

A78 Skelmorlie Water Scour Protection Works- Potential Impacts

Potential impacts the works may have (including details of areas of concern e.g. designated conservation and shellfish harvesting areas) and proposed mitigation in response to potential impacts:

An internal environmental review process in accordance with the Environmental Impact Assessment (Scotland) Regulations was undertaken by Scotland TranServ. The key environmental aspects / potential impacts are detailed below.

Planned Activities

Rip rap will be placed adjacent to the north downstream wing wall and concrete will be installed to raise the height / extend the northern concrete plinth and extend the southern concrete plinth. Each of these activities will take place within the National Tidal Limit.

Above the National Tidal limit two areas of rip rap will be installed at the upstream north wing wall and the other at the upstream south wing wall. Realignment will also take place upstream. These activities will be subject to licencing requirements under SEPA's Controlled Activity Regulations.

Skemorlie Water / Meigle Burn / Firth of Clyde

Baseline Conditions

The A78 Skelmorlie Bridge, which channels Skelmorlie Water below the A78 carriageway, with Meigle Burn discharging into Skelmorlie Water directly up-stream of the bridge. Skelmorlie Water is a tributary of the Firth of Clyde located approximately 50m downstream.

Ayrshire Rivers Trust was consulted in October 2018 regarding works within Skelmorlie Water and Meigle Burn. Ayrshire Rivers Trust stated that salmonid spawning occurs over the winter between November and February with eggs remaining in the gravel until May and as such the working window will be between the months of June and October.

Potential Impacts

Without adequate controls in place during construction there is potential for spills, leaks or seepage of fuels and oils associated with plant to escape into watercourses. Concrete which will be used on site is very alkaline and can be extremely toxic to fish, plants and any animal's dependant on the watercourse. Construction works could give rise to fine sediments within the watercourse, if allowed to enter into the watercourse unchecked this could cause serious pollution, degrading water quality and affecting the overall ecosystem function. Additionally if over pumping is not carried out carefully this can have a devastating effect on wildlife by drastically altering the physical or chemical qualities of the watercourses.

Works will involve dewatering sections of Skelmorlie Water and Meigle Burn as such this has the potential to disrupt fish species within the watercourse. There is potential for fine sediments to be released from the works, this can degrade water quality, disrupt ecosystem function and smother fish.

Control Measures during Construction

All works will be undertaken in accordance with the conditions of the SEPA CAR Licence and Marine Scotland Licence. Works will adhere to SEPA's General Binding Rules and follow best practice, adhering to SEPA's Guidance for Pollution Prevention (GPPs) including PPG 1 Understanding your environmental responsibilities – good environmental practices, GPP 5 Works and maintenance in or near water and GPP 22 Dealing with spills.

Best practice control measures will be in place including:

- Works timed out with fish spawning season,
- Fish rescue to remove any fish present prior to creating of a dry working area,
- All works activities in the watercourse/channel undertaken within a dry working area to reduce the risk to the water environment,
- All concrete will be dry prior to uplifting the dry working area,
- Spill kits present on site and easily accessible at all times with site staff trained/briefed in their use,
- Regular pollution/ water quality observation checks carried out downstream of the works at regular intervals to ensure water is free from silt and sediment, and
- Pumping activities undertaken with competent individuals on site monitoring the activity.

With these mitigation measures implemented the effect of works on Skelmorlie Water, Meigle Burn and Firth of Clyde is predicted to be minimal during construction with no permanent impacts to the watercourse.

Otters / Bird Nests

Baseline Conditions

The site was surveyed for the presence of protected species under the Wildlife and Countryside Act 1981, the Nature Conservation (Scotland) Act 2004, the Conservation (Natural Habitats, &c.) Regulations 1994, Wildlife and Natural Environment (Scotland) Act 2011 and Protection of Badgers Act 1992. Field signs for otter were identified, although no holts or resting sites were identified within proximity to the scheme extents.

Control Measures During Construction

Otter activity has been identified within Skelmorlie Water as such adequate measures will be implemented onsite to ensure that otters are not adversely disturbed during the works. These measures will include site operatives remaining vigilant for the potential presence of protected species, temporarily suspending works if a protected species is sighted and leaving works in an appropriate condition at the end of each day shift to prevent any adverse impacts on otters or other wildlife dependent on the watercourse.

Vegetation works may be required during bird nesting season (March 1st to August 31st) in order to gain access to the works. A birds nesting survey will be undertaken prior to the removal of vegetation. If any active bird's nests are observed out on site that could be impacted by the works, then that portion of works will be stopped.

With best practice mitigation measures in place the residual impact on otters / fish and bird nests is considered to be neutral.

Permanent Wildlife Enhancement

As part of the design, works will involve raising the height and extending the northern concrete plinth, this will be utilised by otters as a dry mammal ledge below Skelmorlie Bridge allowing for otters to easily pass during periods of high water flow. This will have a beneficial impact on otters, allowing them to pass easily, reducing the incentive for otters to seek alternative ways of passage such as over the A78 carriageway.

Invasive Non-native Species (INNS)

The invasive non-native species Japanese knotweed is present on the embankments of both Skelmorlie Water and Meigle Burn and will be disturbed upstream of the bridge structure during the minor realignment of Skelmorlie Water. There is potential for Japanese knotweed to be impacted downstream of the works through access requirements. A Japanese knotweed Management Plan complying with current best practice will be developed prior to works. Measures will reduce the risk of spreading Japanese knotweed to both the watercourse and adjacent land.

Designated Areas Locally

Clyde Muirshiel Regional Park and Skelmorlie Glen SSSI are located at a distance of approximately 280m east and 400m east respectively from Skelmorlie Bridge. No International / European designated sites were identified within proximity to the scheme extents. Given the location of the protected areas from the works no impact is predicted.