

Dovey Junction Phase 2B Environmental Mitigation Measures

Pollution prevention measures

- All welfare, storage, parking and general works will occur within either pre-existing Network Road Rail Access Point (RRAP) or within the proposed compound area outside of the protected site.
- As much equipment and material will be carried along the rail corridor as possible.
- Temporary trackway in use from compound to the Viaduct – use restricted to telehandlers and number of journeys kept to a minimum. With no deviation across saltmarsh from this temporary access route.
- Plant Machinery will only operate within the existing rail corridor and below the structure in the specific locations required.
- No refuelling of plant machinery or equipment within the estuary habitat.
- All equipment should be filled and prepared at the compound ahead of a given shift pattern.
- All items of static plant will be placed within a plant nappy or secondary containment when in use or being stored.
- Plant will be checked for defects and leaks prior to the start of each shift.
- During refuelling plant nappies or drip trays will be placed beneath fuelling hoses and only undertaken in designated area by trained individuals using equipment specifically designed for that purpose.
- Operation of plant within estuary to use biodegradable hydraulic oil.
- Sufficient oil specific spill kits to be in place within refuelling area and close to operational plant and equipment.
- All machines and pontoons will undergo biosecurity control measures (inspection and cleaning where required) before entering the estuarine environment.

To minimise any undue interference to others, the following approaches will be taken:

- The Site compound and works areas will be fully secured to prevent unauthorised access.
- Vehicles will be confined to the site compound area, other plant in use will be road rail vehicles restricted to the railway tracks only.

- Local residents will be notified and informed of works.

To maintain navigational safety, including marking and lighting of works (consultation was undertaken with the Marine and Coastguard Agency and Trinity House. These organisations were satisfied that the risk to river users is low.)

- Issue a Notice to any local users to give warning about the works to the few river users who may be affected.
- Bunding and/or storage facilities must be installed to contain and prevent the release substances/equipment into the marine environment.
- Measures should be implemented to prevent any material falling into the water, and that all equipment, temporary structures, access tracks, waste and/or debris associated with the works will be removed on completion of the works.
- Suitable warning and lighting will be required to advise recreational users of the temporary scaffold and any reduction in headroom under the bridge as a result of the scaffolding being constructed under it.

Lighting (to minimise disturbance on protected species and wider habitat)

- Dovey Junction Phase 2B Lighting Management Plan to be implemented; in summary and example of the controls include:
- Maintaining a dark corridor along the eastern side of the Viaduct to provide safe and unhindered access for otters within the Dyfi estuary.
- Task lighting will be designed to illuminate the works area but limit light spill into the estuary.
- Use of warm white LED lights with a directional fixture that will be set at a low level to the Viaduct.
- Lights to be fitted with shields to further limit light spill beyond the working area.
- Ambient lighting will be used where there is a requirement to provide constant (excluding during day-light hours) to aid the safe navigation for areas such as access track, footpaths, site compound and welfare areas. Lights used for ambient lighting will also be fitted with shields to further limit light spill.
- Adopt the lowest safe lighting levels possible for tasks being undertaken;
- Only use lights when natural light insufficient to provide safe light levels
- All lamps should be able to be moved and adjusted;

- Use the lowest possible mounting height for the light based on the required level of illumination needed for the task being undertaken;
- Direct light into the area to be lit (light from the boundary inwards) to avoid over-lighting a wider area;
- Avoid tilting lights upwards to prevent light spill;
- Ensure that task and ambient lighting is switched off when there are no work activities taking place on the structure.
- Keep mounting heights in the compound lower than the site offices and welfare cabin, where practicable.
- Make use of any natural screening and position equipment so it that is not visible to sensitive receptors in the wider environment.
- Prior to first use of any lighting on-site during the construction phase, the lighting shall be inspected to ensure it has been installed as per lighting management plan
- All lighting shall be periodically inspected during the project to ensure the correct aiming directions are maintained throughout the duration. If any equipment is found to be incorrectly aligned, modifications shall be made to ensure it is restored to 'as designed' and, if required, re-inspected.
- All lighting installed shall have some form of operational control (either local switch or PIR activated) to suit the tasks being undertaken and ensure energy is not wasted.

Otter specific mitigation measures

- Prevent any barriers to otters accessing upstream and downstream of the viaduct, such as:
- Ensuring that a dark corridor is established on the eastern side of the structure, where no lighting or work activities' will take place. This will provide free, unhindered and safe access for otters to the eastern shoreline. In addition, when there are no works taking place at the eastern end of the structure, lighting will be reduced to further limit any light disturbance on the eastern shore.



Map to depict the dark corridor on eastern shore (indicated by graded polygon)

As well as lighting considerations prior to works starting on site an Ecological Clerk of Works will be on site to:

- a) Undertake an otter survey at least 6-weeks prior to works starting on site
 - b) Carry out a pre-works inspection to check on the suitability of the mitigation measures;
 - c) Ensure that there is a means of safe access for otters to move between upstream and downstream;
 - d) Undertake a tool box talk with all personnel to make them aware of ecological constraints and mitigation measures in place; and
 - e) Undertake periodic inspections during the works programme to check for any entrapment risks for otters and ensure mitigation measures are still fit for purpose and in place.
- No equipment or excavation will be left so that an animal could become ensnared and trapped within the working area.
 - If an otter is encountered during works, personnel will temporarily stand down until the animal has vacated the immediate area under its own accord.

- Salmon, which are a prey of Otter will not be prevented from travelling up the estuary during the project.
- Vehicles will be loaded during the day as often as possible to reduce overall night time disturbance.

To maintain records for heritage purposes

- The viaduct is of significance as both a railway asset and to the local area. Although works are a like-for-like replacement, as new elements are replacing old, a photographic survey of the structure will be undertaken prior to the commencement of the works.
- Guidance from Gwynedd Archaeological Trust (GAT) will be followed:

[photographicsurvey.pdf \(heneb.co.uk\)](#)