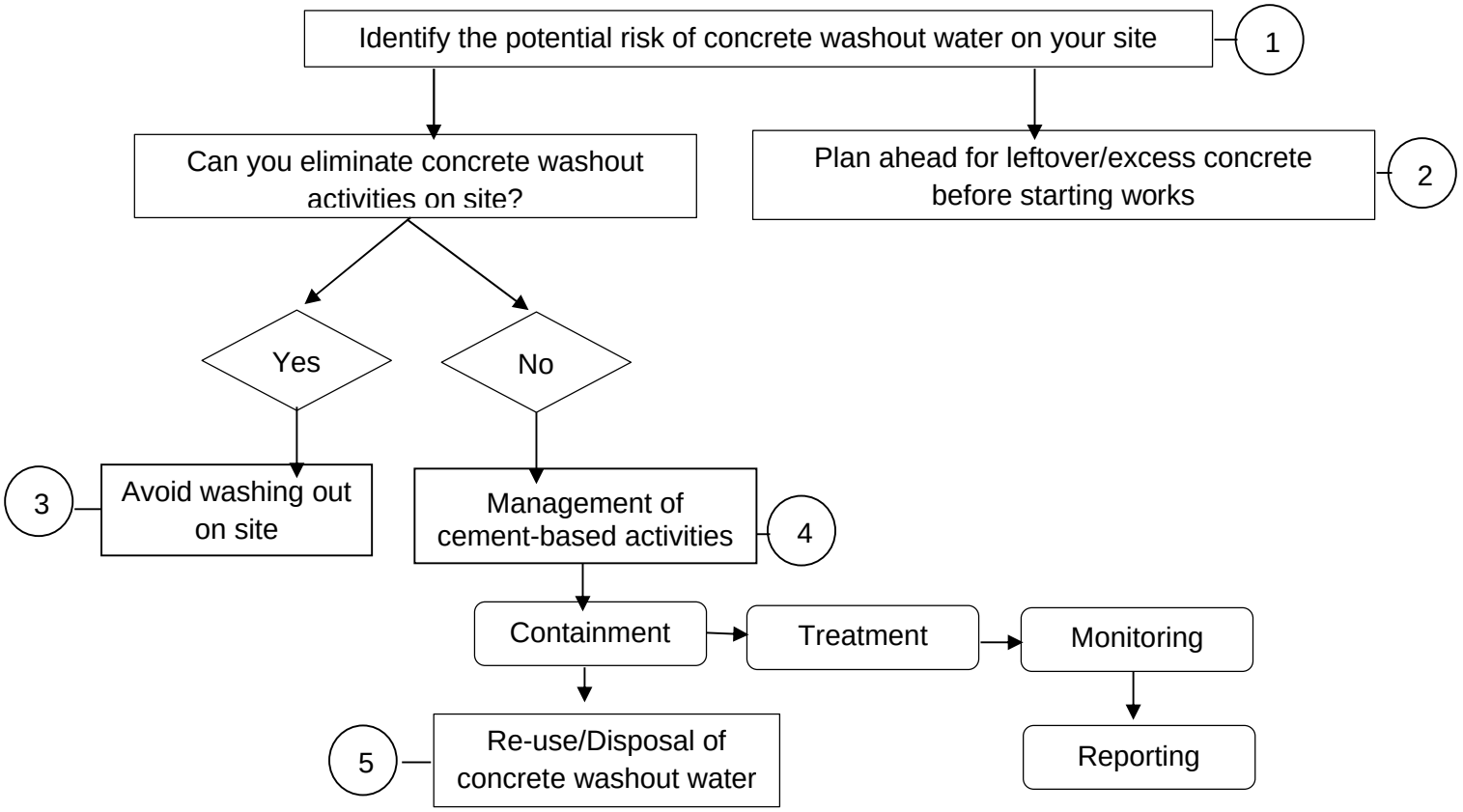
Cement and cement containing products such as concrete and grout are among the most common materials used in construction, however the wash water from their use is highly alkaline, which is incredibly harmful to the environment.

Even the release of relatively small volumes of cement wash water can have devastating long lasting effects on the health of the receiving watercourse. The high alkaline wash water can increase the pH of surrounding waters harming terrestrial and aquatic life. The solids in the water can affect the turbidity of the water, block gills of fish, smother the bed of the water body and cause blockages of streams, drains and pipes, which may increase the risk of flooding.

Abbreviations / Definitions

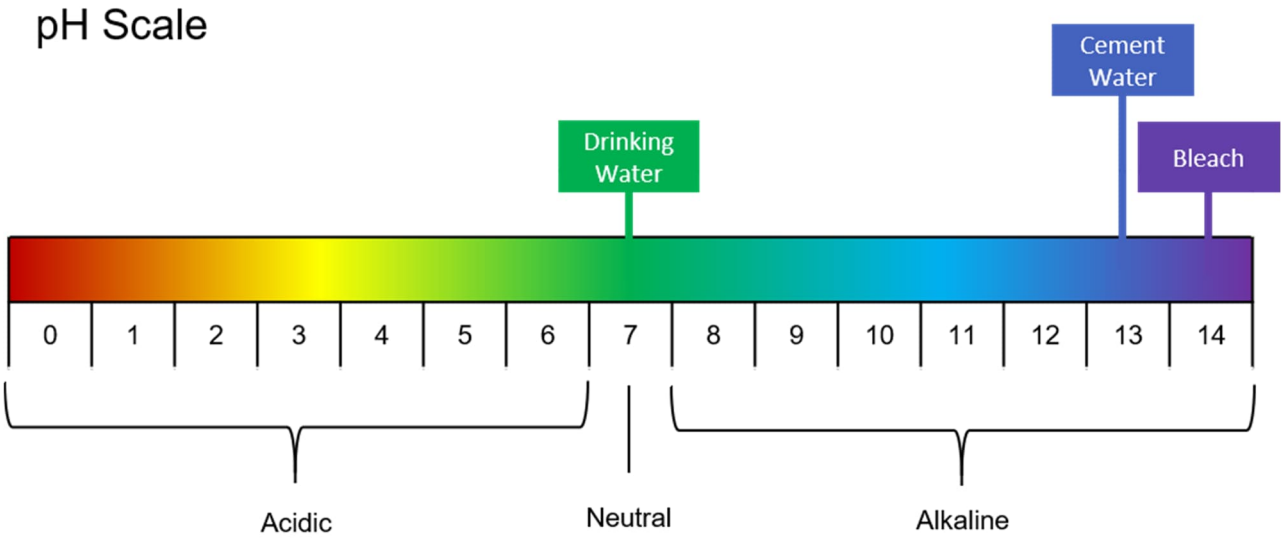
pH	Measure expressing the acidity or alkalinity of a solution on a logarithmic scale on which 7 is neutral, lower values are more acid and higher values more alkaline.
Logarithmic scale	The pH scale is logarithmic, meaning that an increase or decrease of a whole value changes the concentration by a tenfold. For example, a pH of 3 is ten times more acidic than a pH of 4.
Alkaline	Substance having a pH more than 7.
Turbidity	The quality of being cloudy, opaque, or thick with suspended matter.
Trade Effluent	Any effluent that is produced from a process or activity undertaken at premises that are used to carry out a trade or industry. However, it doesn't include domestic sewage - for example used water from hand-washing and flushing of toilets.

What you need to do



Note 1: Identify the risk

If released to the environment cement wash water has the potential to pollute land and leach into the ground contaminating groundwater.



One unit change in pH (e.g. 6 to 7) represents a tenfold increase in strength. As such, it would take 4 Olympic swimming pools of water (over 10,000m³) to dilute just 1m³ of cement wash water to pH7.

Permits typically stipulate a pH of between 6 and 9 for discharges into the aquatic environment and Trade Effluent consents require the pH to be 10 or below.

Although not suitable for accurate measurements, pH test strips are a cheap and convenient way of identifying water requiring treatment out on site.

Highly alkaline water can be created in the following situations:

- From leftover concrete incorrectly stored on site
- Washing down of machinery used with fresh concrete, e.g. concrete chutes, drums, pumps and mortar silo equipment
- Cutting or coring of concrete structures
- From cement bound sand used as bedding to protect underground cable installations
- During hydrodemolition (high pressure water cutting)
- Run-off from recently lime stabilised sites
- Placement of fresh concrete beneath groundwater e.g. piled foundations
- Placement of fresh concrete in a water course e.g. Bridge abutments

Even the release of relatively small volumes of concrete wash water can have devastating long lasting effects on the health of the receiving watercourse. The high alkaline wash water can increase the pH of surrounding waters and, depending where it is discharged, can harm terrestrial and/or aquatic life. The solids in concrete washout water can affect the turbidity of the water, block gills of fish, smother the bed of the water body and cause blockages of streams, drains and pipes, which may increase the risk of flooding.

Note 2: Plan for leftover / excess concrete

Any unused excess concrete (including concrete test cubes) must be stored:

- On an impermeable surface such as an impermeable sheet
- At least 10 metres from drains, ditches and watercourses
- On site in a single agreed location
- Away from works and people and segregated from other materials.

Leftover concrete CANNOT be placed in a skip as waste. Set up an excess concrete solution prior to starting works.

Once the concrete is dry it can be broken up by an excavator and used on any site on the same project or placed in the rubble skip for disposal. Uses for the broken up concrete differ depending on fragment size and could include backfill for excavations, repair material for infilling pot holes on access tracks or infill for crane pads or piling platforms.

Note 3: Avoid washing out on Site

Preference should be given to avoiding the need to wash out on site by engaging with the concrete supplier to identify alternative options. For example, there are solutions for concrete wagons to contain washout water and dispose of back at the depot, and to prevent concrete spillages . Two such examples are:

Spill Stopper System – contains wash water on the wagons and prevents in-transit spills.
Concretesock® or similar – a chute cover which reduces risks of concrete spills in-transit.

Note 4: Management of cement-based activities

All sites must develop a strategy for dealing with concrete washout water prior to mobilisation on site and communicate it to key stakeholders e.g. concrete suppliers, workforce etc. The following must be followed:

- Concrete washout requirements must be specified in any orders and built into terms and conditions as required.
- Plan and implement wastewater control measures prior to mobilisation on site
- Engage with the local regulator to discuss concrete washout management options and apply for appropriate consents if required.
- Plan and prepare for a spill.
- Minimise water consumption and waste water generation e.g. recirculate collected washout water.
- Receptacles for wash water must be regularly monitored to ensure that overtopping does not occur and any deterioration in the waterproofness of the structure is identified and repaired as necessary.
- Surplus cement products (mortar and concrete) should be disposed on an impermeable surface, such as plastic sheeting more than 10 metres from watercourses and away from people, plant and the construction works. Once hardened it should be disposed as inert waste, preferably for beneficial re-use.
- Any wash water / slurry must be contained. Run-off must be directed to a secure waterproof sump or secure tank and the liquid fraction disposed as planned, (following treatment if required).

Site documentation should show:

- The location of the concrete washout facility.
- Copies of consents.
- Records of regulator engagement.

- How concrete wastes are going to be stored.
- How concrete wastes will be collected from these storage points.
- Where wastes will be taken to and/or how they will be treated and disposed.
- How any treatment systems to treat the liquid fraction and/or recover the solids will be operated and maintained.
- How site personnel, particularly those responsible for concrete delivery and pumping, will be made aware (via induction, toolbox talks, pre-start meetings etc.) that a wash-down area is available on-site and when and how it is to be used.

Cement water containment

Wash water should be contained:

- In a designated and signed washout area;
- Within an impermeable bund;
- At least 10m from any watercourses pr surface water drain;

To minimise the amount of washout water generated, excess concrete should be scraped off the equipment before it is washed. These excess solids should be placed in a designated surplus cement products location until hardened. A high pressure, low volume water spray nozzle reduces water use. Where possible, washout bays / skips / containers should be covered during heavy rainfall and at night to avoid flooding.

Treatment of concrete washout water

Proven methods to treat concrete washout water are:

- Treatment with mineral acid, such as sulphuric or hydrochloric are dangerous to handle and when used to reduce the pH level it is easy to overshoot the target resulting in acidic water which will need to be disposed as hazardous waste water (special waste in Scotland).
- Treatment with citric acid, like acid there is a risk of over dosing and acidifying the treated water with citric (fruit) acid. Citric acid also increases the Biochemical Oxygen Demand (BOD) of the water above the limits for safe discharge into the aquatic environment.
- Carbon dioxide is mildly acidic when dissolved in water and is the safest neutralising agent for concrete water as it is self-buffering, making it virtually impossible to acidify the water though overdosing.

A third party should be engaged to install, operate and provide instruction on using these systems. Examples of such systems include:

The Siltbuster Roadside Concrete Washout Unit (RCW) - captures and treats wash water generated from the cleaning of concrete truck mixer chutes on site via settlement and a pH adjustment system.

MCW (Micro Concrete Washout System) by Siltbuster – a compact and versatile system that neutralises and recycles concrete wash water enabling water to be treated, stored and reused for wash down purposes

Monitoring

All concrete washout areas should be monitored to ensure that they are working correctly and have adequate storage capacity. Monitoring should take place weekly during dry weather and prior to, during and after forecast rainfall events.

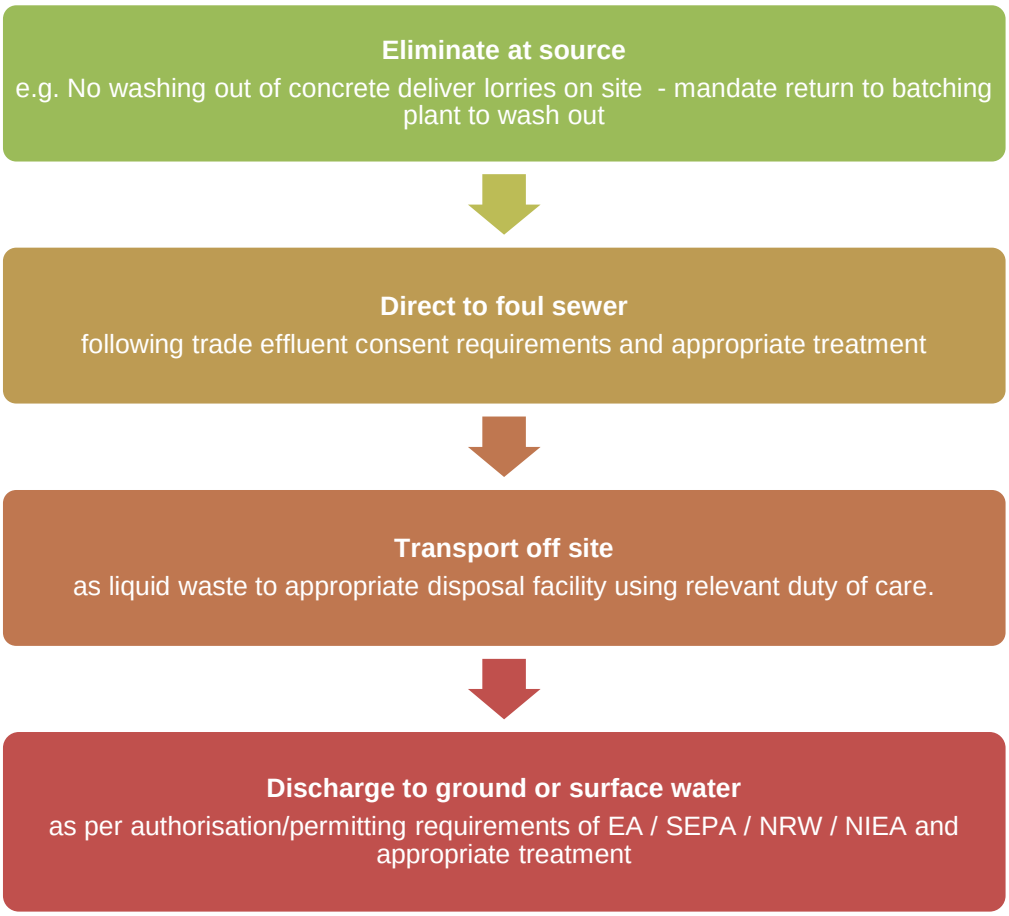
Set concrete and wash water should be removed as required to ensure that the facility has sufficient capacity and prevent overtopping.

An environmental incident occurs if:

- Concrete is washed out in an area other than the designated concrete washout area.
- Concrete washout leads to a release of concrete washout water to land, surface water or the drainage network.
- In the event that an environmental incident occurs then this occurrence should be reported and notified as per business unit reporting requirements and as set out in HSES-PR-0005 Incident Reporting and Investigation

Note 5: Re-use / Disposal

Hierarchy of Disposal for Concrete Washout Water:



England **(EN)**

Concrete wash water cannot be discharged directly to ground without an environmental permit.

RPS 235 allows you to treat and use water that contains concrete and silt at construction sites without an environmental permit for a waste operation. Specifically, this RPS allows you to:

- store and treat water that contains concrete and silt, within the construction site, before use
- use treated water that contains concrete for washing equipment or mixing concrete
- use treated water that contains silt produced from washing equipment for washing equipment or damping down haul roads

This RPS does not apply to any other activity and there are very specific conditions you must comply with. You may still need other permits or licences for other activities you carry out.

Third party systems exist ready to be deployed on site.

Where possible store and reuse washout water in batching fresh concrete to reduce waste.

If available, apply for a Trade Effluent Consent from the sewerage undertaker to dispose of concrete wash water into foul water drain. The water will need to be treated to remove solids and reduce pH to below 10 (or to level specified) before disposal to avoid blocking drains or damaging treatment works.

Contain; dispose off-site as liquid waste via Reconomy or other waste contractor.

Wales **(W)** Scotland **(S)** Northern Ireland **(NI)**

Guidance for Pollution Prevention on Works and maintenance in or near water: GPP 5 provides guidance on environmental legislation in Wales, Scotland and Northern Ireland. Information on concrete, cement and grout is provided in section 3. Wash waters from concrete and cement works should never be discharged into the water environment as this could have serious impact on the water quality and ecology. Wash water shouldn't be dispersed directly to 'ground'.

Option 1: Contain; apply for a Trade Effluent Consent or enter into a trade effluent agreement with Scottish Water/Northern Ireland Water/Welsh Water before you discharge trade effluent or 'liquid waste' to a public foul sewer or a private sewer that connects to a public foul sewer; treat to remove solids and reduce pH <10 (or to level specified by sewerage undertaker). You may also need SEPA approval in Scotland.

- Trade Effluent is any liquid waste 'produced in the course of any trade or industry' which is discharged to the waste water system. It is the legal responsibility of a company which discharges trade effluent to public sewer to obtain a Consent from Scottish Water. Failure to apply for Consent may result in a fine, which is currently set at a maximum of £40,000.
- Project teams that will be disposing of trade effluent into the foul water system are to apply for a Trade Effluent Consent by completing Trade Effluent Notice (Form H). Smaller discharges, generally <2m3 in volume, may be controlled by issuing a Letter of Authorisation. This will be confirmed by Scottish Water once the application has been received. Temporary discharges greater than 2m3 are issued with a FULL consent which lasts 6 months before being terminated.
- Scottish Water will not issue a Consent until a Licensed Provider has been appointed.
- There is no charge to submit the Form H application. Applicants may be required to submit sample analysis results to prove the nature of the discharge at their expense. If samples have to be taken by Scottish Water to monitor discharge compliance these charges may be costed back to the applicant. Any other charges will be confirmed by the Licensed Provider.
- The Trade Effluent Consent must be in place before any waste water is disposed to the foul sewer. The statutory period for processing a Form H application is 90 days. Scottish Water aim to process each application as quickly as possible. Straightforward applications generally take 3 – 6 weeks. Complicated applications may take longer than 3 months before a decision can be made. It is recommended applications are submitted at the earliest opportunity.
- The Trade Effluent Consent lasts 6 months before being terminated. If the discharge will last for more than 6 months do not tick 'temporary' on the Form H; a FULL consent will be issued. When no longer required the project team must use the Trade Effluent Notice (Form H) to terminate the consent with Scottish Water.
- The project team is responsible for self-inspecting the turbidity and pH to determine it is acceptable for discharge.
- Waste water, treated if necessary, can be disposed directly into the foul sewer via the man-hole access. Ideally a discreet location will be selected. It is the project teams responsibility to manage any risks and nuisances associated with lifting the man-hole cover. It is not necessary to 'break in' and make a fixed connection to the sewer.

Option 2: Contain; dispose off-site as liquid waste via Reconomy or other waste contractor.

Option 3: Contain; treat to remove solids and reduce pH <9 (or to level specified); apply for formal authorisation from SEPA / NRW / NIEA to discharge via a fully constructed soakaway to groundwater. Only an option in small number of circumstances.

Legislation and regulation

England and Wales **(EN)** **(W)**

Under the Environmental Permitting (England and Wales) Regulations 2010 (as amended) and the Water Resources Act 1991 (as amended), it is on offence to discharge polluting substances to controlled waters (surface water and groundwater) without prior approval from the relevant Regulators (Natural Resources Wales and Environment Agency).

Scotland **(S)**

Under the Water Environment (Controlled Activities) Regulations 2011 (as amended) and the Water Resources (Scotland) Act 2013 it is an offence to discharge polluting substances to controlled waters (surface water and groundwater) without prior approval from the relevant Regulator (Scottish Environment Protection Agency and Scottish Water).

Northern Ireland **(NI)**

Under the Water (Northern Ireland) Order 1999 (as amended) it is an offence to cause pollution of a waterway or groundwater. Effluent cannot be discharged without the prior approval from the relevant regulator (Northern Ireland Environment Agency).

UK Documentation

Reference	Type	Title
ENV-RM-0009b	Reference material	Concrete Washout Disposal Training (Scotland, Wales, N. Ireland, England)
ENV-SF-0009a	Standard Form	Concrete Wash Water Record
ENV-TB-0009a	Toolbox Talk	Concrete Washout

External Documentation

Reference	Type	Title
External Document	EA Guidance	Environment Agency Guidance on Regulatory Position Statement (RPS)
External Document	SEPA / NRW / NIEA Guidance	Guidance for Pollution Prevention Works and maintenance in or near water: GPP5

Introduction

The nature of Balfour Beatty's operational activities means that the potential for causing an impact to the local communities in which the company, our contractors and Sub-Contractors works always needs be considered and carefully planned.

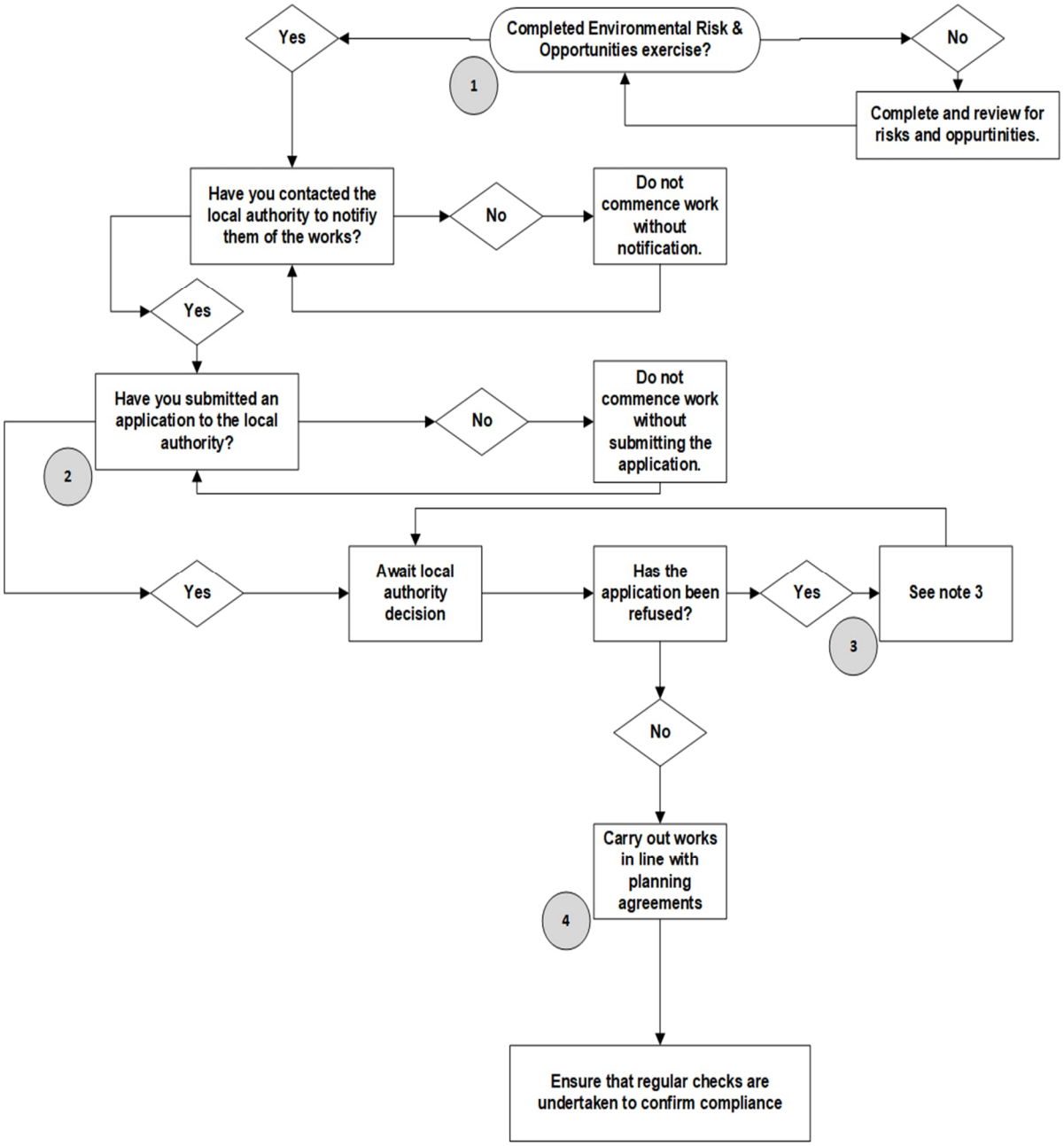
Local Authorities have a duty to manage activities that can impact a local community and determine if an act is categorised as a statutory nuisance. They have the power and authority to prosecute a company or person if found to be responsible for causing a statutory nuisance. Further to this the potential impacts of the company's operational activities can be viewed as a nuisance and an inconvenience to the different members of the communities in which the company works.

This document sets out the process that all operational activities need to follow to ensure that the potential impacts of the company's activities on local communities are considered, local authority requirements are identified, and adequate management controls implemented.

Abbreviations / Definitions

Nuisance	The prevention of the use or enjoyment of your property and land
Statutory Nuisance	A Local Authority's determination that an activity can or has had a local environmental impact that creates an unreasonable interference with the use and enjoyment of adjacent or nearby sites / premises
Local Authorities	UK local government and their council's environmental health departments responsible for the implementation, management and monitoring of compliance to environmental law
Consents	Consents issued and approved by Local Authorities for activities that can be completed within specific requirements based on their location and potential for local environmental impact
Abatement notices	Issued by local authorities to control activities that are deemed to be causing a statutory nuisance
Best Practical Means	Management controls used and set to control activities that can generate statutory nuisances should consider the following points to determine their applicability and effectiveness: • Regard to the current state of technical knowledge • The local conditions and circumstances • The financial implications • The means to be employed including the design, installation, maintenance and manner and periods of operation and plant and machinery, and the design, construction and maintenance of buildings and structures So far as compatible with any duty imposed by law and must be compatible with safety and safe working conditions

What you need to do



Note 1 – Complete environmental risk and opportunity register
The planning of activities is vital so that clear communication can be provided to the local community well in advance of activities starting. ENV-PR-0001 Environmental Risks and Opportunities

The different concerns and considerations of the local authority and community stakeholders need to be considered in terms of the potential impacts our activities could have on them.

Contact the Local Authority to ensure that they are notified of the works and to provide them with contact details of the project management team including the number for the public to request information or log a complaint.

Local Community Engagement

A key opportunity when planning activities that can have a local environmental impact is using the mitigation and management of them as a tool to plan and complete local community engagement.

Balfour Beatty addresses this in two ways; through the implementation of the Sustainability Delivery Plan (SUS-PR-0002 Sustainability Delivery Plan) and the registration of some projects to the Considerate Constructors Scheme as per the Balfour Beatty Sustainability Data Requirements (SUS-RM-0001a).

Details of the Considerate Constructors Scheme can be gained from The Hub.

Good housekeeping is fundamental to good neighbour relations and for ensuring that Balfour Beatty's work in communities does not lead to experiences of nuisance by the local community. Vital to this is ensuring that a site is established right from the start. Please refer to the HSES procedure Site Establishment (HSES-PR-0007) for further details.

Light Pollution:

Light pollution can be considered a nuisance under law if it impacts a person's enjoyment or use of their property. Light pollution can be generated by any artificially created light if the area it is illuminating is not carefully considered. This may lead to such issues as:

- Permanent lights encroaching on local homes or private buildings
- Temporary lights pointing towards local homes or private buildings
- Lights from plant and fleet flashing into local homes or private buildings

The nature of the company's activities and the locations of its sites, offices and depots mean that the use of temporary and permanent lights is a necessity. The following offers some points for consideration when planning the installation of permanent lighting, the use of temporary lighting or the impact that plant and fleeting lighting can have on the local community

In order to maintain security, lighting will be required at depots. When positioning lighting, it should be set in such a way to:

- Not shine on any private residences
- Not shine on any occupied property (residential home, hospitals etc.)
- Be the lowest reasonable level of brightness (Lux)

Operations require lighting to ensure safe working conditions, ensure that

- Lights are positioned to prevent light shining directly into any private residences
- Wherever possible use lights with collars or shades that ensure the light is focused in the correct area

Where the company is required to perform emergency works, make every attempt to follow the requirements of planned work. Where light pollution cannot be avoided, and within reasonable working hours, site teams should inform the people who will be impacted by the pollution and explain the nature of the emergency works.

Air Quality:

Local Environmental impacts that can have an impact on local air quality are an area of continued legislative and regulative focus from the UK Government. Consideration for the mitigation of such potential impacts needs to be included in the planning of activities (i.e. road traffic management) as well as the specification and procurement of the plant and fleet used within Balfour Beatty's operational activities.

Please refer to the following procedures and reference materials for further details of specific areas that need consideration:

- Air Quality and Dust (ENV-RM-0014a)
- Non-Road Mobile Machinery Emissions Regulations (ENV-RM-0011a)

Vibration:

Vibration can be caused by several different activities including:

- Excavations
- Piling
- Building construction
- Plant and fleet use

The local environmental impacts that vibration can have, include:

- Structural damage to the built environment
- Interrupted sleep
- Annoyance and nuisance

If the planned activities have the potential to generate vibration that could lead to damage to the built environment or impact the local community then the requirement to mitigate the impact of vibration and monitor the success of the mitigation measure may be required.

Prior to work activities commencing, an evaluation of those areas sensitive to vibration may need to be completed and a monitoring system implemented to ensure that the vibration effects are monitored and mitigated to acceptable levels.

When needing to consider the potential impact of vibration of existing structures then the need to create a base line of the existing built environment quality is vital to ensure that an accurate picture of any vibration damage can be directly attributed to the activities that caused it.

When planning works the evaluation of the potential for vibration generated by activities should consider:

- Identification of sensitive structures
- Completion of monitoring and condition surveying of sensitive structures to create a baseline of existing condition of structures
- Agreement of the condition survey report results with the owner of the structure
- Adequate monitoring during the works
- Post activities complete monitoring and condition surveying of sensitive structures for agreement with owner of structure

When planning works that can impact the local community due to vibration generated by activities then consider the following:

- The substitution of plant and/or operations with a low frequency vibrational output with that of a high frequency output
- Traffic movements to be minimised when close to sensitive locations / public interfaces
- Plant and fleet with vibration reduction designs
- The positioning of plant on vibration mats or a heavy single layered base
- The use of noise / vibration barriers to protect sensitive locations / public interfaces
- Ensuring all plant and fleet is maintained in accordance with the manufacturer's instructions

Vibration monitoring/measurements should be carried out by a suitably experienced individual in vibration monitoring following procedures described in BS 5228-2:2009+A1:2014 and BS ISO 4866:2010. Vibration technical guidance can be gained via the Balfour Beatty CIRIA membership. Details can be found on The Hub. Please refer to: Ground-borne vibrations arising from piling, CIRIA Technical Notes 142, 1992

Noise:

Balfour Beatty activities due to their nature generate noise and depending on the location of the activities may need to follow specific consent requirements set out by a Local Authority as part of the planning process or follow client requirements that are part of their operating requirements.

Please refer to the following reference material for further details:

- ENV-RM-0015a Noise

Note 2 – Submit application to Local Authority

If a specific application is required, this is usually completed as part of the planning approval process. However, if this is not the case contact your local authority planning department for guidance. Note: Any assessment activities required can be completed across an 8-week period while it can take up to 14 weeks to gain the required local authority approvals and this is just for the application.

Note 3 – Application refused

The letter issued regarding the application and its refusal will set out how an appeal against the decision can be made.

Note 4 – Carry out works in line with planning agreements and any consent requirements

Document activities that can generate local environmental impacts which can create nuisance to the local community if not mitigated or managed.

Risks and the control measures to mitigate or manage them need to be identified and clearly documented in project documentation – Management Plan, Work Package Plans, Risk Assessments and Task Briefing Sheets:

- How they will be managed?
- How any specific consent requirements are addressed?
- Specific working restrictions stated within the consents
- Details and information of receptors in the Emergency/Incident Response Plan and any other specific plans required such as noise and vibration management plans
- Is the local authority aware of the work and do they have contact details for the project management team including the number for the public to request information or log a complaint?
- Is the project registered as part of the Considerate Constructors Scheme?

Planning works

The planning of activities and consideration of the potential impact on the local community is fundamental in ensuring that the local authority and community stakeholders can be kept informed in advance of activities starting as to the potential impact of an activity as well as it start and finish date.

The following points provide some general considerations when planning of activities:

- **Inform** local residents about the works you are doing, be polite and try to alleviate their concerns.
- **Plan** all noisy works inside local typical working hours (Each local authority has specific typically working hours based on the activity type and its location, check with the local authority)
- **Minimise** all noise when working outside of typical working hours.
- **Question** whether any works during unsociable hours are ESSENTIAL.
- Switch **vehicles and plant off** when not in use, do not leave them running idle.
- **Avoid** playing loud music or radios when in residential areas.
- **Never** use powered cutting equipment without water suppression.
- **Cover or dampen** down piles of materials which have the potential to cause dust.
- **Always** direct floodlights and traffic lights towards the work area – take care that the light is directed away from residential properties.
- **Limit speed** to 5 or 10mph to reduce increased risk of dust emission form vehicle movements.
- **Stop works** if a complaint from a member of public or a regulator is received and follow HSES-PR-0005 Incident Reporting and Investigation.

Note 5 – Monitor performance to control measures and compliance

Remember the company's golden rules 1) be fit for work 2) always receive a briefing before starting work 3) report all unsafe events and conditions 4) stop work if anything changes

If the control measures fail, follow the emergency arrangements set for the activity if needed and stop the works to review risk assessment and control measures and/or agreement and conditions of the consent or permit.

Note: The local authority needs to be notified of any proposed changes to the agreed methodology/process as part of the meeting the requirement of regulatory consent approval process under the Control of Pollution Act 1974.

Legislation and Regulation

England, Wales, Scotland and Northern Ireland **(EN) (W) (S) (NI)**

Environment Act 2021: is a significant UK law that addresses various aspects of environmental governance, waste management, air quality, water conservation, and biodiversity.

Environmental Protection Act, 1990: The Act recognises that activities from a site or premises can have local environmental impacts that can be deemed a statutory nuisance.

The Act provides Local Authorities with powers and duties to manage issues determined as a statutory nuisance through either remedial or preventative action, by the issue of consents or abatement notices that set out the requirements that must be met by the approved activities.

Commercial activities, including construction, may have requirements set out in consents that are granted as part of the Local Authority planning process.

However, a Local Authority can also place activities under consents retrospectively or issue abatement notices if they believe that commercial activities are generating a local environmental impact that causes a statutory nuisance. Non-compliance can result in prosecution, prohibition or improvement sanctions as well as the potential for compensation claims from the local community.

The act also defines Best Practical Means as a framework for assessing the acceptability of the management controls applied to an activity to minimise and reduce the local environmental impact of the activity.

Clean Neighbourhoods and Environment Act, 2005: Encompasses many areas of the law affecting local environmental quality. Provisions of this Act cover the following areas: crime and disorder, vehicles, litter and refuse, graffiti and defacements, waste, noise, dogs, and architecture and the built environment.

The Act classifies statutory nuisances (noise, vibration, artificial light, dust, odours, litter etc.) and provides local authorities, parish and community councils and the Environment Agency with more effective powers and tools to tackle poor environmental quality and anti-social behaviour.

UK Documentation

Reference	Type	Title
ENV-RM-0013b	Reference Material	Nuisance Training
ENV-RM-0013d	Reference Material - poster	Environmental Nuisance Posters
ENV-TB-0013a	Toolbox Talk	Nuisance
ENV-TB-0013b	Toolbox Talk	Light Pollution

Introduction

The purpose of this reference material is to provide guidance for employees planning activities that may lead to the generation of noise. It sets out the legislative and regulative framework that needs to be observed when planning such activities.

The guidance provides management actions to be followed by the Company and its subcontractors to prevent disruption to project programme and cost by enabling the identification of practices that need to be adopted to prevent, or minimize, the risk of to the generation of noise.

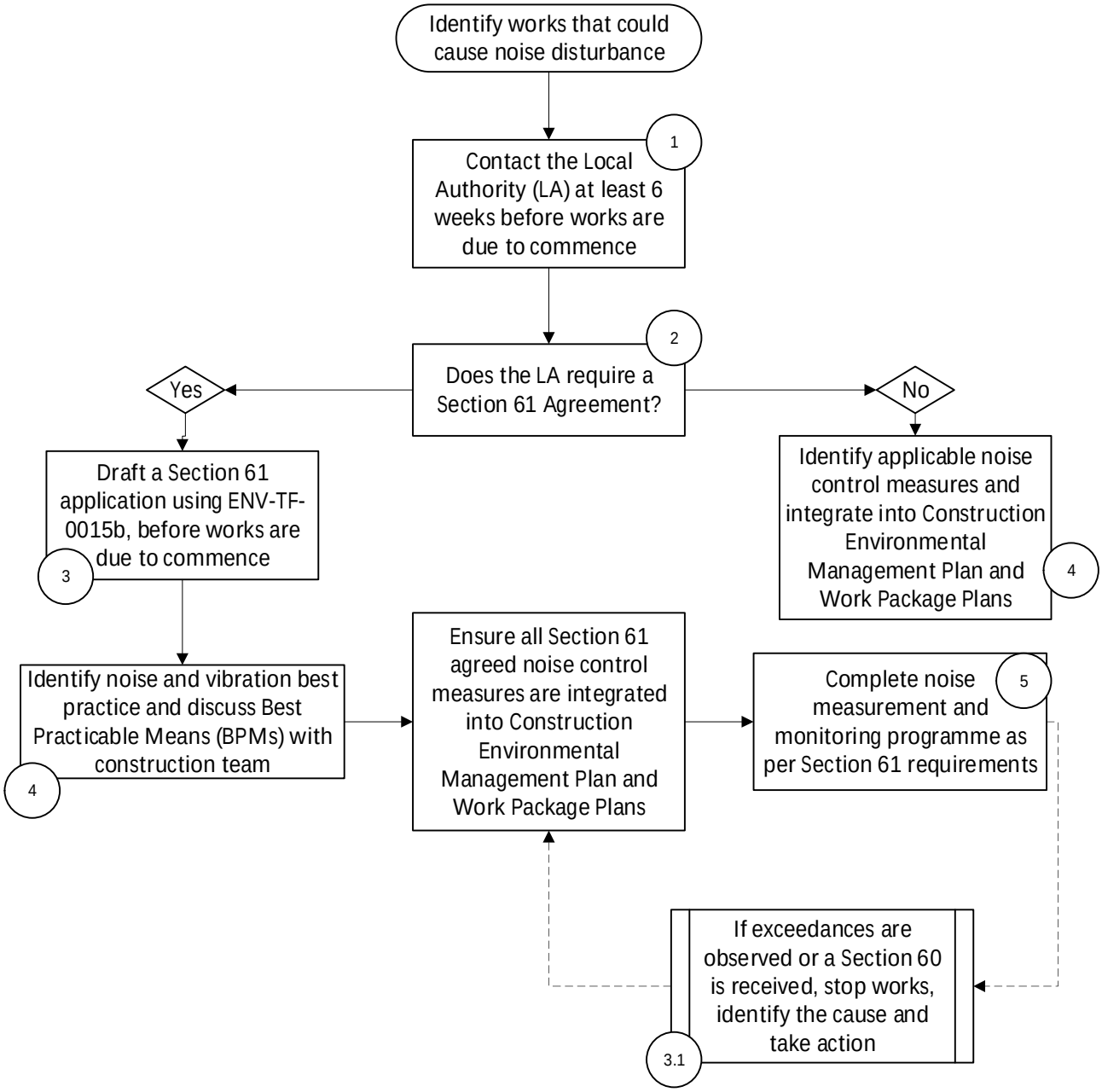
Activities can require authorisation to be gained from a local authority meaning that permit requirements must be met or if suitable management controls are not adopted or followed these environmental risks can cause a statutory nuisance and pose a risk of causing environmental pollution.

Abbreviations / Definitions

Noise	The UK does not set a legislative maximum level of noise must not be exceeded by a specific activity before it is classified as a statutory nuisance. This means that noise from an activity can be deemed a statutory nuisance based on an individual's or, communities' perception of the level of noise. People experience background noise levels on a daily basis and view this level as 'normal' for that location that specific time of day. People can view changes to this perceived 'normal' background level of noise depending on the time of day, the type of activity and period of time that they are exposed to the change in noise level. If after assessment this change is deemed to significantly change the usual background noise level, then a local authority can classify the activity as a statutory nuisance.
Nuisance	The prevention of the use or enjoyment of your property and land.
Statutory Nuisance	A Local Authorities determination that an activity can or has had a local environmental impact that creates an unreasonable interference with the use and enjoyment of adjacent or nearby sites / premises.
Local Authorities	UK local government and their council's environmental health departments responsible for the implementation, management and monitoring of compliance to environmental law.
Consents	Consents issued and approved by Local Authorities for activities that can be completed within specific requirements based on their location and potential for local environmental impact.
Permit	Within this document permit means the authorisation from a regulator to carry out an activity within set criteria to eliminate or minimise the potential for noise generated by an activity to be viewed as a nuisance.
Abatement notices	Issued by local authorities to control activities that are deemed to be causing a statutory nuisance.
Best Practical Means	Management controls used and set to control activities that can generate statutory nuisances should consider the following points to determine their applicability and effectiveness: • Regard to the current state of technical knowledge • The local conditions and circumstances • The financial implications

	• The means to be employed including the design, installation, maintenance and manner and periods of operation and plant and machinery, and the design, construction and maintenance of buildings and structures So far as they are compatible with any duty imposed by law and must be compatible with safety and safe working conditions.
Best Available Technology	Best available techniques not entailing excessive costs (BATNEEC), sometimes referred to as best available technology. Best Available Techniques - means the most effective method to prevent and, where that is not practicable, to reduce emissions and the impact on the environment. Techniques - includes both the technology used and the way in which the installation is designed, built, maintained, operated, and decommissioned; Available – techniques that are developed on a scale to allow implementation in a relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages as long as they are reasonably accessible to an operator; Best - means most effective in achieving a high general level of protection of the environment as a whole.

WHAT YOU NEED TO DO



Note 1 – Contact with local authority

Contact should be made with the local authority. Initial contact should be made with the local authority at least 6 weeks before works are due to commence but ideally as soon as possible.

Note 2 – Applying for a consent

For large or long-term projects, or where there may be a need to work outside of normal working hours and/or likely to give rise to increased noise levels, projects should liaise with the Local Authority with a view to being granted a Section 61 Consent under the Control of Pollution Act 1974. This is mandatory for some local authorities.

Section 61 Consent ensures that standards of performance with respect to the control of construction noise and vibration can be agreed in advance of the start of the works, along with the effective noise management of the work programme. By obtaining a Section 61 Consent and complying with its conditions, we can avoid the risk of being served a Section 60 Notice.

Where this consent is granted the conditions of the consent should be adhered to and incorporated into method statements. Copies of the consent should be retained on site at all times.

Note 3 – Putting together the Section 61 Application

ENV-TF-0015b Section 61 Prior Consent Application Template provides key headings for the information usually required by a local authority for such an application.

It is important that the application clearly details the scope of the works, methodologies, working times, proposed mitigation, and management measures as well as reliable data for plant sound levels, baseline noise levels, and predicted noise levels.

If the required information is not provided in sufficient detail, it may delay the application process and, the timing of a signed-off agreement from the local authority.

Background noise levels

It should be noted the level of noise considered to be a nuisance is significantly lower than the level required for personal hearing protection for health and safety. The noise level which is considered to cause a nuisance is subjective.

The British Standards Institute (BSI) Code of practice for noise and vibration control on construction and open sites (BS 5228-1:2009). Provides the following guidance:

Noise from construction and demolition sites should not exceed the level at which conversation in the nearest building would be difficult with the windows shut.

Noise levels, between say 07.00 and 19.00 hours, outside the nearest window of the occupied room closest to the site boundary should not exceed:

- *70 decibels (dBA) in rural, suburban, and urban areas away from main road traffic and industrial noise;*
- *75 decibels (dBA) in urban areas near main roads in heavy industrial areas.*

These limits are for daytime working outside living rooms and office. When working outside the normal hours say between 19.00 and 22.00 hours – the allowable noise levels from building sites will be less (a reduction of 10 dB(A) may often be appropriate).

Noisy work likely to cause annoyance locally should not be permitted between 22.00 hours and 07.00 hours.

The standard also includes useful reference material in Annex C of what to expect from various piling operations. This includes *Large rotary bored piling rig 83 dB LAeq at 10m and Bauer BG36 coring reinforced concrete pile 72 to 87 dB LAeq at 10m".*

Most Local authorities have stated standard expectations and requirements for noisy works. For example, the City of London Code of Practice for deconstruction and construction which states:

Noise should be restricted to hours outside the normal working day of 09.00 – 17.00 hours.

Contractors will always adhere to these quiet hours unless agreed advance negotiation with all parties and the Pollution Team.

The quiet hours are:

- *10:00 - 12:00 (Monday to Friday);*
- *14:00 - 16:00 (Monday to Friday).*

These periods may be subject to variation in particular circumstances, for example during lunchtimes adjacent to eating places or businesses where most of the trade is carried out at lunchtimes or recording studios and other noise sensitive businesses.

During these quiet periods, the following activities cannot be carried out:

- *Cutting using power tools;*
- *breaking or dismantling using power tools/machines/plant;*
- *the use of impact fasteners;*
- *the loading of heavy materials;*
- *other noisy activities, depending on the specific location of site and neighbours, deemed unacceptable by Environmental Health Officers.*

Note 3.1 - Section 60 Notices

They are a formal notice from the local authority imposing restrictions on the way we work in order to minimise nuisance to neighbours. They can restrict the hours that we operate, the machinery and equipment we use and even set noise limits. Most notices are issued following a complaint however a complaint is not always required.

If you receive a formal notice from the local authority or regulator, notify your Project Manager and the UK Environment Team. Failure to comply with the specified conditions can result in the local authority imposing more stringent conditions or prosecution and a fine. We have 21 days to lodge a formal appeal with the Magistrate Court.

Note 4 – Management of noise and control measures

1) Noise can be caused by several factors, including:
    - Plant and equipment use
    - Vehicle reversing alarms or engine idling
    - Radios
    - Employees shouting
2) Noise can have several impacts, including:
    - Interrupted sleep
    - Annoyance and nuisance
    - interfering with people's enjoyment of their property

Some land uses are regarded as being more sensitive to noise than others due to the types of population groups or activities involved. Noise-sensitive receptors in the project area include, but are not limited to:

- Residential Properties
- Commercial Properties
- Schools
- Hospital/Medical Facilities
- Churches
- Recreational Areas

Best Practicable Means and Best Available Technology should be considered in the planning of work to ensure that when the works are undertaken, they are done so to prevent or reduce the impact on air quality and the environment due to the Company’s activities.

Minimum methods to be adopted should include:

- All plant will be operated with covers closed and where available silencers fitted on equipment
- All plant will be fully maintained
- Plant and vehicles not in use will be switched off – Balfour Beatty has a no idling policy (OPS-PL-0248)
- A quiet night-time working ethic will be employed to ensure that all operatives have consideration for nearby residents
- The use of radios and shouting when entering, leaving, and working on site will be minimised

- Where practicable, materials will be handled in a manner that reduces noise & vibration to an acceptable level
- Static plant will be shielded or provided with screens or enclosures where practicable
- Where possible, working hours will be planned to minimise impact on local residents and buildings

Best practice

Effective management of the depot can control the impact of noise levels on the surrounding area**.** Consideration should be given to the following:

- Working methods should be changed to include equipment or modes of operation that produce less noise (i.e. use of methods other than percussive piling in urban areas)
- Ensure workforce is informed of noise restrictions/requirements via toolbox talks and inclusion in Risk Assessment/Work Package Plans (Method Statements).
- Ensure that the workforce is informed of the sensitive neighbours and reminded to be sensitive when working or walking adjacent to the site boundaries
- Times of deliveries to suit the area. (i.e. restricting deliveries to during normal working hours (i.e. 9-5) in residential areas)
- Working practises that restrict noisy activities to certain periods of the day should be adopted.
- Loud equipment is placed in a position to minimise the impact.
- Consideration should be given to the position of welfare units and access routes for getting to and from welfare to work areas
- Those neighbouring the site will be kept informed of any specific activity likely to cause disruption or in the case of construction, inform the public how long the construction is likely to continue

Working hours Monday – Friday

- Where possible, work activities should be planned to take place between 7.30am and 6.00pm to minimise nuisance complaints
- These hours may vary depending on the area being worked in and local council i.e. busy roads may require short working hours to reduce impacts on traffic congestion
- Where councils require reduced working hours, these should be requested in writing and included in method statements

Working hours Saturday

- Reasonable working hours are reduced on a Saturday to between 8.00am to 4.00pm
- These hours may vary depending on the area being worked in and local council
- Where councils require reduced working hours, these should be requested in writing and included in method statements

Working hours Sunday / Bank Holidays

- Working hours on a Sunday / Bank Holiday should always be checked with the local authority, as they may not allow any work on a Sunday without a specific permit
- Due to the increased likelihood on impact on people, reasonable Sunday hours are reduced further to between 9.00am and 4.00pm
- These hours may vary depending on the area being worked in and local council

Selection of Equipment

The correct selection and usage of equipment and machinery, in combination with the proper maintenance can reduce the impact of the activity with regards to the amount of noise emitted.

- Where practicable use electrically powered machinery rather than diesel or petrol driven particularly when working adjacent to sensitive receptors
- Operate plant properly so that it does not create excessive noise, and shut it down when not in use
- Provide adequate silencers mufflers or other control measures for plant i.e. percussive tools
- Rotating or impacting machinery must be fixed on rotating or impacting machines on anti-vibration mountings

Screening

If designed and used correctly screening can reduce the noise levels emitted from an establishment. Acoustic enclosures or screens can be used where plant and equipment are in continuous operation and or close to sensitive receptors.

- Factors affecting the efficiency of a screen include the distance between the source and the receiver of the noise, the density of the material being used as a screen, the position of the screen relative to noise reflecting surfaces
- The screen may be purpose built or can consist of an existing feature
- When screening an individual item from a receptor, position the screen around three sides of the source on the sides nearest the receptor, place it as near as possible to the noise source; and ensure it is built approximately 1m above the highest sight line

Plant Use

Static plant must be positioned as far as practicable from site boundaries, sensitive receptors, and public areas where they have potential to cause a nuisance:

- Quiet and low or reduced vibration plant, equipment and working methods must be used where possible e.g. super-silenced generators
- When operating equipment, use noise control devices such as jackets, covers, and shrouds. Ensure that all hoods and doors are closed and well fitted / sealed
- Acoustic doors, hoods and covers must be kept shut when plant and equipment are in use
- Plant with potential to generate vibration from the transfer medium and place must be isolated on a heavy base where practicable
- All plant and equipment must be turned off when not in use
- All plant must be maintained in accordance with the manufacturer’s instructions
- Drop heights into hoppers, lorries or other plant must be minimised

Piling

Typical mitigation measures for piling operations include:

- Using modern, quiet, and well-maintained equipment
- Using fully silenced modern piling rigs with engines to highest Euro Standard
- Careful operation of the rig so there is no reversing of the Kelly/auger bars
- Off-site preparation of as many materials as possible
- Avoidance of unnecessary noise (such as engines idling between operations, shouting, loud radios, or excessive revving of engines) by effective site management

Note 5 - Measurement of noise levels

If activities are going to fall outside of these generally expected levels in terms of:

- noise level
- hours of the day or;
- in close proximity to a sensitive location / member of the local community

The need to monitor background noise is often required to ensure that the planning of the noise that will be generated from the activities can be assessed and understood. This enables an understanding of the potential change in noise levels that may be experienced due to the planned activities.

This requirement can form part of the planning approval process or while gaining Section 61 consent approval.

Noise monitoring should be carried out by an individual who is either qualified to the standard of the Institute of Acoustics (IOA's) Certificate of Competence in Environmental Noise Measurement (or equivalent) or an individual who has been trained by the qualified person.

The checking of all noise control measures should be documented in the management plan and should include the ongoing review of the effectiveness of the control measures.

More detailed monitoring may be required under planning and/or contractual conditions or through agreement with the local authority.

Ideally, monitoring should be undertaken prior to project / contract activities. This is to ensure that a "baseline" for the project / contract. For example, London Councils' normally set a limit of *75 decibels (dBA). It is often confirmed at pre-commencement monitoring that noise levels are already exceeding this before our own activity commences. This data becomes pertinent for applications, etc.*

ENV-SF-0015a Noise Monitoring Record should be used to generate records of any noise monitoring requirements.

If the control measures fail, follow the emergency arrangements set for the activity if needed and stop the works to review risk assessment and control measures and/or agreement and conditions of the consent or permit.

Any incidents must be reported and notified as set out in HSES-PR-0005 Incident Reporting and Investigation and as per business unit reporting requirements.

Legislation and Regulation

England, Wales Scotland, and Northern Ireland **(EN) (W) (S) (NI)**

Environmental Protection Act, 1990: The Act recognises that activities from a site or premises can have local environmental impacts that can be deemed a statutory nuisance.

The Act provides Local Authorities with powers and duties to manage issues determined as a statutory nuisance through either remedial or preventative action, by the issue of consents or abatement notices that set out the requirements that must be met by the approved activities.

Commercial activities, including construction, may have requirements set out in consents that are granted as part of the Local Authority planning process.

However, a Local Authority can also place activities under consents retrospectively or issue abatement notices if they believe that commercial activities are generating a local environmental impact that causes a statutory nuisance. Non-compliance can result in prosecution, prohibition, or improvement sanctions as well as the potential for compensation claims from the local community.

Local Authorities set general operating hours and minimum requirements for the management of noisy activities and details can be gained by review of the relevant local authority web page. The following provides general parameters for activities that should consider and engage with the local authority for the need to apply for consent:

1. Sites in operation for over 28 days
2. Significant number of local residents or businesses in a heavily urbanised area
3. Sensitive local receptors such as schools or hospitals that may be affected for a significant time
4. Any other site where it is highly likely the activity may lead to complaints

The Environmental Protection Act, 1990 also defines Best Practical Means as a framework for assessing the acceptability of the management controls applied to an activity to minimise and reduce the local environmental impact of the activity.

The main regulatory mechanism for the management of noise is Control of Pollution Act 1974, Section 61. Obtaining a Section 61 consent means that there is an agreement in place between Balfour Beatty and the local authority to allow an agreed level of noise disturbance to occur including the extent of noise, the hours of work when the noise will be generate, the control measures implemented to control the noise and the monitoring controls put in place to ensure the consent requirements are met.

Clean Neighbourhoods and Environment Act, 2005: Encompasses many areas of the law affecting local environmental quality. Provisions of this Act cover the following areas: crime and disorder, vehicles, litter and refuse, graffiti and defacements, waste, noise, dogs, and architecture and the built environment.

The Act classifies statutory nuisances (noise, vibration, artificial light, dust, odours, litter etc.) and provides local authorities, parish and community councils and the Environment Agency with more effective powers and tools to tackle poor environmental quality and anti-social behaviour. Local authorities have the power to issue a Section 60 for activities that exceed their minimum requirements and prosecute and fine if noise from the activity is defined as a statutory nuisance.

UK Documentation

Reference	Type	Title
ENV-TF-0015b	Template	Section 61 Prior Consent application template
ENV-SF-0015a	Form	Noise Monitoring Record
ENV-TB-0015a	Toolbox Talk	Noise and Vibration (detailed)
ENV-TB-0015b	Toolbox Talk	Noise and Vibration (summary)
External	British Standard	The British Standards Institute (BSI) Code of practice for noise and vibration control on construction and open sites (BS 5228-1:2009)
External	Guidance	City of London Code of Practice for Deconstruction and Construction Sites

Introduction

As a company we have a duty of care to ensure that prior to commencing on-site activities we have a detailed and comprehensive understanding of the ecological value of a site relating to all wildlife (including animals, plants, fungi and soil) regardless of whether they are protected by legislation or not. All species-specific legal requirements must be met and we must work to deliver above and beyond legal requirements to minimise any potential adverse impacts on ecology and biodiversity. Where possible we should achieve measurable net gains in biodiversity in accordance with the UK's good practice principles on Biodiversity Net Gain (CIEEM, CIRIA, IEMA, 2016).

Our activities can negatively impact on protected sites, habitats and species and cause the spread of invasive non-native species. These activities include:

- Damage to vegetation through dust cover;
- Run-off of oil/silt or contaminated materials into protected/sensitive ecological features (land and water);
- Accidents and spillages releasing chemicals into protected/sensitive ecological features;
- Excavation or clearance of habitats;
- Killing or injury to wildlife);
- Tracking soils/ debris which contain injurious and invasive species across, and out of, a project site to another location
- Damage or interference to any protected habitats (including root protection areas of trees);
- Damage, destruction or obstruction of nesting areas, roosting areas, feeding areas and migratory sites;
- Accidental or deliberate killing, injuring, possessing, selling, damaging or obstructing access or a protected species or disturbing a sheltered protected species
- Causing disturbance with noise, vibration, lighting or operations to ecologically sensitive areas (such as foraging areas)

In the UK, legislation is in place to:

- Prevent the loss of sites of ecological and/or geological significance
- Protect vulnerable species and their habitats
- Control the spread of injurious and invasive species

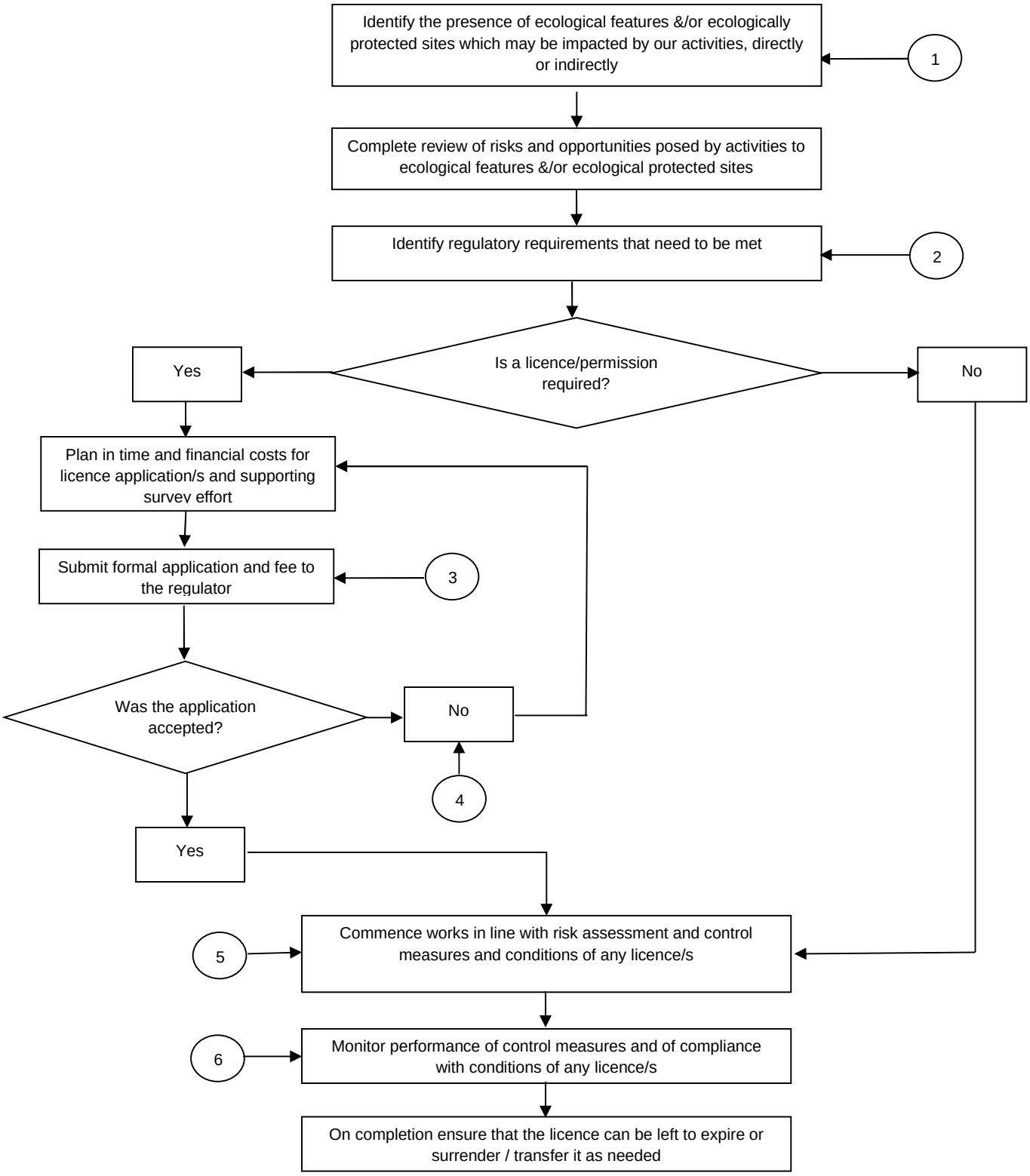
This document sets out the process that Balfour Beatty UK follows to ensure that ecological issues and risks are identified and addressed within the company's operational activities. It explains how to identify and manage our impacts and associated legislative risk regarding protected sites and species.

Abbreviations / Definitions

Biodiversity	The variety of wildlife within an area
Tree Preservation Order (TPO)	Put in place by a Local Planning Authority to protect specific trees or a particular area, group or woodland from deliberate damage and destruction. TPOs prevent the felling, pruning, uprooting or otherwise wilful damaging of trees without the permission of the Local Planning Authority.
Habitat	Habitat can be defined as an area possessing uniformity of landform, vegetation, climate, or any other quality assumed to be ecologically important. Usually, in

	terms of site assessment and management, it is uniformity of vegetation that characterises a habitat, for example oak woodland, reed beds, bramble scrub and so on.
Injurious Species	A plant or animal that can cause injury to people or domesticated animals e.g. giant hogweed and ragwort.
Invasive Species	Any non-native animal or plant that has the ability to spread causing damage to the environment and out competing native species e.g. Japanese Knotweed.
cHECk	The **H**abitat and **E**cology **C**heck Assessment tool, which has been developed to ensure the Company has conducted the necessary compliance checks when planning and carrying our works, providing assurance of legal compliance with ecological and environmental legislation.
IEMA	Institute of Environmental Management and Assessment
CIRIA	Construction Industry Research and Information Association
CIEEM	Chartered Institute of Ecology and Environmental Management
SSSI	Site of Special Scientific Importance

What you need to do



Note 1 - Identify the presence of ecological features &/or ecologically protected sites which may be impacted by our activities, directly or indirectly

In order to understand the potential risks our work presents to ecological features, the presence of protected species (plants and wildlife) and protected sites must be identified well in advance (e.g. at least 3 months) of works starting on site.

This may include information received from the client, specialist surveys, and external consultation with environmental/conservation regulators and local wildlife trusts/bodies etc. Any information passed to the project team must be assessed for completeness, including how recently surveys were carried out. Any ecological data (including surveys) more than one year old must be reviewed with a suitably qualified ecologist to determine their accuracy and validity and whether they need to be repeated and/or updated.

If works/activities are demobilised and will be remobilised after 3 months or more, the environmental risks and opportunities assessment (ENV-SF-0001a) must be re-visited and the ecological risks updated as necessary in advance of works re-commencing.

Any ecological mitigation measures must be implemented in accordance with the stipulated requirements which can mean implementing the mitigation prior to works/activities commencing. If the identified mitigation requirements cannot be followed, alternatives must be sought via your Environmental Sustainability Lead and approved by an ecologist. Ecological mitigation requirements must be briefed to site personnel in advance of works re-commencing.

Ecological mitigation requirements must be revisited in line with ENV-RM-0016b Ecology Calendar, with specific attention paid to the lifecycle of protected species and seasonal restrictions on working and ecological surveying activities. We must ensure that seasonally constrained activities are undertaken at the most appropriate time of the year, depending on the species concerned.

As wildlife is mobile and may move into an area, or if work is being carried out at a different time of year from when it was originally planned, or if site conditions have changed (e.g. vegetation has been allowed to re-establish) additional ecological surveys may be required and, if so, must be undertaken to identify whether the planned ecological mitigation has changed.

Wildlife

Work should not commence until up-to date and complete ecological data/surveys have been carried out and provided to the project team and recommended mitigation measures implemented.

Where the client has not provided any recent or complete ecological data/surveys (see above) at tender stage, sites identified as having ecological potential and/or trees are present, must be surveyed prior to works commencing.

The following describes the types of assessment available and when they should be used.

Preliminary Ecological Appraisal (PEA)

Also known as an extended habitat survey, a preliminary ecological appraisal (PEA) is carried out by a suitably qualified ecologist (either client specified, internal or company approved). It can be undertaken at any time of year and consists of:

- **Desk study exercise** - undertaken in order to collect ecological baseline data relating to the site and its surrounds. Ecological data will be requested from a number of consultees.
- **Habitat survey** – Using a standardised technique for classifying and mapping British habitats, a walkover survey will be carried out to providea record of habitats that are present on site. During the survey, the presence, or confirmed presence or suitability of habitats for protected species will be noted.

A Preliminary Ecological Appraisal report will be produced, which will include a detailed map of the habitats on site. This report will summarise the results of both the desk study and the field survey, and will include an assessment of the likely impact of the project on both habitats and notable species. Recommendations for any further works needed to ensure compliance with wildlife legislation and relevant planning policy will be made.

Some recommendations might have seasonal constraints so must be planned and budgeted for early on (see the Ecology Calendar (ENV-RM-0016b)

Species Specific Surveys

These must be carried out by a suitably qualified ecologist (either client specified, internal or company approved) on species identified in the Phase 1 Habitat Survey as requiring more investigation. Following the survey, a report is produced detailing potential impacts of works and any mitigation requirements. These might require a licensed ecologist in attendance during works, for example if works might affect protected species such as badgers, bats, white-clawed crayfish or great crested newts.

Species specific surveys are likely to be subject to seasonal constraints. The Ecology Calendar (ENV-RM-0016b) identifies the optimum times for carrying out surveys for specific species.

Ecologically Protected Sites

The location of key ecologically protected sites can be identified using the following links:

- England - https://magic.defra.gov.uk/
- Wales - https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/designated-sites/?lang=en
- Scotland - http://gateway.snh.gov.uk/sitelink/index.jsp
- Northern Ireland - https://www.daera-ni.gov.uk/services/searching-protected-areas

A list of the ecologically protected sites to look for is included in Table 1.

Discovery of unknown or unexpected ecological receptors

In the event of a suspected protected species or an invasive or injurious species being discovered the following actions must be taken:

- Stop works in the area, as soon as safe to do so, and cordon off. Restrict access to the area until additional advice is obtained
- Contact the appointed ecologist or Environmental Sustainability Lead for advice
- Identify methodology for dealing with the issue
- In the case of protected species and designated sites, the appropriate authority may also need to be contacted after consultation with the ecologist

- Identify, discuss and agree measures required ensuring compliance with legislation, when works can be completed, and what should be included within the method statement. Agreement and discussions must be recorded and kept on file.
- Report any expected findings in line with HSES-PR-0005 Incident Reporting and Investigation.

Note 2 - Identify regulatory/permit requirements that need to be met

Wildlife

A licence may be required by anyone who wishes to carry out an activity prohibited under wildlife legislation. For example:

- to kill or take certain protected species to prevent problems
- to carry out surveys or conservation work
- to disturb or damage the habitat of certain protected species (even accidentally)
- to possess or keep certain wildlife.

To use a licence you must follow the conditions contained in each licence and submit records and annual reports if required.

Wildlife protection laws are different in England, Scotland, Wales and Northern Ireland. Professional ecological guidance must be sought and followed. The regulator in your area can also be contacted to find out which species are protected and what you can and can't do.

- England – Natural England
- Wales – Natural Resources Wales
- Scotland – Scottish Natural Heritage
- Northern Ireland - Northern Ireland Environment Agency

General Licences

A set of standardised licences that anyone who satisfies the eligibility criteria may use. They are used for activities that carry a low risk to the conservation or welfare of a protected species. e.g. to remove abandoned or unsuccessful bird eggs. These licences do not need to be applied for but the conditions must be followed on any licence used. The licences differ depending where the work is taking place.

For further information on general licences refer to:

- England - https://www.gov.uk/government/collections/general-licences-for-wildlife-management
- Wales - http://www.cyfoethnaturiolcymru.gov.uk/permits-and-permissions/protected-species-licensing/uk-protected-species-licensing/general-licences-2018-birds/?lang=en
- Scotland – https://www.gwct.org.uk/scotland/advice/scottish-general-licences/
- Northern Ireland - https://www.daera-ni.gov.uk/articles/wildlife-licensing

Class Licences (England only)

These licences are held by registered ecologists carrying out specific activities such as surveying for protected species. If work is going to be carried out under a class licence you:

- Must be registered to use most class licences (or have a licensed ecologist)
- Must apply to be registered for each licence you use
- Remain eligible to use the licence(s) for as long as you remain registered
- Meet the recording and reporting requirement for each licence

For further information on class licences in England refer to:

- https://www.gov.uk/government/collections/class-licences-for-wildlife-management

Individual Licences (including European protected species)

Must be applied for if any activity is being carried out that affects a protected species (including European protected species) and is not covered by a general or class licence. This includes activities such as:

- Disturbing, trapping or handling protected species
- Disturbing their habitats, for example by cleaning out a pond or building a housing development

If a licence is granted, its conditions will require a suitable scheme of mitigation to be implemented, i.e. measures aimed at minimising or even cancelling the negative impact of plans and projects during or after their completion. The licences differ depending where the work is taking place.

For further information on individual licences refer to:

- England – https://www.gov.uk/guidance/wildlife-licences#types-of-licence

  If works affects a European protected species, a mitigation licence is also required if your work will have impacts European protected species that would otherwise be illegal such as:
  - capturing, killing, disturbing or injuring them (on purpose or by not taking enough care)
  - damaging or destroying their breeding or resting places (even accidentally)
  - obstructing access to their resting or sheltering places (on purpose or by not taking enough care)

  Further information on mitigation licences is available from Natural England
- Wales – http://www.cyfoethnaturiolcymru.gov.uk/permits-and-permissions/protected-species-licensing/?lang=en
- Scotland - https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/licensing/species-licensing-legislation
- Northern Ireland - https://www.daera-ni.gov.uk/articles/wildlife-licensing

In order to successfully apply for a European protected species licence (mitigation licence in England), a licence application must pass 3 legal tests:

- The activity must be for a certain purpose such as preserving public health or public safety or other imperative reasons of overriding public interest
- There must be no satisfactory alternative
- The activity will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range (the creation of new habitats to offset any damage may be required)

European Protected Species

European protected species are those species listed in Annex IV to the Habitats Directive and include:

Annex IV to the Habitats Directive		
Large blue butterfly (Maculinea arion)	Bats (all species)	Pool Frog (Rana lessonae)
Otter (Lutra lutra)	Sand lizard (Lacerta agilis)	Great Crested Newt (Triturus cristatus)
Smooth snake (Coronella austriaca)	Natterjack toad (Bufo calamita)	Wild cat (Felis silvestris)

A full list of Annex IV species can be found here.

Designated Sites

There are various ecological designations for ecologically protected sites which can be protected under European and national law. In addition, Local Authorities have the ability to establish and maintain sites of regional and local importance.

When our activities could affect a protected site, discussions with the appropriate regulatory authority must take place as early as possible before starting works to allow consultation on any required permissions and working conditions. These specific working requirements must be built into methods of work and site teams must be briefed on the specific working requirements at the start of work. Work requirements can also require watching briefs by suitably qualified ecologists, which must be planned and budgeted for as early as possible.

Copies of any permit for working in, or near a protected site must be included in the site files or Project Management Plan and be available to every visitor to site upon request. 'Near' can be many miles away depending on the qualifying feature for the designation and connectivity from the works to the protected site.

Table 1 – Key Ecologically Protected Sites

Sites of International importance	
RAMSAR (The UK is a signatory to this international convention)	Sites listed under the convention of wetlands of international importance. The protected sites are of importance as wildfowl habitats. **UK Statutory Designation** UK Statutory Designation: a RAMSAR site is always designated as a SSSI (Site of Special Scientific Interest) in England, Wales & Scotland Regulator: Natural England, Scottish Natural Heritage, Natural Resources Wales, Department of Agriculture Environment and Rural Affairs (Northern Ireland)
Special Protection Area (SPA)	Classified under the European Community Directive on the conservation of wild birds. UK Statutory Designation: SPA - all SPA's are SSSI's in England, Wales & Scotland Regulator: Natural England, Scottish Natural Heritage, Natural Resources Wales, Department of Agriculture Environment and Rural Affairs (Northern Ireland)
Special Area of Conservation (SAC)	This legislation is based on the European Community Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive). UK Statutory Designation: SAC (all SAC's are SSSI's in England, Wales & Northern Ireland) Regulator: Natural England, Scottish Natural Heritage, Natural Resources Wales, Department of Agriculture Environment and Rural Affairs (Northern Ireland)
Sites of National Importance	
Sites of Special Scientific Interest (SSSI)/ Areas of Special Scientific Interest in Northern Ireland.	All SSSIs / ASIs have been studied in detail prior to being awarded protected status. The reason for protection of an individual SSSI / ASI will be included within the site schedule. The SSSIs/ASSI designation may extend into intertidal areas. UK Statutory Designation: SSSI / ASSI Regulator: Natural England, Scottish Natural Heritage, Natural Resources Wales, and Northern Ireland Environment Agency
National Nature Reserve (NNR)	An NNR is managed primarily for nature conservation benefits. UK Statutory Designation: NNR Regulator: Natural England, Scottish Natural Heritage, Natural Resources Wales, and Northern Ireland Environment Agency
Areas of Special Protection (England & Wales)/Wildlife Refuges (Northern Ireland)	Designation aims to prevent the disturbance and destruction of the birds for which the area was identified, by making it unlawful to damage or destroy either the birds or their nests and in some cases by prohibiting or restricting access to the site. Wildlife Refuges are equivalent to Areas of Special Protection in Northern Ireland. Sites in Northern Ireland with a 'Bird Sanctuary' designation may be afforded similar protection to Wildlife Refuges. Regulator: Natural England, Scottish Natural Heritage, Natural Resources Wales, and Northern Ireland Environment Agency

Marine Conservation Zones (MCZs)	Marine Conservation Zones can be established to protect nationally important marine wildlife, habitats, geology and geomorphology and can be designated anywhere in English and Welsh inshore and UK offshore waters. Regulator: Natural England, Scottish Natural Heritage, Natural Resources Wales, and Northern Ireland Environment Agency
Marine Protected Areas (MPAs) - Scotland	Nature conservation Marine Protected Areas can be designated in offshore waters around Scotland. MPAs may also be designated for demonstration and research and for historic/cultural conservation. Regulator: Scottish Natural Heritage
Marine Nature Reserves (MNRs)	Marine Nature Reserves are used to protect an area of the sea and seabed (which can include intertidal areas) to conserve marine flora and fauna and geological features of special interest, while providing opportunities for study of marine systems. They are a mechanism for the protection of nationally important marine (including subtidal) areas. These are being slowly replaced by MCZs in England and Wales only. Regulator: Natural England, Scottish Natural Heritage, Natural Resources Wales, and Northern Ireland Environment Agency
UK BAP priority species and habitats and The UK Post-2010 Biodiversity Framework	UK BAP priority species and habitats were identified as being the most threatened and requiring conservation action under the UK Biodiversity Action Plan (UK BAP). The original lists of UK BAP priority species and habitats were created between 1995 and 1999, and were updated in 2007. Now superseded, the UK BAP lists of priority species and habitats remain important reference sources as they have been used to help draw up statutory list of priority species in England, Scotland, Wales and Northern Ireland. The UK Post-2010 Biodiversity Framework, published in July 2012 has succeeded the UK BAP and much of the work previously carried out under the UK BAP is now focused at a country level.
Common Land and Village Greens	Common land is owned e.g. by a local council, privately or by the National Trust. The public usually have the right to roam on it, using it for certain activities like walking and climbing. Some common land has different rights, so it may be able to be used for other activities e.g. horse-riding. Town and village greens can usually be used for sports and recreation. Some also have 'rights of common over them' like grazing livestock. The right to roam doesn't apply. Many green are owned and maintained by local parish or community councils and some are privately owned. In order for Balfour Beatty to carry out any work activities across common land or village greens (including parking plant or vehicles or the establishment of a site compound), formal permission must be obtained. Find out where your local common land of village green is by contacting your local council as it keeps the 'Register of Common Land and Village Greens' for your area.

Sites of Regional or Local Importance	
Local Nature Reserve (LNR)/Local Authority Nature Reserves (LANRs) in Northern Ireland	A habitat of local significance that makes a contribution to nature conservation and to the opportunities for the public to enjoy wildlife Regulator: Local Authority
Non-statutory nature reserves	These areas are established and managed by a variety of public and private bodies for specific ecological interest Regulator: County Wildlife Trusts, Royal Society for the Protection of Birds etc.
Site of Importance for Nature Conservation/Key Wildlife Site	Usually adopted by the local authority for planning purposes. The name and status of this type of site varies considerably. Regulator: Local Authority

Note 3 - Submit formal application and fee to regulator

Wildlife

When applying for a licence, the correct application form must be used. For details of the forms, use the links below:

- England - https://www.gov.uk/guidance/wildlife-licences
- Wales - http://www.naturalresources.wales/permits-and-permissions/protected-species-licensing/uk-protected-species-licensing/?lang=en
- Scotland - https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/licensing
- Northern Ireland - https://www.daera-ni.gov.uk/articles/wildlife-licensing

It is usual that a “named ecologist” (i.e. the ecologist named on the licence) will need to apply for a licence on behalf of a specific, responsible individual on the project (such as the Project Director, Site Lead, Environmental Specialist etc). For some licensed activities (e.g. surveys, certain research activities or implementing mitigation works in relation to developments), the applicant may be required to provide information or references demonstrating technical expertise. The relevant application form will explain what you must provide.

The time a regulator takes to determine whether a licence should be issued is typically 30 working days (6 weeks), but this may vary depending on the time of year and the type of licence (and can be much longer). Sufficient time must be built into the project programme for licence applications to be made. If an application is put on hold for any reason by the regulator at any stage, the clock will stop until the issue has been resolved.

In certain ‘emergency’ situations licences can be issued more quickly. An emergency situation is where there is an immediate risk to health, life, property or environment. The regulator must be consulted about licences needed in such situations.

You may not assume that consent has been granted if you do not receive a response within 30 working days. In this instance, the licence application must be followed up with the regulator. Work must not commence until the licence has been received from the regulator.

Some licences and general advice are provided free of charge. The relevant application form will give full guidance. The regulator can also be contacted to confirm current licence and advice costs.

Designated Sites

When applying for permision to work in an designated site, the correct application process must be follwoed depending on the nature of the designation. For details of the forms to use when applying for SSSI/ASSI consent/assent, use the links below. For all other designations, contact the regulator in the area where you are working.

- England – https://www.gov.uk/guidance/sites-of-special-scientific-interest-public-body-responsibilities
- Wales – https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/guidance-to-site-of-special-scientific-interest-sssi-land-owners-and-occupiers/?lang=en
- Scotland – https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-areas/national-designations/sites-special-scientific-interest
- Northern Ireland - https://www.daera-ni.gov.uk/topics/land-and-landscapes/areas-special-scientific-interest

The time a regulator takes to determine SSSI consent/assent varies:

- England - 28 working days
- Wales – 28 days
- Scotland – up to 4 months
- Northern Ireland – up to 3 months

Sufficient time must be built into the project programme for licence applications to be made. If an application is put on hold for any reason by the regulator at any stage, the clock will stop until the issue has been resolved.

A fast track service may be available if consent/assent is required more quickly. The regulator must be consulted about this.

If a written response is not received within the timeframe detailed above it must be assumed that consent/assent has been refused. In this instance the regulator must be contacted for further information. Work must not commence until formal consent/assent has been received from the regulator.

Common Land and Village Greens

Consent must be obtained from the Planning Inspectorate on behalf of the Secretary of State for Environment, Food and Rural Affairs to carry out any works that would prevent or impede access to common land or for works for the resurfacing of land. These works could include:

- Putting up new fences
- Erecting buildings
- Making ditches or banks

- Resurfacing the land
- Building new solid surfaced roads, paths or car parks

England

A section 38 application form must be completed and submitted to the Planning Inspectorate in order to carry out work which needs consent. Further information is available from Common land and village greens and Carrying out works on common land.

Wales

An application must be completed and submitted to the Planning Inspectorate in Wales in order to carry out work which needs consent. Further information is available from Common land consents: guidance and Common land, village greens and applications to work on.

Scotland

The issue of common land was referred to The Scottish Land Commission for review in 2016. They should be contacted for further information:

info@landcommission.gov.scot

0300 244 4452

www.landcommission.gov.scot

Note 4 – Application refused

The letter issued regarding the licence application and its refusal will set out how an appeal against the decision can be made

Note 5 – Commence works in line with identified risk and control measures and conditions of any licence

Where wildlife has been identified, regardless of whether it is protected or not, appropriate working methods must be developed and implemented by suitably qualified professionals to minimise the risk of harm, . Mitigation measures must be interrogated to ensure they are fit for purpose.

If works are being remobilised after 3 months or more, BMC-SF-0001e Sales to Delivery Handover Checklist must be completed again, ensuring that ecology risks are reviewed.

Work activities must be programmed with regard to the life cycle of protected species, including nesting birds, to first avoid and then minimise disturbance and to ensure compliance with legislation. See Ecology Calendar (ENV-RM-0016b).

If mitigation requirements are identified following ecological surveys, these must be followed or alternatives sought via your Environmental Sustainability Lead and approved by an ecologist.

Ecological permits can be implemented on sites as an appendix to Work Package Plans for works at risk of impacting ecological receptors (e.g. vegetation clearance), using:

1. ENV-SF-0016b Ecological Permit Request Form can be filled out by the person requesting the works, usually the engineer or agent. The applicant must read and fill out all 4 tabs and send it to the Natural Environment / Ecology Team. Work on the permit will not commence until all information is provided to the Natural Environment / Ecology Team.

2. A site impact assessment is carried out by the ECoW and a method of works agreed with the applicant. Mitigation requirements are communicated as early as possible.
3. 7 calendar days must be allowed for ENV-SF-0016a Ecological Permit to be issued by the Natural Environment / Ecology Team so that any required resource may be sourced.
4. Once it is issued, the Supervisor / Foreman / Engineer must arrange mitigation requirements and sign and upload the permit to the project's document platform (e.g., BC, ProjectWise).

All ecological risks and control measures must be:

- Included in PRM-TF-0001a Project Management Plan by documenting activities that will impact on ecological features and how these activities will be managed i.e. the mitigation measures to be implemented
- Included in Work Package Plans and Task Briefing Sheets, as well as CEMPs
- Included in method statements
- Briefed to employees and subcontractors before work commences as part of project induction training. It must highlight the wildlife, habitat and biosecurity controls in place at relevant locations, and periodic refresher training must be carried out using toolbox talks on wildlife and habitat protection.

Details and information of ecological receptors must be included in the Emergency/Incident Response Plan and if required, a specific Ecological Management Plan must be produced.

Copies and requirements of licences must be available on site and complied with in full. Deviations from licence conditions must be reported as an environmental incident as per HSES-PR-0005 Incident Reporting and Investigation.

Protected sites and species must be fenced off if required, and clearly demarcated as ecological exclusion zones prior to works starting. Ecological exclusion zones must be marked on site plans and communicated to employees and subcontractors. The type of demarcation and signage required will depend on the location of the exclusion zone and the reason for protection. Consideration must be given to the wording of any signage, for example to avoid bringing unwanted attention to the area e.g. badger sett.

If an ecological watching-brief is required on site this would normally be carried out by a suitably qualified ecologist. Specially licenced ecologists may be required if working near protected species such as badgers, bats, white-clawed crayfish, dormice and great crested newts. The advice of ecological specialists and/or consultants must be followed at all times.

Invasive or Injurious Species

Methods of work must be adopted that prevent the spread of invasive or injurious species and ensure that any waste is disposed of appropriately. If you encounter any invasive or injurious species stop works and contact your Environmental Sustainability Lead.

Note: Although invasive or injurious weeds are not classed as hazardous/special waste their disposal routes are restricted and so they must not be mixed with other waste. The disposal location and/or waste broker must be notified of the weed type prior to collecting the waste/taking it to the disposal location.

Guidance on commonly found invasive or injurious species and how to manage them is provided in ENV-RM-0021c Invasive and Injurious Species Handbook.

Biosecurity

Biosecurity is a set of measures put in place to prevent the introduction and spread of harmful organisms and invasive species that are a threat to other plants and animals. Where a risk has been identified through site surveys, biosecurity measures must be put in place.

Guidance on implementing biosecurity measures is provided in ENV-RM-0021a Biosecurity Measures.

Trees

Trees are a vital part of our cities, towns and countryside landscapes and offer many benefits. Where work is taking place in close proximity to trees, appropriate mitigation measures must be put in place to prevent harm to them, including to their branches, foliage, trunk and roots, regardless of whether or not they are protected. Trees must not be pruned/cut during the bird nesting season. If this is unavoidable the presence of nesting birds must be checked for prior to works on the tree commencing. No works to trees within a Conservation Area or subject to a Tree Preservation Order (TPO) shall be undertaken without consent from the Local Planning Authority or Secretary of State.

Detailed guidance is provided in ENV-RM-0017a Tree and Hedgerow Protection.

Hedgerow Management

In England, it is a criminal offence to deliberately remove or otherwise destroy a 'protected' hedgerow without permission. A hedgerow will be protected if it is mature and over 20 metres in length, or connected at both ends to another hedgerow of any length. Hedgerows which mark the edge of a garden are not protected.

Where work is taking place in close proximity to hedgerows, appropriate mitigation measures must be put in place to prevent harm to them regardless of whether or not they are protected.

Detailed guidance is provided in ENV-RM-0017a Tree and Hedgerow Protection.

All Cornish and Devon hedgerows are protected by local by-laws, and permission and advice is needed from the Local Planning Authority prior to the start of works. For further information see ENV-TB-0017c Devon and Cornish Hedgerows.

In all cases, hedgerows must not be pruned/cut during the bird nesting season. If this is unavoidable the presence of nesting birds must be checked for prior to works on the hedge commencing. If nesting birds are present, no works may be carried out to the hedge. Hedgerows also provide a valuable habitat for invertebrates and small mammals (including dormice) and appropriate surveys must be carried out prior to undertaking any works on a hedge.

Peat Management

The effective management of peat soils is important for the following reasons:

- Significant carbon storage - Peat soils in Scotland contain almost 25 times as much carbon as all other plant life in the UK
- Peatlands are internationally important wildlife habitats
- Peatlands absorb atmospheric pollutants, improving water quality downstream, leading to productive fisheries and high quality drinking water
- Peatlands help with flood regulation

Peat habitats may need to be inspected during works.

A peat management plan may be required when working on, or near, peat-based soils. This is normally in any one of the following situations;

- Client or 'other' stakeholder requirement
- Handling, movement or removal of more than 50m^3 of peat
- On any site where there is a significant risk of peat slide or pollution from disturbed peat, or degradation of peat
- If the storage of peat is for longer than four months

If you think a peat management plan may be required for the project contact your Environmental Sustainability Lead and, where appropriate, seek specialist environmental advice.

Note 6 - Monitor performance of control measures and of compliance with conditions of any licence/s

An inspection of any mitigation measures and controls such as barriers and reptile fences must be undertaken by the Management Environmental Representative (MER) and recorded on ENV-TF-0004a Environmental Management Representative Inspection.

If the control measures fail, the emergency arrangements set for the activity must be followed if needed. The work must be stopped and the risk assessment, control measures and compliance with any licence/s reviewed.

Environmental incidents must be reported as per HSES-PR-0005 Incident Reporting and Investigation.

The regulator must be notified of any proposed changes to the methodology/mitigation measures which were agreed as part of the licence application process.

Injury or death to plants & wildlife

The injury or death of a protected species (plants & wildlife) must be reported to the regulator. When work is taking place within or adjacent to a protected site, the death or injury of plants & wildlife must be reported to the regulator regardless of whether the species is protected or not.

Biodiversity Net Gain

Biodiversity net gain (BNG) is a way to quantify the impact of developments on habitats with the purpose of ensuring the area and / or quality of habitat is a minimum of 10% better than it was before development. Projects must try to avoid loss or damage to habitats. Where this is not possible, they will be required to create habitat either on-site or off-site. If on-site or off-site net gain is not achievable the project must buy statutory credits from the government. This must be a last resort.

BNG will apply from November 2023 for developments in the Town and Country Planning Act 1990, unless exempt. It will apply to small sites from April 2024 and Nationally Significant Infrastructure Projects (NSIPs) from 2025.

Further information can be found in ENV-RM-0020a Biodiversity Net Gain.

Legislation and Regulation

There are numerous pieces of nature conservation legislation and the key pieces for our activities are detailed below. For further details refer to HSES-RM-0001c UK Environmental Legal Register.

England, Scotland, Wales and Northern Ireland **(EN) (S) (W) (NI)**

Environmental Damage (Prevention and Remediation) Regulations (there are individual variants for England, Wales, Scotland and Northern Ireland) impose obligations on certain operators to prevent, limit or remediate environmental damage concerning land, water, protected species or natural habitats and SSSIs. If damage is caused there is a requirement to notify the applicable Environmental Regulator/Competent Authority.

They bring into force rules to force polluters to prevent and repair damage caused to water systems, land quality, species and their habitats and protected sites (the 'Polluter Pays' principle). The 2015 amendment extends environmental damage to include damage to the status of marine waters.

Natural Environment and Rural Communities Act established Natural England, responsible for conserving, enhancing and managing England's natural environment. The act makes provision in respect of biodiversity, pesticides harmful to wildlife, the protection of birds and in respect of non-native species.
The act is split into 10 parts:

- Part 1 (Natural England and the Commission for Rural Communities) – England & Wales only
- Part 2 (nature conservation in the UK) – England, Wales, Scotland, Northern Ireland
- Part 3 (wildlife) - England & Wales
- Part 4 (sites of special scientific interest) – England & Wales
- Part 5 (National Parks and the Broads) – England & Wales only
- Part 6 (rights of way) – England and Wales
- Part 7 (inland waterways) – England, Wales and Scotland
- Part 8 (flexible administrative arrangements) – England and Wales. Chapter 2 (powers to reform agricultural bodies) extends also to Scotland and Northern Ireland. Chapter 3 (financial assistance) extends also to Northern Ireland.
- Part 9 (miscellaneous), section 98 (byelaws relating to land drainage) extends to England and Wales only, and section 99 (abolition of certain agricultural committees) extends to the whole of the UK.
- Part 10 (final provisions) - England, Wales, Scotland and Northern Ireland.

England, Wales and Scotland **(EN) (S) (W)**

The Wildlife and Countryside Act forms the basis of most statutory wildlife protection in the UK. It is divided into four parts:

- Part I deals with the protection of animals and plants. It details the level of protection afforded to species listed in the various schedules of the act.
- Part II relates to the countryside and national parks and the designation of protected areas (Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs)
- Part III covers public rights of way
- Part IV deals with miscellaneous provisions of the act

Animal Welfare Act and the Animal Health and Welfare (Scotland) Act applies when wild animals (vertebrates) come into our care, even if only temporarily. Individual animals must be treated humanely, including not causing unnecessary suffering. The removal of otherwise unprotected species form a site is

covered by this, as well as providing additional protection to otherwise protected species (such as when carrying out translocation operations).

Protection of Badgers Act provides for the protection of badgers and their setts by making it an offence to:

- Take, kill or injure a badger
- Damage, interfere with or destroy a sett, including obstructing access to a sett
- Interfere with badger while it is in the sett or other place of shelter,

Salmon and Freshwater Fisheries Act deals with problems of pollution making it an offence to knowingly permit the flow of poisonous matter and polluting effluents into river courses.

Weeds Act covers 5 injurious (harmful) weeds: common ragwort (Senecio jacobaea), spear thistle (Cirsium vulgare), creeping or field thistle (Cirsium arvense), curled dock (Rumex crispus) and broad leaved dock (Rumex obtusifolius). It is not an offence for these plants to be growing on land, however they are required to be kept under control by the landowner.

England and Wales **(EN)** **(W)**
Conservation of Habitats & Species Regulations provides for the designation and protection of 'European Sites' and the protection of 'European Protected Species'. It requires that a marine licence is required for all works in UK inshore waters.

Countryside and Rights of Way (CRoW) Act containing five Parts and 16 Schedules, the Act provides for public access on foot to certain types of land, amends the law relating to public rights of way, increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation, and provides for better management of Areas of Outstanding Natural Beauty (AONB).

Schedule 12 of the Act amends the species provision of the Wildlife and Countryside Act 1981, strengthening the legal provision for threatened species. The provisions make certain offences 'arrestable', create a new offence of reckless disturbance, confer greater powers to police and wildlife inspectors for entering premises and obtaining wildlife samples for DNA analysis, and enable heavier penalties on conviction of wildlife offences.

Scotland **(S)**
Natural Heritage (Scotland) Act established Scottish Natural Heritage (SNH) whose role covers wildlife and landscape conservation through the management of designated areas, and the provision of advice to developers and local planning authorities on countryside conservation and development issues

Nature Conservation (Scotland) Act provides increased protection and management of SSSIs

Northern Ireland **(NI)**
Conservation (Natural Habitats etc.) Regulations (Northern Ireland) is the principle piece of nature conservation legislation in Northern Ireland. It relates to nature reserves, Areas of Special Scientific Interest (ASSIs), wildlife protection and the implementation of the European Habitats Directive. It provides for the designation, protection and management of European Protected Sites: SACs (Special Areas of Conservation) listed under the Habitats Directive and SPAs (Special Protected Areas) listed under the Birds Directive.

Environment (Northern Ireland) Order 2002 Provides the Department of Environment for Northern Ireland with the power to declare areas of land as Areas of Special Scientific Interest (ASSI) where the land is of

special interest by reason of its flora, fauna, geological, physiographical or other features and needs to be protected. Consent must be obtained before carrying out any 'notifiable operation' specified in the declaration (unless it is carried out as part of a management agreement or management notice).

Nature Conservation and Amenity Lands (Northern Ireland) Order 1977 establishes the Council for Nature Conservation and the Countryside. Provides the Department for Environment Northern Ireland with the power to acquire land for the purpose of managing it as a nature reserve and allows marine nature reserves to be established. Byelaws can be made to protect both nature reserves and marine nature reserves.

Noxious Weeds (Northern Ireland) Order 1977 defines ragwort, thistle, dock and wild oat as noxious weeds and places a legal responsibility on landowners to prevent the spread of other weeds.

Wildlife (Northern Ireland) Order 1985 makes it an offence to intentionally kill, injure or take any wild birds or their eggs or nests. Specific penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests or their dependent young.

It is an offence to intentionally kill, injure or take, possess or trade in any wild animals listed in schedule 5, and to interfere with places used for shelter or protection or intentionally disturbing animals occupying such places. Certain methods of killing, injuring or taking wild animals are also prohibited.

It is an offence to pick, uproot, trade in or possess (for the purpose of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of some plants.

The Order also contains measures for preventing the establishment of species not native to Northern Ireland which may be detrimental to native wildlife, and prohibits the release of animals and the planting of plants listed in Schedule 9.

Licences are used to regulate the activities that may affect protected species and their environment.

Further Information

Additional reference material is available on:

UK DOCUMENTATION

Reference	Type	Title
ENV-RM-0016b	Reference Material	Ecology Calendar
ENV-RM-0016e	Reference Material	Protected Species Handbook
ENV-RM-0016g	Reference Material	Bird Control
ENV-RM-0017a	Reference Material	Tree and Hedgerow Protection
ENV-RM-0020a	Reference Material	Biodiversity Net Gain
ENV-RM-0021a	Reference Material	Biosecurity Measures
ENV-RM-0021c	Reference Material	Invasive and Injurious Species Handbook
ENV-SF-0016a	Standard Form	Ecological Permit
ENV-SF-0016b	Standard Form	Ecological Permit Request Form
ENV-TB-0016a	Toolbox Talk	Amphibians
ENV-TB-0016b	Toolbox Talk	Badgers
ENV-TB-0016c	Toolbox Talk	Bats
ENV-TB-0016d	Toolbox Talk	Birds
ENV-TB-0016e	Toolbox Talk	Dormice
ENV-TB-0016f	Toolbox Talk	Great Crested Newts
ENV-TB-0016i	Toolbox Talk	Otters
ENV-TB-0016j	Toolbox Talk	Reptiles
ENV-TB-0016k	Toolbox Talk	Water Voles
ENV-TB-0016l	Toolbox Talk	Wildcats
ENV-TB-0016m	Toolbox Talk	Stag Beetle
ENV-TB-0016n	Toolbox Talk	Harvest Mouse
ENV-TB-0016r	Toolbox Talk	Beavers
ENV-TB-0016s	Toolbox Talk	Natterjack Toad
ENV-TB-0016t	Toolbox Talk	Seals
ENV-TB-0016u	Toolbox Talk	Freshwater Fish
ENV-TB-0016v	Toolbox Talk	Terrestrial Invertebrates
ENV-TB-0016w	Toolbox Talk	White Clawed Crayfish
ENV-TB-0016o	Toolbox Talk	Ecological and Biodiversity Assessment
ENV-TB-0016p	Toolbox Talk	Nesting Birds and Vegetation Clearance
ENV-TB-0016q	Toolbox Talk	Sites of Special Scientific Interest (SSSI)

Spill Kit Training

ENV-RM-0018b

Balfour Beatty

Introduction

1. Who we are and why we are here?
2. What do we know now?
3. What will we learn?

Storage

- All fuels, oils and storage systems (bowsers) must be stored away from watercourses, drains, sewers, or any point in which liquids have the potential to reach a watercourse, a minimum distance of 10 metres should be maintained.
- Store all containers in a bunded area. A bund must capture at least 110% of the volume of the largest vessel or 25% of the total volume stored, whichever is greater should be used.
- All containers, including bowsers, shall be stored with their lids/caps fitted and closed, contents identifiable by label or other means on the outside of the container and locked when not in use.
- Ensure a spill kit is present nearby.
- Liquid transfers should be carried utilising the correct spout of filling application.
- PPE must be worn when handling substances by referring to the guidance available on the relevant COSHH Assessment.
- Regularly inspect the storage area to ensure its condition and suitability.

Storage solutions

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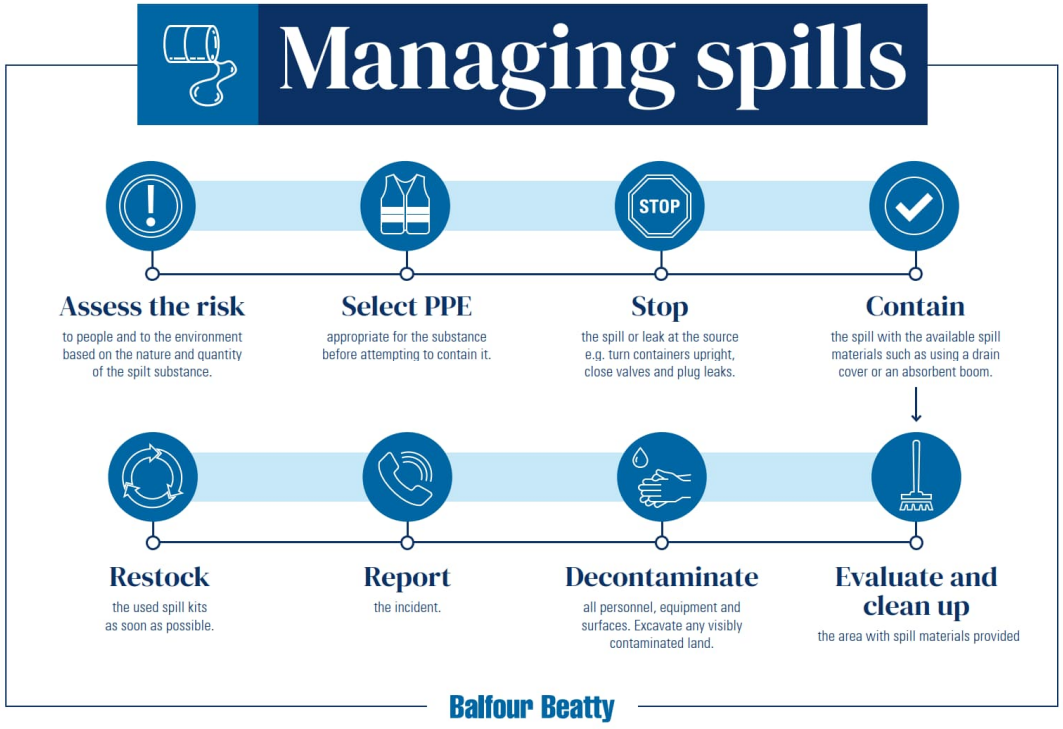
Spill Response

The 8 steps for spill response

See the Spill Control Poster:



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Step 1. Assess the Risk

- Determine the risks that may affect human health, the environment and property.
- Response must be as quick as possible.
- The spilled material can be identified from the container label or the Material Safety Data Sheet (MSDS).
- Identify how much has been spilled.
- Take appropriate measures to isolate the spill area (e.g. setting up exclusion zones, installing booms and drain mats).

Step 2. Correct selection of PPE

- Select appropriate PPE. Consulting the MSDS, manufacturers literature or the PPE manufacturers literature can aid in choosing appropriate PPE.
- If the danger is uncertain and the material is unknown, the worst should be assumed and the highest level of protection used.

Step 3. Stop the Source

- This could simply involve turning a container, standing it upright, or plugging the leak.
- Once the leak has been stopped the liquid should be transferred from the damaged container to a new one.

“Plumber’s” epoxy putty: sealing/patching putty/paste

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Step 4. Contain the spill

- Ensure the correct absorbents (chemical, oil, all-purpose) and size of spill kit are available on site, based on the liquids being stored there.
- Limit the spill area by blocking, diverting, or confining the spill.
- Minimising the spill area and protecting drains are the priority before it has a chance to contaminate a water source.
- Make sure the protective barrier (e.g. booms, drain covers, spill socks) are placed to ensure the entire spillage can be captured. Ensure this is as far away as possible from sensitive areas such as drains and waterways.

Step 5. Evaluate the incident and implement clean up

- Develop a plan of action for implementing the spill clean up.
- Make sure there are enough spill response supplies to deal with the incident.
- Pads and/or granules should be used to quickly absorb the spill and should be placed throughout the confined spill area.
- Once the absorbents are saturated, they must be considered as hazardous waste (special waste in Scotland) and disposed of appropriately.

Step 6. Decontaminate

- The site, personnel, and equipment should be decontaminated by removing or neutralising the hazardous materials that have accumulated during the spill.
- This may involve removing and disposing of contaminated media, such as soil, that was also contaminated during the spill incident.
- PPE may be able to be reused after inspection and clean up. An effective decontamination area should also be created to ensure the health and safety of emergency responders, dependent on the nature of material cleaned up.

Step 7. Record and Report

- The incident must be reported on iSMS within 24h of occurring.
- The spill may need to be reported to an environmental regulator and/or Balfour Beatty's client. An investigation may need to be carried out depending on the nature of the spill. Notify the Environmental Sustainability Team.
- The steps above are simply a guide for us to follow when responding to spills. They do not constitute a spill response plan in themselves, but together they provide a framework for us to build a customised plan.

Note: if you have an environmental plan on site, remember to follow it

Step 8. Restock

- It is vital that you restock or replace your spill kit following an incident.
- Make sure you know the correct ordering process.
- DO NOT leave it for somebody else to do, it is your responsibility.

Remember, the equipment was there for you to use,
the next person expects the same

Training, Practice & Drills

As a business we take our environmental responsibilities seriously. As such, training and emergency practice drills should be carried out for spills:

- Spill Control Poster ENV-RM-0018c should be displayed
- Spill kit training should be recorded
- Live demos and refreshers should be encouraged
- ENV-SF-0018a should be used to record the emergency practice drills

Practical

Resources:

- Sealed surface spill response: Spill Kit Demo – YouTube
  - If using absorbent pads: apply light pressure into the spill, leave the pads for a couple of minutes before cleaning the residue using the same pads (rather than creating more waste by using paper towels for example).
  - If using absorbent granules: start from the edges and work in, let the absorbent sit for a couple of minutes and then sweep back and forth through the spill before removing and placing in the hazardous waste bag.
  - If the spill occurs on soft ground / unsealed surface: all contaminated material should be removed, this includes any affected underlying soil which should be disposed of as hazardous waste.

Balfour Beatty Emergency Response Contractors

SBU		Coverage	Contact Details
UKCS / Major Projects Living Places	Reconomy	UK	**01952 292000** (8am-5pm excluding weekends and bank holidays) **07817770148 / 07506306538** (out of standard working hours)

Reconomy can deal with:

Reconomy only works with pre-approved suppliers, ensuring full compliance with all environmental legislation relating to waste handling and disposal.

All teams are PTS and hazmat trained, and accredited to ISO 9001 standards for oil spill response.
To minimise response times, all response vehicles are pre-packed with hazmat and CBRN response equipment.

In the event of an emergency, also inform your Balfour Beatty Environmental Sustainability Lead:

Environment Sustainability Contacts

Balfour Beatty

Balfour Beatty Emergency Response Contractors

SBU		Coverage	Contact Details
Power T&D / Gas & Water / Plant and Fleet	Adler & Allan Briggs Environmental	England & Wales Scotland	**0800 592 827** **0800 374 348**
Rail	Adler & Allan Ambipar Response	UK UK	**0800 592 897** **01202 653558**

In the event of an emergency, also inform your Balfour Beatty contact:

Environment and Sustainability Contacts

Balfour Beatty

How to Report an Environmental Incident - Internal Legacy Reporting Requirements

SBU	Reporting and Notification
UKCS	Notification to Operational Senior Management and Environmental Sustainability Lead by Environmental Sustainability Advisor / Site Lead as soon as practicable.
Major Projects	
Ground Engineering	
Power T&D and ATS	Helpline 0800 121 4444
Living Places	Notification to Operational Senior Management and Environmental Sustainability Lead by Environmental Sustainability Advisor / Site Lead as soon as practicable.

Populate or Delete as appropriate

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How to Report an Environmental Incident - Internal Legacy Requirements

SBU	Reporting and Notification
Rail	All incidents, including those involving plant operating under the BB Rail operating licence, will be notified to the Rail Control Centre immediately after the basic facts surrounding the incident are known. The HS&E Director and/or Head of Environmental Sustainability for Rail will ensure that incidents are notified and escalated to all relevant parties within the Strategic Business Unit (SBU)/Project/Depot, and as required to satisfy contractual and legislative requirements.
Highways	

Populate or Delete as appropriate

How to report an Environmental Incident – Network Rail

When working for Network Rail, all environmental incidents must be reported to Route Operations Control (ROC). If a spill occurs which meets the threshold criteria detailed below, the incident shall be reported by ROC to the Environment Agency (EA), or Scottish Environment Protection Agency (SEPA), or Natural Resources Wales (NRW):

- Fuel spillages greater than 50 litres;
- Other hydrocarbon spillages greater than 20 litres (e.g. lubricating oil, hydraulic oil, transmission fluids);
- Any incident by/ near a watercourse or drains of any volume and any substance (local water company to also be contacted)
- Any unplanned loss or spillage into combined drainage areas (e.g. a large station) of any volume and any substance;
- All Incidents irrespective of size that:
  - Are on or near a Site of Special Scientific Interest (SSSI);
  - Have or might have affected protected species (e.g. greater crested newts, bats, badgers, slow worms, dormice)
  - Have or may have affected protected habitats (e.g. bat roosts, badger setts etc)
- Spillages of other products with polluting potential including:
  - Detergents greater than 25 litres (e.g. Train cleaning chemicals, vehicle cleaning products, washing powder)
  - Disinfectants greater than 5 litres (e.g. Toilet cleaner, household bleach and “Dettol”)
  - Paints and Dyes greater than 50 litres
  - Inorganic Powders greater than 50 kg (e.g. Silt, Sand, Cement chalk, Gypsum/plaster)
  - Organic liquids/ slurries greater than 25 litres (e.g. Blood, offal, sewage sludges, antifreeze, cutting, lube and cooking oils, glycerine, alcohols, latex and water-soluble polymers)
- If there is any doubt as to whether an environmental incident should be reported then the precautionary principle should be applied and Network Rail ROC contacted, who may use the EA/SEPA Emergency Hotline (0800 807060), or NRW Incident Hotline (0300 065 3000)

Delete as appropriate

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How to report an Environmental Incident – National Highways

All environmental incidents should be reported on HART and iSMS (by the project Environmental Sustainability team) within one day of occurrence. Project escalation processes should be followed. Environmental incidents may include but are not limited to:

- Spillages involving substances covered by the Carriage of Dangerous Goods Regulations
- All Petrol spillages (if over 100 litres this needs to be reported to the EA)
- All Hydrocarbon spillages (if over 20 litres this needs to be reported to the EA)
- Spillages of Low Hazard products with polluting potential
- Any spillages in or near watercourses
- Major Incidents within combined drainage areas
- Incidents at Environment Agency regulated National Highways sites in line with Permit Conditions
- Incidents involving hazardous fly tipped waste or the generation of hazardous waste incidents involving radioactive materials
- Significant releases of silt/sand/cement slurry from National Highways sites, construction projects or RTCs
- Incidents actually or potentially affecting environmentally sensitive/designated locations
- Large spills from or on the public highway that are not construction related should be notified to the local area team for clean up.

Delete as appropriate

Highways works carried out on the Strategic Road Network (SRN) for Local Authorities or other organisations may have other reporting requirements. If there is any doubt as to whether an environmental incident should be reported then the precautionary principle should be applied and National Highways contacted, who may use the Environment Agency Emergency Hotline (0800 807060).

How to report an Environmental Incident – National Grid

There isn’t a ‘one size fits all’ for National Grid. They have different approaches to reporting for different projects depending on if it's under DCO or not, size of project, etc.

Populate or Delete as appropriate

Further Information

Spill Management
ENV-RM-0018a Spill Management and Response
ENV-RM-0018b Spill Kit Training Presentation
ENV-RM-0018c Spill Control Poster

ENV-TB-0018a Spill Management and Response

ENV-SF-0018a Spill Environmental Emergency Drill

Incident Response
ENV-RM-0005a Environmental Incidents
ENV-RM-0005e Environmental Incident Severity Classification Table
ENV-TF-0005a Master Pollution Incident Plan

Incident Reporting
HSES-PR-0005 Incident Reporting and Investigation

Emergency Response
HSES-PR-0003 Emergency Arrangements
HSES-TF-0003a Emergency Response Matrix and Assessment

Managing spills

Assess the risk

to people and to the environment based on the nature and quantity of the spilt substance.

Select PPE

appropriate for the substance before attempting to contain it.

Stop

the spill or leak at the source e.g. turn containers upright, close valves and plug leaks.

Contain

the spill with the available spill materials such as using a drain cover or an absorbent boom.

Evaluate and clean up

the area with spill materials provided

Decontaminate

all personnel, equipment and surfaces. Excavate any visibly contaminated land.

Report

the incident.

Restock

the used spill kits as soon as possible.

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Introduction

The poor management of waste can have an adverse effect on the environment by wasting valuable resources and contaminating water, the ground and air. All waste must be stored, transferred, disposed of, processed and re-used in accordance with relevant environmental legislation at all sites, company offices, depots and fixed locations.

The legal definition of waste is ‘any substance or object which the holder discards or intends to discard or is required to discard’. If a material is classed as waste, Waste Duty of Care rules must be followed when the waste is being disposed of.

Waste Duty of Care is about taking all reasonable steps to ensure that when waste is transferred from one party to another, it is managed legally throughout its complete journey to final disposal or recovery.

Waste Duty of Care applies to anyone who imports, produces, carries, keeps, treats, disposes of, or is a dealer or broker that has control of controlled waste. Balfour Beatty carries out a number of these activities, and all individuals must comply with Waste Duty of Care requirements.

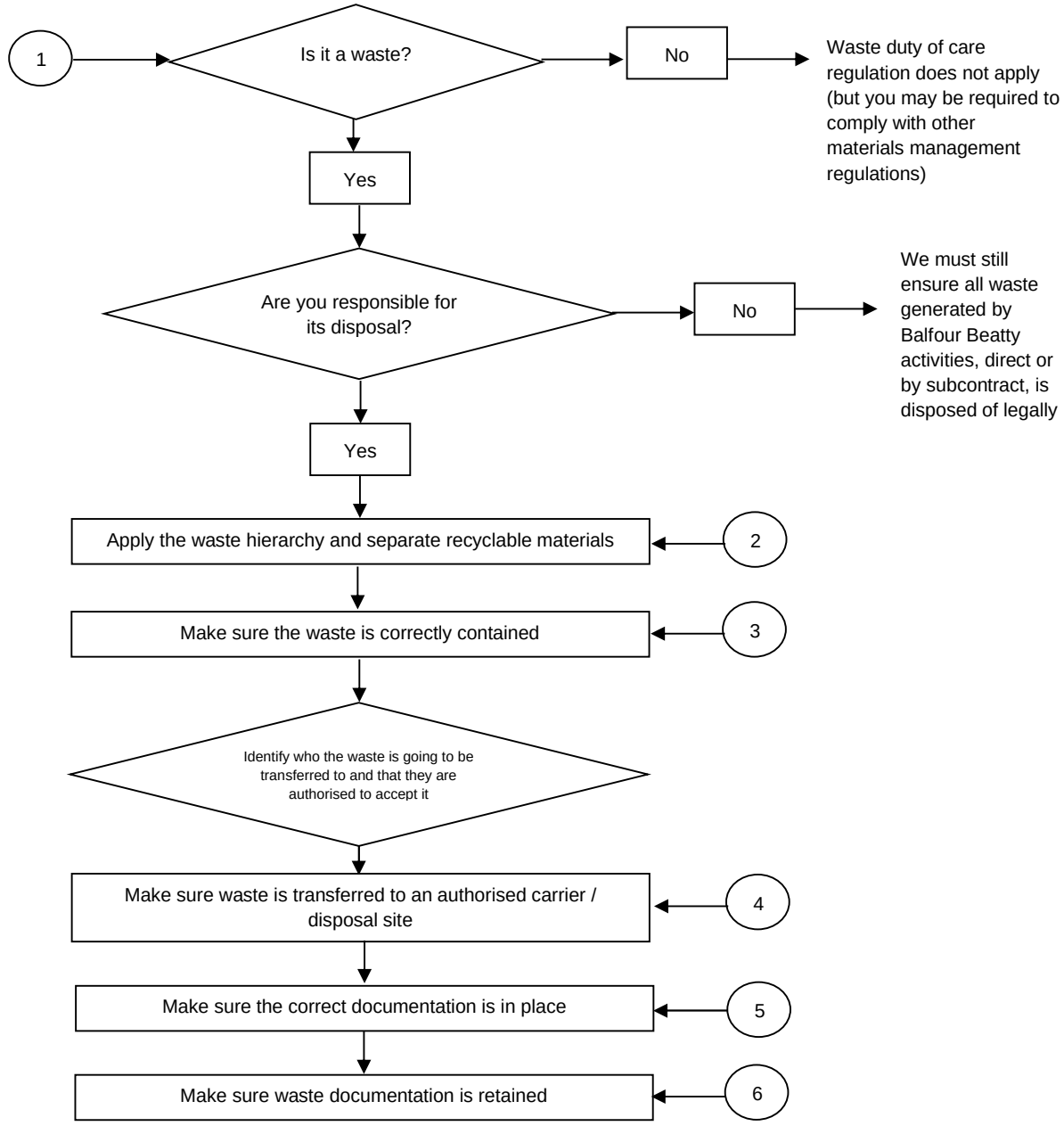
Abbreviations / Definitions

Controlled Waste	Any household, commercial or industrial waste such as waste from a house, commercial premises, office, factory, building site or any other business premises.
Waste	The legal definition of waste is ‘any substance or object which the holder discards or intends to discard or is required to discard’.
Waste Producer*	Any person whose activities produce waste. This includes private sector businesses such as shops, offices, factories and tradesman (e.g., electricians, builders, glaziers and plumbers) and public sector services such as schools, hospitals and prisons, as well as charities and voluntary and community groups. It also includes permitted operations or exempt facilities (sites or operations which operate under an Environmental Permit or exemption) that produce waste as part of their activities. If you carry out a waste operation that changes the nature or composition of the waste, you are regarded as a producer of the waste.
Waste Carrier*	Any person, who normally and regularly collects, carries or transports waste in the course of any business or with a view to profit, including those that produce and transport their own waste e.g. builders and landscape gardeners.
Waste Dealer*	Any person, business or organisation that buys waste with the aim of subsequently selling it, including in circumstances where the dealer does not take physical possession of the waste.
Waste Broker*	Any person, business or organisation that arranges waste transportation and management of waste on behalf of another party, such as organisations contracting out waste collection services e.g. Reconomy, local authorities, supermarkets and producer responsibility compliance schemes.
Waste Manager*	Any person involved in the collection, transport, recovery or disposal of controlled waste, including the supervision of these operations, the after-care of disposal sites and actions taken as a dealer or broker
Standard Industrial Classification (SIC) Code	A government indicator of what type of industry a company is categorised in i.e. what type of industry the producer of the waste is in.

European Waste Catalogue (EWC) Code	A 6-digit code used to describe a waste stream. *Waste Classification Guidance on the classification and assessment of waste (WM3)* lists the 650 (approx.) EWC codes which are divided into 20 chapters and further sub-chapters defining the type of waste and the industry which has generated it. Codes are divided into 4 types of entry: • Mirror hazardous (coloured blue and labelled MH) or Mirror non-hazardous (coloured green and labelled MN) – wastes which may be hazardous or non-hazardous depending on whether they contain dangerous substances. • Absolute hazardous entries (coloured red and labelled AH) – entries which are always hazardous • Absolute non-hazardous (coloured black and labelled AN) – entries which are always non-hazardous Hazardous wastes have an asterisk (*) next to them.
Inert waste	Waste that does not undergo any significant physical, chemical or biological change. It will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact with or is likely to cause environmental pollution, or harm to human health. Examples are uncontaminated concrete, bricks, glass, soil and stones (excluding topsoil, peat, soil and stones from contaminated sites).
Non-hazardous Waste	Waste which is neither inert nor hazardous. Examples are general waste and topsoil.
Hazardous / Special waste	Waste (or the material or substances it contains) which is harmful to humans or the environment. Examples are batteries, asbestos, non-edible oils and fluorescent light tubes.
Transferor	Current holder of the waste.
Reconomy	Reconomy is a waste management company who is working in conjunction with all Balfour Beatty Strategic Business Units. They provide skip hire, waste and recycling services and hazardous waste disposal.
WEEE (Waste Electrical and Electronic Equipment)	Includes most products that have a plug, need a battery, have a wind-up mechanism or have a solar mechanism: small and large household appliances, and IT and telecommunications equipment. It includes electronic parts such as chips, capacitors and circuit boards.

* Definitions taken from *Waste Duty of Care code of Practice* March 2016 (Department for Environment Food and Rural Affairs)

What You Need To Do



Note 1 – Is it a waste?
Waste is legally defined as 'any substance or object which the holder discards or intends to or is required to discard'. This includes materials being sent to landfill, for recycling and given to third parties.

It is a requirement to record waste on the Sustainability Portal. The following categories should be applied to waste transfers:

Demolition waste is classed as material arising from the removal or strip out of an existing structure above or below ground, including any hazardous waste produced by this process. This excludes waste from correcting defects, design changes, rework etc – this should be recorded as construction waste.
Excavation waste is classed as naturally occurring material which arises from below the man-made surface on site (e.g. pavements), including any hazardous waste produced by this process.
Construction waste is classed as any other waste, not included in demolition, excavation, office or manufacturing and depot waste, including any hazardous waste produced by these processes. This includes offcuts of materials (plasterboard, timber, metals), packaging from construction materials and products, surplus concrete, asphalt etc that is disposed of in site waste containers.
Office waste is classed as any municipal waste that is created as a result of fixed or temporary offices and site accommodation including sewage / septic tank waste, sanitary waste, biodegradable kitchen waste, paper / cardboard / plastic, toner cartridges etc.
Manufacturing and depot waste is classed as any waste that leaves a fixed manufacturing facility or depot, including any hazardous waste produced by these processes. If any waste enters a depot as a construction, demolition or excavation waste, it must remain under this waste type upon removal from the depot. The following waste types typical of highway depots includes: • Street lighting lamps and lanterns • Traffic barrier • Roadkill • Traffic management batteries • Road sweeper / gully cleaning waste • Incident waste • Fly tipped / litter picked waste • Holding tank oily wastes • Sewage / septic tank wastes and sanitary wastes created at the facility or on the network

ENV-RM-0035p Management of Specific Waste Types covers guidance on specific waste-types that may not arise as a direct result of Balfour Beatty's activities, or that are not business-as-usual waste types.

Note 2 – Apply the waste hierarchy and separate recyclable materials
All reasonable steps must be taken to apply the waste hierarchy (outlined below) to all waste streams.

We have a clear ambition to generate zero avoidable waste from our UK operations by 2040. To deliver this, we'll be working with our partners right from the start of every new scheme to ensure we're looking for solutions that generate Zero Waste through design and construction, applying the waste management hierarchy. Where this is not possible, our priority will be to maximise the value of materials throughout their lifecycle.

There are specific legal requirements for recyclable materials to be collected separately across the UK. The specific requirements depend on which UK nation you are working in. These are outlined below.

England
From 31st March 2025, the Simpler Recycling Regulations made it a legal requirement for all Balfour Beatty locations in England to separate their core recyclable waste streams and arrange for the separate collection of these.

The waste streams that must be separated are:

- Residual (non-recyclable) waste i.e. 'black bag' waste
- Food waste
- Paper & card (packaging, office paper, envelopes, newspapers, magazines)
- Any other dry recyclable materials (plastic e.g. plastic bottles and packaging, metal e.g. drinks cans and glass e.g. glass bottles & jars)

This applies to all Balfour Beatty operations in England: projects, mobile operations, welfare units, depots, sites and offices regardless of the number of people based at a location / on a project or the amount of waste generated.

<u>Paper & card waste</u>
Under the Simpler Recycling Regulations, the default position is that paper and cardboard must be separated from all dry recyclable materials. This means it must be separated at source where it is produced.

However, if the waste collector deems that the separate collection of paper and cardboard is not technically, environmentally and economically practicable (TEEP), then they will need to produce a short, written assessment explaining their decision.

Guidance on this is available for waste collectors. They must retain a record of the written assessment and any evidence. The Environment Agency can ask to see a copy of this at any time. The waste collector should update the written assessment at least annually, or where circumstances change, such as when collection, treatment or recycling contracts end or are changed. It is best practice for Balfour Beatty to also retain a copy of the assessment produced by the waste collector.

Glass
The Simpler Recycling Regulations allow glass waste to be mixed in with plastic and metal. However, not all suppliers will allow glass to be accepted with other dry materials.

Further information is available from Simpler recycling: workplace recycling in England - GOV.UK.

Wales
From 6th April 2024 the Waste Separation Requirements (Wales) Regulations 2023 made it a legal requirement for Balfour Beatty locations in Wales to separate their waste for recycling.

The waste streams that must be separated are:

- Food (only for premises that produce more than 5kg of food waste a week)
- Paper & card
- Glass
- Plastic, cartons and metals and other fibre-plastic composite packaging of a similar composition
- Unsold small waste electrical and electronic equipment (sWEEE) (unlikely to be relevant to Balfour Beatty)
- Unsold textiles (unlikely to be relevant to Balfour Beatty)
- Residual waste (including food waste if less than 5kg of food waste is produced at a single location in a week)

Further information is available from Natural Resources Wales / Guidance for waste collectors and handlers: Separated waste collections.

Scotland
The Waste (Scotland) Regulations 2012 make it a legal requirement for every business operating in Scotland to separate their waste for recycling.

It is therefore a legal requirement that Balfour Beatty separates the following materials for recycling:

- Glass (including drinks bottles and empty food jars)
- Metal (including cans & tins)
- Plastic (including drinks bottles and empty food containers)
- Paper
- Cardboard
- Food waste produced by an urban food business

Food businesses
Urban food businesses (such as cafés, restaurants or food takeaways) which produce over 5 kg of food waste per week also have to present food waste separately for collection unless excluded by a rural location.

A food business is defined as “An undertaking, whether for profit or not, and whether public or private, carrying out any activity related to the processing, distribution, preparation or sale of food”. This excludes businesses which only prepare and sell drinks.

When a premises is used to consume food brought from elsewhere e.g. an office where staff bring in food for personal consumption, are not regarded as food businesses. However, a staff canteen where food is prepared, sold and consumed is classed as a food business.

Use the Scottish Government Urban Rural Classification Postcode Lookup to see whether your business area is considered to be rural or non-rural

Further information is available from Waste (Scotland) Regulations | Zero Waste Scotland.

Northern Ireland
In Northern Ireland it is a legal requirement for businesses to segregate the following key materials for recycling:

- Glass
- Metals
- Plastic
- Cardboard
- Paper
- Food waste (food businesses only)

Food businesses
Food businesses (including canteens) which produce over 5 kg of food waste per week also have to present food waste separately for collection. Further information is available from RPS - FOOD WASTE - Are You Compliant - August 2017.pdf)

UK-wide
‘Co-mingled’ collections, where 2 or more dry recyclables are collected together in the same container (but still separate from mixed or general waste) are allowable where:

- Separate collection is not technically, environmentally and economically practicable (TEEP); or
- Separate collection is not necessary to provide high quality recyclates.

In these cases, responsibility is passed to the waste contractor to separate the waste types.

There are additional legal requirements which require other waste streams such as hazardous waste and WEEE waste to be collected separately. Consideration should also be given to separate collection of other waste streams e.g. wood.

Note 3 – Make sure the waste is correctly contained
Waste must be stored safely and securely in a suitable labelled container and must not be allowed to escape to the surrounding environment (source-pathway-receptor):

- Consideration must be given to covering skips or loose material to prevent it from escaping and contaminating the surrounding environment (this applies to waste in-situ and waste being transported).

- Liquid wastes must be prevented from escaping into drains, watercourses or surrounding ground. See ENV-RM-0007a Storage of Fuels, Oils and Liquids.
- Hazardous/special wastes must be stored separately from each other and in well ventilated areas where appropriate, asbestos containers must be lockable.

Note 4 - Make sure waste is transferred to an authorised carrier / disposal site
The person or organisation taking away the waste must be legally authorised to do so and it must be taken to a site which is licenced to accept it or has an exemption in place.

Verification of a Waste Carrier:
Anyone transporting waste must be legally allowed to do so by having a waste carriers licence. This allows an organisation to transport inert, non-hazardous and hazardous waste. Balfour Beatty must know who is carrying our waste and check waste carriers' licences. This check should be made at least annually, and a record of the check should be made (e.g. by saving a print screen of the check on the regulators website and dating it). They can be used as evidence that Balfour Beatty has met its duty of care. ENV-SF-0035c Waste Contractor Inspection can be used to record the check.

- **If a Balfour Beatty company is carrying its own waste, or someone else's waste** – The Balfour Beatty Company transporting the waste must hold an Upper Tier Waste Carriers Licence. The licences held by Balfour Beatty are included in ENV-SF-0035f Waste Transfer Note and copies are accessible from the BMS. Their application and renewal is managed by the Sustainability Enabling Function (Balfour Beatty waste carriers licences only).

  Waste Carriers Licences in England, Scotland, Wales and Northern Ireland
  - If Balfour Beatty is transporting waste in England, Scotland or Wales the waste carriers licence must be applied for in the country where the registered head office is located for the Balfour Beatty company who will be carrying the waste (England, Scotland or Wales). The regulators are Environment Agency (England), Natural Resources Wales (Wales) and Scottish Environment Protection Agency (Scotland). Any of these waste carriers licences allow waste to be transported in England, Scotland and Wales.
  - If Balfour Beatty is transporting waste in Northern Ireland a separate waste carrier's licence is required from the Northern Ireland Environment Agency.

  Joint Ventures (JV) and Waste Carriers Licences
  - Where a Joint Venture (JV) is operating using the Balfour Beatty UK BMS, the JV can use the relevant Balfour Beatty waste carriers licence (see BMS).
  - Where a JV is operating using another parent company's BMS, they can use the waste carriers licence of the parent company of the BMS they are using, or apply for a waste carriers licence in the name of the JV.
  - Where a JV is operating its own JV-specific BMS they should apply for their own waste carriers licence in the name of the JV

- **Waste disposed of via Reconomy** – Reconomy verify that every waste carrier they use is licensed to carry waste. Copies of the waste carriers' licences can be found on the Reconomy Portal https://portal.reconomy.com/login. A username and password is required. Contact Reconomy to arrange access at managedaccounts@reconomy.com or 0800 028 2290.

- **Other Registered Waste Carriers** – each Strategic Business Unit (SBU) must examine the carrier's certificate of registration and check with the issuing body whether the registration is still valid. Carriers can be either upper tier or lower tier. Each SBU must decide who has responsibility for checking the waste carriers licences.

Lower Tier (England, Wales, Northern Ireland) / Professional Carrier (Scotland)
Operators must register as a Lower Tier (England, Wales and Northern Ireland) or as a Professional Carrier (Scotland) if they:

- Only carry waste they produced while carrying out their business **unless** it is construction or demolition waste
- Only carry, arrange (broker) or deal (dealer) in:
  - Animal by-products
  - Waste from mines and quarries
  - Waste from agricultural premises
- Are a charity or voluntary organisation
- Are a waste collection, disposal or regulation authority

Upper Tier (England, Wales, Northern Ireland) / Waste Carrier (Scotland)
If none of the lower tier criteria apply, a person or organisation will be in the upper tier. Key examples are if a business:

- Transports other people's waste, like a skip company
- Carries construction and/or demolition waste
- Arranges for waste from other businesses' to be transported, recovered or disposed of (broker)
- Buys or sells waste, or uses an agent to do so (dealer)

Use the following regulator websites to check against the public register to assess the validity of a waste carrier:
Environment Agency
https://environment.data.gov.uk/public-register/view/search-waste-carriers-brokers

Scottish Environment Protection Agency
Register of Waste Carriers and Brokers | SEPA

Natural Resources Wales
https://naturalresources.wales/permits-and-permissions/check-for-a-permit-licence-or-exemption/?lang=en

Northern Ireland Environment Agency
https://www.daera-ni.gov.uk/articles/registered-waste-carriers-transporters

This check should be made at least annually, and a record of the check should be made (e.g. by saving a print screen of the check on the regulators website and dating it). They can be used as evidence that Balfour Beatty has met its duty of care.

Verification of the Disposal Site
The site where the waste is being taken to must be legally allowed to accept it. Balfour Beatty must be aware of the destination of the waste and check the site's licence, permit or exemption number. This check should be made at least annually, and a record of the check should be made (e.g. by saving a print screen of the check on the regulators website and dating it). They can be used as evidence that Balfour Beatty has met its duty of care. ENV-SF-0035c Waste Contractor Inspection can be used to record the check. A more detailed audit form is also available for conducting an audit at a waste contractor's facility, ENV-SF-0035h Waste Contractor Audit.

- **If a Balfour Beatty company is carrying its own waste and identifying its own disposal site** – The Balfour Beatty Company generating the waste is responsible for checking the disposal sites licence or permit to verify that the waste can be accepted.

- **Waste disposed of via Reconomy** – Reconomy verify that disposal sites have the correct licences, permits or exemptions in place to accept the waste. Copies of the site licences and permits/exemptions can be found on the Reconomy Portal https://portal.reconomy.com/login. A username and password is required. Contact Reconomy to arrange access at managedaccounts@reconomy.com or 0800 028 2290.

- **Other Registered Waste Carriers** – The waste carrier must have a process in place to check disposal sites licences or permits to verify that the waste can be accepted. The contract/SBU engaging with the waste carrier must obtain a copy of the licence, permit or exemption from the carrier and ensure that the waste code is listed within the document. Ensure a copy of the permit, licence, exemption is kept for the duration of the project. Each contract/SBU must decide who has responsibility for making and recording these checks. Examples of 'other' waste carriers include:
    - A skip/waste company who isn't engaged through Reconomy e.g. a local waste company who is employed directly / a 'muck-away' contractor removing spoil from site / a landscaping contractor who removes garden waste from site / a tanker company who is employed directly to empty effluent tanks or suck out drains.
    - A subcontractor carrying out construction work on behalf of Balfour Beatty.

Further details on waste management licences, environmental permits and waste exemptions can be found in ENV-RM-0039a Waste Management Licences Permits and Exemptions.

Use the following websites to check the validity of an environmental permit or licence:

Environment Agency
https://environment.data.gov.uk/public-register/view/search-waste-operations

Scottish Environment Protection Agency
Contact SEPA's registry department:
- Aberdeen registry: email registryaberdeen@sepa.org.uk or call 01224 266600
- Dingwall registry: email registrydingwall@sepa.org.uk or call 01349 862021
- Angus Smith registry: email RegistryAngusSmith@sepa.org.uk or call 01698 839000

Natural Resources Wales
https://naturalresources.wales/permits-and-permissions/check-for-a-permit-licence-or-exemption/?lang=en

Northern Ireland Environment Agency
Waste Management Licensing | Public registers | DAERA

Note 5 – Make sure the correct documentation is in place
A waste transfer note is required for non-hazardous and inert waste, and a consignment note is required for hazardous / special waste.

ENV-RM-0035p Management of Specific Waste Types covers guidance on specific waste-types that may not arise as a direct result of Balfour Beatty's activities, or that are not business-as-usual waste types.

Waste Transfer Note
When non-hazardous or inert waste is transferred to another company, a waste transfer note must be completed and be signed by both parties. The following types of waste transfer note can be used:

Single movement of waste
- A paper waste transfer note for a single movement of waste: or
- A digital waste transfer note for a single movement of waste, either a:

- Balfour Beatty digital waste transfer note (Sustainability Portal) – includes all legally required information and generates a PDF that can be signed by both parties. Data can also be automatically uploaded to the Sustainability Portal; or
- Third party digital waste transfer note.

Alternative documentation such as an invoice can be used if it contains all the required information). Only a single type of waste should be listed on each waste transfer note.

Series of repeated waste transfers

- A paper 'season ticket' – a single waste transfer note that covers a series of repeated waste transfers. A season ticket issued by Balfour Beatty should last no longer than 3 months and be updated to the Sustainability Portal at this scheduled frequency. If several sites are serviced by the same carrier with the same type of waste collected, they can be listed in the schedule to the schedule to the season ticket. Typically, a season ticket covers welfare waste and removals in skips that remain permanently on the premises for the duration of use.
- A digital 'season ticket' – a single waste transfer note that covers a series of repeated waste transfers, either a:
  - Balfour Beatty digital waste transfer note (Sustainability Portal) – includes all legally required information and generates a PDF that can be signed by both parties. It should not last longer than 3 months (the digital wase transfer note won't allow a timeframe of more than 3 months from the date of the first movement to be set). Data has to be uploaded to the Sustainability Portal manually; or
  - Thid party digital waste transfer note which can legally be valid for up to 12 months.

Only one waste transfer note is required for each waste movement. Waste transfer notes are normally provided by the waste carrier. If a third party provides a compliant waste transfer note, there is no need for Balfour Beatty to also produce a waste transfer note.

A waste transfer note is not required for non-hazardous waste if the waste holder does not change on the transfer of the waste e.g., the waste is moved from one premises to another belonging to the same business. This includes Balfour Beatty moving its own non-hazardous waste from a site back to a Balfour Beatty depot.

However, it is considered best practice to keep a record of internal transfers, and this is a requirement in Balfour Beatty Living Places (BBLP).

A waste transfer note doesn't have to be in a set format, but it must contain the following information:

- An accurate written description of the waste being transferred.
- The six -digit EWC (European Waste Catalogue) code. EWC codes are listed in link to Appendix A of Waste Classification Guidance on the classification and assessment of waste (WM3).
- An indication of how the waste is contained e.g., is it loose, in a sack, skip or drum.
- The SIC code of the transferor (current holder of the waste). Further information is provided in ENV-RM-0035b Standard Industrial Classification (SIC codes can be found on Companies House.
- A tick box or sign-off to confirm that the waste hierarchy has been considered.
- The quantity and nature (solid, liquid) of waste being passed on, for example the number of sacks or other containers, the volume of waste or its weight.
- The name and address of the producer of the waste.
- The name and address of the company the waste is being passed to and their status, for example a registered waste carrier, including their registration number.
- The address where the waste was passed to the other company.
- The time and date of transfer.
- Printed, legible full names signatures of both parties.
- The name, address, permit/licence number of the receiving waste facility.

The Balfour Beatty Waste Transfer Note template is ENV-SF-0035f Waste Transfer Note.

An example of how to complete a waste transfer note is outlined in ENV-TB-0035a How to complete a Waste Transfer Note.

Instructions on completing the digital waste transfer note (Sustainability Portal) are available in the linked video resource and should be reviewed prior to use. The digital waste transfer note can be accessed at https://wastetransfernotes.balfourbeatty.net.

Season Tickets and Waste Volumes

Season Tickets include an estimate of the quantity of waste which will be removed over the period it is valid for (no longer than 3 months if the waste carrier is Balfour Beatty and 12 months for third party season tickets). In order to track the volume of actual waste removed:

- For waste disposed of via Reconomy, the actual waste volumes removed are uploaded to the Reconomy Portal for each movement. The portal can be accessed at http://portal.reconomy.com/login.
- For waste disposed of via non-Reconomy waste contractors, the waste contractor should be contacted for this information. The format in which this information is provided may vary but could include the provision of individual invoices or collection notes which contain the quantity of waste removed for each collection.

Taking Waste to a Balfour Beatty Waste Transfer Station

Some Balfour Beatty depots have an Environmental Permit in place to allow them to operate as a waste transfer station. This allows larger quantities of waste to be brought back to the depot and stored prior to disposal as well as allowing other activities which aren't covered by an environmental exemption, for example dewatering gulley waste.

It is required to complete a waste transfer note when taking Balfour Beatty waste to a Company-operated waste transfer station which operates under an Environmental Permit. This allows Balfour Beatty to:

- Monitor that the amount of waste being stored doesn't exceed the Permit requirements.
- Have the necessary information available for Balfour Beatty to complete the quarterly waste returns for the Environment Agency.

For further information see ENV-RM-0039a Waste Management Licences Permits and Exemptions and ENV-TB-0039a Using a Balfour Beatty-operated Waste Transfer Station.

Hazardous Waste Consignment Note

A consignment note must be used for all movements of hazardous waste (special waste in Scotland). This includes:

- Collections from businesses by registered waste carriers
- Movements from one premises to another within the same business
- Movements from customer premises where another business has produced the waste

A consignment note must contain all the information required by a waste transfer note, and additionally:

- Hazardous waste premises code (Wales only – see below)
- Details of the disposal site

Only one consignment note is needed for each waste movement. Consignment notes must be provided by the waste carrier. If a third party provides a consignment note, there is no need for Balfour Beatty to also produce a consignment note.

The Balfour Beatty Consignment Note template is ENV-SF-0035g Hazardous Waste Consignment Note.

Scotland – Intra Group Movements
When special waste is moved from a site back to a depot for storage prior to its disposal or recovery then a consignment note must be raised but it doesn't need pre-notifying to SEPA. Further information on intra-group movements on the SEPA website.

There may be instances where special waste can be moved from an operational site back to a depot specifically for that project without the need to consign the waste from the operational site. For example, if it is deemed that keeping it at the operational site before consignment would likely cause further environmental harm. This must be checked with SEPA. The waste must be consigned from the depot.

Regulatory Position Statement (RPS) Diffuse Network Infrastructure – England
RPS 'Diffuse Network Infrastructure' allows engineers or operators to move small quantities of waste from minor works, at diffuse locations not associated with other premises, back to base. Information on the RPS is available here.

Note that the RPS doesn't remove the need for a consignment note as it says *'You must always consign hazardous waste when it's removed from the place where it was produced on the network. This includes waste being moved from one place on the network to another place on the same network by road, rail, water or air.'*

The RPS does allow for a summary consignment note to be used when specific conditions have been met. Otherwise, a normal consignment note must be used.

Waste consignment note exemptions - Wales
There are a small number of activities at certain locations where you do not have to complete a consignment note, e.g. parts of a highway where spillages are cleaned up or places on railway tracks where maintenance works are carried out. Go to the list of all exempt places and activities.

Moving Small amounts of hazardous waste
It is usual for small amounts of hazardous waste to be generated on a construction site and returned to a Balfour Beatty depot for disposal. Examples include used spill kits and empty aerosol cans. There are different rules for how this waste must be moved depending on where the waste was generated. In BBLP, internal transfers must be recorded, load by load and regardless of size / quantity.

England - Highways, railways, waterways or utility infrastructure
If hazardous waste is produced at a clearly defined premises on the network, for example a station, depot, substation, pumping station, building or equivalent then waste must be consigned when it is removed from the premises.

England – Mobile services
A mobile service is where hazardous waste is produced at a customer premises, other than a domestic premises. The following must be followed:

- Consign the hazardous waste when its removed from the customer premise
- Enter the customer's business name and address for where the waste was created, and use this to create the consignment note code
- Enter Balfour Beatty's name and address for the producer of the waste

Hazardous Waste Premises Registration in Wales
In Wales, premises which produce or store more than 500kg of hazardous waste in a 12 -month period must be registered with Natural Resources Wales. When a site is registered, a hazardous waste producers number will be provided, called a 'premises code'. The premises code must be entered on the consignment note. Further information and details on how to register can be found on the NRW website.

Wales – Mobile services
A mobile service is one where a limited amount of waste is produced at a site which is neither owned nor operated by Balfour Beatty. The mobile service operator can produce limited amounts of waste at each customer premises without those premises being notified to NRW. For further information refer to the NRW website.

Wales – Sites exempt from registration
Some premises are exempt from the ned to register them as hazardous waste producing sites. Further information is provided here Natural Resources Wales / Register or renew as a hazardous waste producer.

There is no requirement to register premises in England, Scotland or Northern Ireland.

The rules about consignment notes and pre-notifying the regulator prior to the movement of hazardous waste differ depending on which country in the UK the waste is being moved from:

	Consignment note requirements	**Pre-notification requirement**
England	An EA consignment note or a company's own consignment note can be used. This can be either a Balfour Beatty consignment note if Balfour Beatty is moving the waste or a subcontractor or waste contractors' consignment note if they are moving the waste. The format of the consignment note code is XXXXXX**/**YYYYY. The first 6 characters of the consignment note number must be the first 6 letters or numbers of the business name. BALFOU should be used across the business. YYYYY is 5 numbers or letters that you choose. Each consignment note number must be unique, so for YYYYY consider choosing two or three letters that relate to the project and then number sequentially e.g. BALFOU/HP001, BALFOU/HP0002 etc. Further information is available at https://www.gov.uk/government/publications/hazardous-waste-consignment-note.	None
Wales	An NRW consignment note, or a company's own consignment note can be used. This can be either a Balfour Beatty consignment note if Balfour Beatty is moving the waste, or a subcontractor or waste contractors' consignment note if they are moving the waste. If your site is in Wales and generates >500kgs of hazardous waste per year, you must register as a hazardous waste producer to obtain a premises code for use on consignment notes.	None

	The consignment note code is made up of the premises code followed by a set of five letters or numbers that are unique. If the waste is from an exempt site, the consignment note number must be EXE followed by eight letters or numbers. Each consignment note number must be unique, so consider choosing two or three letters that relate to a project and then number sequentially e.g., EXE/HPC00001, EXE/HPC00002 etc. Further information is available at: Natural Resources Wales / How to complete a hazardous waste consignment note Exclusions apply:	
Scotland	All special (hazardous) waste produced in Scotland must be consigned using a SEPA-issued consignment note or code, regardless of its final destination within the UK. Unique SEPA special waste consignment note codes can be purchased online. SEPA is updating the format and process for submitting consignment notes. In addition, PDF formats, there is now an Excel version which is our preferred format. Further information is provided at Special Waste | Beta | SEPA | Scottish Environment Protection Agency SEPA is no longer selling paper Special Waste Consignment Notes.	If special waste is being moved within Scotland, no pre-notification to SEPA is required. If special waste is being moved from outside Scotland, into Scotland the waste movement must be pre-notified to SEPA at least 72 hours in advance. If special waste is being moved out of Scotland, refer to the requirement relevant destination agency for England, Wales or Northern Ireland. Further information is available at: consigning_special_waste_guidance.pdf Hazardous/special waste notifications | NetRegs | Environmental guidance for your business in Northern Ireland & Scotland
Northern Ireland	Contact NIEA directly to obtain a consignment note containing a unique number - or a consignment number if using your own forms.	Pre-notification must be provided to the NIEA at least 72 hours prior to removal of hazardous waste. Further information is provided at https://www.gov.uk/hazardous-waste-movement-notice-northern-ireland.

Note 6 – Make sure waste documentation is retained

Signed copies must be kept as follows (an electronic system and scanned copies are acceptable):

- Waste Transfer Notes – 2 years
- Consignment Notes – 3 years
- Hazardous waste consignee returns (Quarterly Hazardous Waste Returns) – 3 years

Electronic Consignment Notes (England)
Electronic hazardous waste consignment notes can be used but their use must comply with the law.

As with paper copies, before a waste is removed from a premises, the producer, holder or consignor must confirm the details are correct, sign part D and retain their copy.

In all cases a signature must be provided, and a copy retained before the waste is removed. A copy may be retained either by keeping an electronic copy on a local computer system, printed out locally, or by being accessible from the site via either a local or remote secure server or website.

It is an offence for the carrier to remove the waste before a copy has been provided to the producer/holder.

Hazardous Waste Consignee Returns (Quarterly Hazardous Waste Returns)
As a producer of hazardous waste, it is a legal requirement that Balfour Beatty receives hazardous waste consignee returns (known as 'quarterly hazardous waste returns') from each business that receives our hazardous waste (such businesses are known as 'consignees'). This could be a waste contractor such as a skip company. It is a legal requirement that we receive these returns and keep them for 3 years. If consignee returns are not being received, they must be requested in writing.
Consignee returns can be received in one of two formats:

- A form which details multiple hazardous waste consignments where a site sends regular loads to a specific disposal site.
  OR
- A fully completed consignment note, including Part E which includes a description of the method of disposal or recovery undertaken in relation to the waste, if the waste was accepted "A" or rejected "R", record of the receiving site's permit / exemption.

In both cases, Balfour Beatty must receive the documentation within one month of the end of the quarter in which the waste was accepted by the person receiving the waste (the consignee). It is an offence to withhold waste documentation from the producer due to late payment.

For waste disposed of via Reconomy, fully completed consignment notes (including part e) are uploaded via the Reconomy Portal and can be accessed at https://portal.reconomy.com/login. Further notification may also be received at the site where the waste arose.

For waste disposed of via non-Reconomy waste contractors, consignee returns are provided to the site where the waste arose.

From 15th July 2019, if persistent organic pollutants (POPs), listed in Annex 4 of the POP recast regulations are present above the set thresholds, the code POP must be recorded in addition to the hazard (HP) code/s.

Balfour Beatty must ensure that consignee returns are complete and accurate. If they aren't, a record of any missing information must be kept.

Legislation and Regulation
England and Wales **(EN)** **(W)**
The Waste (England and Wales) Regulations 2011 (as amended) require that waste is stored correctly, it is transported by a registered waste carrier (two-tier registration system), all collections are recovered and accompanied by a valid waste transfer note and waste is taken only to a permitted, exempt or authorised facility. They also require that waste collectors (i.e. skip companies) offer to collect paper (including cardboard), plastic, metal and glass separately.

The Hazardous Waste (England and Wales) Regulations 2005 (as amended) require that hazardous waste is stored and transported correctly, that different types of hazardous waste aren't mixed and that hazardous waste is only taken to a site which can legally accept it. Hazardous waste consignment notes must be used for the transfer of hazardous waste.

England **(EN)**
From 31st March 2025, The Simpler Recycling Regulations will make it a legal requirement for all Balfour Beatty locations in England to separate their core recyclable waste streams and arrange for the separate collection of these.

Wales **(W)**
The Waste Separation Requirements (Wales) Regulations 2023 made it a legal requirement for Balfour Beatty locations in Wales to separate their waste for recycling from 6th April 2024

In Wales, producers of hazardous waste are required to register premises (sites) which produce in excess of 500kg of hazardous waste in 12 months, with Natural Resources Wales prior to its removal.

Scotland **(S)**
The Environmental Protection (Duty of Care) Scotland Regulations 2014 (as amended) require that waste is stored correctly, it is collected by a registered waste carrier, all collections are covered by a valid waste transfer note, waste is taken only to an authorised facility, and that consignment notes are used for the transfer of special (hazardous) waste.

The Special Waste (Scotland) Regulations 1996 (as amended) outline the requirements around the movement of special waste in to and out of Scotland and any requirement to pre-notify SEPA at least 72 hours in advance of the waste movement, when the special waste is entering Scotland.

The Waste (Scotland) Regulations 2012 require that waste producers take reasonable steps to present the following key dry recyclables for separate collection: paper (including cardboard), plastic, metal and glass.

The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991 (as amended) introduce provisions for the registration of carriers of controlled waste and for the seizure of vehicles that are used for illegal waste disposal. They both supplement and introduce new provisions, which assist in the implementation of the Control of Pollution (Amendment) Act 1989. These Regulations entered into force in England, Wales and Scotland on the 14 October 1991, and have been subsequently amended. Although almost fully revoked in England and Wales they still apply in Scotland.

Northern Ireland **(NI)**
The Controlled Waste Duty of Care Regulations (Northern Ireland) 2002 (as amended) requires waste holders and transporters to use waste transfer notes and keep records.

The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations Northern Ireland 1999 (as amended) requires all waste carriers to register with the Northern Ireland Environment Agency (NIEA).

The Waste Regulations (Northern Ireland) 2011 require that waste collectors set up separate collections of paper (including cardboard), plastic, metal and glass.

UK Documentation

Reference	Type	Title
ENV-RM-0035c	Reference Material	Disposing of Waste Electrical and Electronic Equipment
ENV-RM-0035d	Reference Material	Use and Disposal of Coal Bound Tar Materials
ENV-RM-0035e	Reference Material	Waste Assessment and Classification
ENV-RM-0035p	Reference Material	Management of Specific Waste Types
ENV-SF-0035c	Standard Form	Waste Contractor Inspection
ENV-SF-0035f	Standard Form	Waste Transfer Note
ENV-SF-0035g	Standard Form	Hazardous Waste Consignment Note
ENV-SF-0035h	Standard Form	Waste Contractor Audit
ENV-TB-0035a	Toolbox Talk	How to Complete a Waste Transfer Note
ENV-TB-0035c	Toolbox Talk	Fly-tipping
ENV-TB-0035d	Toolbox Talk	Waste Segregation and Storage
ENV-TB-0035e	Toolbox Talk	Street Lighting – Lamp Recycling
ENV-TB-0035f	Toolbox Talk	Coal Tar
ENV-TB-0035g	Toolbox Talk	Control of Road Sweeper Arisings
ENV-TB-0035h	Toolbox Talk	Waste Management: Classification
ENV-TB-0035i	Toolbox Talk	Waste Management: Waste Hierarchy
ENV-TB-0035m	Toolbox Talk	Waste Management – Container Efficiency
ENV-AL-0035d	Alert	Simpler Recycling Requirements in England
Video resource	Video	Digital Waste Transfer Note (Sustainability Portal)

External Documentation

Reference	Type	Title
External Document	EA / SEPA / NRW / NIEA technical guidance	Waste Classification Guidance on the classification and assessment of waste (WM3)
External Document	DEFRA Code of Practice	Waste Duty of Care Code of Practice
External Document	Natural Scotland	Duty of Care a Code of Practice
External Document	EA – Regulatory position statement	065 Dewatering of road sweepings
External Document	NIEA	Waste Management – The Duty of Care – A Code of Practice
External Document	NIEA	Regulatory Position Statement – Waste – Short Guide to Duty of Care Responsibilities
External Document	SEPA	Activities exempt from waste management licensing
External Document	SEPA	A Guide to Consigning Special Waste

External Document	NRW	Where mobile service operators produce all of your hazardous waste
External Document	Environment Agency	Hazardous Waste: consignment note guidance
External Document	Environment Agency	Disposal of waste to landfill
External Document	Wood Recyclers Association	Waste Wood Assessment Guidance for the UK Waste Wood Industry v1.2
External e-learning	Supply Chain Sustainability School	England, Scotland, Wales & Northern Ireland

Date:	Location:
Recorded by:	Signature:
Date of last drill:	

Names of personnel taking part:		
Detail how spill was enacted:		
Nature of liquid spilled:		
Approximate spill volume (L):		
Type/s of absorbent material available:		
Did all participants know what to do?	Yes	No
Was the spillage adequately controlled with the material available?	Yes	No
Was an Environmental Management Plan available?	Yes	No
Was an up to date spill plan/site drainage plan available?	Yes	No
Were any drains adequately protected?	Yes	No
Was the waste contained and disposed of correctly?	Yes	No
Was the operation carried out safely?	Yes	No
Were the following 8 Steps to Spill Control followed? (add comments if necessary)	Yes	No

1. Assess the risk	2. Select appropriate PPE
3. Stop the source	4. Contain
5. Evaluate incident	6. Decontaminate
7. Report	8. Restock spill kits

Was a de-briefing session carried out immediately after the drill?	Yes	No

Was the drill performed to expected standards?	Yes	No
Are there any causes for concern? (detail below)	Yes	No

Detail all areas for improvement:

Action	**Owner**	**Proposed completion date**

Add PHOTO RECORD:

Take pictures to show what was done, what went well and what could be improved.

Optional section for SKETCH & OUTLINE of SCENARIO tested:

Mark up the locations of spill source, key environmental pathways, potential environmental and human receptors and spill kit locations.

TOOLBOX TALK

This aim of this toolbox talk is to inform all Balfour Beatty employees, sub-contractors and Joint Venture partners about energy use and to encourage them to 'Act on Energy'. The key take away message is that energy use and energy management is our collective responsibility.

Did you know?

- Balfour Beatty (UK) uses approximately 460,000 megawatt-hours of energy annually.
  This is equivalent to heatinxg 67,696 3-bed semi-detached homes for a year or powering 375,303 televisions for a year or boiling enough water to make 2.3 billion cups of tea!
- Balfour Beatty (UK) spends in excess of £66 million on energy (gas & electric) and fuel across the business annually.

Why should we take steps to reduce our energy use?

Avoid Environmental Harm	There are considerable environmental benefits to becoming more energy efficient. Burning fossil fuels for electricity generation, heating, powering plant, vehicles and other equipment produces carbon emissions (CO_2). CO_2 is a greenhouse gas which contributes to global warming and causes dramatic changes to the global climate. *Every person in our organisation has an important role to play in minimising the impact of our activities on the environment.*

Reduce Costs	The price of electricity, gas and other fuels is rising every year. This is making it increasingly difficult for all organisations to keep their costs down and stay competitive. To ensure we stay successful, we need to operate as energy efficiently as possible. *Every person in our organisation can have an impact to minimise overheads and contribute to a sustainable future.*

Avoid Prosecution	It is a mandatory requirement in the UK for large organisations to measure and monitor energy use and report on energy saving opportunities. In addition to legal requirements, clients also require us to meet certain standards for managing energy performance. *Every person in our organisation can support the business to meet compliance obligations by following prescribed reporting procedures.*

Questions

1. What simple steps can I take to help minimise energy use in this building?
2. What simple steps can I take to help minimise energy use on this construction site?
3. What simple steps can I take to help minimise energy use when using a vehicle?

Buildings	Construction Site	Vehicles
• Ensure all lighting, heating and electrical equipment is switched off when not in use. • Ensure doors and windows are closed when air-conditioning or heating is switched on. • Ensure temperature controls reflect building operating time and are season appropriate. • Do not leave any lighting on overnight unless it is a security requirement. • Report compressed air system leaks to FM lead immediately.	• Opt for a grid connected power supply over diesel generators where possible. • Where generators are used, ensure they are appropriately sized to meet power demand. Do not oversize. • Use appropriate plant and equipment for the task. • Ensure doors are closed in drying rooms. • Do not leave plant idling.	• Avoid unnecessary vehicle movements and journeys. • Accelerate smoothly, and where practicable, use cruise control. • Ensure all unnecessary items and equipment is removed from vehicles. • Where travelling by car is unavoidable car-share where possible. • Ensure tyres are correctly inflated.

Additional material

- How to reduce energy on a project sites – short video from The Supply Chain Sustainability School.
- OPS-RM-0380a – Site Mobilisation Guide
- Sustainability Reporting Procedures and Guidance

TOOLBOX TALK

A large number of pollution incidents each year are caused by unintentional releases of fuel, oils and chemicals from construction sites. Many of these incidents can be prevented and their impacts minimised, when prompt action is taken. It is important that everyone on site knows how to prevent a spill and what to do if one happens.

Balfour Beatty could be prosecuted and fined if a spill or leak causes pollution. We could also be liable for significant clean-up and remediation costs.

EFFECT OF WORKS

Works often require the use of liquids, and if released into the environment these have the potential to cause serious damage, particularly if they come into contact with a watercourse or soak into the ground.

SPILL RESPONSE PLANS

Your site should have a spill response plan and everyone should be familiarised with the plan as part of the general site induction.

GENERAL PRINCIPLES OF SPILL MANAGEMENT

1. **ASSES THE RISK** to people and to the environment based on the nature and quantity of the spilt substance. Do Not take personal risks.
2. **SELECT PPE** that is appropriate for the substance before attempting to contain it
3. **STOP** the spill or leak at the source
4. **CONTAIN** the spill with the materials provided, or alternative materials to hand in an emergency. Block the environmental pathway by, for example, using a drain cover or absorbent boom.
5. **EVALUATE AND CLEAN UP** the area with spill materials provided
6. **DECONTAMINATE** all personnel, equipment and surfaces impacted by the spill. Excavate any visibly contaminated land.
7. **REPORT** the event according to site incident reporting procedures
8. **RESTOCK** used spill kits ASAP.

If you are unable to manage/contain the spill, contact your Environmental Sustainability Advisor – they will arrange for a specialist emergency contractor to attend site ASAP.

SPILL KITS

There are generally 2 types of spill kit:

- One for chemical spills
- One for oil/hydrocarbon spills

Spill kits should contain the following items:

- Absorbent materials, in a range of configurations:
  - granules
  - booms/pads
- Bag for containing contaminated residues and clothing
- Other helpful kit to have nearby: plant nappies, drain mats / covers, sand, shovel and brush

Note: If the liquid has spilt onto porous ground (e.g. soil or grassy areas) the contaminated ground will need to be excavated and disposed of. Before disposal the soil will need to be tested.

Remember to bag, label and **dispose** of all used spill materials and contaminated PPE as hazardous waste (Special Waste in Scotland).

Spill kit item	Surface application	Pollutant applications	Image
Absorbent granules	Hard surfaces or to form a protective bund	Oil spills	
Absorbent pads	Hard surfaces Some types can be used on watercourses to absorb oil or other floating liquids (hydrophobic) Preventative	Oil, liquid chemical spills	
Absorbent booms	On watercourses to control oil or other floating liquids (downstream from point of entry) Used to isolate drains or to contain or divert spillages on hard surfaces	Hydrocarbons, chemicals or both	 
Sand	Low-cost alternative to absorbent granules, used to create a bund or to assist in clean-up		
Drain mats (eg: clay mats, rubber mats and water filled bags)	Used to seal a drain		

For environmental queries, please contact your Site Lead. Alternatively, contact the Environmental Sustainability Advisor for your project.

SCOPE

This procedure applies to all Company projects, offices, facilities, asset and concession companies and Joint Venture (JV) projects where the Company Management System has been adopted by the JV Board. Where the Company is required to operate another party's Management System then the requirements of the Joint Venture/Alliance Business Management System (BMS) Assessment must be followed in relation to assessing the validity of third-party management systems.

PURPOSE

The purpose of this procedure is to define the minimum expectations for HS W and Environmental Sustainability training and competency for employees and sub-contractors.

The requirements in this procedure are our current standards and must be adopted as part of a safe system of work. However, Projects and Contracts are also encouraged to identify new methods of working as long as these are: developed through rigorous risk assessment, demonstrably improve on current standards, deliver legal compliance and are approved in accordance with the Controlled Derogation from BMS procedure (MSC-PR-0004).

This document excludes specific arrangements for working on Network Rail Managed Infrastructure as these are dealt with in separate procedures (HSF-PR-0029) and (HSF-PR-0032).

PROCEDURAL REQUIREMENTS

1. GENERAL

1.1 All employees and sub-contractors must have the relevant skills/knowledge/experience/training required by the industry sector they are working in that are appropriate to the tasks and activities undertaken.

1.2 All employed and subcontracted operatives must have the relevant training required for their role in accordance with HSES Duty Holders Minimum Training Requirements Reference Material (HSES-RM-0026a.).

1.3 With the exception of the Balfour Beatty Rail and Power Transmission and Distribution businesses, all operatives must have a valid CSCS or affiliated card providing proof that individuals have the required training and qualifications for the type of work they carry out. A limited number of non-CSCS card schemes are accepted as detailed within the 'Approved Card Schemes' reference material (HSES-RM-0026b). Note that some CSCS, CSCS-affiliated and approved cards may be relevant and required for operatives undertaking construction tasks and activities such as plant operation within the Power and Rail businesses, as determined by the relevant competency procedures below.

1.4 All employed and sub-contracted operatives working within the Rail business must be sponsored in accordance with the Rail Sentinel Scheme Requirements (HSF-PR-0029), Rail Personal Track Safety Procedure (HSF-PR-0032 Rail Personal Track Safety) and Competence Management Procedure (OPS-PR-6601). Rail plant operators must have their competencies assessed and maintained in accordance with the Rail Plant Operations Scheme Procedure (HSF-PR-0057).

1.5 All employed and sub-contracted operatives working within the Power Transmission and Distribution business must be in possession of the required training and competencies determined by their defined role profile in accordance with the Power business Competency and Training Procedure (TRN-PR-5960-PTD).

1.6 All employees and sub-contractors must attend the Zero Harm Induction (E-Learning style module) and relevant site level induction (HSES-RM-0008b) or office induction (HSES-RM-008a) in accordance with the Induction procedure (HSES-PR-0008).

1.7 All employed or sub-contracted supervisors working with every Balfour Beatty business must possess either Site Managers Safety Training Scheme (SMSTS) or Site Supervisors Safety Training Scheme (SSSTS) or Company accepted equivalent detailed in Table 1 of HSES Duty Holders Minimum Training Requirements Reference Material (HSES-RM-0026a).

1.8 All employed or sub-contracted supervisors working with every Balfour Beatty business must complete all twelve modules of the Supervisors Passport as detailed in the Supervisors Passport and Competency Review (HSES-TF-0026c).

1.9 All employee and sub-contractor supervisors must receive a Supervisor Induction (HSES-RM-0008d) as part of the induction process in accordance with the Induction procedure (HSES-PR-0008).

1.10 The Supervisor must ensure that only employees and sub-contractors with the relevant skills/knowledge/experience/training are allocated to a task or activity.

1.11 The following Balfour Beatty role holders must have attended ESA (Environmental Site Awareness) training or SEATS (Site Environmental Awareness Training Scheme) if SEATS is a client requirement):

- PM3 Managers responsible for running a project
- Site Engineers
- Supervisors (Level 2 & 3)

1.12 Any employee or sub-contractor who does not have the sufficient skills/knowledge/experience to complete a task safely when working independently, for example inexperienced operatives and those recently trained or undergoing training, must be effectively supervised.

2. INDIVIDUAL TRAINING NEEDS

2.1 Each project must produce and maintain a training plan, as a minimum, utilising the R12 Training Matrix Detail Report, adding to this any additional requirements beyond the ones listed in the reference material, for example Driver CPC or Supervisor Development Pathways, and must include:

- Technical training and competency requirements
- Task specific training
- Client specific training

This document must be maintained and must be readily accessible particularly during August each year as it informs the following year's training budget.

This document can be stored in the projects records on Sharepoint, within the Training Administration Report on R12 or within the Project Management Plan (PMP). The 'HSES Training matrix Template' (HSES-TF-0026a) may be used and duties/training not required on the project may be deleted from the template to assist in producing the project specific matrix.

Training plans within the Power Transmission and Distribution business must be formulated and maintained in accordance with the Competency and Training procedure (TRN-PR-5960-PTD).

Training plans within the Rail business must be formulated and maintained in accordance with the Competence Management Procedure (OPS-PR-6601).

2.2 Each SBU/Project must have a process in place for managing training/competency renewals and expiry dates. Employees and sub-contractors with expired training shall not be put to work until this has been renewed. Additional training must be identified during a training needs analysis/PDR process.

New employees or those that are new to a role/Project shall have a training needs analysis completed as part of the setting to work process and a training plan agreed.

2.3 Competency and training accreditations remain valid until the expiry date, providing it complies with procedural requirements and meets specific training standards required for the role or activity/operation as detailed in the 'HSES Duty holders Minimum Training Requirements' (HSES-RM-0026a.

3. COMPETENCY ASSESSMENT

3.1 The Site Lead must ensure that any trained but inexperienced or 'new to project' operatives have direct supervision to ensure they have the competence and abilities to work to a high standard of safety in line with their training and Balfour Beatty Golden Rules (Note: This is a requirement of 2016-UK-Update-001 Fatal Injury Third Don Crossing Aberdeen).

3.2 The Site Lead must ensure that a review is undertaken to confirm that competent Supervisors are appointed (*HSES-TF-0026c Minimum Training and Certification Requirements (Supervisors Passport and Competency Review) and they are making the required progress in attaining the Supervisors Passport. The Site Lead must also ensure that every Supervisor understands and accepts the relevant duties and responsibilities of their role (HSES-TF-0026b Supervisor Role and Responsibilities).

3.3 The Site Lead must act as, or appoint a Supervisor Competency Reviewer to ensure that the Supervisor can demonstrate the expected skills, knowledge, experience and behaviours commensurate with their role (HSES-TF-0026c Minimum Training and Certification Requirements (Supervisors Passport and Competency Review).

3.4 To ensure that employees and sub-contractors are competent to carry out the task, the supervisor must undertake a review of their performance in the role.

Where a deficiency in competency is identified this must be addressed. This may take the form of additional training or mentoring/supervision for employees and notifying sub-contractor management of supply chain deficiencies.

Where there is no deficiency of training or mentoring, and performance concerns remain, then applicable HR capability (HRS-PL-0002) or disciplinary (HRS-PL-0008) policies must be followed.

3.5 **RECORDS**

3.6 The Site Lead must ensure that training records for employees are maintained on Oracle R12.

3.7 The Site Lead must ensure that copies of sub-contractor training records are obtained, maintained, accessible and secure.

3.8 The Site Lead must ensure that competence/training cards such as CPCS are validated with the card supplier. Validation contact details for each Card Scheme are available in the 'Approved Card Schemes' reference material (HSES-RM-0026b)

3.9 Individual employee's competence cards are maintained on Oracle R12 and can be made available on request.

Sub-contractor competence cards (or copies) must be available on request

3.10 Employees and sub-contractors with training certificates which do not have a fixed expiry date must either:

- Refresh the training after 5 years,
- Be able to demonstrate current updated knowledge and skills via either Continual Professional Development (CPD), or the PDR process
- Complete supplementary training suitable to the business (i.e. NEBOSH & IOSH beyond 5yrs takes SMSTS) or,
- No longer undertake activities related to the training.

3.11 All data on individuals (electronic or paper based) must be kept and processed in accordance with the Data Protection Policy (LGL-PL-0045).

4. TRAINING REQUESTS

4.1 Each SBU must have processes in place to request employee training. These processes must be made clear to all employees. The process can be found here.

ABBREVIATIONS / DEFINITIONS

Site Lead	The person directly responsible for the Health and Safety of all employees, subcontractors and third parties, and for the care of the environment, affected by our works.

INPUTS

Reference	Type	Title
1974 c.37	Legislation	Health and Safety at Work Act 1974
1999 No.3242	Legislation	Management of Health and Safety at Work Regulation
HSF-PL-0001	Policy	Health & Safety Policy statement
ENV-PL-0001	Policy	Environmental Policy statement
LGL-PL-0045	Policy	Data Protection Policy
HSES-RM-0026a	Reference Material	HSES Duty holders Minimum Training Requirements'
HSES-RM-0026b	Reference Material	Approved Card Schemes
HSES-RM-0026c	Reference Material	Construction Skills Certification Scheme
HSES-RM-0026d	Reference Material	Supervisor Review
OPS-PR-6601	Procedure	Competence Managament Procedure
HSF-PR-0057	Procedure	Rail Plant Operations Scheme (POS)
	Standard	Build UK – Training Standards

OUTPUTS

Reference No.	Document Title	Responsibility	Retention Period
HSES-TF-0026a	Project HSES Training Matrix	Site Lead	Project Duration
HSES-TF-0026b	Supervisor Role and Responsibilities	Site Lead	Project Duration
HSES-TF-0026c	Supervisor Competency Review	Site Lead	Project Duration
HSES-SF-0026c	Training Attendance Record	Site Lead	Project Duration

This form should only be completed by a manager or supervisor. All personal information will be treated in the strictest confidence. Once completed, this report is subject to a management review before being distributed accordingly to the relevant recipients.

Event Type (✓)	Injury / Illness	Near Miss	Asset Damage (above or below ground)	Loss / Damage	Worker Abuse	Road Traffic Collision	Environmental
	☐	☐	☐	☐	☐	☐	☐

1. General Information (to be completed for all reports)

Summary of incident. What happened?		
Immediate actions taken after the incident:		
Reported by;	Incident / Event Date	Incident / Event Time
Name:	Click or tap to enter a date.	
Job Title:	Date reported	Time reported
Tel: Email:	Click or tap to enter a date.	

Location description of incident	Contract/Project/Depot/Office/Organisation Name
Address incl. Post Code	Contract/Project/Depot/Office Contact Phone No.

Strategic Business Unit SBU		Business Unit	
Contract/Project No.		iSMS Number	

iSMS **Actual** Severity Ratings (select one only from the relevant row(s)). Please refer to HSES-PR-0005 Incident Reporting and Investigation, Section 6 Table 1 for the definitions of the severity ratings.

Safety	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Health	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Environment	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

2. Information relating to the individual(s) involved in the incident (to be completed for all relevant/applicable reports)

Employee Type	Choose an item.
Trade/Craft	Choose an item.

Name of Individual(s) involved	How is the person involved? (E.g. injured party, utility damage / RTC cable strike)	Role
Name of any Witnesses		

3. Injury / Illness Details (to be completed in Injury or Illness reports)

✓ if N/A ☐

Was Medical Treatment beyond First Aid received?	Y ☐ N ☐

Number of Injured Persons		*A separate form (HSES-SF-0005a-e) must be completed per injured person.*	
Is this a lost time event?	Y ☐ N ☐	How many lost days in total?	
Date of first day away from work	Click or tap to enter a date.	Date returned to work	Click or tap to enter a date.
Description of Injury /harm / illness			
Treatment Given, By whom?			
Emergency Services called? Y ☐ N ☐ If Yes, provide details.			
Hospital visit required? (If yes provide location details)	Y ☐ N ☐		
Accident Type	Choose an item.		
List all injuries received (More than one injury can be selected)			
Injury Type	Choose an item.	**Body Part**	Choose an item.
Injury Classification	Choose an item.	**Type of Incident**	Choose an item.
Immediate action(s) taken after the incident			
Has a drug/alcohol test been conducted?	Y ☐ N ☐		
Work Activity in Progress	Choose an item.	**Equipment / Plant / Vehicle Involved**	Choose an item.
4. Road Traffic Collision/Loss/Damage (Complete only where applicable)		✓ if N/A	☐
Drivers Name		Vehicle Reg. no.	
Was the driver found to be at fault?	Y ☐ N ☐	**Incident On/Off Road?**	Choose an item.
Description of vehicle / item of plant involved – Please provide Driving Licence Type / Number (Vehicle Make and Model) and any Third Party details (where applicable)			
5. Asset Damage (Above or below Ground) (Complete only where applicable)		✓ if N/A	☐
Asset Type	Choose an item.	**Asset Position**	Choose an item.
Asset Location	Choose an item.		
Damage Caused By	Choose an item.	**Asset Status**	Choose an item.
Name of individual who damaged the asset			

Were Utility Plans on site?	Y ☐ N ☐	Did the utility plans show the damaged asset?	Y ☐ N ☐
Was the damaged asset marked up?	Y ☐ N ☐	Was the asset located with a Cat & Genny?	Y ☐ N ☐

6. Environmental Incident Details (Complete only where applicable)		✓ if N/A	☐
Environmental Incident Type	Choose an item.		
Environment Category (Sub Hazards)*	Choose an item.		
Detail the substance involved e.g. oil/fuel/chemical/foul water)		Approx. Lt/Kg.	
What receptor did the substance enter (E.g. air/soft or hard ground/ surface or ground water/drainage system?			
Surface/Ground condition			
How was it contained? (E.g. Spill kits used?)			
Type of waste involved (i.e. inert or hazardous)			
Amount of waste in tonnes		Cost of disposal	
The habitat, area structure, species, or part of community involved			
Type of non-native species or biosecurity type			
EA/SEPA/NRW/NIEA notified?	Y ☐ N ☐	Ref/Contact	

7. Other information			
Weather Conditions	Choose an item.	**Hazard Category**	Choose an item.
Emergency or planned work?			
Did the incident occur whilst undertaking remedial works due to a NCR/Snag?			
Any property damage? (detail)	Y ☐ N ☐	Value £	

Another BB Group Company involved	Y ☐ N ☐	If yes, please state details	
Who were we working for?			
Was a subcontractor involved	Y ☐ N ☐	If yes, please state details	
Was a sub-subcontractor involved	Y ☐ N ☐	If yes, please state details	
Was a third party involved	Y ☐ N ☐	If yes, please state details	
Is there any CCTV/Photo evidence available?	Y ☐ N ☐	If yes, please provide contact details below	

Is there any evidence of fatigue?	Y ☐ N ☐	If yes, please state details

8. Incident Investigation Facts

Using sub-headings as appropriate include brief project description, organisations involved & inter-relationships. Outline the work being done on the day of the incident and the people, plant, and equipment involved. Using the timeline, describe what happened, when, and where including how the task was planned and communicated in relation to construction methods, plant selection, control measures, systems of work, competencies, how people were set to work and any personal contributing factors. Insert relevant diagrams, plans, photographs, and cross reference any supporting documents appended to this report e.g. witness accounts, RAMS etc.

9. Incident Investigation Findings and Analysis

Causes	List all relevant findings
Immediate Cause (the most obvious reason why the incident happens)	
Underlying causes (the less obvious contributing factors)	
Root Cause(s) Failings in the organisation, planning and management systems	

10. Corrective and Preventative Actions / Recommendations

Action Required	Responsible Person to action	Target Date	Completion Date
		Click or tap to enter a date.	Click or tap to enter a date.

11. Lessons Learned

Please detail below any lessons learned following the incident investigation and highlight if local/business benefit.

Lesson learned detail	Local	Business
	☐	☐

All Business Lessons learned must be forwarded to the relevant Fatal Risk Working Group Lead and HSW Director.

12. Event Review

iSMS **Potential** Severity Ratings (select one only from the relevant row(s)) Please refer to HSES-PR-0005 Incident Reporting and Investigation, Section 6 Table 1 for the definitions of the severity ratings.

Safety	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Health	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Environment	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Name of Lead Investigator		Signature	
Job Title		Date of Investigation	Click or tap to enter a date.
To be reviewed and signed off by an Operational, Construction, or HSW Manager			
Name of Manager		Approval Signature	
Comments		Date	Click or tap to enter a date.

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9	Material specification	Bid preparation	Impact: Depletion of natural resources / global warming and climate change / degradation of landscape through extraction of natural resources / waste disposal Risks: availability of materials / cost to the business / cost of waste disposal	1	1	1	2	2	G	Normal / Abnormal: Use of sustainable construction materials. Use recycled aggregates instead of virgin aggregates. Construction to set KPI targets on use of sustainable materials. Seek locally sourced materials. Development of waste management plans to minimise waste from types of materials selected. Consider use of off-site manufacturing to minimise waste through controlled environment. Opportunities: Material substitution - consider innovative materials with lower environmental impacts	1	1	1	1	1	G	
10	Depot located adjacent to protected area e.g. SSSI, SAC, SPA	Ecology & Biodiversity	Impact: Disturbance to protected species / visual impact on protected area / potential pollution to protected areas from litter and releases to water Risks: Reputational damage, negative publicity, prosecution, clean-up costs	3	1	3	3	9	A	ENV-RM-0016d Ecologically Normal / Abnormal: Ensure depot personnel aware of any protected areas, carry out an environmental aspect assessment for the depot and implement any necessary mitigation measures Emergency: Stop work	3	1	3	1	3	G	
13	Working within or close to protected sites - SSSI, SPA, SAC, Ramsar, NNR, LNR, AONB	Ecology & Biodiversity	Impact: Damage to protected areas / loss of biodiversity / disturbance to protected species / visual impact on protected area / potential pollution to protected areas from litter and releases to water Risks: reputational damage, negative publicity, prosecution, fine, delay to works	4	1	4	3	12	R	ENV-RM-0016d Ecologically Normal / Abnormal: Contact Natural England / Scottish Natural Heritage / Natural Resources Wales or equivalents to obtain consent/assent for work and to agree working methods / consult ecologist / re-route works / site specific method statement / brief control measures to site teams / method statements / seek advice and guidance from local fisheries trust or specialist fisheries contractor if work may have potential impact on fisheries Emergency: Stop work Opportunities: build good working relationship with regulator through liaison during planning phase MMO Licenen and SSSI Ascent in place with NRW - CML2566	4	1	4	1	4	G	
24	Working near protected species	Ecology & Biodiversity	Impact: Disturbance or damage to protected species and their habitats / loss of biodiversity Risks: possible fine, prosecution, reputational damage, delay to works	3	1	4	3	12	R	ENV-RM-0016e Protected ENV-RM-0016a Managing Normal / Abnormal: Consult with Client to establish whether ecology survey has been carried out / preconstruction ecology survey is carried out / species specific surveys carried out / fingertip searches / apply for protected species licence and follow conditions / controls such as translocation, watching brief or other suitable mitigation measures to be included in method statements / teams to be briefed on controls / mitigation measures to be implemented / support to be provided by environmental advisor or specialist ecological resource where required Emergency: Stop work and inform team leader / site manager. Consult environmental advisor / specialist.	3	1	4	1	4	G	

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33	Office heating	Energy Use	Impact: Depletion of natural resources / global warming and climate change Risks: price of energy and increased costs / availability of energy	1	1	2	4	8	A	ENV-TB-0006a Act on Energy Normal & Abnormal: turn off heating at night / do not leave heaters on when rooms unoccupied Emergency: Failure in heating system or inadequate heating system results in portable heaters being used which are less efficient resulting in increased energy usage, CO2 emissions and heating costs. Opportunities: procure renewable energy / use alternative low carbon energy sources / install renewable energy generation / use of automated controls to manage energy demand	1	1	2	1	2	G	
34	Office lighting / electricity use	Energy Use	Impact: Depletion of natural resources / global warming and climate change Risks: price of energy and increased costs / availability of energy	1	1	2	4	8	A	ENV-TB-0006a Act on Energy Normal & Abnormal: turn of equipment an lights when not in use / do not use electrical equipment unnecessarily / use renewable sources where available / purchase through BB Group deal / choose energy efficient items where possible/automated lighting controls. Emergency: Inadequate office lighting or loss of main lighting resulting in use of desk lamps which are less efficient resulting in increased energy usage, CO2 emissions and electricity costs. Use of backup power generation (generators) which are less efficient than mains electricity and will result in increased environmental impact, particularly carbon emissions. Opportunities: procure renewable energy / use alternative low carbon energy sources / install renewable energy generation / use of automated controls to manage energy demand	1	1	2	1	2	G	
40	Spillage of diesel through damaged tank or drips	Material use & storage	Impact: Contamination of ground / ground water / surface water / damage to habitats / disposal of spill kits and hydrocarbon contaminated waste Risks: costs of disposal, waste exceeding hazardous waste landfill acceptance criteria, reputational damage, prosecution, clean up costs	4	2	4	4	16	R	ENV-RM-0007a Storage of Normal & Abnormal: Provision of spill kits / use of drip trays / maintenance of tanks and bunds Emergency: Stop work / refer to project environmental plan / utilise emergency response contractor if significant spill which can't be dealt with in-house	4	2	4	1	4	G	
42	Storage of fuel & oil	Material use & storage	Impact: Contamination of ground / ground water / surface water / damage to habitats / disposal of spill kits and hydrocarbon contaminated waste Risks: costs of disposal, waste exceeding hazardous waste landfill acceptance criteria, reputational damage, prosecution, clean up costs	4	2	4	4	16	R	ENV-RM-0007a Storage of Fuels Normal / Abnormal: Double skinned fuel tank / tank & associated pipework within bund / drums stored on spill pallets / locked tank / use of drip trays or plant nappies / concrete hard standing / bund maintenance / spill kits / pollution incident plan / drainage plan / regular inspections of fuel storage areas / store fuel away from watercourse / availability of spill kit materials to deal with large spills Emergency: Refer to project environment plan. Utilise emergency response contractor if significant spill which can't be dealt with in-house	4	2	4	1	4	G	
44	Storage of paint / coatings / epoxys / resins / adhesives	Material use & storage	Impacts: Pollution to water and ground / impacts to habitats / waste generation and disposal Risks: clean up costs, fines, reputational damage	1	2	2	4	8	A	ENV-RM-0007a Storage of Normal / Abnormal: Store materials in secure containers / away from surface water drains / locked / bunded / ensure stored in original containers / COSHH records available / dispose of in line with data sheets Emergency: Report leaks into iSMS	1	2	2	1	2	G	

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64	Breakout/grinding/cutting of concrete	Operations	Impact: Nuisance caused to neighbours / depletion of natural resources / global warming / climate change Risks: Reputational damage, negative publicity, prosecution, fines, prohibition notice, project delay	1	3	2	3	9	A	ENV-RM-0015a Noise ENV-RM-0013a Nuisance Normal / Abnormal: Extraction / consider hydro-derm / introduce water whilst cutting or drilling to reduce dust / consider vac blasting / wet blasting / no measure required / noise assessment / silenced plant / identify noise levels prior to work commencing Emergency: Stop work and seek professional advice Opportunities: crush and re-use concrete on site / send material for recycling elsewhere to avoid landfill	1	3	2	1	3	G	
67	Use of concrete	Operations	Impact: Depletion of natural resources, pollution to ground, pollution to water / global warming / climate change Risks: Reputational damage, negative publicity, fines, prosecution, clean up costs	1	2	2	4	8	A	ENV-RM-0009a Concrete Normal / Abnormal: Set up bunded hardstanding and settlement tank / specific area for wash out / use concrete washout skip / supervisor or foreman to advise at appropriate time / no wash-out to occur on site Emergency: Stop work	1	2	2	1	2	G	
75	Drilling/coring/cutting	Operations	Impact: Disturbance to archaeological remains and foundations / damage to listed buildings and structures / disturbance to people in neighbouring properties from noise and vibration / creation of dust causing nuisance to people in neighbouring properties / global warming and climate change Risks: Complaints, reputational damage, negative publicity, fines, delays to work, legal breach	1	3	2	3	9	A	ENV-RM-0013a Nuisance ENV-RM-0015a Noise Normal / Abnormal: ancient monument and listed building consent obtained where needed / consultation with local authorities and neighbouring residents prior to works commencing / section 61 consents put in place for night time works / damping down of materials with high dust potential Emergency: None	1	3	2	1	3	G	
79	General construction activities	Operations	Impact: Disturbance to wildlife and their habitats / pollution to air / pollution to water / noise nuisance / depletion of natural resources / global warming / climate change / depletion of water resources Risks: Reputational damage, complaints, negative publicity, fines and prosecution, availability of raw materials	2	2	2	3	6	G	ENV-RM-0016a Managing ENV-RM-0035a Waste ENV-RM-0015a Noise Normal / Abnormal: Identify sensitive environmental receptors & assess likely impacts prior to commencement / implement controls / install adequate barriers / fencing / consult specialists / identify alternative accesses / consult with local authorities and neighbouring residents prior to works commencing / section 61 consents put into place prior to works / attach and utility services to site cabins and welfare facilities where possible Emergency: Stop works	2	2	2	1	2	G	

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87	Loading/unloading of deliveries & materials	Operations	Impact: Nuisance to neighbours and wildlife / releases to land / releases to water / waste disposal Risks: complaints, negative publicity, reputational damage	2	3	2	3	9	A	ENV-RM-0013a Nuisance ENV-RM-0015a Noise Normal / Abnormal: Arrange deliveries to minimise impact on local area / comply with any planning requirements / Section 61 agreements for night time works / consult with local authorities and neighbouring residents prior to work / damping down materials with high dust potential Emergency: None	2	3	2	1	3	G	
92	Operation of plant and motorised equipment	Operations	Impact: Damage to protected sites / spread of invasive species through dispersal /noise disturbance to protected species / disturbance to local residents / contamination to surface water drains and watercourses / GHG emissions and climate change impacts / depletion of natural resources Risks: reputational damage, negative publicity, prosecution, fine, cost of fuel	1	3	3	4	12	R	ENV-RM-0016a Managing ENV-RM-0015a Noise ENV-RM-0021b Invasive and ENV-RM-0016d Ecologically Normal & Abnormal: consents obtained to work in protected sites / plan site layout including access and refuelling points / clean and wash plant following work through invasive species / ecological surveys / fingertip searches / consultation with local authorities and neighbouring residents prior to working / section 61 agreements for night time works / operational checks of plant and equipment prior to work / regular monitoring of fuel usage Emergency: Stop work Opportunities: install telematic technology on plant and equipment to provide visibility of use and consumption patterns	1	3	3	1	3	G	
93	Operative behaviour and movement around site	Operations	Impact: Disturbance to local residents Risks: complaints, reputational damage	1	1	2	3	6	G	ENV-RM-0015a Noise ENV-RM-0013a Nuisance Normal & Abnormal: No shouting, playing of loud music. Vehicles turned off when not in use. Emergency: None	1	1	2	1	2	G	
94	Over-ordering of materials	Operations	Impact: Unnecessary use of raw materials / increased waste generated / unnecessary disposal costs / increased global warming and climate change impacts from transport Risks: material availability, increased cost to business	1	1	3	3	9	A	ENV-RM-0036a Materials Planning and Waste Normal & Abnormal: Accurately assess material needs / check stock prior to placing orders Emergency: None	1	1	3	1	3	G	

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100	Refuelling of plant and vehicles	Operations	Impact: Depletion of natural resources / global warming/ climate change / contamination to watercourses / contamination to land / impact on ecology Risks: cost of fuel, cost to the business, prosecution, clean up costs	2	3	4	4	16	R	HSF-PR-0046 Plant ENV-RM-0018a Spill Normal & Abnormal: never leave plant/vehicles unattended when refuelling / use of drip trays or plant nappies / availability of spill kits / clean up any spills or leaks / report spills and leaks into iSMS regular inspections of refuelling areas / availability of spill kit materials to deal with large spills Emergency: In the event of a significant spill which can't be dealt with in-house, utilise emergency response contractor. Opportunities: Use of electric vehicles and battery operated plant / install telematics technology on plant and equipment to determine consumption and use patterns / use alternative low carbon fuel where possible	2	3	4	1	4	G	
104	Scaffolding (erecting & dismantling)	Operations	Impact: Noise disturbance to people in local properties Risks: complaints, negative publicity, reputational damage	2	3	2	3	9	A	ENV-RM-0015a Noise Normal & Abnormal: consultation with local authorities and neighbouring residents prior to works commencing / Section 61 agreements put in place for night works Emergency: None	2	3	2	1	3	G	
105	Site security	Operations	Impact: Depletion of natural resources / global warming / climate change / visual impact of perimeter site fencing Risks: complaints from local residents (noise & light)	1	2	1	3	6	G	ENV-RM-0015a Noise Normal & Abnormal: Turn of equipment when not is use / use silenced generators for night time works Emergency: Where possible reposition generator in event if noise complaints / report complaints to the BB Helpline / report incidents on iSMS Opportunities: Reduce generator noise by installing renewable energy sources e.g. solar panels	1	2	1	1	2	G	
106	Spillage of other materials e.g. chemicals	Operations	Impact: Contamination of ground / ground water / surface water Risks: reputational damage, prosecution, clean up costs	4	2	4	4	16	R	ENV-RM-0007a Storage of Fuels Oils and Liquids Normal & Abnormal: Provision of spill kits / use of drip trays / maintenance of tanks and bunds Emergency: Stop work / refer to project environmental plan / utilise emergency response contractor if significant spill which can't be dealt with in-house	4	2	4	1	4	G	
107	Storage of building materials	Operations	Impact: Disturbance to wildlife and impact on vegetation / nuisance to third parties / potential surface water pollution / waste disposal. Risks: complaints, reputational damage, possible fine	1	2	1	3	6	G	ENV-RM-0036a Materials Planning and Waste Normal / Abnormal: Store materials in bays / out of wind / covered / compact stockpiles / damp down / spill kits / drip trays / undercover to prevent damage / regular checks on storage areas Emergency: None	1	2	1	1	2	G	
113	Theft of plant / equipment / fuel	Operations	Impact: Pollution to rivers, surface water drains , foul drains and ground Risks: negative publicity, failure to fulfil compliance obligations, possible fines, prosecution, clean up costs	2	3	3	3	9	A	ENV-RM-0007a Storage of ENV-RM-0019a Working near Watercourses Normal / Abnormal: consider the need for security cameras or security personnel / lock plant & equipment and ensure secure if left on site / store plant & equipment away from watercourses / spill kits with plant Emergency: Stop work	2	3	3	1	3	G	

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115	Use of construction materials	Operations	Impact: Use of natural resources / inefficient use of construction materials / waste disposal Risks: Increase in raw material costs, cost to the business of wastage	1	2	2	3	6	G	ENV-RM-0035a Waste ENV-RM-0036a Materials Planning and Waste Normal / Abnormal: implementation of the waste hierarchy / regular monitoring and reporting of waste production and costs Emergency: Stop work	1	2	2	1	2	G	
116	Use of COSHH substances	Operations	Impact: Spill or leaks polluting surface water drains, watercourses and ground / production of waste materials including hazardous waste Risks: clean up costs, reputational damage, prosecution, fines	2	4	2	3	12	R	ENV-RM-0007a Storage of Normal / Abnormal: secure COSHH storage / implementation of procedures for using COSHH Emergency: Stop work	2	4	2	1	4	G	
119	Use of paint / coatings / epoxys / resins / adhesives	Operations	Impact: Contamination of ground and water / damage or loss to flora, fauna, habitats and ecosystems Risks: clean up costs, reputational damage, cost of waste disposal	1	3	2	3	9	A	Normal / Abnormal: Install adequate barriers & fencing / mask off areas prior to application / use water based material / use non-harmful deterrents e.g. bird scarers Emergency: Stop work Opportunities: Source lower environmental impact paint / coatings / epoxys / resins / adhesives	1	3	2	1	3	G	
122	Use of site lighting (outside)	Operations	Impact: Depletion of natural resources / global warming / climate change / disturbance to people in neighbouring properties / disruption to local wildlife by disrupting ecological cycles / complaints from local residents Risks: complaints, negative publicity	1	1	2	3	6	G	ENV-RM-0013a Nuisance Normal / Abnormal: Adopt mains power utility services where possible / implementation of the 'green dot' scheme / use timers so turned off when not needed / focus light on work site and prevent unrequired light dispersal / use movement sensors to activate lights Emergency: Where possible, reposition lighting in event of nuisance complaints / report complaints to the BB Helpline / report incidents on iSMS Opportunities: Use of LED technology to reduce energy consumption / use of renewable technology to power lighting / use of automated controls to manage energy demand	1	1	2	1	2	G	
123	Use of welfare cabins on site	Operations	Impact: Depletion of natural resources / global warming / climate change / disposal of waste / disposal of waste water / disposal of septic tank waste Risks: failure to fulfil compliance obligations, lack of sewer to discharge waste water to	1	2	3	3	9	A	Normal / Abnormal: use of water saving devices on taps etc. / rainwater harvesting / report and repair leaks and drips / attach mains utility services to site cabins and welfare facilities where possible / sinks to drain to sewer or to septic tank, not to ground Emergency: None	1	2	3	1	3	G	
125	Water jetting to clean structures	Operations	Impact: Depletion of natural resources / global warming / climate change / unauthorised discharge to sewer or surface water / pollution resulting in negative impact on ecology / biodiversity loss Risks: reputational damage, negative publicity, possible prosecution and fine.	2	3	3	4	12	R	ENV-RM-0010a Silt Mitigation ENV-RM-0019a Working near Watercourses Normal / Abnormal: Sand bags to act as baffles to encourage settlement of fines / teram or similar to filter water at outlets / settlement tanks / test water quality / prevent debris falling into watercourse Emergency: Stop works and review process	2	3	3	1	3	G	

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				Severity			Likelihood	Risk Factor	Trigger		Severity			Likelihood	Risk Factor	Trigger	
				Legal	H&S	Env					Legal	H&S	Env				
136	Approval of Suppliers	Procurement	Impact: Potential for approving suppliers who don't have correct environmental licences / permits / exemptions / potential for suppliers to carry out activities other than those they were approved for e.g. carrying waste / potential for waste supplier to take BB waste to unlicensed sites Risks: Reputational damage, negative publicity, prosecution, fines, clean up costs, failure to fulfil compliance obligation	4	4	4	3	12	R	PRC-PR-0002 Supply Chain Prequalification Procedure Normal / Abnormal: Supplier assessment process using Constructionline. Emergency: Stop using supplier Opportunities: Approve suppliers for specific activities	4	4	4	1	4		G	
137	Procurement of materials	Procurement	Impact: Depletion of natural resources / air pollution and road congestion from transporting materials / natural resource depletion and associated habitat degradation / potential to procure non-sustainably sourced materials / waste generation from over-ordering / global warming / climate change / waste disposal / potential to source materials from an illegal source / environmental damage caused by extraction and during production Risks: materials unavailable, cost to business of sourcing from further-afield, failure to fulfil compliance obligations, negative publicity, reputational damage	1	1	3	4	12	R	PRC-PL-0007 Sustainable Normal & Abnormal: Sustainable Procurement Policy in place / Quantity Surveyors to calculate material quantities / spare materials to be returned to depots for re-use / procure locally / procure from approved suppliers / use recycled / secondary aggregates / responsible sourcing of materials e.g. FSC timber with chain of custody Emergency: Report products which don't meet Sustainable Procurement Policy e.g. non-FSC timber or no chain of custody documentation into iSMS, make report to Procurement if illegally sourced materials are suspected Opportunities: investigate material substitution, use of local suppliers to minimise impacts	1	1	3	1	3		G	
141	Employee business travel	Travel & Transport	Impact: Depletion of natural resources / global warming / climate change / air pollution from higher emissions if one employee per vehicle / nuisance to local stakeholders / dust / pollution of surface water drains Risks: Price of diesel and petrol, increased cost to business	2	3	3	5	15	R	PRC-PL-0100 UK Travel and OPS-RM-0012 Company Car Normal / Abnormal: Put on crew bus where possible / employ local labour / car sharing / video conferencing to avoid need to travel / use of public transport Emergency: Fuel protests resulting in fuel shortage and disrupting employees travel to work / severe weather conditions including snow & ice, floods, high winds causing the office to be closed or transport to be disrupted. Result in the need for employees to work from home / increased reliance on electricity for charging vehicles. Business continuity plans for offices. Opportunities: Inclusion of hybrid vehicles on fleet list, inclusion of lower emission vehicles on fleet list	2	3	3	1	3		G	

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Ref.	Environmental Aspect	Environmental Category	Environmental Impact	Pre Mitigation Severity: Legal	H&S	Env	Likelihood	Risk Factor	Trigger	All Options Considered to Mitigate Risk and Realise Opportunity for improvement	Post Mitigation Severity: Legal	H&S	Env	Likelihood	Risk Factor	Trigger	Responsibility
142	Transportation of people & materials	Travel & Transport	Impact: Depletion of natural resources / global warming / climate change / air pollution from higher emissions if one employee per vehicle / nuisance to local stakeholders / dust / pollution of surface water drains Risks: Price of diesel and petrol, increased cost to business	2	3	3	5	15	R	OPS-RM-0012 Company Car List Normal / Abnormal: Green travel plans for permanent locations / regular monitoring of fuel use / use of WebEx / tool box talks / lowering the carbon footprint of fleet vehicles / set up bunded wheel wash / utilise road sweeper Emergency: Utilise warning signs to warn other road users of mud/debris on public highway Opportunities: Inclusion of hybrid vehicles on fleet list, inclusion of lower emission vehicles on fleet list	2	3	3	1	3	G	
201	Parked cars	Travel & Transport	Impact: Discharges to surface water e.g. from fuel and oil leaks and vehicle washing resulting in pollution to surface water drains and hardstanding. Risks: Complaints from landlord / pollution / potential for fines and prosecution.	1	1	3	3	9	A	Normal / Abnormal: provision of spill kits / no vehicle washing allowed / drainage plan available Emergency: Report to iSMS where fuel oil, leaks or spillages occur. Opportunities: Provision of spill kits in office car parks	1	1	3	1	3	G	
144	Transfer of waste and disposal	Waste	Impact: Global warming and climate change / depletion of landfill capacity Risks: Potential use of waste carrier without valid waste carriers licence / potential use of disposal sites without the correct environmental permit, exemption or equivalent / increased costs if local disposal and recycling sites not utilised / potential that waste is fly-tipped by waste carrier / inadequate waste segregation / potential for prosecution / no provision of recycling bins / recycling bins not used correctly / recycling bins in place but no recycling waste collection in place.	4	1	3	4	16	R	ENV-RM-0035a Waste Normal / Abnormal: Review disposal options prior to office establishment / segregate waste materials as they are generated / identify reclaim and reuse materials where possible / dispose of materials in accordance with duty of care / ensure licensed waste carriers are used / segregate all hazardous and non-hazardous waste for disposal / do not landfill liquid hazardous waste / prioritise recycling / dispose of waste via Group deal with Reconomy. Emergency: Stop works and contain waste if waste has been inappropriately disposed of. Opportunities: View waste as a resource and prioritise reuse	4	1	3	1	4	G	
148	Generation and storage of inert waste including spoil	Waste	Impact: Potential contamination to surface water / negative visual impact / potential breach of waste storage limits / potential breach of waste treatment legislation / incorrect definition of waste applied / nuisance to local stakeholders Risks: failure to fulfil compliance obligations, fines and prosecution, delay to works, increased costs, failure to see waste as a resource	2	1	2	4	8	A	ENV-RM-0035a Waste Normal / Abnormal: Open skip / covered skip / locked skip / monitoring of skips / regular litter picks / store away from watercourses / don't store under trees / install silt protection measures if needed e.g. silt fencing, rock dams, cut off ditches, settlement ponds / store away from drains / waste exemption or permit to be obtained for storage of waste if necessary Emergency: Collect litter as required / sheet spoil in heavy rain Opportunities: Follow the waste hierarchy	2	1	2	1	2	G	

Balfour Beatty UK

Project:	CRMC554 Dragon Jetty
Date Assessed:	01/06/2026
Risk Assessor:	Dylan Crabtree

Pre Mitigation			Post Mitigation		
R	A	G	R	A	G
16	16	7	0	0	39

Ref.	Environmental Aspect	Environmental Category	Environmental Impact	Pre Mitigation						All Options Considered to Mitigate Risk and Realise Opportunity for improvement	Post Mitigation						Responsibility
				Severity							Severity						
				Legal	H&S	Env	Likelihood	Risk Factor	Trigger		Legal	H&S	Env	Likelihood	Risk Factor	Trigger	
149	Generation and storage of non-hazardous waste	Waste	Impact: Potential contamination to surface water / negative visual impact / potential breach of waste storage limits / potential breach of waste treatment legislation / incorrect definition of waste applied / nuisance to local stakeholders Risks: failure to fulfil compliance obligations, fines and prosecution, delay to works, failure to see waste as a resource	2	1	2	4	8	A	ENV-RM-0035a Waste Normal / Abnormal: Open skip / covered skip / locked skip / monitoring skips / regular litter picks Emergency: Stop works and contain waste if non-hazardous waste has been inappropriately disposed of / contact Environment Team if waste has been sent to a disposal or recycling site which is only licensed to accept inert waste. Opportunities: Follow the waste hierarchy	2	1	2	1	2	G	
159	Transport of waste by third party	Waste	Impact: human health impacts / global warming / noise, dust and traffic congestion causing nuisance for local community / potential to use supplier without waste carriers licence / potential for waste carriers licence to be revoked / potential for disposal sites to be utilised which don't have environmental permits or exemptions in place Risks: failure to fulfil compliance obligations, lack of control over disposal sites utilised	4	1	4	4	16	R	ENV-RM-0035a Waste Normal / Abnormal: use approved waste carriers where waste carriers licence and disposal site licences have been approved prior to use / obtain waste transfer note and retain for 2 years / use of Group Reconomy deal Emergency: Where existing waste carriers and disposal sites can't be used, approve new waste carriers and sites prior to use Opportunities: reuse waste material where possible and with the appropriate regulatory licences, consents and permissions in place.	4	1	4	1	4	G	
160	Waste disposal	Waste	Impact: Potential use of waste contractors without valid waste carriers licences / potential use of disposal sites without correct licences in place / reduction in landfill capacity / nuisance caused to local community through operating waste disposal sites Risks: failure to fulfil compliance obligations, reputational damage, prosecution, fine	4	1	4	4	16	R	ENV-RM-0035a Waste Normal / Abnormal: use approved waste carriers where waste carriers licence and disposal site licences have been approved prior to use / follow waste hierarchy to reduce waste disposed of to landfill Emergency: Where existing waste carriers and disposal sites can't be used, approve new waste carriers and sites prior to use Opportunities: reuse waste material where possible and with the appropriate regulatory licences, consents and permissions in place.	4	1	4	1	4	G	
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Balfour Beatty UK

Project:	CRMC554 Dragon Jetty
Date Assessed:	01/06/2026
Risk Assessor:	Dylan Crabtree

Pre Mitigation

R	A	G
16	16	7

Post Mitigation

R	A	G
0	0	39

Ref.	Environmental Aspect	Environmental Category	Environmental Impact	Pre Mitigation – Severity – Legal	H&S	Env	Likelihood	Risk Factor	Trigger		All Options Considered to Mitigate Risk and Realise Opportunity for improvement	Post Mitigation – Severity – Legal	H&S	Env	Likelihood	Risk Factor	Trigger		Responsibility
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G. Biosecurity Risk Assessment

Document version number: (to be completed by marine licensing team)	
Approval date: (to be completed by marine licensing team)	

Marine Invasive Non-native Species Biosecurity Risk Assessment and Management Plan

A Marine Biosecurity Risk Assessment and Management Plan enables marine operators and contractors to understand and minimise the risk of introducing or spreading marine invasive non-native species (INNS). Management of marine INNS is extremely challenging once they are introduced to a new area. Effective biosecurity measures that minimise the risk of introduction or spread are therefore key to effective management.

Filling in this form:

To help you fill in this form, see accompanying document “Guidance for completing NRW’s Biosecurity Risk Assessment and Management Plan”. The accompanying document contains clarification of many key terms and also provides guidance on potential pathways of introduction for INNS (Table 1) and level of risk associated with each pathway (Table 2).

Structure of this form:

You will need to fill in Sections A and C. Fill in sections B1 to B5 when relevant to your activity. For further information on what is included in each section see the accompanying guidance document.

Section A: Activity overview

You should complete this section.

Section B: Risk Assessment

B.1 Assessing the pathway risks associated with vessels

If you are using a vessel (or vessels) as part of your licensed activity you should complete this section. Information on any equipment to be used which can be separated from the vessel should be provided in Section B.4.

B.2 Assessing the pathway risks associated with non-biological materials and water

If your activity involves the use or transfer of non-biological materials (e.g. water, sediment, construction material) you should complete this section.

B.3 Assessing the pathway risks associated with biological material

If your activity involves the use or transfer of biological material (including aquaculture) you should complete this section.

B.4 Assessing the pathway risks associated with equipment

If your activity involves use of equipment which can be separated from their vessel you should complete this section.

B.5 Assessing other pathway risks

This should be filled in if previous sections do not capture aspects of your activity.

Section C: Management Measures

You should complete this section.

Section D: Recommendations

You should consider this section.

Section A: Activity overview

Please fill out the activity details below:

Applicant name:	Dragon LNG
Short description of activity: *(please provide enough detail for NRW to understand the location and the different elements of the project. Links to other documents which describe the project can be provided)*	DragonLNG is looking to undertake repairs for the jetty at Milford Haven. The jetty was constructed in the1960's, built of steel piles, with a concrete roadway on top. Recent observations have identified potential issues with the integrity of the concrete roadway. In response, DragonLNG is looking to undertake an inspection of the jetty and carry out any subsequent repairs. The proposed scheme is located in Milford Haven at OS Grid reference SM928044.
Estimated timings of proposed licensed activities:	The inspection and repair works would be undertaken during the low shipping period (May to September) and expected to be completed during the summers of 2026-2028

Section B: Risk Assessment

B.1 Assessing the pathway risks associated with vessels

B.1.1. Please list all ports within the UK or overseas that all vessel(s) to be used (both during construction and maintenance) have visited over the 12 months prior to this licensed activity, or since the last out of water period (whichever is most recent).

Please state **N/A** if vessels have not entered any port since the last out of water period.

If you do not yet have the information to complete this section, please state **Unknown.** NRW may ask for this section to be updated when these details are known. The risk should be set as High.

Vessel name	**Port / location visited over last 12 months** (listed chronologically with dates if known)	**Which marine invasive non-native species known to be present at this port(s) / location(s)?**	**Has the vessel had antifouling?** 12 months prior to activity for biocidal coatings, 24 months for biocide-free coatings

Please add more rows if necessary

Please indicate the INNS risk level and justification of the risk below, separately for each vessel based on the locations visited in last 12 months. This should take into account the probability of biofouling and vessel antifouling regime. **Note:** Examples of risk levels are given in Table 2 of the accompanying guidance document and there is further information about this section in the accompanying guidance document.

Vessel name / type	**Risk Level (High, Medium, Low)**	**Justification of risk level**

B.1.2 Please provide details of the vessels (identified in Table B.1.1), which have not had antifouling (within the 12 months prior to the licensed activity for biocidal coatings, or 24 months for biocide-free coatings) and if there is an alternative antifouling management regime.

If there are not additional measures or an alternative biofouling management regime, then please put **None**, and the risk level would not change.

Vessel	**Alternative biofouling management regime** (e.g. different timeframes for antifouling treatment, vessel storage on land etc.)	**Risk Level (High, Medium, low)**

B.2 Assessing the pathway risks associated with non-biological materials and water

B.2.1: Please provide information about the source and receiving environments for non-biological materials and water transferred through the licensed activity from different pathways (for example hopper water, dredge material, construction material).

Pathway	**Location (including Coordinates, WGS84)**		**Relevant Environmental Conditions for INNS species** (e.g. salinity and depth differences between source and receiving environments)	**List of INNS known to be present**	**Risk Level (High, Medium or Low)**	**Justification of risk level**
Construction material	Source	The jetty – concrete which requires replacement / repair will be removed from the jetty.	Infrastructure above MHWS	A intertidal and subtidal survey of the area around the jetty was undertaken in June 2025. Across both the subtidal and intertidal surveys, no records of any rare or invasive non-native fauna in the Milford Haven survey area were identified. A check of NBNs INNS Wales and NBN INNS shows records of	Low	No known recorded or presence of INNS. Concrete will be blasted so INNS surviving is low. Part of an operational/highly disturbed area. ECoW will complete pre-commencement walkover. Buffer will be established around INNS (if identified) where possible. Where not possible INNS to be removed by hand where practicable. If not practicable, pressure wash arisings

				Caulacanthus okamurae and *Corella eumyota* in the waterbody.		will be filtered through terram to limit disposal to the watercourse.
	Receiving	The waterbody around the jetty.	Estuarine water body	A intertidal and subtidal survey of the area around the jetty was undertaken in June 2025. Across both the subtidal and intertidal surveys, no records of any rare or invasive non-native fauna in the Milford Haven survey area were identified. A check of NBNs INNS Wales and NBN INNS shows records of *Caulacanthus okamurae and* *Corella eumyota* in the waterbody.	Low	Any INNS present on the concrete will not likely be suitable for surviving in estuarine environments. ECoW will complete pre-commencement walkover. Buffer will be established around INNS (if identified) where possible. Where not possible INNS to be removed by hand where practicable. If not practicable, pressure wash arisings will be filtered through terram to limit disposal to the watercourse.

Please add more rows if necessary

B.3 Assessing the pathway risks associated with biological material

B.3.1 Please provide information about the species that will be used or transferred through the licensed activity and the potential for INNS to be contained in the biological material.

There are no biological materials associated with the project.

B.3.2: Please provide information about the source and receiving environments for biological material used or transferred through the licensed activity. Pathways include, for example, transfer of seeded ropes with seaweed or shellfish.

Pathway	**Location (coordinates, WGS84) and / or name of culture facility**		**Relevant environmental conditions for INNS species** (e.g. salinity and depth differences between source and receiving environments)	**List of INNS known to be present in the location or culture facility**	**Risk Level (High, Medium or Low)**	**Justification of risk level**
	Source					
	Receiving					
	Source					
	Receiving					

Please add more rows if necessary

B.3.3. If a relevant pathway is identified in Table B.3.2, please outline any relevant biosecurity measures or protocols in place to prevent contamination of material by marine INNS, and introduction or spread of marine INNS.

B.3.4. Does the transfer have the relevant documentation from the Fish Health Inspectorate at CEFAS (Aquaculture Production Business Registration), or follow other relevant codes of conduct for prevention of the introduction or spread of marine INNS? Please place an X in the relevant box.

Yes	No	Don't know	Not relevant

B.4 Assessing the pathway risks associated with immersible equipment

B.4.1. Please list the immersible equipment expected to be used in this licensed activity in the box below.

There are no biological materials associated with the project.

B.4.2. Will all the immersible equipment used in this licensed activity undergo washing, rinsing and / or drying as part of routine maintenance at the times described below? Please place an X in the relevant box.

	Yes	No
Immediately prior to departing the port of origin to undertake the licensed activity.		
Immediately prior to leaving the licensed activity area on completion of the licensed activity.		

B.4.3. Will all the immersible equipment used in this licensed activity undergo washing, rinsing and / or drying between different deployments within the activity area of this licensed activity (e.g. different specific locations of dredging or sampling covered under this marine licence)? Please place an X in the relevant box.

Yes	No (please provide reason)

If you answer No to any of the questions in B.4.2 or B.4.3, then please complete B.4.4 below.

B.4.4. Please provide information on the previous location the equipment will have been used prior to the vessel being used for this licensed activity.

Equipment	Location (Coordinates, WGS84)	Risk Level (High, Medium or Low)	Justification of risk level

B.5 Assessing other pathway risks

B.5.1 Please provide any other information on the licensed activity that may produce a risk of the introduction or spread of marine INNS that is not covered in the sections above.

Pathway	Risk Level (High, Medium or Low)	Justification of risk level

Section C: Management Measures

C.1 Management Measures

Enter the management measures for the pathways identified in the sections above.

All **high and medium risk** pathways identified in the previous risk assessment (sections B.1 to B.5) should have some degree of additional control or mitigation measures. Low risk pathways may also need additional control or mitigation measures. You may want to consider keeping a logbook to help demonstrate compliance if this is requested.

Pathway (identified in sections above)	**Risk Level (High, Medium or Low)**	**Risk management measure/s**	**Risk level after management (High, Medium or Low)**
Construction material	Low	It is proposed to use water misting systems and wet cutting techniques to suppress dust during concrete removal. Additionally, vacuum systems would be used in confined or sensitive areas. All equipment will be inspected prior to mobilisation. Spill kits will be stationed at every work zone with drip trays placed under stationary machinery. Refuelling will be conducted	Low

		away from the water where feasible, and secondary containment is proposed for fuel and chemical storage.	

Please add more rows if necessary

Section D. Recommendations

You may want to consider how compliance with the management measures will be recorded, for example in a log book or via photos.

We also recommend that;

- You identify an individual for monitoring and reporting on biosecurity management plan actions (a biosecurity manager)
- All staff involved in the licensed activity are made fully aware of the possibility that INNS may be encountered and understand what measures will be taken to ensure surveillance / monitoring of INNS during the activity
- All relevant staff are adequately trained in the identification and detection of INNS and to report any instances to the biosecurity manager

H. Designated Sites

Designation site name, area and distance from Project	Designated features or qualifying interests
Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA Area: 166,800.74ha Marine area: 99.8% 9.5km south of the Project	Skomer and Skokholm islands designated in 1982, marine boundary extended in 2014 and again in 2017. Annex I qualifying features under the Birds Directive (2009/147/EC): ● European storm petrel (*Hydrobates pelagicus*) – breeding; ● Red-billed chough (*Pyrrhocorax pyrrhocorax*) – breeding; and ● Short-eared owl (*Asio flammeus*) – breeding. Regularly occurring migratory species: ● Manx shearwater (*Puffinus puffinus*) – breeding; ● Atlantic puffin (*Fratercula arctica*) – breeding; and ● Lesser black-backed gull (*Larus fuscus*) – breeding. Seabird assemblage: ● Seabird assemblage of international importance – at least 20,000 seabirds in any season.
Limestone Coast of South West Wales/Arfordir Calchfaen de Orllewin Cymru SAC 4.5km southwest of the Project Area: 1,583.86ha Marine area: 12%	Designated in 1995, updated in 2015. Annex I habitats that are a primary reason for selection of this site: ● 1,230 Vegetated sea cliffs of the Atlantic and Baltic Coasts; and ● 2,130 Fixed coastal dunes with herbaceous vegetation (“grey dunes” Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: ● 4,030 European dry heaths; ● 6,210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (important orchid sites); ● 8,310 Caves not open to the public; and ● 8,330 Submerged or partially submerged sea caves. Annex II species that are a primary reason for selection of this site: ● 1,304 Greater horseshoe bat (*Rhinolophus ferrumequinum*); and ● 1,654 Early gentian (*Gentianella anglica*). Annex II species present as a qualifying feature, but not a primary reason for selection of this site: ● 1,395 Petalwort (Petalophyllum ralfsii).
West Wales Marine/Gorllewin Cymru Forol SAC 8.0km west of the Project Area: 737,614.00ha Marine area: 100%	Designated in 2017, updated in 2019. Annex II species that are a primary reason for selection of this site ● 1,351 Harbour porpoise (*Phocoena phocoena*).
Pembrokeshire Marine/Sir Benfro Forol SAC	Designated in 1997, updated in 2015. Annex I habitats that are a primary reason for selection of this site:

Project is within SAC Area: 138,038.50 Marine area: 99.3%	● 1,130 Estuaries; ● 1,160 Large shallow inlets and bays; and ● 1,170 Reefs. Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: ● 1,110 Sandbanks which are slightly covered by sea water all the time; ● 1,140 Mudflats and sandflats not covered by seawater at low tide; ● 1,150 Coastal lagoons; ● 1,330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae); and ● 8,330 Submerged or partially submerged sea caves. Annex II species that are a primary reason for selection of this site: ● 1,364 Grey seal (*Halichoerus grypus*); and ● 1,441 Shore dock (*Rumex rupestris*). Annex II species present as a qualifying feature, but not a primary reason for selection of this site: ● 1,095 Sea lamprey (*Petromyzon marinus*); ● 1,099 River lamprey (*Lampetra fluviatilis*); ● 1,102 Allis shad (*Alosa alosa*); ● 1,103 Twaite shad (*Alosa fallax*); and ● 1,355 Otter (*Lutra lutra*).
Castlemartin Coast SPA Area: 1,114.00ha 4.7km southwest of the Project	Designated in 1996, updated in 2015. Annex I qualifying features under the Birds Directive (2009/147/EC): ● Red-billed chough (*P. pyrrhocorax*) – breeding.
Pembrokeshire Bat Sites and Bosherton Lakes/Safleoedd Ystlum Sir Benfro a Llynnoedd Bosherton SAC Area: 121.26ha 5.9km southeast of the Project	Designated in 1995, updated in 2015. Annex I habitats that are a primary reason for selection of this site: ● 3,140 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. Annex II species that are a primary reason for selection of this site: ● 1,304 Greater horseshoe bat (*R. ferrumequinum*). Annex II species present as a qualifying feature, but not a primary reason for selection of this site: ● 1,303 Lesser horseshoe bat (*Rhinolophus hipposideros*); and ● 1,355 Otter (*L. lutra*).
Arfordir Penrhyn Angle/Angle Peninsula Coast SSSI Area: 133.50ha 7.7km west of the Project	Designated in 2003. Features include: ● Intertidal rock, sand and gravel communities; ● Kelp, sea squirts and sea mats on tide-swept lower shore rock; ● Serrated wrack and piddocks on lower mid-shore soft rock; ● Specialised marine habitats (including rockpools, overhangs, cave and underboulder communities); and ● Chough (*P. pyrrhocorax*).
Broomhill Burrows SSSI Area: 201.10ha 4.4km southwest of the Project	Designated in 1954, updated in 1987. Features include: ● Mobile dune, dune grassland and dune slack vegetation;

	● Rare sand dune plants; ● Chough (*P. pyrrhocorax*); and ● Cliff structures.
Castlemartin Corse SSSI Area: 30.40ha 5.3km southwest of the Project	Designated in 1985. Features include: ● Swamp; ● Fen meadow; and ● Fen pondweed.
Castlemartin Range SSSI Area: 2,089.00ha 6.3km southwest of the Project	Designated in 1954, updated in 1959, 1977, 1993 and 2011. Features include: ● Scarce and specialised inter-tidal rock communities; ● Maritime cliff crevice and ledge vegetation; ● Maritime grassland; ● Maritime and dry heath; ● Neutral grassland; ● Calcareous grassland; ● Sand dune habitats; ● Swamp, fen and mire; ● Goldilocks aster (*Galatella linosyris*); ● Small restharrow (*Ononis reclinate*); ● Field gentian (*Gentianella campestris*); ● Fen pondweed (*Potamogeton coloratus*); ● Scrambled egg lichen (*Gyalolechia fulgens***);** ● Jelly lichens (*Collema fragile* and *Leptogium diffractum*); ● Petalwort (*P. ralfsii*); ● Entire threadwort (*Cephaloziella calyculata*); ● Chough (*P. pyrrhocorax*); ● Greater and lesser horseshoe bat (*R. ferrumequinum* and *R. hipposideros);* ● Strand-line beetle (*Eurynebria complanata*); ● Hairy shield bug (*Dolycoris baccarum*); ● Silver-studded blue butterfly (*Plebejus argus*); ● Shrill carder bee (*Bombus sylvarum*); ● Solitary bee (*Andrena hattorfiana*); ● Marsh fritillary butterfly (*Euphydryas aurinia*); ● Atlantic grey seal (*H. grypus); and* ● Otter (*L. lutra*).
Hook Wood SSSI Area: 12.70ha 8.2km northeast of the Project	Designated in 1968, updated in 1986. Features include: ● Semi-natural broadleaved woodland; and ● Saltmarsh.
Milford Haven Waterway SSSI Area: 2,192.10ha 0.1km north of the Project	Designated in 2002. Features include: ● Estuaries (contains all shore types and communities); ● Specialised marine habitats (including eelgrass beds, rockpools, overhangs and underboulder communities); ● Sand gapers and bristle worms in muddy gravel shores;

	● Bristle worms in poorly sorted mixed sediment shores; ● Bristle worms in variable salinity muddy gravel shores; ● Serrated wrack, sponges and sea-squirts on tide-swept lower mid-shore rock; ● Serrated wrack with sponges, sea-squirts and red seaweeds on tide-swept lower mid-shore mixed substrata; ● Kelp, sea-squirts and sea mats on tide-swept subtidal fringe rock; ● Oyster beds on shallow subtidal muddy sediment; ● Saltmarsh (including Atlantic salt meadows); ● Reedbeds; ● Semi-natural ancient woodland; ● Saline lagoons; ● Marsh pea (*Lathyrus palustris*); ● Spurge-laurel (*Daphne laureola*); ● Wayfaring tree (*Viburnum lantana*); ● Dwarf eelgrass (*Zostera noltii*); ● Assemblage of coastal flowering plants; ● Assemblage of saltmarsh and intertidal flowering plants; ● Assemblage of mosses and liverworts; ● Assemblage of nationally rare and scarce lichens; ● Shelduck (*Tadorna tadorna*); ● Teal (*Anas crecca*); ● Curlew (*Numenius arquata*); ● Wigeon (*Anas penelope*); ● Dunlin (*Calidris alpina*); ● Little grebe (*Tachybaptus ruficollis*); ● Otter (*L. lutra*); ● Tentacled lagoon worm (*Alkmaria romijni*); ● Brown hair-streak butterfly (*Thecla betulae*); ● Assemblage of saltmarsh invertebrates; and ● Greater and lesser horseshoe bat (*R. ferrumequinum* and *R. hipposideros).*
Gweunydd Somerton Meadows SSSI Area: 19.87ha 3.6km south of the Project	Designated in 2017. Features include: ● Grassland fungi assemblage; and ● Neutral grassland.
Stackpole SSSI Area: 315.40ha 8.9km southeast of the Project	Designated in 1959, updated in 1977 and 1993. Features include: ● Scarce and specialised inter-tidal rock communities; ● Maritime cliff crevice and ledge vegetation; ● Small restharrow; ● Maritime grassland; ● Sand dune habitats; ● Lichen heath; ● Early gentian (*G. anglica*); ● An assemblage of dune grassland invertebrates; ● Silver-studded blue butterfly (*P. argus*); ● Standing freshwater habitats and communities; ● Otter (*L. lutra*); ● Hairy dragonfly (*Brachytron pratense*);

	● An assemblage of vascular plants; ● An assemblage of lichens; ● Scrambled egg lichen (*G. fulgens*); ● Lichen (*Bacidia herbarum*); ● Golden hair lichen (*Teloschistes flavicans*); ● Ciliate strap lichen (*Heterodermia leucomela*); ● Bird assemblage; ● Chough (*P. pyrrhocorax*); and ● Greater and lesser horseshoe bat (*R. ferrumequinum* and *R. hipposideros).*
Stackpole Courtyard Flats and Walled Garden SSSI Area: 0.06ha 9.6km southeast of the Project	Designated in 1984, updated in 1993. Features include: ● Greater and lesser horseshoe bat (R. ferrumequinum and R. hipposideros); and ● An assemblage of other bat species.
Scoveston Fort SSSI Area: 6.35ha 2.6km northeast of the Project	Designated in 2022. Features include: ● Greater horseshoe bat (*R. ferrumequinum*).
Orielton Stable Block and Cellars SSSI Area: <1ha 5.9km southeast of the Project	Designated in 2000. Features include: ● Lesser horseshoe bat (R. hipposideros).
Park House Outbuildings, Stackpole SSSI Area: 0.01ha 9.8km southeast of the Project	Designated in 1998. Features include: ● Lesser horseshoe bat (*R. hipposideros).*