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Record of Determination

A82 Kiachnish Bridge Scour Repair

Contents

Project Details

Description

Recent inspections have identified scour damage to the bridge which requires repair. The main works will comprise installation of rip-rap rock armour across the full width of the channel bed to create an area of stone pitching. This is required to protect the bridge piers as they have been subjected to both fluvial and coastal scouring. This area of bed protection will extend approximately 12m upstream and downstream of the bridge. The existing channel will be excavated to a depth of 2m below the existing ground level and filled with large diameter rocks (rip-rap rock armour). This will subsequently be reinstated with reclaimed riverbed material.

The excavation and rip-rap rock armour installation will utilise a phased method with works being completed in one span of the bridge before works start in the next span to ensure the stability of the bridge is maintained throughout the works.

Works are proposed to start in August 2021. In water works are expected to take between three and four months to complete, with each phase of works taking between four and six weeks to complete. Works are therefore expected to be completed by the end of January 2022.

The works will be carried out in a dry working area and therefore significant temporary works are required to temporarily divert the river flows and tides. The excavations will also require supports using either trench boxes or trench sheets. The water management method will utilise rock bags covered with a water barrier membrane. These will be repositioned between each phase of works by crane to create dry working areas.

Additional works to carry out a small number of concrete repairs will also be required throughout all phases of works. Some landscaping works may not be carried out until March 2022 to allow for works being undertaken at a more appropriate time of year.

Access from the southern bank both upstream and downstream of the bridge will be required to carry out the proposed works. A site compound will be located on the southern bank either upstream or downstream of the Kiachnish Bridge.

No road closures are required to facilitate the works. Traffic management over the bridge will be required when setting up or removing the site compound and moving plant or material between lifting locations. Working hours will generally be between 7am and 7pm.

A Marine Licence will be required for the proposed works as set out in Part 4 of the Marine (Scotland) Act 2010.

Location

Kiachnish Bridge lies approximately 6.5km south of Fort William and carries the A82 trunk road over the River Kiachnish. The River Kiachnish outfalls into Loch Linnhe and is below Mean High Water Springs (MHWS) at the proposed works location.

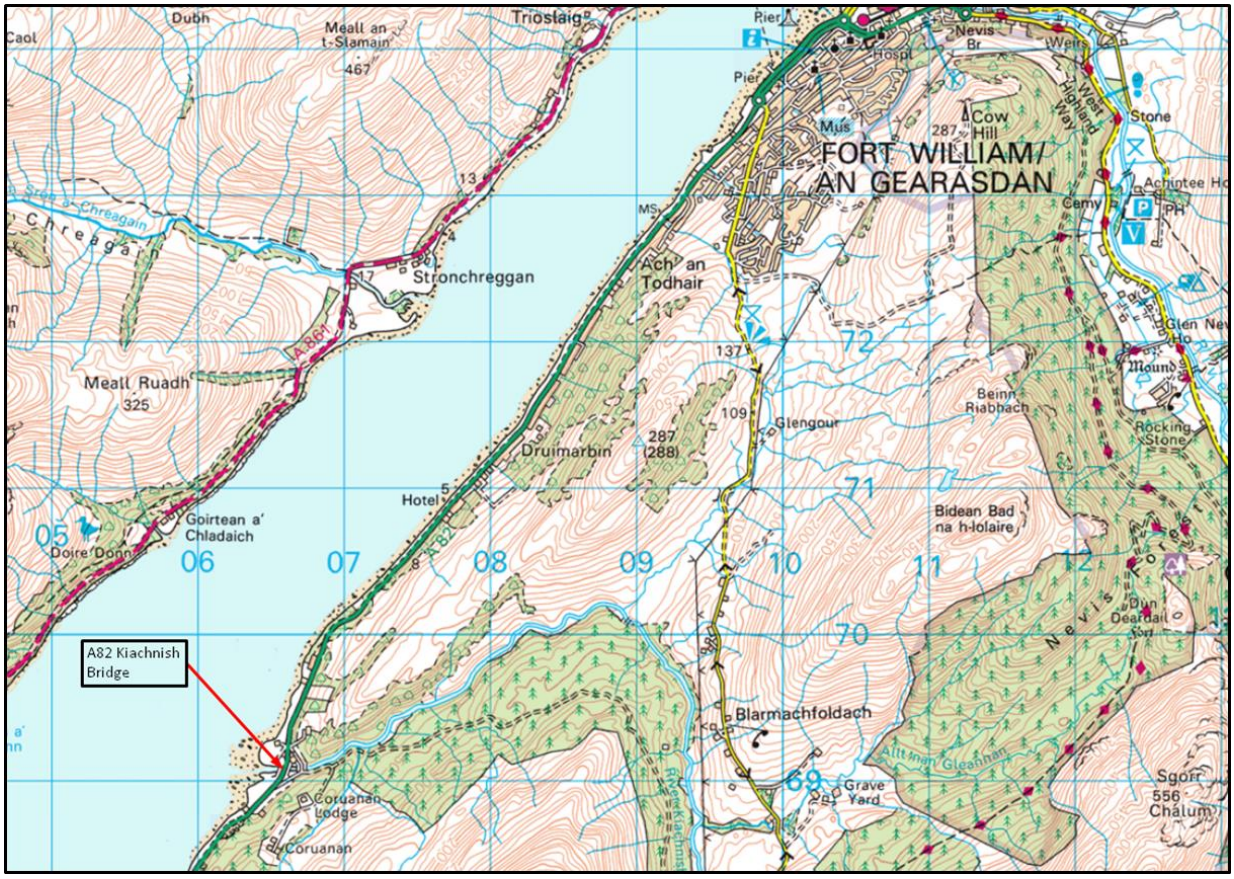

Figure 1 - Location Plan

Description of Local Environment

Population and Human Health

The scheme passes through a rural area but there are some residential properties within 300m of the scheme extents.

There are no National Cycle Network (NCN) cycle routes located within 300m of the scheme, although cyclists may still use the A82 carriageway. Likewise, there are no walking routes listed on WalkHighlands located within 300m of the scheme .

There is a paved footpath along the northbound carriageway of the A82 that runs from A82 Kiachnish Bridge north into Fort William.

Biodiversity

There were no designated sites identified on NatureScot Sitelink which were within, or had connectivity to, the proposed works.

The National Biodiversity Network (NBN) Atlas records the following protected species within 2km of the scheme during the past ten years.

- Otter (Lutra lutra)
- Red squirrel (Sciurus vulgaris)

The NBN Atlas records the following non-native invasive species using the same search criteria:

- Japanese knotweed (Fallopia japonica)

There is woodland listed as Ancient on the Ancient Woodland Inventory (AWI) located within 300m of the scheme. There are stands of AWI woodland (of semi-natural origin) located approximately 80m south and 160m east of the bridge.

Habitats in the surrounding area include deciduous woodland to the east and south of the bridge. Patches of improved grassland are present to the north, south, and west of the bridge and are associated with local residential properties. Areas of coastal shingle and littoral rock are present along the shore of Loch Linnhe west of the bridge, with freshwater habitats in the River Kiachnish further upstream to the east.

A site visit was carried out by BEAR Environment Team in November 2020 to assess ecological constraints within 200m of planned scour works to Kiachnish Bridge.

Trees within 30m of the bridge, temporary works area, and site compound did not have features suitable for roosting bats. Most of the trees were single stem alder (Alnus glutinosa) which lined the watercourse. The bridge itself is a three-span concrete structure with pre-cast elements. It was considered to have negligible hibernation potential due to the open and exposed nature of the bridge and therefore no winter hibernation inspections (WHI) are required. The bridge was considered to provide low to moderate potential as a summer roost and therefore between one and two summer activity surveys will be required during the core active bat period (May to September inclusive). Habitats surrounding the bridge would provide foraging opportunities for bats along the watercourse and riparian woodland. Woodland surrounding the bridge was limited but became more dominant with more mature tree specimens upstream.

The Kiachnish bridge spans the River Kiachnish near where it enters Loch Linnhe North. The River Kiachnish was classified by the Scottish Environment Protection Agency (SEPA) in 2018 as having an overall status of ‘Moderate’. Overall ecology of the river and hydromorphology is recorded as moderate with hydrology recorded as poor, which is likely due to a recently installed hydroelectric scheme. Loch Linnhe North is a sea loch that was classified by SEPA in 2018 as having an overall status of ‘Good‘.

Both Japanese knotweed and Rhododendron (Rhododendron ponticum) were recorded on site. A stand of Japanese knotweed was found on the downstream left-

hand bank which was approximately 8m by10m. This area looked like it had undergone treatment by the local estate as materials had been burned here on top of the stand of knotweed in an attempt to control its spread. Further Japanese knotweed was identified on the downstream right-hand bank outside of the working area. Rhododendron was identified on the right-hand bank both upstream of the bridge and at the top of the bank downstream of the bridge.

Land

The surrounding area is dominated by woodland with Loch Linnhe to the northwest. The scheme is located south of Fort William, which is a main urban centre on the west coast of Scotland. It is popular with tourists and outdoor recreationists during the summer months.

The immediate surrounding landscape comprises open views across Loch Linnhe to the west. The landscape in the wider area is dominated by woodland with some agriculturally improved grassland and amenity grassland associated with residential properties.

Soil

The scheme does not lie within a Geological Conservation Review Site (GCRS).

Bedrock within the scheme extent is comprised of Fort William Formation – Micaceous Psammite and Semipelite, which is a metamorphic bedrock.

Superficial deposits within the scheme extent are recorded as Raised Beach Deposits, 1 – Gravel, Sand and Silt, which are sedimentary deposits .

Soils within the scheme extent are recorded as peaty gleys.

Water

The bridge spans the River Kiachnish near where it enters Loch Linnhe North. The River Kiachnish was classified by SEPA in 2018 as having an overall status of ‘Moderate’. Loch Linnhe North is a sea loch that was classified by SEPA in 2018 as having an overall status of ‘Good‘ . Due to the location of works in an area that falls within the boundary of Loch Linnhe North below MHWS, a Marine Licence from Marine Scotland has been applied for.

The scheme falls within the Fort William groundwater body, which was classified by SEPA in 2018 as having ‘Good’ overall condition. It is also a Drinking Water Protected Area (Ground).

Air

There is no air quality monitoring site at the scheme location; the closest monitoring site is in Fort William which lies approximately 6.5km north of the scheme location. Air quality was recorded as Low (Index 2) on 22nd of December 2020. The site does not lie within an Air Quality Management Area (AQMA).

Local air quality in the area is likely to be reasonable due to its rural location, although the trunk road corridor itself will be affected to some degree by vehicle

emissions. There are a few residential properties and businesses within 300m of the scheme extents.

Waste

Waste materials will comprise riverbed and soil excavated to install rip-rap rock. The final destination for these materials is yet to be confirmed. Where the riverbed material is considered to be suitable, it will be re-used to reinstate the riverbed. All relevant SEPA exemptions and consents will be in place to ensure the material is suitable for its given purpose and that all appropriate regulatory processes have been followed.

Cultural Heritage

According to Pastmap, the Category B Listed Building Kiachnish Bridge (Old) over River Kiachnish near Coruanan (LB7071) is located approximately 110m east of the A82 Kiachnish road bridge.

There are also a few sites of local cultural heritage interest recorded on Historic Environment Record and/or the Canmore database located within 300m of the scheme. The nearest of these include the A82 road bridge itself and Kiachnish Bridge Crofting Township, encompassing the land area directly north of the river and road bridge.

Description of Main Environmental Impacts and Proposed Mitigation

Population and Human Health

There will be a temporary impact during construction on vehicle travellers, non-motorised road users and the local communities that rely on this key infrastructure route. This will be managed with appropriate traffic management. During construction, there will be a temporary impact from noise and vibration. There are nearby residential receptors and holiday accommodation close to the proposed works. Due to the general openness and lack of natural screening in the area, the noise is likely to be audible to residential properties and businesses in the nearby area.

To reduce the potential for impacts, works will be completed outside of the main summer tourist period, no night working is proposed and works will be restricted to extended daylight working hours and, where required, weekend working.

With the implementation of the following mitigation, noise and vibration impacts during the construction phase are not predicted to be significant.

- An appropriate traffic management plan will be designed in accordance with Volume 8, Chapter 4 of the DMRB.
- Prior to construction, consultation will be carried out with local residents and businesses to inform them of the proposals. Residents will be provided with a 24-hour contact number for the BEAR Scotland control room.
- Working hours, notice of night deliveries, and any changes of schedule or procedures must be communicated to local residents throughout the programme.

- The best practice means, as defined in Section 72 of the Control of Pollution Act 1974 and BS5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites, will always be employed to reduce noise to a minimum.
- All construction operatives will be briefed through toolbox talks prior to works commencing using the Being a Good Neighbour toolbox talk template.
- Where possible, inherently quiet plant should be selected for construction works.
- All plant, machinery and tools will be well maintained, including parts relating to noise minimisation.
- All plant, machinery, and vehicles will be switched off when not in use.
- Where ancillary plant such as generators are required, they will be positioned so to cause minimum noise disturbance. Where deemed necessary, acoustic screens will be utilised.
- Movement of plant onto and around the site will have regard to minimising noise and will not be left running if not required for immediate use.
- All plant must be operated in a mode that minimises noise emissions and must have been maintained regularly to comply with relevant national and international standards.
- If required, acoustic screens may be installed to reduce the amount of noise travelling towards nearby properties.
- With the above mitigation measures in place, noise impacts from works are not expected to be significant during the construction phase. No impacts from noise are expected during the operational phase. Traffic dynamics will remain unchanged during the operational phase and will not result in significant impacts caused by noise and vibration.

Biodiversity

There will be no impacts on any designated sites, as none have been identified within or with connectivity to the proposed works.

Terrestrial Mammals

No otter resting places were identified during the most recent survey in 2020. Therefore, a derogation licence is not required at this time to allow works to proceed. Otter are likely to be active in the area, but works will not take place along the shores of Loch Linnhe.

No other signs of protected species were recorded on site.

Works will primarily be carried out during daylight hours. In addition, the following mitigation measures will be followed on site to avoid impacts:

- An Environmental Clerk of Works (ECoW), will attend site regularly during construction. More frequent visits may be required during sensitive site activities (e.g. dry working area installation, reinstatement of riverbed, landscaping activities). The ECoW will advise on the suitability and effectiveness of pollution prevention measures. If required, the ECow will have the power to conduct audits

of the site at any time and stop works should any breach of the Site Environmental Management Plan (SEMP) or Marine Licence conditions be identified. The ECoW will provide advice and recommendations to the contractor.

- Site personnel are instructed not to approach or touch any animals seen on site.
- Site personnel should remain vigilant for the presence of protected species over the works period.
- Measures to be implemented to protect the aquatic environment are detailed in Section 10: Road Drainage and Water Environment.
- Tracking of machinery through watercourses will not be permitted, except where it is essential to install temporary works to achieve dry working areas.
- No discharges into any watercourses or drainage systems are permitted.
- All construction operatives are to be briefed through toolbox talks prior to works commencing using the toolbox talks. The talks are to specifically cover ecology, field signs of protected species, and legislation. Briefings are to be clear and unambiguous, with all staff informed to stop works where a concern is raised. Works may not commence until advice from an appropriately qualified ecologist is sought and appropriate mitigation is in place, where required.
- Where protected mammals are encountered or move within 50m of the active works, works will cease until the animal(s) move further away than 50m from the construction site or until the contractor's ECoW can provide advice.
- All material, machinery and equipment will be subject to checks for resting mammals daily prior to any works commencing to prevent entrapment or injury of any mammals.
- A 'soft start' will be implemented on site each day. This will involve switching on vehicles and checking under/around vehicles and the immediate works area for mammals prior to works commencing to ensure none are present and that there is a gradual increase in noise.
- Any excavations, exposed pipes/drains, or areas where an animal could become trapped (e.g. storage containers) will be covered over when not in use, at the end of each shift, and following completion of the works to avoid animals falling in and becoming trapped. Where this is not possible excavations should be suitably ramped to allow animals to escape.
- If fencing is utilised at any point during the works, a gap of 200mm from ground level must be provided, allowing free passage for mammals and preventing entrapment.
- During the operational phase, impacts on terrestrial mammals are considered to be non-significant due to the lack of suitable habitat within the vicinity of the works.

Birds

There are areas of scrub and trees within the scheme extents, as well as the bridge itself, which are considered to provide some habitat suitable for nesting birds. Any vegetation clearance to allow for installation of temporary works and site compound should be undertaken before March in advance of the works starting on site to make

these areas unsuitable for nesting birds. Where this is not possible, the ECoW will carry out breeding bird checks within 24 hours prior to carrying out any vegetation clearance. The bird breeding season is generally considered to run from March to August, inclusive. The works will take place predominantly outside of the main breeding period for birds.

Providing the following mitigation is adhered to during the works, significant impacts are not anticipated during the construction phase.

- A toolbox talk on breeding birds will be provided to all site staff prior to works commencing.
- If vegetation clearance is required, it should take place outwith the breeding bird season.
- If vegetation clearance is required during the breeding bird season, a check for nesting birds should be carried out within 24 hours prior to clearance if appropriate (depending on the amount and nature of vegetation to be removed and timing within the breeding bird season).
- If a nesting bird is observed on site during works, all works within 30m must stop until the ECoW or BEAR Scotland NW Environment Team can provide advice.

With the above mitigation measures in place, no significant negative impacts on breeding birds are expected as a result of works.

Bats

The bridge was considered to have negligible hibernation potential due to lack of suitable roost features for hibernating bats and the open and exposed nature of the bridge; therefore, no winter hibernation inspections (WHI) are required. Two summer bat activity surveys of the bridge will be required to identify whether any bat roosts are present in the bridge. If any bat roosts are identified, a bat derogation licence issued by NatureScot will be applied for and secured prior to any works taking place. If no bats are found, works can proceed as planned with all staff advised to remain vigilant for bats throughout the works.

The following mitigation measures will ensure no significant negative impacts on the favourable conservation status or long- or short-term welfare of local bat populations:

- If a bat licence is required, all conditions of any bat derogation licence issued by NatureScot must be adhered to during works. Any breach of the licence conditions will result in an environmental offence and persons responsible may face fines and/or prosecution.
- Site staff must remain vigilant for bats during works. If bats are found, works will stop and the ECoW will be contacted immediately. Works will not recommence until advised by the ECoW.
- Artificial lighting used during hours of darkness should be restricted to the immediate working area and should be directed away from areas of suitable habitat (e.g. watercourses, woodland, shrubs) as far as is safe and reasonably practicable.

- If a bat (or bats) are observed flying in the vicinity of works during the day, works are to stop and the ECoW is to be consulted. Works will not recommence until advised by the ECoW.

With appropriate mitigation measures and licences in place, it is expected that there will be no significant negative impacts on the favourable conservation status or long- or short-term welfare of local bat populations as a result of works.

Fisheries

The Kiachnish River is tidal within the scheme extents, with the tidal limit approximately 100m upstream near the old masonry arch bridge. Therefore, there will be no salmonid spawning within the footprints of the scheme.

Consultation with the Lochaber District Salmon Fisheries Board (LDSFB) highlighted the importance of ensuring free and easy access for migratory fish, both upstream and downstream during the works. Due to the expected design of the temporary works, this has not been possible to achieve. During works to the central span, the watercourse will need to be flumed through pipes for a period of approximately 4-6 weeks. The LDSFB have advised that any works which will prevent migratory access should be completed between mid-November and mid-March to avoid the adult fish run from June to October and the smolt run in April/May. They advised that lighting and noise which can disturb fish is primarily a problem when they are running and therefore pose less risk to fish between mid-November to mid-March.

There is potential for temporary, indirect impacts on fish during construction due to disturbance as a result of lighting and activities causing vibrations near the watercourse and temporary loss of habitat as a result of construction works. With the following mitigation in place, impacts are not anticipated to be significant.

- Mitigation measures described in the Water Section will be followed to minimise potential impacts on the water environment.
- Pollution prevention and sediment containment measures will be in place for the duration of construction.
- Works in span 2, when the watercourse will need to be flumed, will be carried out between mid-November to mid-March. At all other times, free migratory passage to fish must be maintained.
- The works will be carried out in a dry working area.
- Lighting at night on site should also be kept to a minimum as this can deter migratory fish from travelling. This is of particular importance between March and October when the fish are running.
- Tracking of machinery through the watercourses will not be permitted, except where it is essential to install temporary works to achieve dry working areas.
- No discharges into any watercourses or drainage systems are permitted.
- An Environmental Clerk of Works (ECoW), will attend site regularly during construction. More frequent visits may be required during sensitive site activities (e.g. dry working area installation, reinstatement of riverbed, landscaping activities). The ECoW will advise on the suitability and effectiveness of pollution prevention measures. If required, the ECow will have the power to conduct audits

of the site at any time and stop works should any breach of the SEMP or Marine Licence conditions be identified. The ECoW will provide advice and recommendations to the contractor.

No significant impacts are anticipated on fisheries during operation as there will be no loss of spawning or feeding habitat for diadromous fish species.

INNS

Both Japanese knotweed and Rhododendron were recorded on site. A stand of Japanese knotweed was found on the downstream left-hand bank in an area that may need to be accessed to facilitate the works.

If vegetation or soil containing INNS must be removed, it should be disposed of appropriately at a licenced facility. Biosecurity measures should be in place for all site staff and equipment/vehicles. Agreement on the location of the site compound and the details of the biosecurity measures required on site will need to be made in advance of works starting.

Provided that the following mitigation measures are followed during construction, impacts on habitats as a result of spread of INNS are not expected.

- Construction methods will take place sensitively to reduce as far as possible encroachment of plant and machinery on habitats outside of the work footprint.
- Material storage areas and site compound will be sited sensitively to avoid requirement for further land take. Where practical, this will be in existing hardstanding areas on level ground.
- An Environmental Clerk of Works (ECoW), will attend site regularly during construction. More frequent visits may be required during sensitive site activities (e.g. dry working area installation, reinstatement of riverbed, landscaping activities). The ECoW will advise on the suitability and effectiveness of biosecurity measures. If required, the ECow will have the power to conduct audits of the site at any time and stop works should any breach of the SEMP or Marine Licence conditions be identified. The ECoW will provide advice and recommendations to the contractor.
- Mitigation measures described in the Landscape Section will be followed to reinstate habitat.
- Mitigation measures described in the Water Section will be followed to minimise potential impacts on the water environment.
- Mitigation measures described in the Geology and Soils Section will be followed to minimise potential impacts on habitats.

During the operational phase, the works are not expected to significantly impact surrounding habitats as a result of spread of INNS.

Land

There will be no loss of land or change in land use as a result of the works. During construction, a site compound will be established and access at a number of locations is likely to be required; any impacts are therefore expected to be

temporary. Agreements will be made with landowners on the use of and reinstatement of land not owned by Transport Scotland.

During the construction phase, there will be a temporary visual impact as a result of temporary work set up, and site compound and laydown areas. In addition, vehicles and plant in the vicinity of the works may result in a temporary visual impact to the landscape.

The following mitigation measures will reduce impacts of works on the landscape during the construction and operational phases:

- Throughout all stages of the works, the site must be kept clean and tidy, with materials, equipment, plant, and wastes appropriately stored, minimising the landscape and visual effects.
- Works are to avoid encroaching on land and areas where work is not required or does not have permission to do so. This includes general works, storage of equipment/containers and parking.
- The working area and site compound location are to be appropriately reinstated following works.
- The site is to be left clean and tidy following construction.

Scour repair works will tie into the existing landscape and therefore no long-term landscape impacts are anticipated as a result of the proposed works.

Soil

There will be excavation of ground to facilitate installation of site compound and to create access points for vehicle movements. The scheme does not lie within a GCRS. There is the potential to disturb surrounding ground during construction.

Provided the following mitigation measures are followed during works, impacts during construction are not anticipated to be significant.

- Excavated soil and rock will be stored in a designated area on level ground where practicable.
- If the soil is to be re-used on site, then it will be wetted (if necessary) during periods of dry weather to prevent drying out.
- Upon completion of the works, any damage to the local landscape (i.e. damage to grass verges) should be reinstated as much as is practicable and as per agreements with the landowner.
- Mitigation measures to prevent contamination of soils through loss of containment are discussed in the Water Section.
- Mitigation measures described in the Biodiversity Section will be followed to reduce potential impacts on soils through the spread of INNS.

The works will not result in significant impacts to geology and soils during the operation phase as the works do not lie within any site designated for geology and soils.

Water

Consultation with the SEPA has confirmed that due to works being below MHWS no authorisation under the SEPA Controlled Activity Regulations (CAR) is required. Consultation with Marine Scotland has confirmed that a Marine Licence as well as formal Pre-Application Consultation is required.

Any construction work has an inherent risk to surface waters and groundwater. There is potential for impacts on the water environment during construction as a result of activities such as establishment of dry working areas and excavation within those dry working areas, and the presence of fuel and oils from mechanical plant on site. The location of the works on Kiachnish Bridge, which spans River Kiachnish, also represents a risk to the water environment. Loch Linnhe is a sea loch and the bridge spans an area of the River Kiachnish seaward of MHWS. BEAR Scotland has applied to Marine Scotland for a marine licence to allow works to go ahead. All conditions of the marine licence must be adhered to during works. In addition, the in-stream works will be carried out in a dry working area to facilitate the works and reduce the risk of mobilisation of sediments.

Provided the following mitigation measures are adhered to during the works, impacts on the water environment during construction are not anticipated to be significant:

- All conditions of the Marine Licence are to be complied with, a copy of which will be supplied to the successful contractor.
- A copy of the Marine Licence must also be kept on-site at all times.
- No discharges into any watercourses or drainage systems are permitted.
- All plant and equipment must be regularly inspected for any signs of damage and leaks. A checklist will be present to make sure that the checks have been carried out.
- All on-site activities should operate in accordance with relevant SEPA Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (GPPs).
- All hazardous material will be stored in accordance with Control of Substance Hazardous to Health (COSHH) data in a designated storage area at least 10m away from any watercourses, drains and / or waterbodies.
- The designated storage area must be on impermeable ground and fully bunded.
- All hazardous material utilised on site is required to undergo assessment under the COSHH Regulations 2002. These assessment(s) will contain a section on environment which highlights any precautions and mitigation requirements.
- All hazardous material will be stored in line with COSHH data within a designated COSHH storage area. Oils and chemicals will be stored in appropriately bunded storage cabinets. The COSHH store will be locked with only appropriate personal having access and an inventory register being maintained.
- Where applicable and practicable, bio-degradable hydraulic fluids and oils should be utilised in machinery.
- Where fuel is stored on site and refuelling activities are undertaken, the following will apply:

- Only suitably double-skinned fuel bowser(s) or tank(s) in line with General Binding Rules the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) will be utilised on site.
- The fuel bowser(s) and/or tank(s) must be stored at least 10m away from any watercourses, waterbodies or drains and away from being struck by plant and machinery.
- All distribution and fuelling nozzles will be fitted with a shut-off valve.
- All refuelling activities are to be undertaken in a designated site with a drip tray positioned underneath the nozzles when not in use.
- All fuel containers and nozzles are to be secured, for example with a lock when not in use.
- All staff undertaking refuelling actives are to be appropriately trained and undertake these activities in line with site refuelling procedures.
- During refuelling of smaller mobile plant, a funnel and drip trays must be used.
- Spill kits must be quickly accessible to capture any spills should they occur.
- The ground / stone around the site of a spill must be removed, double-bagged and taken off site as special contaminated waste.
- Generators and static plant may have the potential to leak fuel and/or other hydrocarbons and must have bunding with a capacity of 110%. If these are not available, then drip trays with a capacity of 110% should be placed beneath the equipment.
- A spillage control procedure will be in place in which all staff are to be trained.
- Suitable spill kits are to be available on site with all staff to be trained in their use.
- All spills must be logged and reported. In the event of any spills into the water environment, all works must stop, and the incident reported to the project manager and the BEAR Scotland Environment Team. SEPA must be informed of any such incident as soon as possible using the SEPA Pollution Hotline.
- Mitigation detailed in Biodiversity Section will be strictly adhered to.
- The Water Pollution – Silt toolbox talk will be delivered to all site personal as part of the site induction prior to works commencing.
- Pollution prevention measures will be installed as required to prevent loss of sediments from the working area into the River Kiachnish and Loch Linnhe.
- Pollution prevention measures will be checked daily and more regularly during period of heavy rainfall.
- An Environmental Clerk of Works (ECoW), will attend site regularly during construction. More frequent visits may be required during sensitive site activities (e.g. dry working area installation, reinstatement of riverbed, landscaping activities). The ECoW will advise on the suitability and effectiveness of pollution prevention measures. If required, the ECow will have the power to conduct audits of the site at any time and stop works should any breach of the Site Environmental Management Plan (SEMP) or Marine Licence conditions be identified. The ECoW will provide advice and recommendations to the contractor.

With the above measures in place, significant impacts on the water environment are not expected during the construction phase. No impacts on the water environment are expected during the operational phase.

Air

There is potential for temporary impacts on air quality during construction as a result of activities such as excavation, transportation of materials, the presence of construction traffic and vehicles idling on site.

Provided the following mitigation measures are adhered to during the works, impacts on air quality during construction are not anticipated to be significant.

- A designated laydown area will be established on level ground away from the excavation and works.
- All materials will be stored in the laydown area and only moved to site when they are required.
- Prolonged storage of debris on site exposed to wind should be avoided. Materials should be wetted down or covered when exposed to wind for lengthy periods of time.
- All delivery vehicles carrying material with dust potential will be covered when traveling to or leaving site, preventing the spread of dust beyond the work area.
- Material stockpiles will be reduced as much as reasonably practicable by using a ‘just in time’ delivery system. All material will also be stored on made ground (e.g. within site compound) and 10m away from potential pollution pathways such as drains and watercourses where feasible.
- Materials should be removed from site as soon as is practical.
- Vehicles removing excavation materials must have their loads effectively covered.
- All plant, machinery and vehicles associated with the scheme must be maintained to the appropriate standards and must switch their engines off when not in use.
- Where possible, materials are to be sourced locally to reduce greenhouse gas emissions associated with materials movement.
- Cement bags will remain closed when not in use to prevent cast off to the surrounding environment.
- The movement of dusty material will be minimised by appropriately planning material movements.
- Any stockpiled material on site, such as rock, will be monitored daily to ensure no risks of dust emissions exists. Where a risk of dust emissions exists from stockpiles, these are to be dampened down. This is likely to require the use of mobile water bowsers.
- Good housekeeping will be employed throughout the works.

The proposed works are not expected to affect air quality during the operation phase as there will be no significant change in traffic levels or dynamics at this location.

Waste

During construction, there will be a temporary impact as a result of materials and waste. Topsoil and excavated materials will be re-used as far as possible on site.

Provided the following mitigation measures are followed during works, impacts during construction are not anticipated to be significant.

- The waste hierarchy (Reduce, Reuse, Recycle and Dispose) will be employed throughout the construction works.
- Where possible, waste production will be minimised. For example, the provision of reusable cutlery, crockery and water bottles to all on-site staff is strongly encouraged.
- Bulk material will be delivered to site without packaging where possible.
- Supplies are to be requested to minimise all packaging where possible.
- Care is to be taken to only order the correct quantity of required materials, preventing disposal of unused materials.
- Materials should be reutilised where possible.
- Facilities on site will be provided in a designated area to enable the correct segregation of waste, maximising recycling on site. These are to be clearly marked and labelled.
- Wastes not suitable for recycling will be sent to landfill or special waste treatment facilities, depending on the nature of the waste.
- All waste stored on site will be adequately protected against the elements and vermin.
- All appropriate waste documentation must be present on-site and be available for inspection.
- All wastes and unused materials will be removed from site in a safe manner by a licensed waste carrier upon completion of the works. The appointed waste carrier will have a valid SEPA waste carrier registration, a copy of which will be retained by BEAR Scotland. A copy of the waste transfer is also to be provided to BEAR Scotland as early as practicably feasible and retained.
- If required, an exemption from SEPA will be secured to allow for the reuse of materials.
- During the site induction, all staff are to be informed that littering will not be tolerated. Staff are also encouraged to collect any litter seen on site.
- Where applicable, all temporary signage will be removed from site on completion of the works.
- All hazardous material will be stored in line with Section 10.0: Road Drainage & Water Environment.
- A copy of the duty of care paperwork should be provided and filed appropriately in accordance with the Code of Practice (as made under Section 34 of Environmental Protection Act 1990 as amended).

- Any contaminated ground as a result of the works should be removed and transferred off site as special waste.
- Any COSHH waste and special waste should be removed from site by a specialised waste carrier. COSHH waste should NOT be mixed with general waste and/or other recyclables.

All waste will be disposed of safely and legally with regard to Duty of Care. No significant impacts are anticipated during the operation phase.

Cultural Heritage

The working area will be confined to the area surrounding Kiachnish Bridge adjacent to the trunk road boundary. The Kiachnish Bridge (Old) is a Category B Listed Building and lies 110m distant from the trunk road bridge. There are also a few sites of local cultural heritage interest recorded on Historic Environment Record and/or the Canmore database located within 300m of the scheme. The nearest of these include the A82 road bridge itself and Kiachnish Bridge Crofting Township, encompassing the land area directly north of the river and road bridge. Provided the following mitigation measures are adhered to, potential impacts on cultural heritage during construction are not anticipated to be significant.

- If there are any unexpected archaeological finds, works will stop temporarily in the vicinity, the area will be cordoned off and a member of the BEAR Environment team will be contacted for advice.
- Laydown area will be sensitively located to avoid areas of cultural heritage interest including the Category B Listed Kiachnish Bridge (Old).
- There will be no storage of plant, materials or equipment against and buildings, bridges, walls or fences.

The works are not anticipated to result in significant impacts on cultural heritage interests during the construction or operational phase.

Vulnerability of the Project to Risks

A SEMP has been produced by BEAR Scotland which sets out a framework to reduce the risk of adverse impacts from construction activities on sensitive environmental receptors. It describes a basis for recording environmental risks, commitments, and other environmental constraints and identifies the processes and measures that will be used to manage and control these aspects. In addition, it seeks to ensure compliance with relevant environmental legislation, government policy objectives, and scheme-specific environmental objectives. It also provides a mechanism for monitoring, reviewing, and auditing environmental performance and compliance. The subcontractor will comply with all conditions of the SEMP during works and may be subject to audit throughout the contract.

A Designer's Risk Register will be prepared by BEAR Scotland which addresses potential environmental risks. Activity-specific Method Statements will be produced by the subcontractor and will recognise and highlight the environmental risks and detail how these will be addressed, as well as the contingency plans to be in place to deal with environmental incidents. These must be approved by BEAR Scotland prior to works commencing.

With the above measures in place, the risk of major accidents or disasters as a result of the works is considered to be low.

Cumulative Effects

BEAR Scotland currently have works underway at A82 Croit Anna sea wall and these are expected to finish in June/July 2021. However, standard good practice measures will be in place during these works to avoid environmental impacts. Aside from this on-going scheme there are no known projects currently planned or recently completed that have the potential to contribute to in-combination or cumulative effects on environmental receptors or protected species in the vicinity of the scheme.

The proposed works will improve the condition of the Kiachnish Bridge and protect it from future scour. Consequently, carrying out these works now will reduce the risk that additional major works will be required in the future. This in turn will reduce the amount of work required at this location. Therefore, it is not expected that the works will contribute to long-term significant cumulative effects on the environment in the vicinity of the scheme.

Assessments of the Environmental Effects

Consultation with statutory consultees was deemed necessary because there are potential nature conservation parameters which could be affected during the works. Below is a list of consultees.

- NatureScot
- Lochaber District Salmon Fisheries Board
- Scottish Environment Protection Agency
- Marine Scotland

Statement of case in support of a Determination that a statutory EIA is not required

This is a relevant project in terms of section 55A(16) of the Roads (Scotland) Act 1984 as it is a project for the improvement of a road and the completed works (together with any area occupied by apparatus, equipment, machinery, materials, plant, spoil heaps, or other such facilities or stores required during the period of construction) exceed 1 hectare in area,

are not situated in whole or in part in a sensitive area within the meaning of regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999.

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment is required under the Roads (Scotland) ACT 1984 (as amended by The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017). Screening using Annex III criteria, reference to consultations undertaken and review of available information has not identified the need for a statutory EIA.

The project will not have significant effects on the environment by virtue of factors such as:

Characteristics of the scheme:

- The total working area is over 1ha;
- The works will be temporary and short-term (less than 1 year duration);
- The works are required to protect the structure against scour;
- The working areas will be contained and 'dry working' will be undertaken to prevent debris or materials from entering the surrounding environment.

Location of the scheme:

- Land use will not change as a result of the works;
- The scheme is not located within a densely populated area;
- The scheme is not located within any areas designated for landscape interests;
- The scheme is not located in any sites designated ecological sites;
- The scheme does not lie within any sites of historical, cultural or archaeological significance.
- The scheme does not lie within any sites designated for their geology or soils.

Characteristics of potential impacts of the scheme:

- Any potential impacts of the works are expected to be temporary, short-term, and limited to the construction phase;
- Mitigation measures and licences will be in place to ensure no short-term or long-term significant negative impacts on biodiversity;
- Measures will be in place to ensure no short-term or long-term significant negative impact on local residents and road users;
- Measures will be in place to ensure appropriate removal and disposal of waste;
- The SEMP, Designer's Risk Register, and activity-specific method statements (produced by the subcontractor) will include plans to address environmental incidents;
- No impacts on the environment are expected during the operational phase as a result of works;
- Mitigation measures detailed above and in the SEMP will ensure no significant negative impacts on sensitive receptors.

Annex A

"sensitive area" means any of the following:

- land notified under sections 3(1) or 5(1) (sites of special scientific interest) of the Nature Conservation (Scotland) Act 2004
- land in respect of which an order has been made under section 23 (nature conservation orders) of the Nature Conservation (Scotland) Act 2004
- a European site within the meaning of regulation 10 of the Conservation (Natural Habitats, &c.) Regulations 1994
- a property appearing in the World Heritage List kept under article 11(2) of the 1972 UNESCO Convention for the Protection of the World Cultural and Natural Heritage
- a scheduled monument within the meaning of the Ancient Monuments and Archaeological Areas Act 1979
- a National Scenic Area as designated by a direction made by the Scottish Ministers under section 263A of the Town and Country Planning (Scotland) Act 1997
- an area designated as a National Park by a designation order made by the Scottish Ministers under section 6(1) of the National Parks (Scotland) Act 2000

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