

Environmental Impact Assessment Report

Chapter 17 Summary of Significant Residual Environmental Effects

Grangemouth Flood Protection Scheme 2024
Falkirk Council



GRANGEMOUTH
Flood Protection Scheme
Protecting the heart of our communities

Grangemouth Flood Protection Scheme Environmental Impact Assessment Report

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17. Summary of Significant Residual Environmental Effects

17.1 Introduction

This chapter provides a summary of the significant adverse and positive residual environmental effects of the Scheme, including significant adverse effects which have not been able to be avoided or mitigated to such an extent where they are no longer significant.

Adverse residual effects remain after mitigation measures have been taken into account or where it has not been possible to incorporate mitigation measures either through primary mitigation (i.e. changing the Scheme to avoid impacts) or secondary or tertiary mitigation (measures designed to avoid or reduce impacts).

17.2 Significant Residual Effects

The significant residual environmental effects of the Scheme, both positive and adverse comprise the following and are further detailed in the relevant chapters of this EIA Report as stated.

Population and Human Health (Chapter 6):

- Residual effects of positive significance related to improved psychological health and reduced disruption to utilities and access associated with flood avoidance.

Biodiversity (Chapter 7):

- During construction, a significant adverse residual effect is predicted on the qualifying features of the Firth of Forth SPA and Ramsar sites due to disturbance, which could lead to roosting bird displacement at two key areas within the sites. Compensatory roosting habitat, which is at least functionally equivalent to that which is potentially lost, will be provided to maintain the integrity of the European site network.
- During construction and operation, a significant adverse residual effect is predicted for the loss of other broadleaved and mixed woodland during the re-growth phase of replacement planting. However, this impact will be temporary in nature and a mix of tree/ shrub ages will be planted to expedite the available habitat. Once the woodland is established, no significant residual effects are predicted.

Noise and Vibration (Chapter 8):

Significant residual adverse effects associated with noise exceedances at several residential properties during construction are considered unavoidable. Significant residual adverse effects from construction noise are expected to occur at the following locations (within Flood Cell 1):

- Working Area 1-1 Stirling Road: Residential receptors on Stirling Road.
- Working Area 1-2 Carron Bridges: Residential receptors on Burder Park, Beaumont Drive, and Farm Street.
- Working Area 1-3 Chapel Burn: Residential receptors on Waters End, Bryce Avenue, Duncan Avenue, Halket Crescent and Rae Court.
- Working Area 1-4 Dock Street: Residential receptors on Dock Street, Wardlaw Place, Gilfillan Place, The Avenue (including Carron House Lodge).

Ongoing monitoring (Mitigation Item NV1) will be undertaken as part of a noise and vibration monitoring plan.

Landscape and Visual Impact Assessment (Chapter 9):

- Significant residual adverse effects associated with localised disturbance during construction (i.e. loss of trees/vegetation and addition of construction site hoarding, plant, bare earth etc) and the potential temporary changes to the landscape and views within the area. Mitigation measures are proposed which will reduce effects, but the residual effect remains significant.
- Significant residual adverse effects associated with loss of trees/vegetation and associated screening and setting effects once the Scheme has been constructed. However, these effects will lessen with time as vegetation becomes established and become less significant. After 15 years, the Scheme landscaping measures will have settled into the surrounding landscape, resulting in a reduction in significance of effects across many areas from that assessed after one year. The landscape character of many Scheme areas will change compared to the existing baseline, but the overall changes may not necessarily be adverse, with some being neutral and accepted as a changed landscape. By the summer of Year 15 the significance of effects on the landscape will have reduced to four locations, none of which have been assessed as being of major significance. Significant adverse visual effects will still be experienced at 20 visual receptor locations; however, these effects are expected to reduce as the Scheme generally becomes more integrated into the surrounding landscape. Ongoing monitoring will be required to ensure new vegetation is becoming established and a follow-up maintenance plan will be implemented accordingly.

Water Environment (Chapter 10):

- There will be significant residual positive effects in relation to reduced flood risk and improved flood protection across the Scheme area once the Scheme is operational.
- There are localised areas within the overall Scheme area where isolated effects of adverse significance in relation to flood risk during large flood events (1-in-200 year / 0.5 AEP) have been identified (as provided in Chapter 10: Water Environment Table 10-29) and these comprise some residential, commercial and industrial properties and land, as well as on civic and agricultural land. Discussions have taken place with affected stakeholders during the development of the Scheme and there will be ongoing consultation after publication of the Scheme and at detailed design to assess appropriate mitigation.
- There is the likelihood of a significant residual impact to a likely area of high groundwater dependence and associated springs. The detailed design stage of the Scheme will be progressed with consideration to the local groundwater setting and the mitigation required to limit impacts on groundwater will be embedded within the design as necessary.