

# Environmental Impact Assessment Report

Appendix B9 Landscape and Visual Impact Assessment

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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



**GRANGEMOUTH**  
Flood Protection Scheme  
Protecting the heart of our communities

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# Environmental Impact Assessment Report

Appendix B9.1 Landscape and Visual Planning Policy

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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



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## Appendix B9.1 Landscape and Visual Planning Policy

### 1. Introduction

This appendix supports Section 9.3 Landscape and Visual Planning Policy, in Chapter 9: Landscape and Visual Impact Assessment. The relevant policies to the Scheme are detailed below. A summary for each document is provided within the LVIA chapter.

### 2. National Policy

#### National Planning Framework 4 (NPF4)

The Development Plan relevant to the Falkirk Council (FC) area is comprised of National Planning Framework 4 (NPF4) (The Scottish Government, 2023) and the Falkirk Local Development Plan 2 (LDP2) (Falkirk Council, 2020). LDP2 is considered in the Local Policy section below. NPF4 mentions the Grangemouth flood protection scheme as contributing to the Grangemouth investment zone, one of the 'Industrial Green Transitions Zones' (national development), where plans are emerging for innovative industry which will support the generation of significant economic opportunities while minimising carbon emissions.

The NPF4 Policies relevant to the LVIA are summarised below.

Policy 1 'Tackling the climate and nature crises' states: *'When considering all development proposals significant weight will be given to the global climate and nature crises'*.

Policy 4 'Natural places' contains provisions that are intended to protect, restore and enhance natural assets making best use of nature-based resources.

Policy 6 'Forestry, woodland and trees' contains provisions that are intended to protect and expand forests, woodland and trees.

Policy 8 'Green belts' seeks to encourage, promote, and facilitate compact urban growth nationally and to support sustainable use of land around towns and cities in Scotland. One of the categories of development that is supported under this policy is:

*"flood risk management (such as development of blue and green infrastructure within a 'drainage catchment' to manage/mitigate flood risk and/or drainage issues)."*

Policy 14 'Design, quality and place' requires that development proposals will be designed to improve the quality of an area whether in urban or rural locations and regardless of scale. Development proposals will be supported where they are consistent with the six qualities of successful places: Health; Pleasant; Connected; Distinctive; Sustainable; and Adaptable. Development proposals that are poorly designed, detrimental to the amenity of the surrounding area or inconsistent with the six qualities of successful places will not be supported.

Policy 20 'Blue and green infrastructure' includes the requirement that: *"Development proposals that result in fragmentation or net loss of existing blue and green infrastructure will only be supported where it can be demonstrated that the proposal would not result in or exacerbate a deficit in blue or green infrastructure provision, and the overall integrity of the network will be maintained."*

Blue Infrastructure is defined within Annex F of the NPPF as:

*"Water environment features within the natural and built environments that provide a range of ecosystem services. Blue features include rivers, lochs, wetlands, canals, other water courses, ponds, coastal and marine areas including beaches, porous paving, sustainable urban drainage systems and raingardens."*

Green Infrastructure is defined within Annex F of the NPPF as:

*"Features or spaces within the natural and built environments that provide a range of ecosystem services."*

Policy 21 'Play, recreation and sport' contains a range of criteria provided to meet the policy intention to encourage, promote and facilitate spaces and opportunities for play, recreation and sport.

Policy 22 'Flood risk and water management' contains a range of criteria provided to meet the policy intention to strengthen resilience to flood risk by promoting avoidance as a first principle and reducing the vulnerability of existing and future development to flooding.

**Designing Streets – (The Scottish Government, 2010):**

'Designing Streets' updates and replaces 'PAN 76 New Residential Streets' and remains the national planning, architecture and transport policy for street design. It states in its aims that *"good street design should derive from an intelligent response to location, rather than the rigid application of standards, regardless of context."*

This document highlights that the connection between the residential areas and the watercourses are important in creating a better quality of living, and keeping the riverside streets active through the use of location-based, good quality street design is key to creating successful places.

**Creating Places – (The Scottish Government, 2013):**

This document is a policy statement on architecture and place for Scotland. Some quotes below from the document show the commitment the Scottish Government has to the design of our landscape:

*"Design provides value by delivering good buildings and places that enhance the quality of our lives."*

*"Landscape shapes our impressions and experience of place and, if fully understood, managed and developed, provides numerous benefits including wellbeing, stimulation of our senses, biodiversity, and opportunities for economic development."*

*"Landscapes, by their very nature are constantly evolving and changing and this can be a change for good when well planned and correctly managed."*

*It sets out the six qualities of successful places as:*

- distinctive;
- safe and pleasant;
- easy to move around;
- welcoming;
- adaptable; and
- resource efficient.

It is relevant to this Scheme due to the location of the watercourses and the flood protection measures, which run through residential areas and Grangemouth centre.

**Green infrastructure: design and placemaking – (The Scottish Government, 2011):**

The Green Infrastructure: Design and Placemaking report includes guidance on how local authorities and developers can incorporate green infrastructure, including parks, open spaces, woodland and wetland spaces into placemaking, as mentioned in the 'Creating Place' document above. This document contains key design issues and techniques to include green infrastructure at different scales- as part of buildings, at street and/or neighbourhood level and a strategic scale.

### 3. Local Policy

#### Falkirk Local Development Plan

The 'Falkirk Local Development Plan 2' (LDP2) (Falkirk Council, 2020) was adopted in August 2020 and provides a broad vision and strategy for the Falkirk Council area, including relevant planning policies for the 20-year period from 2020 to 2040.

The LDP2 is split into:

- Vision
- Spatial strategy
- Policies
- Settlement Statements
- Proposals and Opportunities

#### LDP2 Policy

Relevant policies from the LDP2 which are applicable to the project, and specifically this LVIA are as listed and summarised below:

##### Place and Environment (PE)

- Policy PE01 Placemaking

*Development proposals should promote the six qualities of successful places as defined in SPP by addressing the following principles: distinctive, safe and pleasant, easy to move around and beyond, welcoming, adaptable and resource efficient.*

- Policy PE02 Placemaking Tools

*The use of design and placemaking tools will be required to raise the standard of design and embed the six qualities of successful place in new development; such as providing development frameworks, masterplans and community consultations, where appropriate.*

- Policy PE05 Antonine Wall

*The Council will seek to retain, protect, preserve and enhance the Antonine Wall, its associated archaeology, character and setting. Refer to SG11 for details.*

- Policy PE09 Areas of Townscape Value

*The Council recognises the architectural and historic merit and potential of the additional areas of townscape value identified on the Proposals Map, which do not currently have Conservation Area status.*

- Policy PE10 Historic Gardens and Designed Landscapes

*There are three sites within the Council area listed in the 'Inventory of Gardens and Designed Landscapes in Scotland'. Guidance on these, and identification of locally important non-inventory sites, is provided in SG09 'Landscape Character Assessment and Landscape Designations'.*

- Policy PE13 Green and Blue Network

*Policy PE13 The Council will support the delivery of the Central Scotland Green Network in the Falkirk area, and Falkirk Greenspace: A Strategy for Our Green Network, through the development and enhancement of a multi-functional network of green and blue components and corridors as set out in the Spatial Strategy. The Spatial*

strategy sets out in broad terms how the Central Scotland Green Network will be implemented in the Falkirk area. The spatial focus will be on a series of green and blue network components and corridors which are illustrated in Map 3.2. (of the LDP2).

- Policy PE15 Green Belt

The Green Belt forms an important part of the Spatial Strategy for the area. The primary purpose in the Falkirk area is to safeguard the identity of communities by preventing development which would reduce their visual separation.

- Policy PE16 Protection of Open Space

Open space is vital to the quality of places, and fulfils a range of purposes including recreational, landscape, ecological, surface water management and active travel. The Council has prepared an Open Space Strategy, which is based on a detailed audit of its parks and open spaces, and sets out a vision, standards and priority actions for improving the open space resource. Policy PE16 provides criteria for assessing potential losses of open space and ensuring that open space of value continues to be protected or that, if there would be a loss of recreational amenity, this will be compensated by qualitative improvements to other open space in the vicinity.

- Policy PE18 Landscape

The Council will seek to protect and enhance landscape character and enhance landscape quality throughout the Council area in accordance with Supplementary Guidance SG09 'Landscape Character Assessment and Landscape Designations' which provides information on forces for change, sensitives and development guidance for all Landscape Character Areas. Development proposals which are likely to have significant landscape and visual effects must be accompanied by a landscape and visual assessment demonstrating that, with appropriate mitigation, a satisfactory landscape fit will be achieved without adverse effects.

- Policy PE20 Trees, Woodland and Hedgerows

Protection of existing trees and woodland will be a priority, and the principles of the Scottish Government's Policy on 'Control of Woodland Removal' will be followed where woodland is affected. In addition, a number of Tree Preservation Orders (TPOs) are in force across the Council area, as shown on the Proposals Map. New development will be expected to contribute to woodland and green network objectives through management and new planting as appropriate.

- Policy PE22 The Water Environment

The Council recognises the importance of the water environment within the Council area in terms of its landscape, ecological, recreational and land drainage functions. Policy PE22 aims to ensure that water quality, habitat/species integrity and quality, and the recreational amenity of the water environment is safeguarded by development proposals.

**Infrastructure and Resources (IR) policy including:**

- Policy IR06 Active Travel

The Council will safeguard, improve and extend the network of active travel routes, with particular emphasis on the core path network. Proposals should accord with the detailed guidance on active travel routes within SG05 'Green Infrastructure and New Development'.

**Green and Blue Networks**

LDP2s Spatial Strategy notes that the objective of the Central Scotland Green Network (CSGN) is to create Green Networks which make the area a more attractive place to live in, do business and visit; to help tackle climate change; to enhance biodiversity; and to promote active travel and healthy lifestyles. In the Falkirk area, CSGN is

being delivered through Falkirk Greenspace. The development of the Green and Blue Network is integral to LDP2's vision and growth strategy and is supported by Policy PE13.

LDP2 identifies specific opportunities for enhancement within each Green and Blue Network Component or area, and for relevant ones within the Scheme areas the following Green and Blue Network Components are identified as:

- GN06 – River Carron Corridor Improvements
- GN09 – Zetland Park
- GN17 – Larbert Open Space Corridors
- GN19 – River Avon Corridor

More information on these opportunities is provided in the Proposals and Opportunities Schedule (Appendix 1) of the LDP2. The opportunities for the Green and Blue Networks that are noted above are summarised in **Table 1** below. SG05 'Green Infrastructure and New Development' is to provide guidance on how these can be achieved.

**Table 1: Extract from LDP2 Appendix 1 'Proposals and Opportunities Schedule Green and Blue Network Table'**

Green and Blue Network			
LDP Ref.	Opportunity	Green and Blue Network Component	Comment
GN06	River Carron Corridor Improvements	Upper/Lower Carron	<ul style="list-style-type: none"> <li>• Communities along the Carron Initiative aims to enhance the River Carron's function as a recreational resource for riparian communities.</li> <li>• Opportunity to create River Carron Trail including access improvements at Carrongrove and Denny East to Lochlands.</li> <li>• Opportunity for habitat, landscape and access enhancement as part of the future restoration of West Carron landfill site once existing operations have ceased.</li> <li>• Further opportunities for continuing habitat restoration and invasive species clearance projects and support for the Carron Works project which seeks to conserve and enhance the industrial heritage of the Lower Carron Valley.</li> <li>• For permission to be granted, proposals must be accompanied by project-specific information to inform an appropriate assessment. This will allow FC to complete an appropriate assessment demonstrating that there will be no adverse effects on the integrity of the River Teith Special Area of Conservation, Firth of Forth Special Protected Area (SPA) and the Outer Firth of Forth and St Andrew's Bay Complex pSPA, either alone or in combination with other plans or projects.</li> </ul>
GN09	Zetland Park	Falkirk-Grangemouth	<ul style="list-style-type: none"> <li>• Park masterplan has been prepared for Zetland Park which identifies a range of improvements.</li> <li>• Zetland Park is identified in the Open Space Strategy as a key open space asset.</li> </ul>
GN17	Larbert Open Space Corridors	North Larbert	<ul style="list-style-type: none"> <li>• Opportunity to improve quality, function and diversity of open space corridors running through Larbert and Stenhousemuir.</li> <li>• Opportunities focus on the open spaces running along Chapel Burn between the River Carron and Bellsdyke Road; and the How Burn between River Carron and Larbert Main Street.</li> </ul>
GN19	River Avon Corridor	Avon	<ul style="list-style-type: none"> <li>• Extensive work completed over the past few decades to create the River Avon Heritage Trail running along the River Avon from</li> </ul>



			<p>Avonbridge to Linlithgow Bridge. Opportunities remain to extend the access network downstream from Linlithgow Bridge to Grangemouth and upstream from Avonbridge to Slamannan.</p> <ul style="list-style-type: none"> <li>• For permission to be granted new access proposals must be accompanied by project-specific information to inform an appropriate assessment. This will allow FC to complete an appropriate assessment demonstrating that there will be no adverse effects on the integrity of the Slamannan Plateau SPA, either alone or in combination with other plans or projects.</li> <li>• Long term opportunity to enhance and extend riparian habitat and access through phased restoration of Avondale landfill site.</li> </ul>
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Falkirk Council has produced the 'Falkirk Greenspace: A Strategy for our Green Network' (Falkirk Council, 2013) and the 'Falkirk Open Space Strategy'. One of the aims of the strategies is to assess whether Green Networks and open spaces can be expanded to increase the natural floodplain. The Falkirk greenspace strategy details a range of opportunities and proposals for how to deliver quality greenspace in the Falkirk Council area.

The Green Network proposals listed in the above table and further described the LDP2 Action Plan go some way to setting out the current Green Network proposals. Green Networks run through parts of the Scheme study area, with Green Network corridors being located along the River Carron in the Lower Carron area and crossing the Grange Burn and the River Avon in the Falkirk/Grangemouth area.

In addition to existing Green Networks, the Open Space Strategy illustrates opportunities for new Green Networks, including along the River Carron, between South Broomage and Glensburgh and running parallel to the M9 and adjacent to the Polmont Burn in the Westquarter area.

Opportunities to enhance the Green Network in tandem with the proposed Scheme are discussed in the context of the Flood Cell areas where appropriate.

### LDP2 Supplementary Guidance

The LDP2 Supplementary Guidance (SG) relevant to this chapter are:

- SG02 – Neighbourhood design (2020)
- SG05 – Green Infrastructure and New Development (2021)
- SG09 – Landscape Character Assessment and Landscape Designations (2021)
- SG10 – Trees and Development (2020)
- SG11 – Frontiers of the Roman Empire (Antonine Wall) World Heritage Site (draft, 2022)

The SG are summarised as follows:

- SG02 Neighbourhood Design

*"The Council expects new development to meet the highest standards of design through the delivery of good buildings and places to enhance quality of life",* while new development should address the six qualities of successful places (as mentioned under the heading for 'Creating Places' above). The guidance reflects this approach to promoting principles of successful place making and it interprets the principles of the Scottish Government's document 'Designing Streets' specifically for the Falkirk area.

- SG05 Green Infrastructure and New Development

This guidance provides details on existing and new open space provision associated with new developments, particularly housing and their contribution to the development of the CSGN within Falkirk.

- SG09 Landscape Character Assessment and Landscape Designations

Provides definitions of the Landscape Character Types (LCT), Local Landscape Character Areas (LLCA) and Local Landscape Areas (LLA) for the FC Area, and it provides likely future forces for change, sensitivities and guidelines relating to new and existing developments within the different zones. It also lists national and local designed landscapes within the Falkirk area, with guidance on development near to and within them.

This guidance, as well as the previous version of the guidance, helped inform the landscape character assessments of the areas impacted by the Scheme.

- SG10 Trees and Development

The purpose of this SG is to encourage developers, through the Development Management process, to effectively safeguard and protect existing trees and woodlands within development and to provide the right conditions for new trees on construction sites. It includes guidance on preparation of tree surveys, protection of trees during construction, and design of new tree planting.

- SG11 Frontiers of The Roman Empire (Antonine Wall) World Heritage Site (Draft)

The guidance provides advice for developers, decision makers and the public on managing the impact of development on the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site (FRE(AW)WHS) and its setting. The guidance supports the implementation of the development plan policies.

The purpose of the guidance is to:

- explain the significance of the Antonine Wall and its status as a WHS;
- encourage early and effective consultation with Councils and Historic Scotland;
- outline the approach and procedure for assessing development affecting the WHS;
- set out the criteria which will be applied in determining planning applications for development along the line and within the setting of the WHS; and
- guide decisions on planning appeals and enforcement.

The Antonine Wall WHS runs through the flood scheme at the Westquarter Burn (Flood Cell 4), and therefore this guidance has been reviewed, as well as discussions with the relevant statutory bodies, to develop a solution to the Scheme design in this area (see Chapter 13: Cultural Heritage and Appendix C13.2 - Westquarter Burn Flood Storage Area: Record of Outline Design Development).

#### Other Guidance

##### Scotland's Landscape Charter – The Scottish Landscape Forum (Scottish Natural Heritage, 2010)

This document encourages action from all sectors of society to *fulfil its vision to ensure that all Scotland's landscapes are protected for future generations. From Individuals; Land Managers; and Developers to Local Authorities; public agencies and government departments; each has their own role in helping to respect and enhance the Scottish landscape to create high quality surroundings.*

Although this overarching strategy is high level, it is important to be aware of this vision for Scotland as a whole and protection of its heritage and quality landscape for future generations.

# Environmental Impact Assessment Report

Appendix B9.2 – Visual Envelope Plans

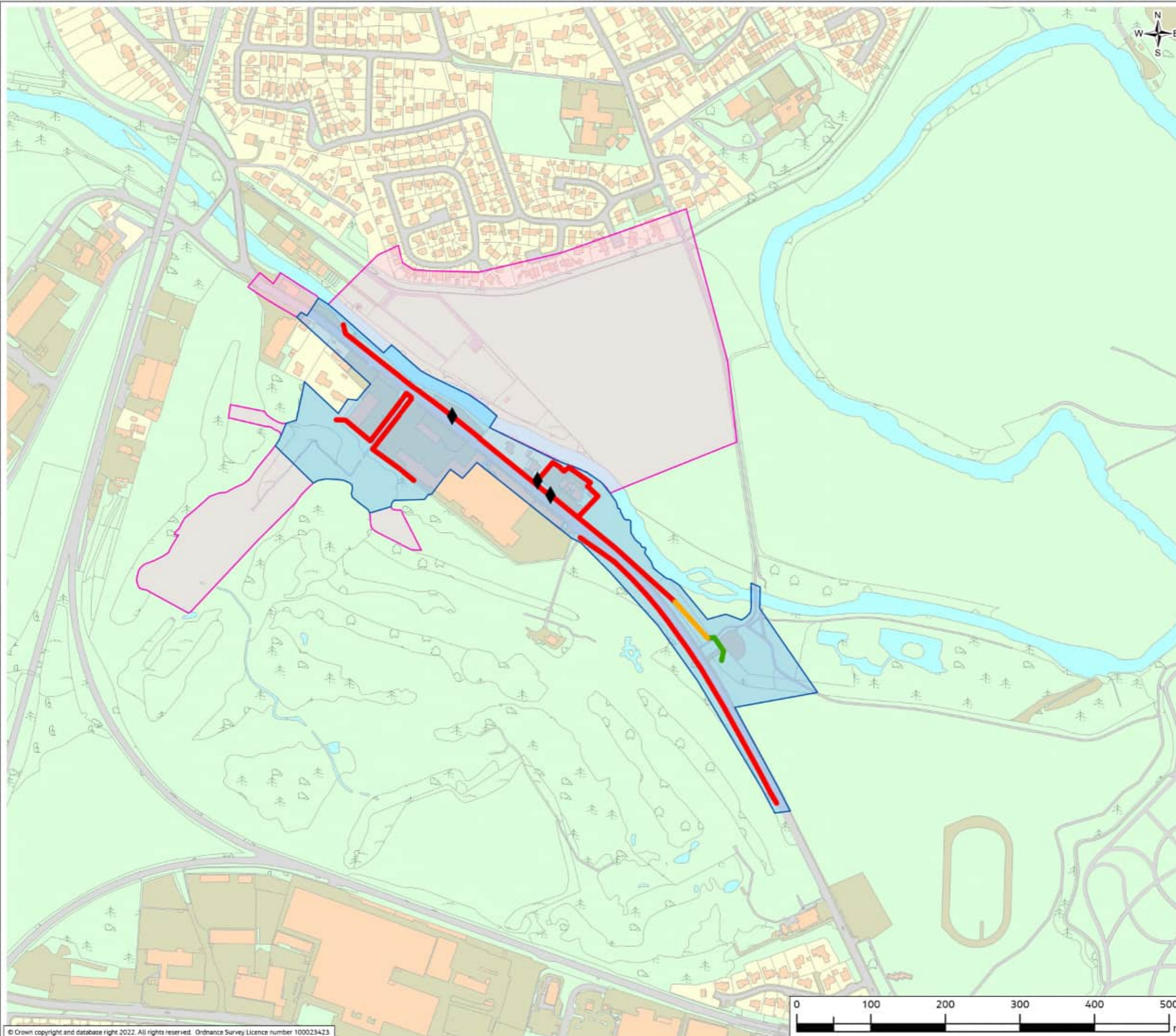
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**Falkirk Council**



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**FIGURE B9.2**



**Legend**

- ◆ Flood Gates
- Direct Defences
- Type
- Embankment
- Flood Wall
- Ground Rising
- Seepage
- Demountable Defence
- Estimated Visibility
- Visibility to Flood Defences and Tree Loss
- Visibility of Tree Loss Only

Note:  
 1. Visibility shown is potential/estimated based on site visits, photographs and maps.  
 2. Visibility shown on each map relates to the Cell and area specified in the drawing title.



CD1	JAN 24	Initial Issue	AH	TC	JR	AMc
Rev.	Date	Purpose of revision	Drawn	Checked	Revised	Approved

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Project	Grangemouth Flood Protection Scheme
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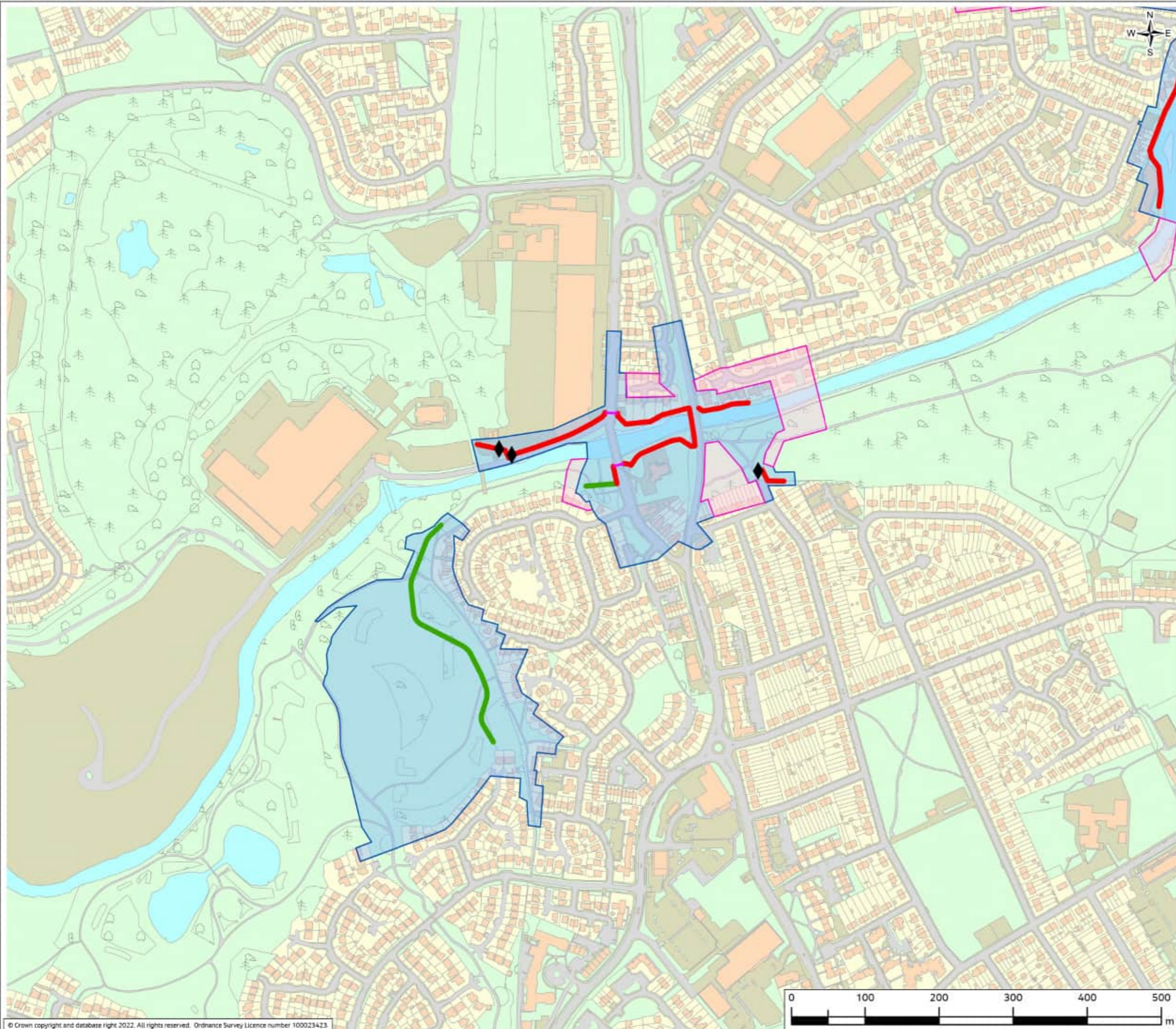
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**FIGURE B9.2**



- Legend**
- ◆ Flood Gates
  - Direct Defences**
  - Type**
  - Embankment
  - Flood Wall
  - Ground Rising
  - Seepage
  - Demountable Defence
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**Project:** Grangemouth  
 Flood Protection Scheme

**Drawing Title:** Visual Envelope  
 Cell 1 - Area 2

SHEET 2 OF 3

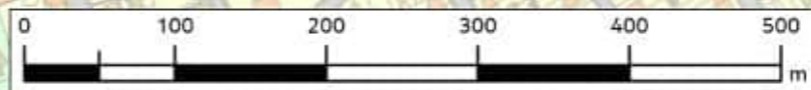
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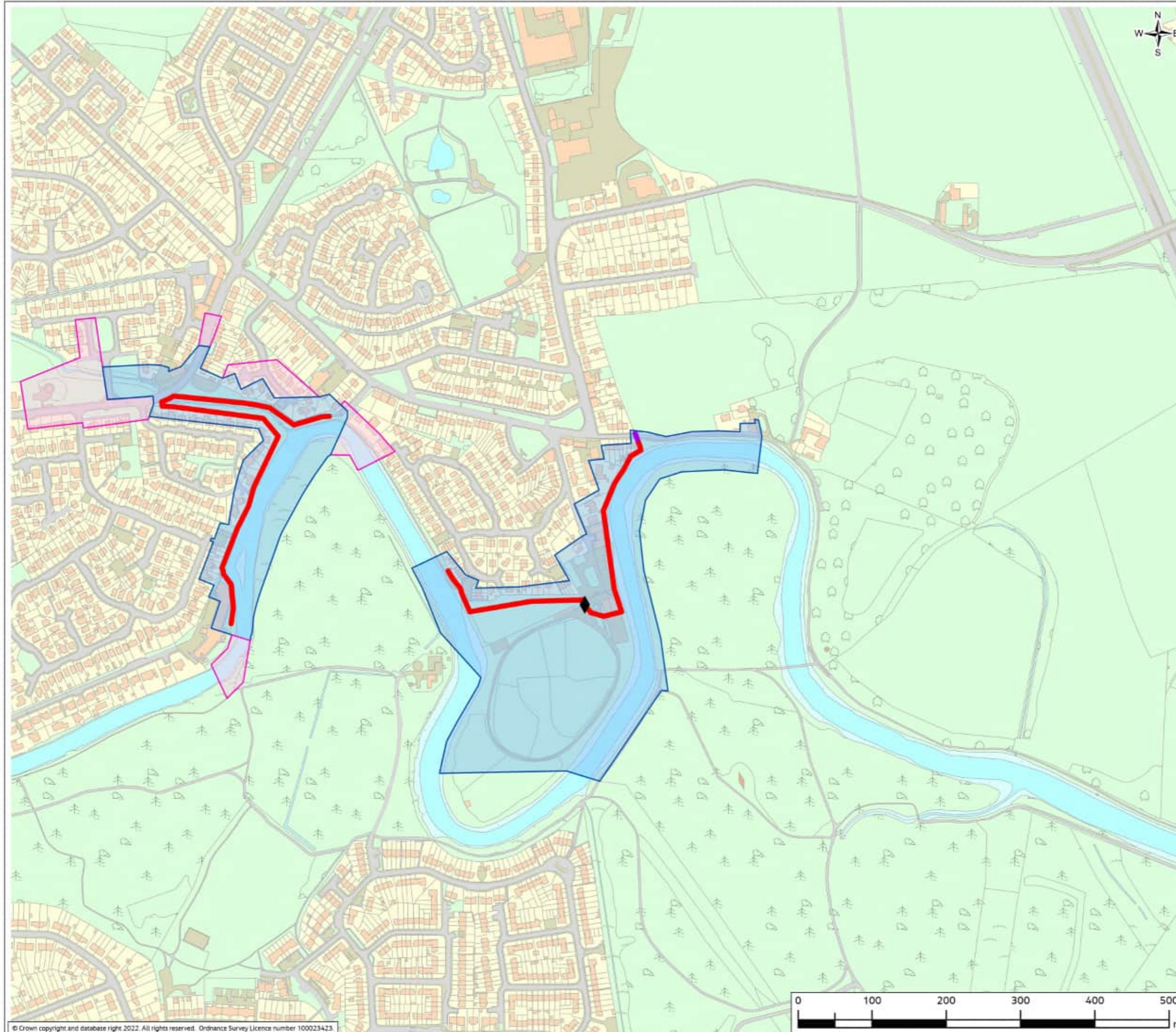
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**FIGURE B9.2**



**Legend**

- ◆ Flood Gates
- Direct Defences
- Type
- Embankment
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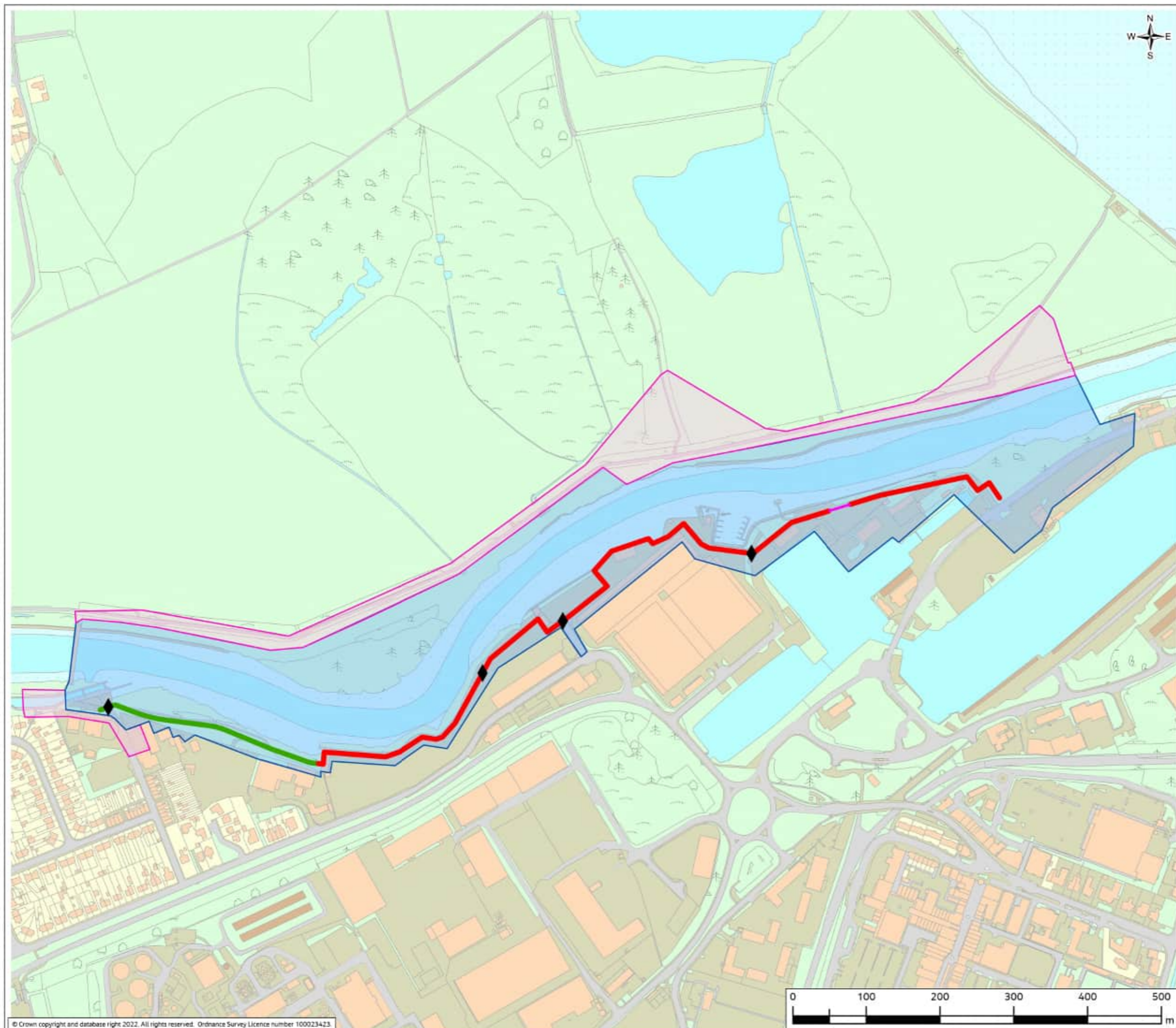
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**FIGURE B9.2**



**Legend**

- ◆ Flood Gates
- Direct Defences
- Type
- Embankment
- Flood Wall
- Ground Rising
- Seepage
- Demountable Defence
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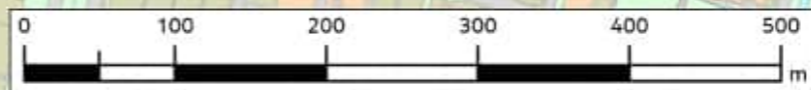
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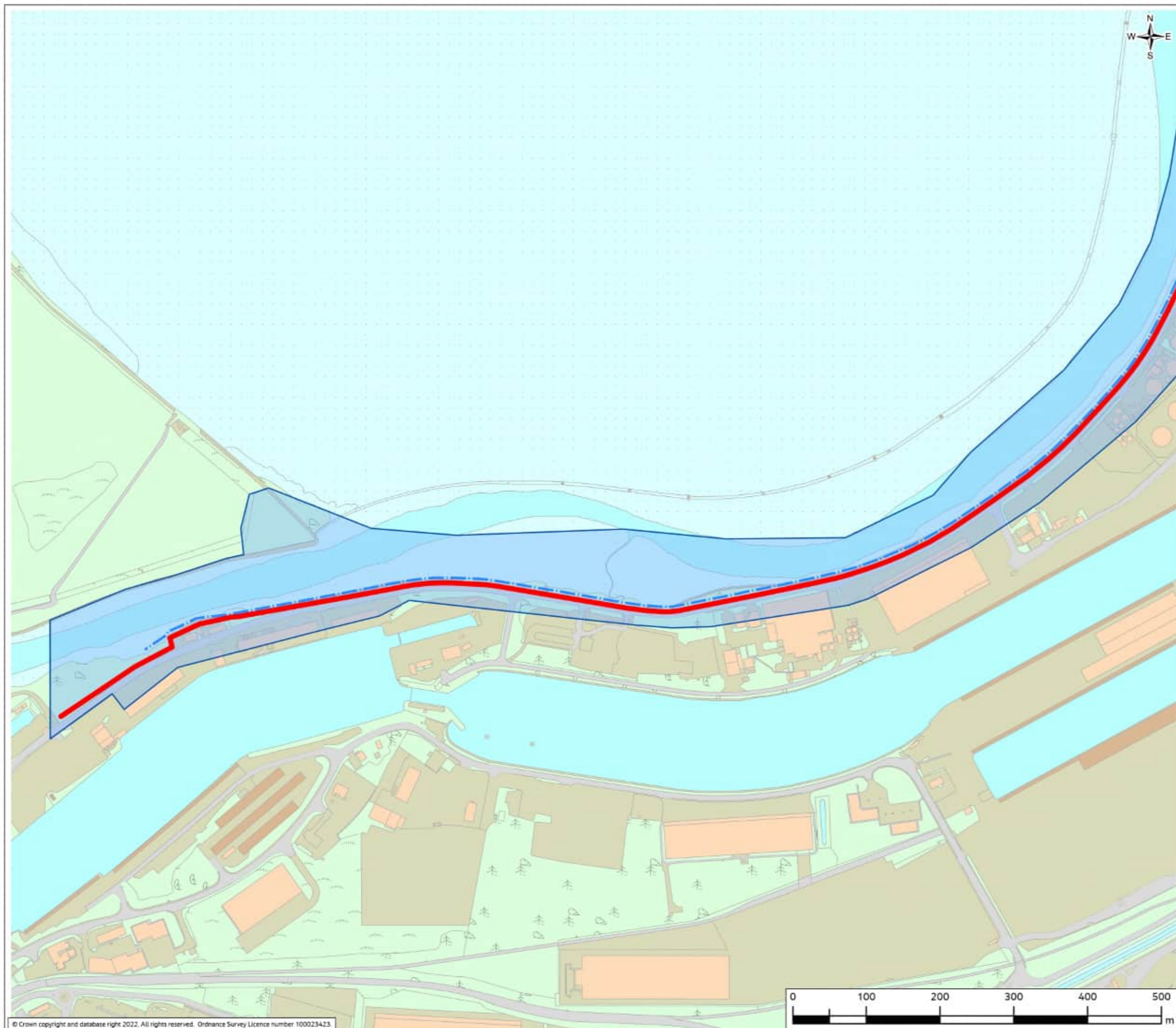
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**FIGURE B9.2**



- Legend**
- Coastal Revetment
- Direct Defences**
- Type**
- Embankment
  - Flood Wall
  - Ground Rising
  - Seepage
  - Demountable Defence
- Estimated Visibility**
- Visibility to Flood Defences and Tree Loss
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 Cell 3 - Area 1  
 SHEET 1 OF 2

**Drawing Status**  
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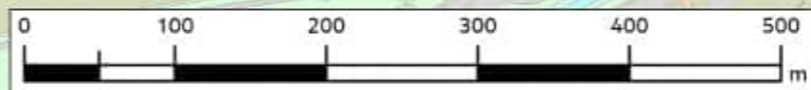
**Scale @ A3** 1:5,000 **DO NOT SCALE**

**Jacobs No.** B2386100

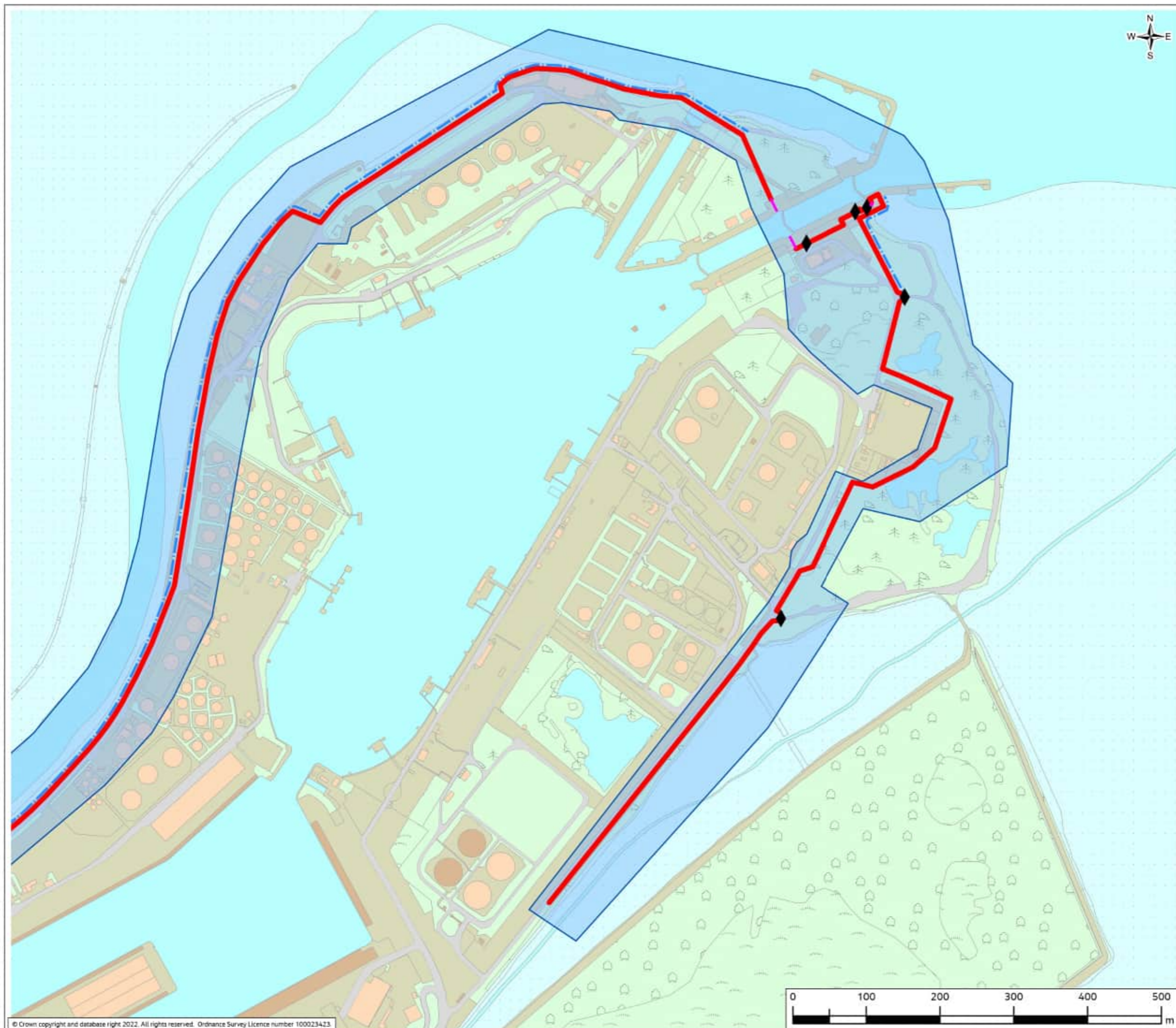
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**Drawing No.** FIGURE B9.2

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**FIGURE B9.2**



- Legend**
- ◆ Flood Gates
  - Coastal Revetment
- Direct Defences**
- Type
- █ Embankment
  - █ Flood Wall
  - █ Ground Rising
  - █ Seepage
  - █ Demountable Defence
- Estimated Visibility**
- █ Visibility to Flood Defences and Tree Loss
  - █ Visibility of Tree Loss Only

**Note:**  
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Project: **Grangemouth Flood Protection Scheme**

Drawing Title: **Visual Envelope Cell 3 - Area 2**

SHEET 2 OF 2

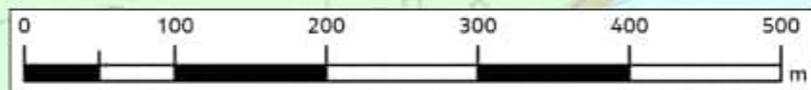
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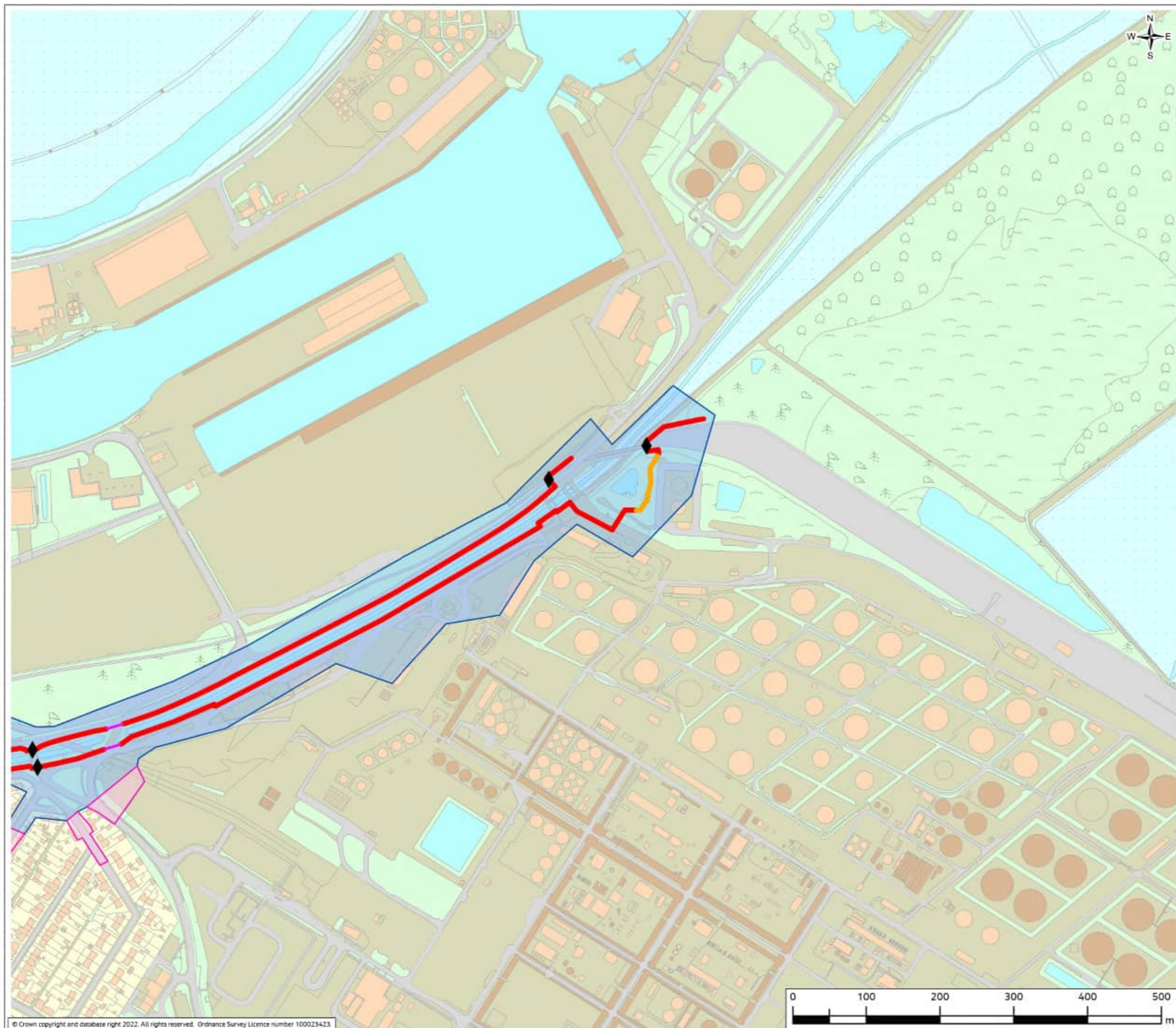
Jacobs No.: B2386100

Drawing No.: **FIGURE B9.2**

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**FIGURE B9.2**



**Legend**

- ◆ Flood Gates
- Direct Defences
- Type
  - Embankment
  - Flood Wall
  - Ground Rising
  - Seepage
  - Demountable Defence
- Estimated Visibility
  - Visibility to Flood Defences and Tree Loss
  - Visibility of Tree Loss Only

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Project	Grangemouth Flood Protection Scheme
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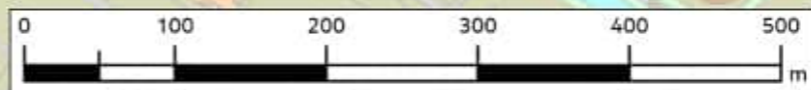
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Drawing Status	DRAFT
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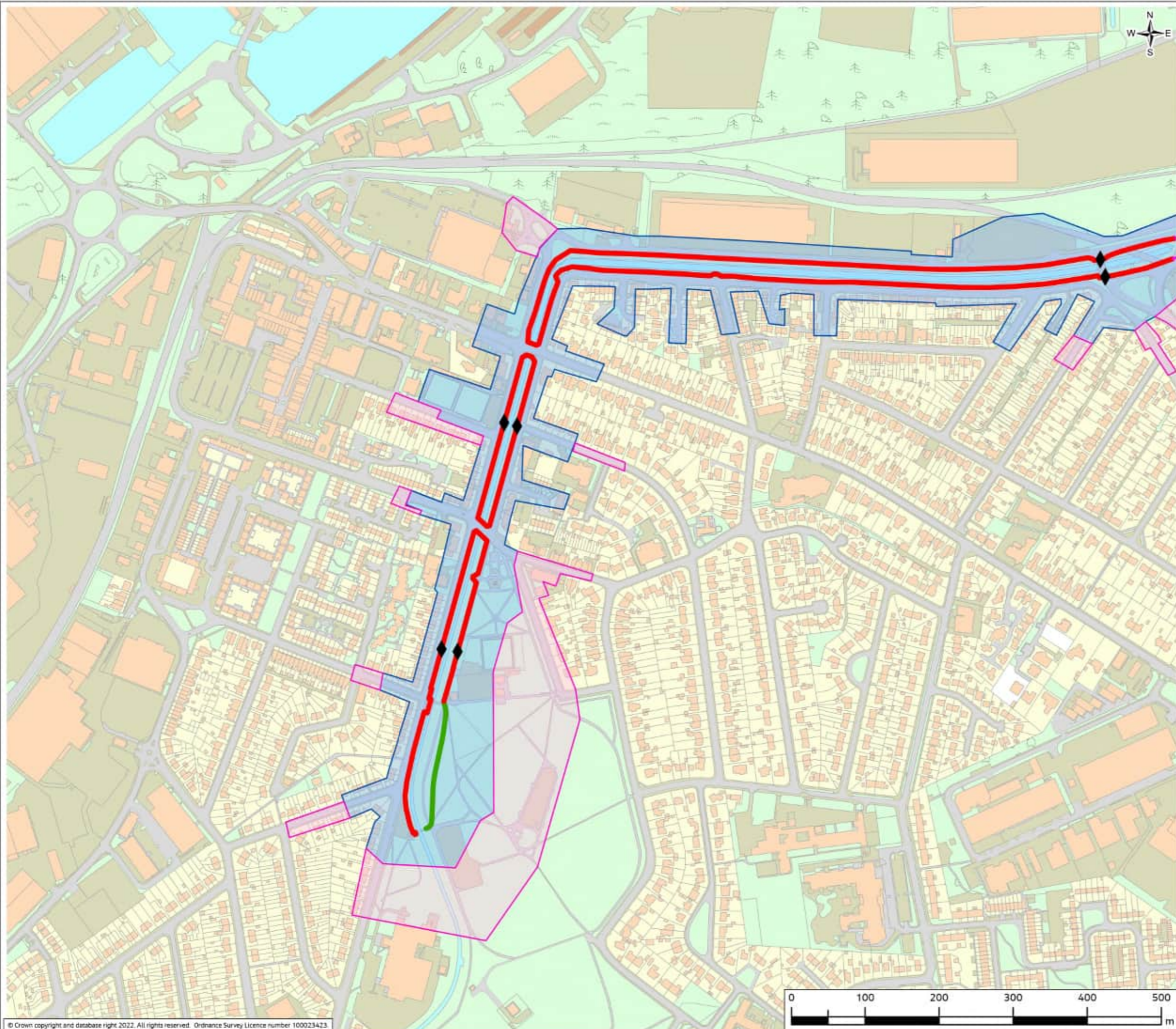
Scale @ A3	1:5,000	DO NOT SCALE
Jacobs No.	B2386100	
Client No.		

Drawing No.	FIGURE B9.2
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**FIGURE B9.2**



**Legend**

- ◆ Flood Gates
- Direct Defences
- Type
- Embankment
- Flood Wall
- Ground Rising
- Seepage
- Demountable Defence
- Estimated Visibility
- Visibility to Flood Defences and Tree Loss
- Visibility of Tree Loss Only

Note:  
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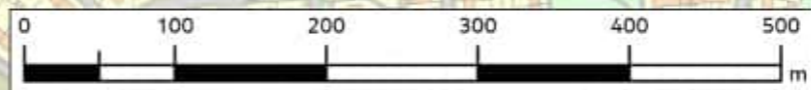
Drawing Title	Visual Envelope Cell 4 - Area 2	SHEET 2 OF 4
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Drawing Status	DRAFT	DO NOT SCALE
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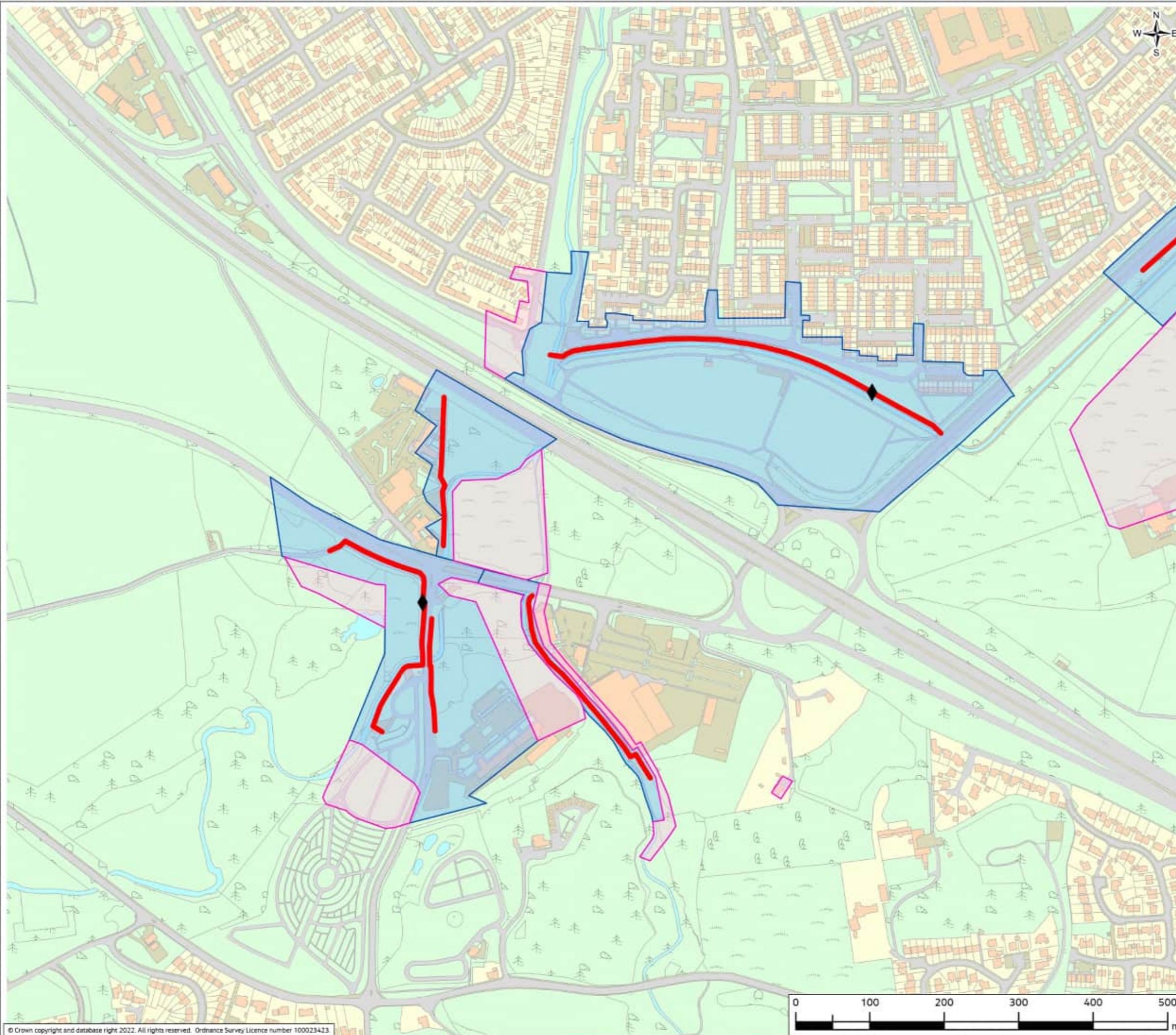
Scale @ A3	1:5,000
Jacobs No.	B2386100
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Drawing No.	FIGURE B9.2
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**FIGURE B9.2**



**Legend**

- ◆ Flood Gates
- Direct Defences
- Type
- Embankment
- Flood Wall
- Ground Rising
- Seepage
- Demountable Defence
- Estimated Visibility
- Visibility to Flood Defences and Tree Loss
- Visibility of Tree Loss Only

Note:  
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Project	Grangemouth Flood Protection Scheme
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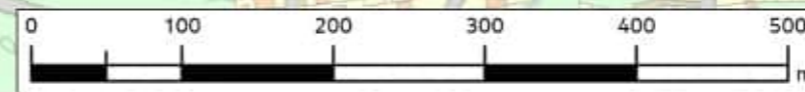
Drawing Title	Visual Envelope Cell 4 - Area 3	SHEET 3 OF 4
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Drawing Status	DRAFT
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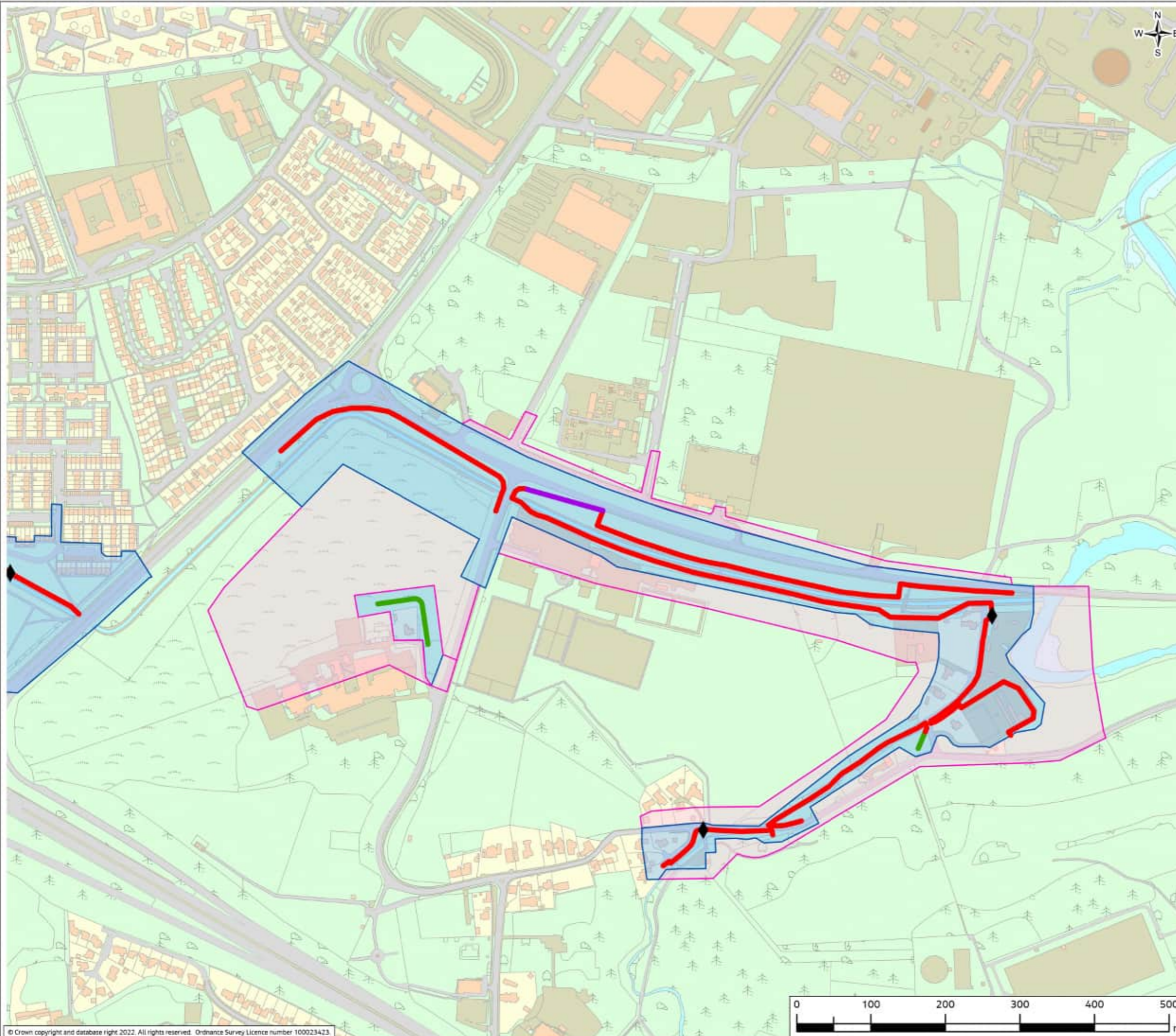
Scale @ A3	1:5,000	DO NOT SCALE
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Drawing No.	FIGURE B9.2
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**FIGURE B9.2**



- Legend**
- ◆ Flood Gates
  - Direct Defences
  - Type
    - Embankment
    - Flood Wall
    - Ground Rising
    - Seepage
    - Demountable Defence
  - Estimated Visibility
    - Visibility to Flood Defences and Tree Loss
    - Visibility of Tree Loss Only

**Note:**  
 1. Visibility shown is potential/estimated based on site visits, photographs and maps.  
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**Project:** Grangemouth  
 Flood Protection Scheme

**Drawing Title:** Visual Envelope  
 Cell 4 - Area 4  
 SHEET 4 OF 4

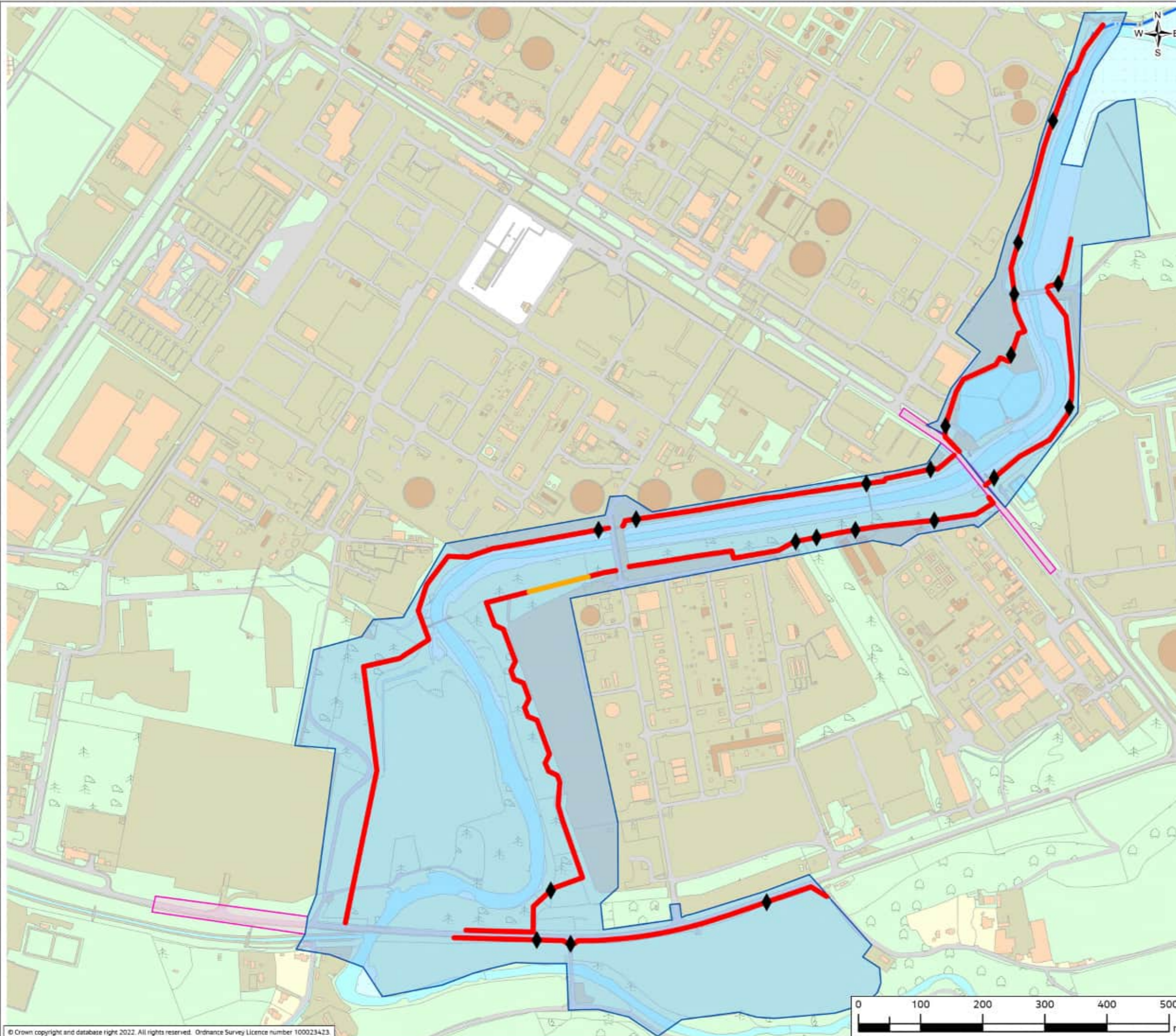
**Drawing Status:** DRAFT

**Scale @ A3:** 1:5,000  
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**Client No.:**

**Drawing No.:** FIGURE B9.2

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**FIGURE B9.2**



- Legend**
- ◆ Flood Gates
  - Coastal Revetment
- Direct Defences**
- Type
- █ Embankment
  - █ Flood Wall
  - █ Ground Rising
  - █ Seepage
  - █ Demountable Defence
- Estimated Visibility**
- █ Visibility to Flood Defences and Tree Loss
  - █ Visibility of Tree Loss Only

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**Project:** Grangemouth  
 Flood Protection Scheme

**Drawing Title:** Visual Envelope  
 Cell 5  
 SHEET 1 OF 1

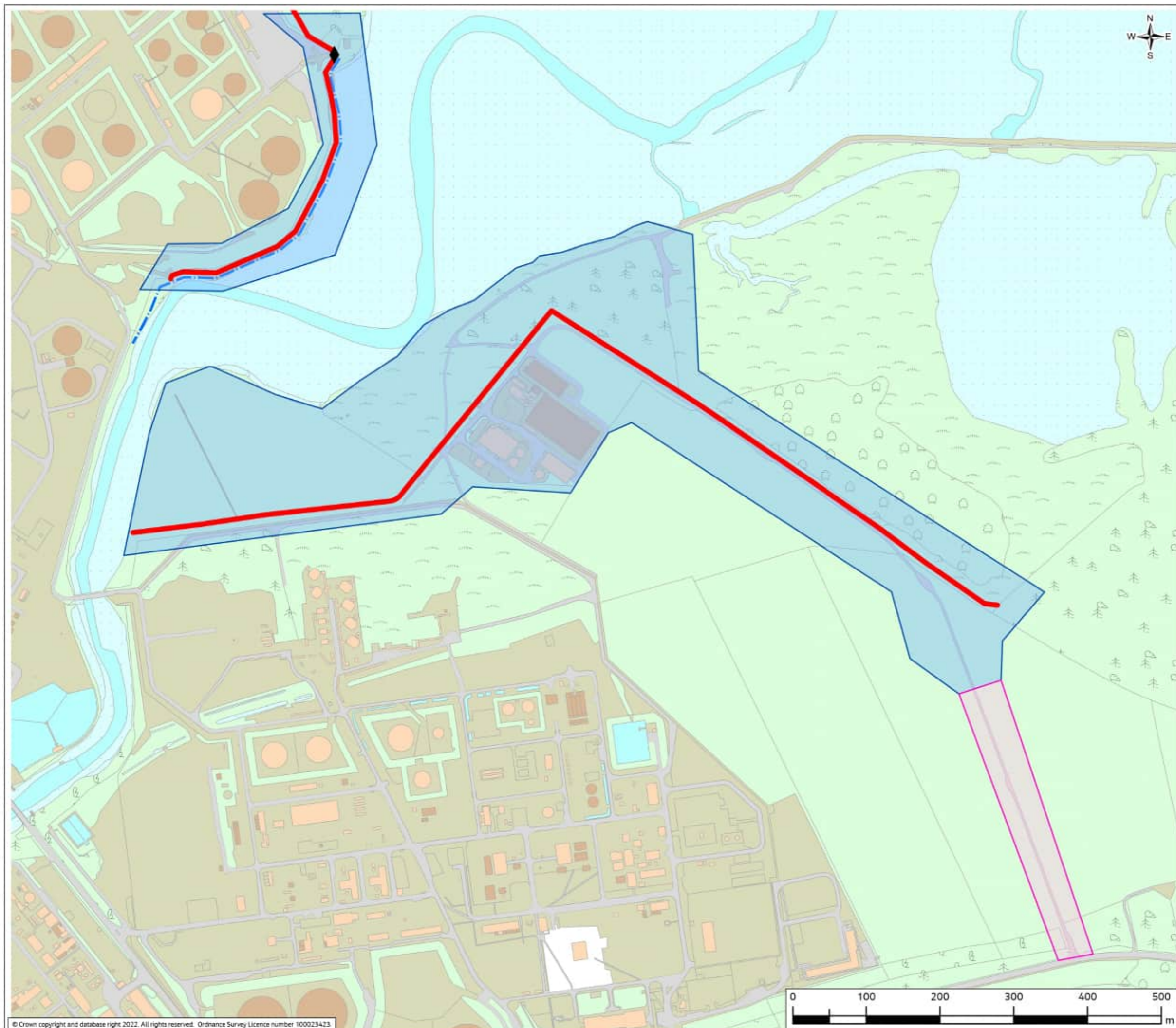
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**Scale @ A3:** 1:6,000  
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**Client No.:**

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**FIGURE B9.2**



**Legend**

- ◆ Flood Gates
- Coastal Revetment
- Direct Defences**
- Type
- Embankment
- Flood Wall
- Ground Rising
- Seepage
- Demountable Defence
- Estimated Visibility**
- Visibility to Flood Defences and Tree Loss
- Visibility of Tree Loss Only

**Note:**  
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Project	Grangemouth Flood Protection Scheme
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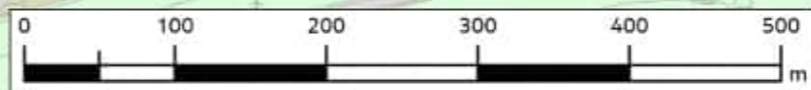
Drawing Title	Visual Envelope Cell 6	SHEET 1 OF 1
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Drawing Status	DRAFT
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Scale @ A3	1:5,000	DO NOT SCALE
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Drawing No.	FIGURE B9.2
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# Environmental Impact Assessment Report

Appendix B9.3a – Core Paths Plan

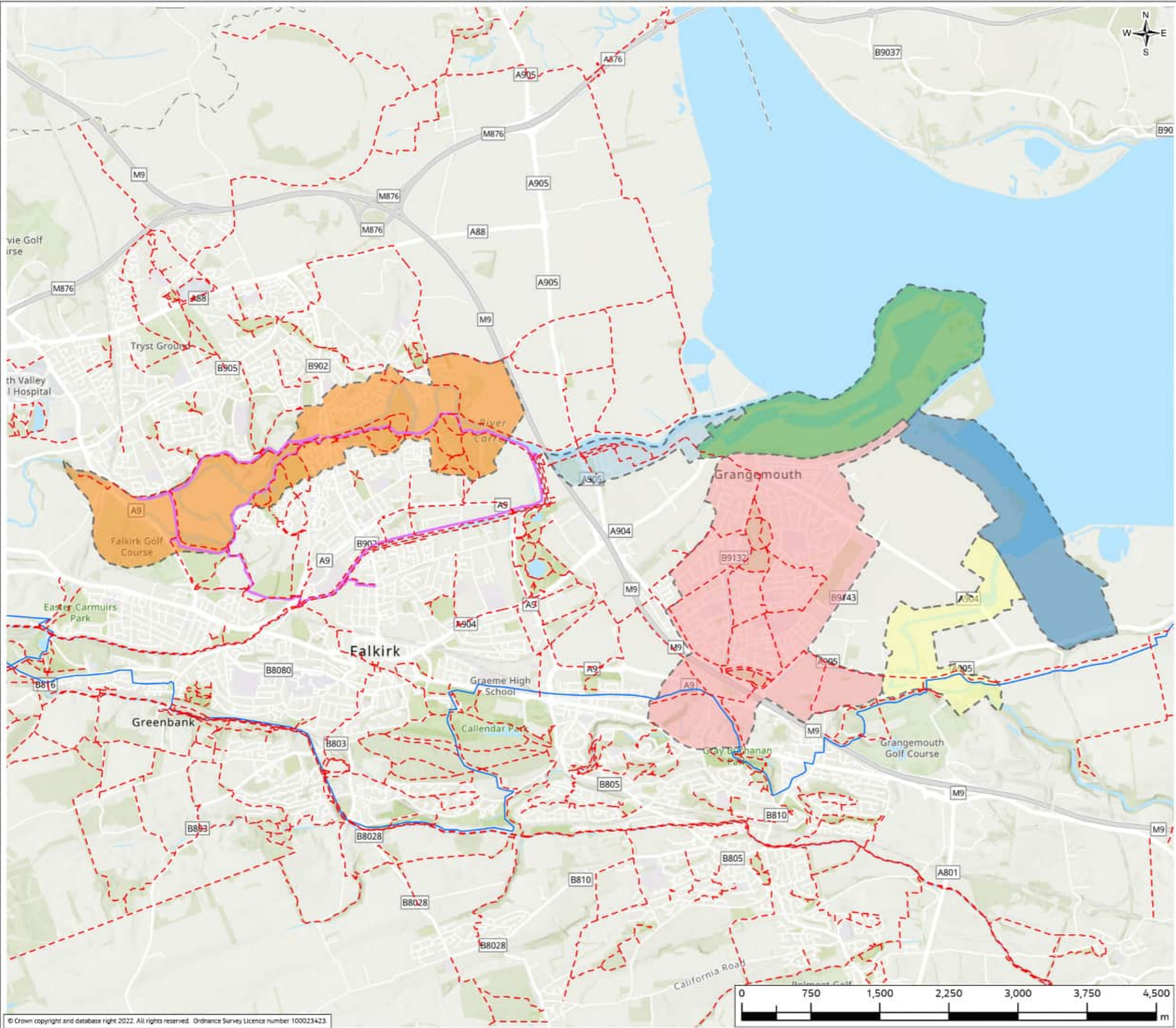
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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



**GRANGEMOUTH**  
Flood Protection Scheme  
Protecting the heart of our communities

**FIGURE B9.3a**



- Legend**
- Flood Cell Areas**
- 1
  - 2
  - 3
  - 4
  - 5
  - 6


- Paths**
- Core Paths
  - Antonine Wall
  - River Carron Loop Path



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**Project**  
 Grangemouth  
 Flood Protection Scheme

**Drawing Title**  
 CORE PATHS AND OTHER FOOTPATHS

**Drawing Status**  
 DRAFT

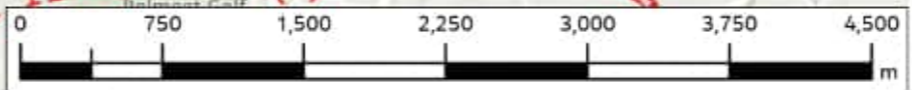
**Scale @ A3** 1:40,000 **DO NOT SCALE**

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**Client No.**

**Drawing No.** **FIGURE B9.3a**

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# Environmental Impact Assessment Report

Appendix B9.3b – National and Regional Cycle Routes Plan

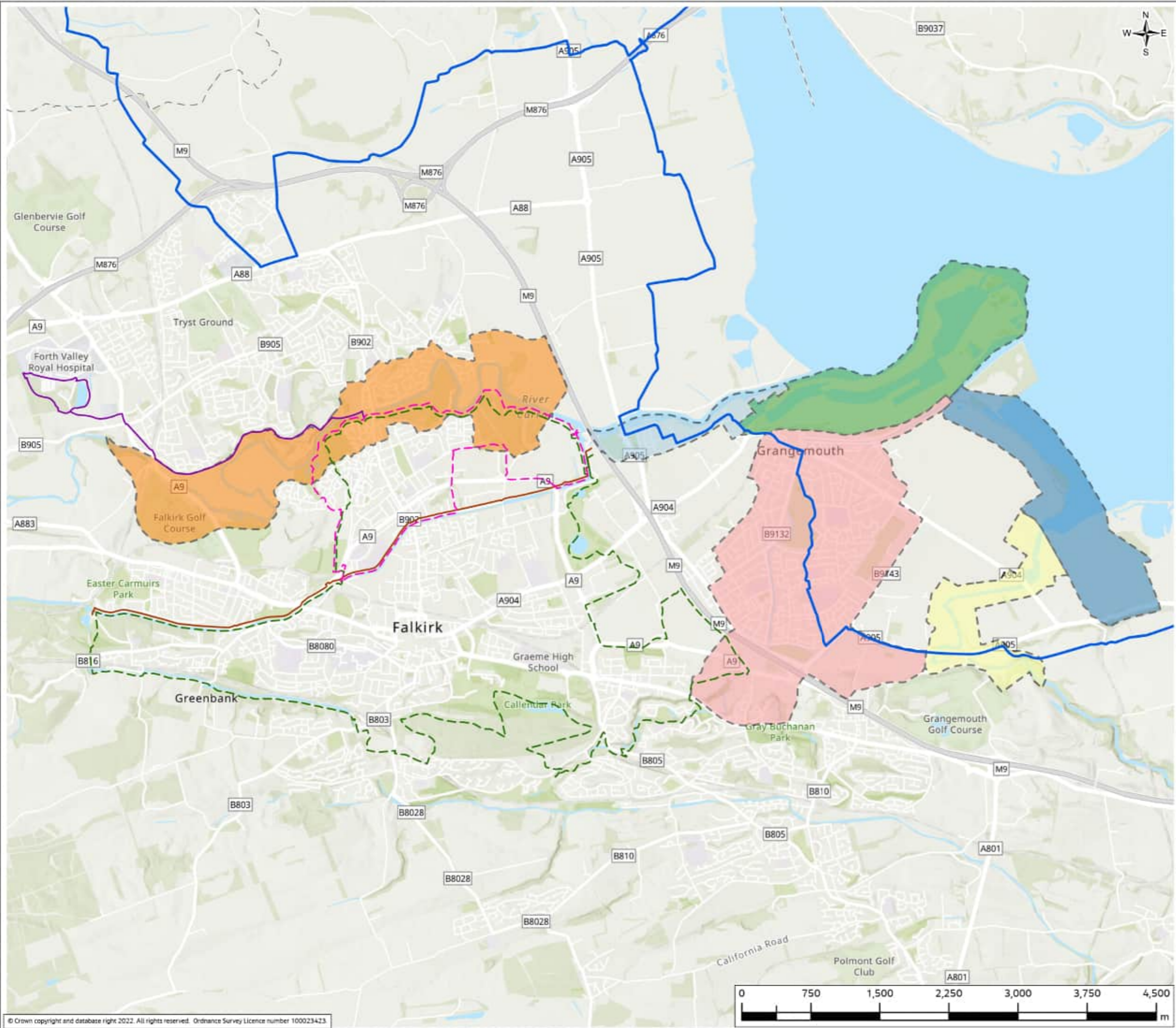
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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



**GRANGEMOUTH**  
Flood Protection Scheme  
Protecting the heart of our communities

FIGURE B9.3b



- Legend**
- Flood Cell Areas**
- 1
  - 2
  - 3
  - 4
  - 5
  - 6
- National Cycle Routes**
- National Cycle Network (NCN) Route 76
- Regional Cycle Routes**
- Falkirk Wheel - Kelpies Canal Route
  - HArTT (Helix Around Town Tour)
  - Bainsford Loop
  - The Helix - Larbert Link



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grangemouthflood@falkirk.gov.uk

**Project**

Grangemouth  
Flood Protection Scheme

**Drawing Title**

NATIONAL AND REGIONAL CYCLE ROUTES

**Drawing Status**

DRAFT

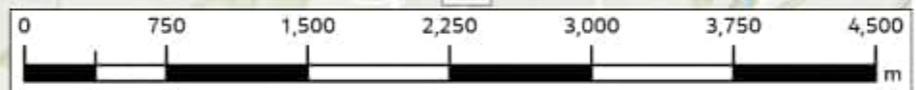
**Scale @ A3** 1:40,000 **DO NOT SCALE**

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**Drawing No.** FIGURE B9.3b

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# Environmental Impact Assessment Report

Appendix B9.4 – Visual Receptor Location Plans

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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



**GRANGEMOUTH**  
Flood Protection Scheme  
Protecting the heart of our communities

**FIGURE B9.4**

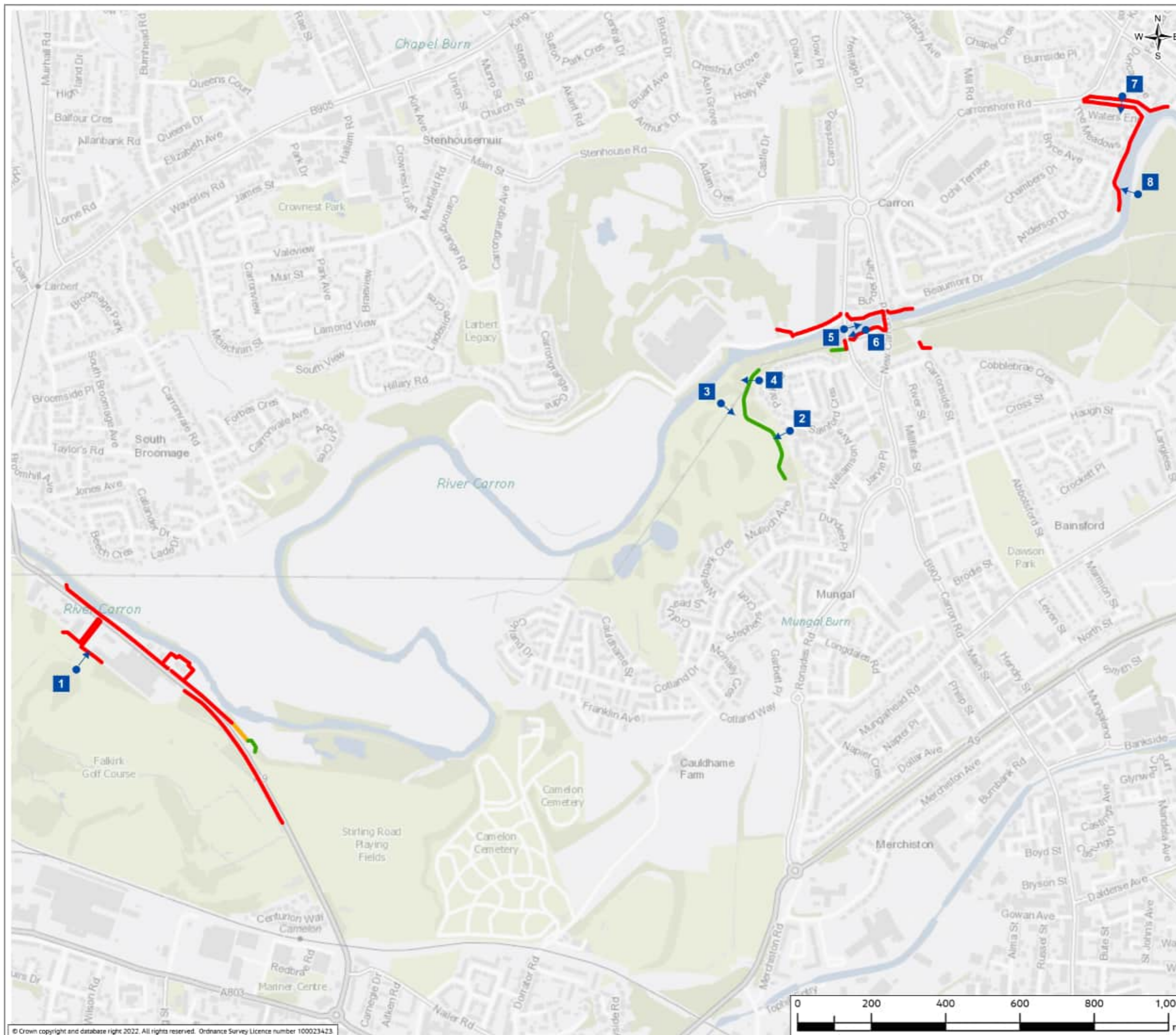
**Legend**

- Direction of View
- Key View Location

**Direct Defences**

**Type:**

- Embankment
- Flood Wall
- Seepage



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Drawing Title	KEY VIEW LOCATIONS
	SHEET 1 OF 2

Drawing Status	DRAFT
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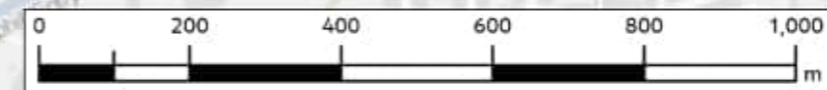
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Drawing No.	FIGURE B9.4
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**FIGURE B9.4**

**Legend**

- ➔ Direction of View
- Key View Location

**Direct Defences**

**Type:**

- Embankment
- Flood Wall
- Ground Rising



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Project	Grangemouth Flood Protection Scheme
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Drawing Title	KEY VIEW LOCATIONS
	SHEET 2 OF 2

Drawing Status	DRAFT
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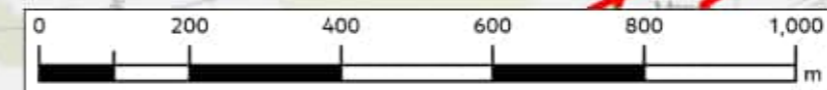
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Drawing No.	FIGURE B9.4
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# Environmental Impact Assessment Report

Appendix B9.5 – Key Viewpoint Visualisations

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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



**GRANGEMOUTH**  
Flood Protection Scheme  
Protecting the heart of our communities



## Appendix B9.5 – Key Viewpoint Visualisations

As part of the site assessment and visits, photographs were taken from key receptor locations of landscape features likely to be physically affected, and locations where people would have visibility of the Scheme.

From this study, 15 key viewpoints were selected and agreed with the Local Planning Authority, to represent and illustrate changes to the landscape and visual experience from a variety of locations and receptors. Views not shown in this appendix are either considered to have a similar view to one of the 15 key viewpoints chosen, or are not notably affected due to the Scheme.

Existing and proposed key views are shown below and assessed in Appendix B9.8.

Proposed views are indicative artist's impressions so it is easier to discern what the changes in the view are, and are the mid-long-term view, with mature vegetation and a medium/high river level.

**Viewpoint 1 – Footpath on Falkirk Golf Club**



**Viewpoint 1 Information:**

**Location:** Cell 1 (Area 1) Footpath on Falkirk Golf Club.

View north-east from a footpath along the eastern side of the golf course next to Hole 16, towards the rear of the Bus Depot/Cockburn Auto Electrics.

**Scheme Description:** Proposed replacement of the existing boundary wall and railing between the golf club and the rear of the bus depot/Cockburn Auto Electrics with a new flood wall. Works require the clearance of vegetation along existing boundary which currently provides a visual barrier between them. Provision of new buffer tree planting, as well as potential additional shrub planting, are to be included as part of detail design in conjunction with discussions with the golf club. Wall to be the same height as the existing wall, although this is higher than the required defence, to maintain the screening.



Viewpoint 2 – Footpath onto Mungal Community Woodland, New Carron Village



Existing View



Proposed View

**Viewpoint 2 Information:**

**Location:** Cell 1 (Area 2) Footpath onto Mungal Community Woodland, New Carron Village. View south-west from a footpath exiting New Carron Village towards Mungal Community Woodland open space.

**Scheme Description:** Proposed grassed embankment of circa 4m high above existing ground level, set back from footpath within the existing grassed area and avoiding existing vegetation. The existing core path is to be retained adjacent to the back of the properties. Existing shrub vegetation along the path is to be positively managed.



**Viewpoint 3 – Core Path 001/36, Mungal Community Woodland**



Existing View



Proposed View

**Viewpoint 3 Information:**

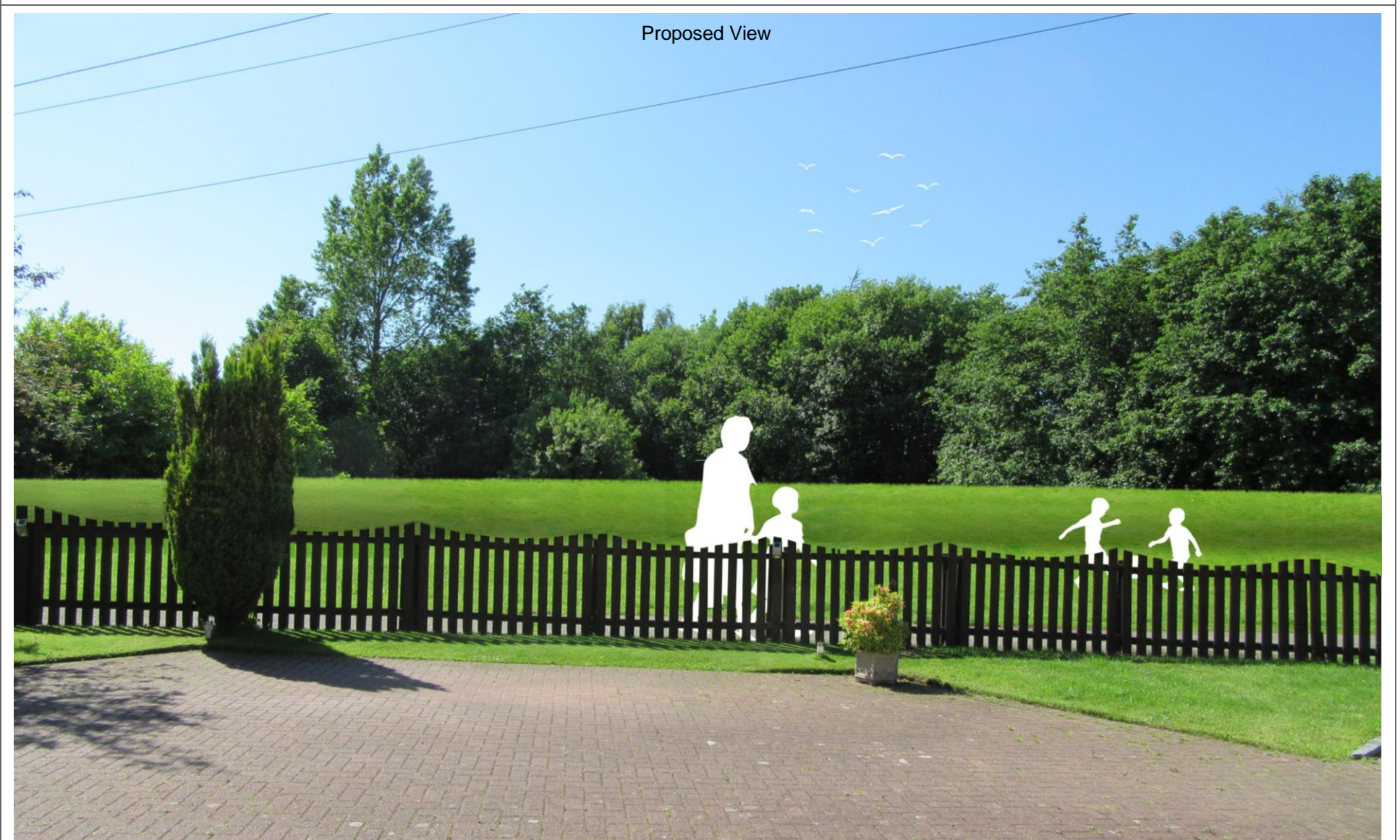
**Location:** Cell 1 (Area 2) Core Path 001/018, Mungal Community Woodland.

View south-east from Core Path 001/018 (also the River Carron Loop Path and Helix Around Town Tour (HArTT) and Bainsford Loop cycle paths) across Mungal Community Woodland and towards New Carron Village, in the central view.

**Scheme Description:** Proposed high grassed embankment in the open grassed area around 3.5m above existing ground level. Bund has been located to retain the majority of the existing vegetation. The embankment is framed by existing woodland on either side and backed by houses within New Carron Village, with the core path running alongside these properties.



Viewpoint 4 – Residential property, New Carron Village



**Viewpoint 4 Information:**

**Location:** Cell 1 (Area 2) Residential property, New Carron Village.

View west from the front driveway to two residential properties, adjacent to Core Path 001/020 (also the River Carron Loop Path, Bainsford Loop cycle path and HArTT).

**Scheme Description:** Proposed grassed embankment, set to the rear of the open space, which gradually increases in height from the junction with the Core Path on the east, up to a height of almost 1.5m where it adjoins existing woodland to the west. The route of Core Paths 001/020 and 004/017, Bainsford Loop, River Carron Loop, and HArTT continues in front of the embankment.



**Viewpoint 5 – Stenhouse Road Bridge, Carron**



Existing View



Proposed View

**Viewpoint 5 Information:**

**Location:** Cell 1 (Area 3) Stenhouse Road Bridge, Carron.

View east from Stenhouse Road Bridge to the River Carron and its vegetated embankment and the Dawson Mission beyond in the central view.

**Scheme Description:** Proposed flood wall at up to 2m in height at the back of the footpath alongside the river, with the path on the west side. Glass panels to be located at intervals along the walls to maintain a view and connection with the adjacent land, and to reduce the feeling of enclosure. Glass panel locations are shown indicatively and will be defined at detail design stage.



**Viewpoint 6 – Core Path 004/1196, the Dawson Mission, Carron**



**Viewpoint 6 Information:**

**Location:** Cell 1 (Area 3) Core Path 004/003, the Dawson Mission, Carron.

View west along Core Path 004/003 (also the River Carron Loop Path and the HARTT and Bainsford Loop cycle paths), adjacent to the Dawson Mission.

**Scheme Description:** Proposed approximately 2m high flood wall along the south of the core path adjacent to the riverside. The widened path has been raised to reduce the effect of the height of the wall. Loss of trees at the Dawson Mission to the left, are to be replaced with mitigation planting. Glass panels to be located at intervals along the wall to maintain a view and connection with the adjacent land, and to reduce the feeling of enclosure. The location of glass panels are shown indicatively and will be defined at detail design stage. Path at far end raises up to flow over the defences.



Viewpoint 7 – Core Path 009/1674, adjacent to the Chapel Burn, Carronshore



**Viewpoint 7 Information:**

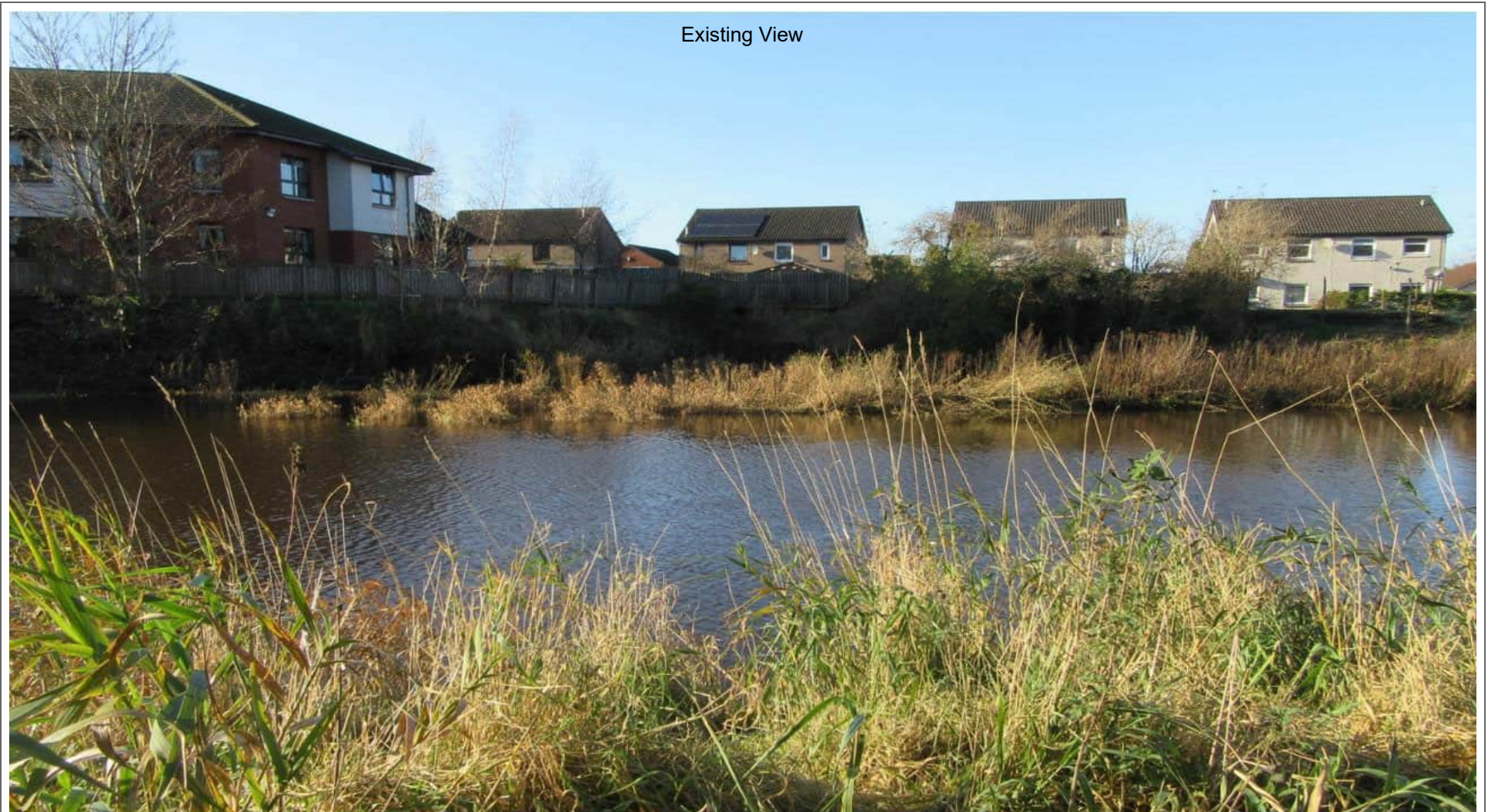
**Location:** Cell 1 (Area 4) Core Path 009/001, adjacent to the Chapel Burn, Carronshore.  
View south from Core Path 009/001 towards Chapel Burn and residential properties adjoining it.

**Scheme Description:** The burn is enclosed with flood walls on both sides. A proposed 0.6m high (approximate) flood wall is located on the far side of burn with fence on top, forming the boundary wall and providing privacy to residential properties. A flood wall of 1 to 1.2m high is located on the north side of the burn adjacent to the path. Mitigation planting in the form of large and small replacement trees is to replicate existing planting within the burn.





**Viewpoint 8 – Informal path adjacent to the River Carron, Carronshore**



Existing View



Proposed View

**Viewpoint 8 Information:**

**Location:** Cell 1 (Area 4) Informal path adjacent to the River Carron, Carronshore.  
View west from an informal path in the River Carron Meander Site of Importance for Nature Conservation (SINC). Houses within Carronshore are seen beyond the riverbank and Carrondale Care to the left.

**Scheme Description:** Proposed 0.5 to 1.3m high (approximate) flood wall on far riverbank. Existing boundaries to some of the properties to remain behind the wall. Mitigation planting would replace the loss of vegetation and reinstate the natural outlook.



**Viewpoint 9 – Southern end of Bowhouse Road, adjacent to Rannoch Park**



Existing View



Proposed View

**Viewpoint 9 Information:**

**Location:** Cell 4 (Area 2) Southern end of Bowhouse Road, adjacent to Rannoch Park.

View looking south, near the intersection of Bowhouse Road and Rannoch Road (Core Path 006/1368 runs along the far side of the road) towards an existing grassed embankment and row of Ash trees along the northern side of Rannoch Park.

**Scheme Description:** Proposed circa 0.7m high flood wall on top of the existing embankment with substitute tree planting to replace the row of Ash trees, which would need to be removed due to Chalara Ash Dieback disease.



**Viewpoint 10 – Abbots Road (B9132), adjacent to Zetland Park**



Existing View



Proposed View

**Viewpoint 10 Information:**

**Location:** Cell 4 (Area 1) Abbots Road (B9132), adjacent to Zetland Park.  
View south-east along Abbots Road (B9132) and the western edge of Zetland Park, including mature rows of trees either side of Grange Burn.

**Scheme Description:** Proposed 1.2m high flood wall along edge of Abbots Road with large substitute tree planting along the burn to replace the loss of the roadside avenue trees. The other parallel rows of existing trees within the park would be retained. A switchback ramp rises up to meet the raised bridge over the Grange Burn.



Viewpoint 11 – Core Path 006/1391, northern entrance to Zetland Park



**Viewpoint 11 Information:**

**Location:** Cell 4 (Area 1) Core Path 006/026 at the northern entrance to Zetland Park.

View south-west along Core Path 006/026 towards the B listed gates and stone pillars at the northern entrance of Zetland Park, as well as the war memorial (to the left) and mature vegetation including avenue trees along burn (right).

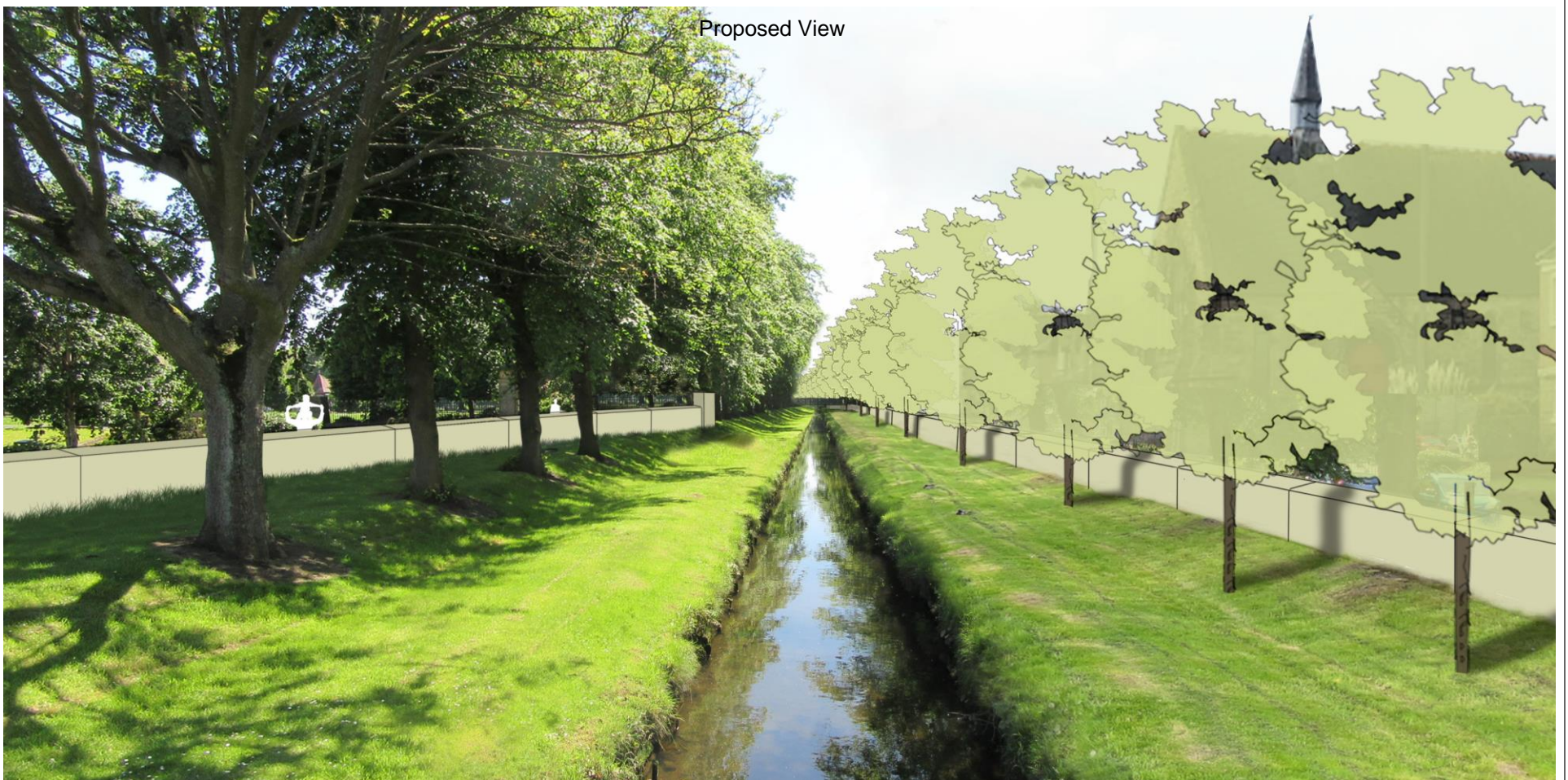
**Scheme Description:** A proposed flood wall, up to 1.5m high, is located adjacent to the footpath into Zetland Park. The proposed wall wraps around the end of the listed gate structure with a pillar (far right) and continues past it along the western side of path in the distance. Existing trees on the park side of the burn are mostly to be retained, with a replacement row of trees adjacent to the road on the far side of the burn.



**Viewpoint 12 – Dalratho Bridge, Zetland Park**



Existing View



Proposed View

**Viewpoint 12 Information:**

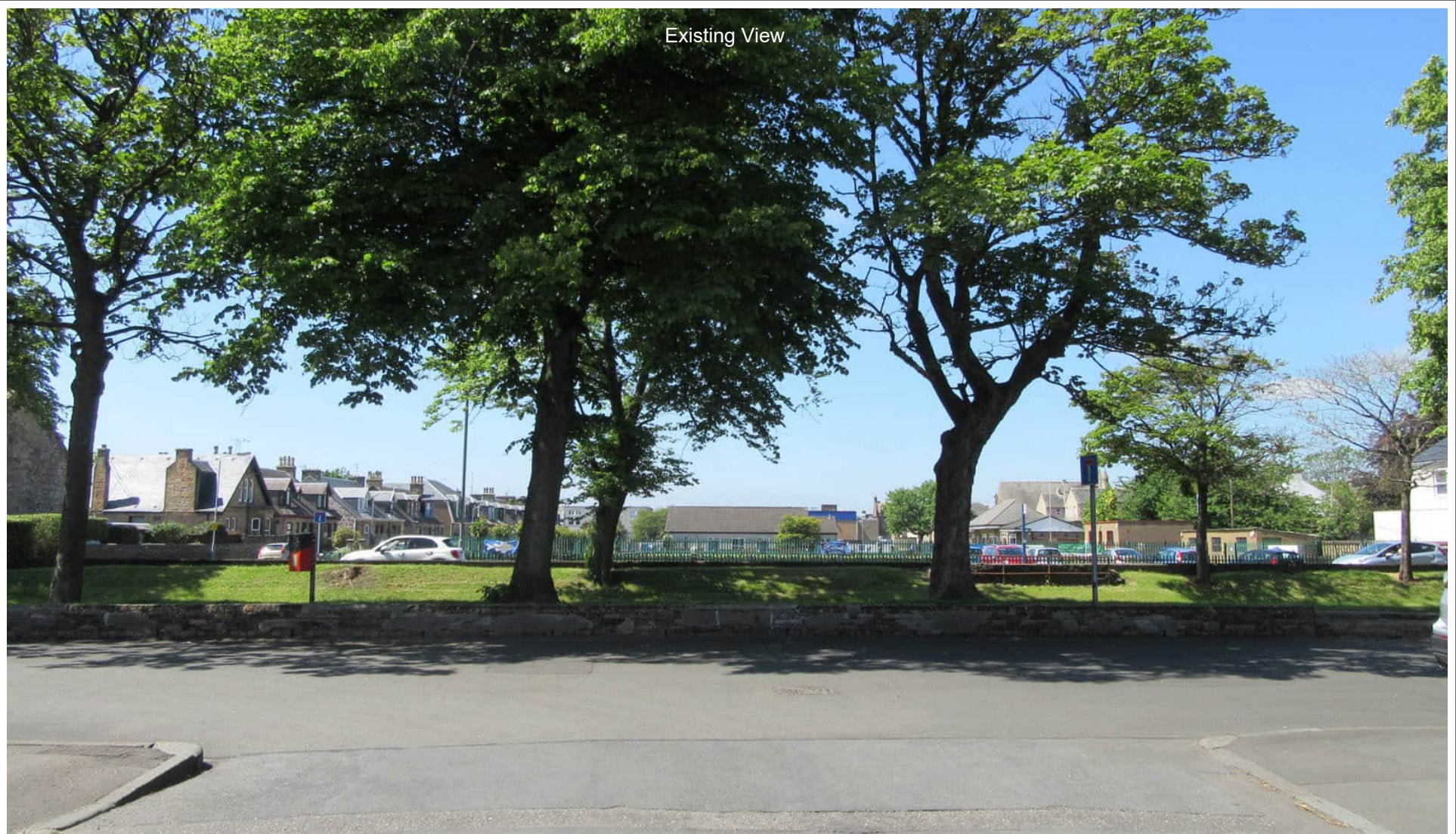
**Location:** Cell 4 (Area 1) Dalratho Bridge, Zetland Park.

View south-west along the Grange Burn from Dalratho Bridge, Abbotsgrange Church and houses are visible beyond mature trees to the right, with Zetland Park on the left.

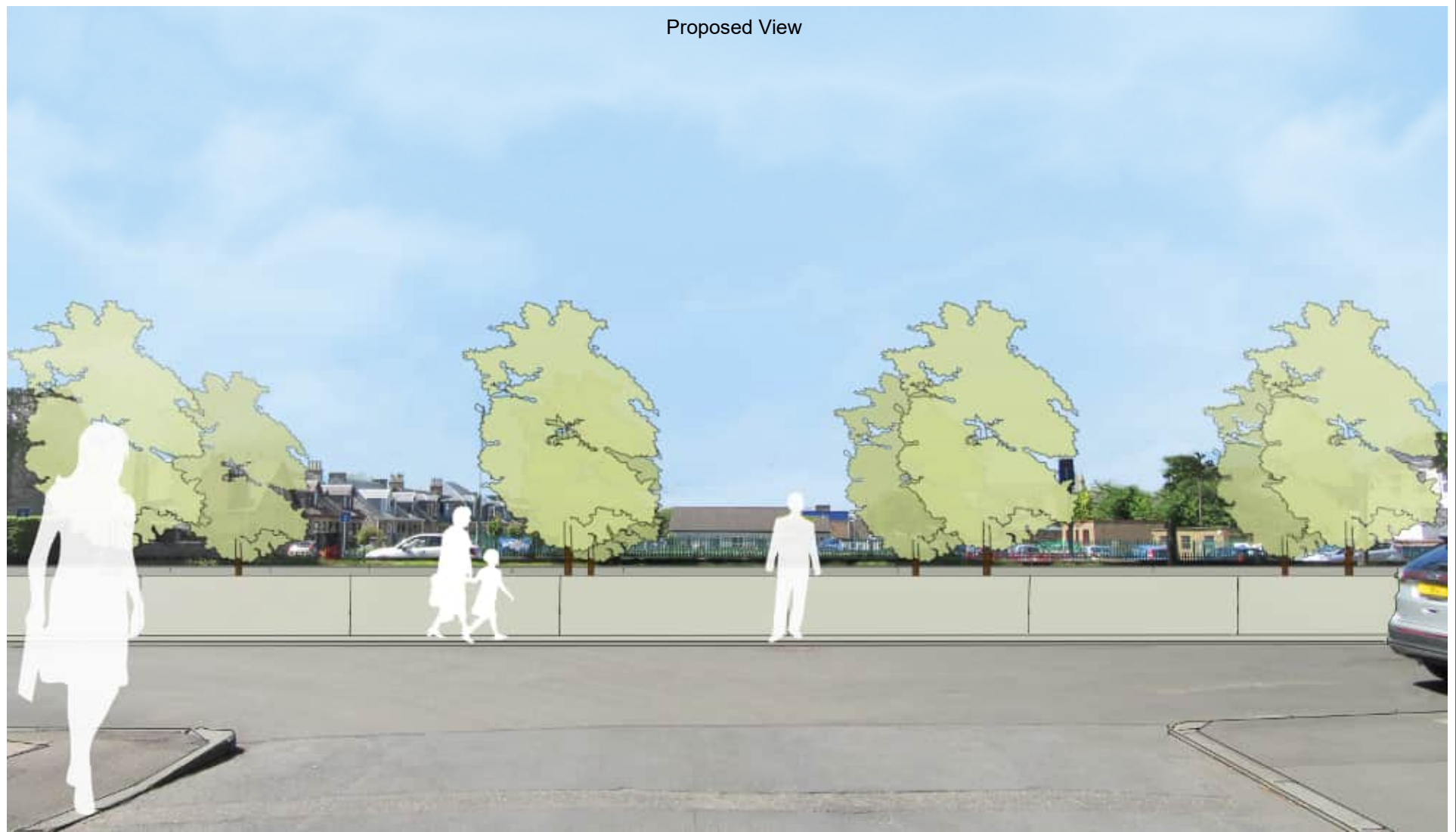
**Scheme Description:** Proposed flood wall around 1.3m high along the Grange Burn adjacent to Abbots Road on the right, and up to 1.37m high wall to Zetland Park path is located on the left. Substitute large trees are proposed, in a similar location to existing trees next to Abbots Road, to replace the loss of avenue trees and reinstate a green outlook. Majority of trees on the park (east) side of the burn to be retained. Riverbank to be reinstated.



Viewpoint 13 – Ronaldshay Crescent, Grangemouth



Existing View



Proposed View

**Viewpoint 13 Information:**

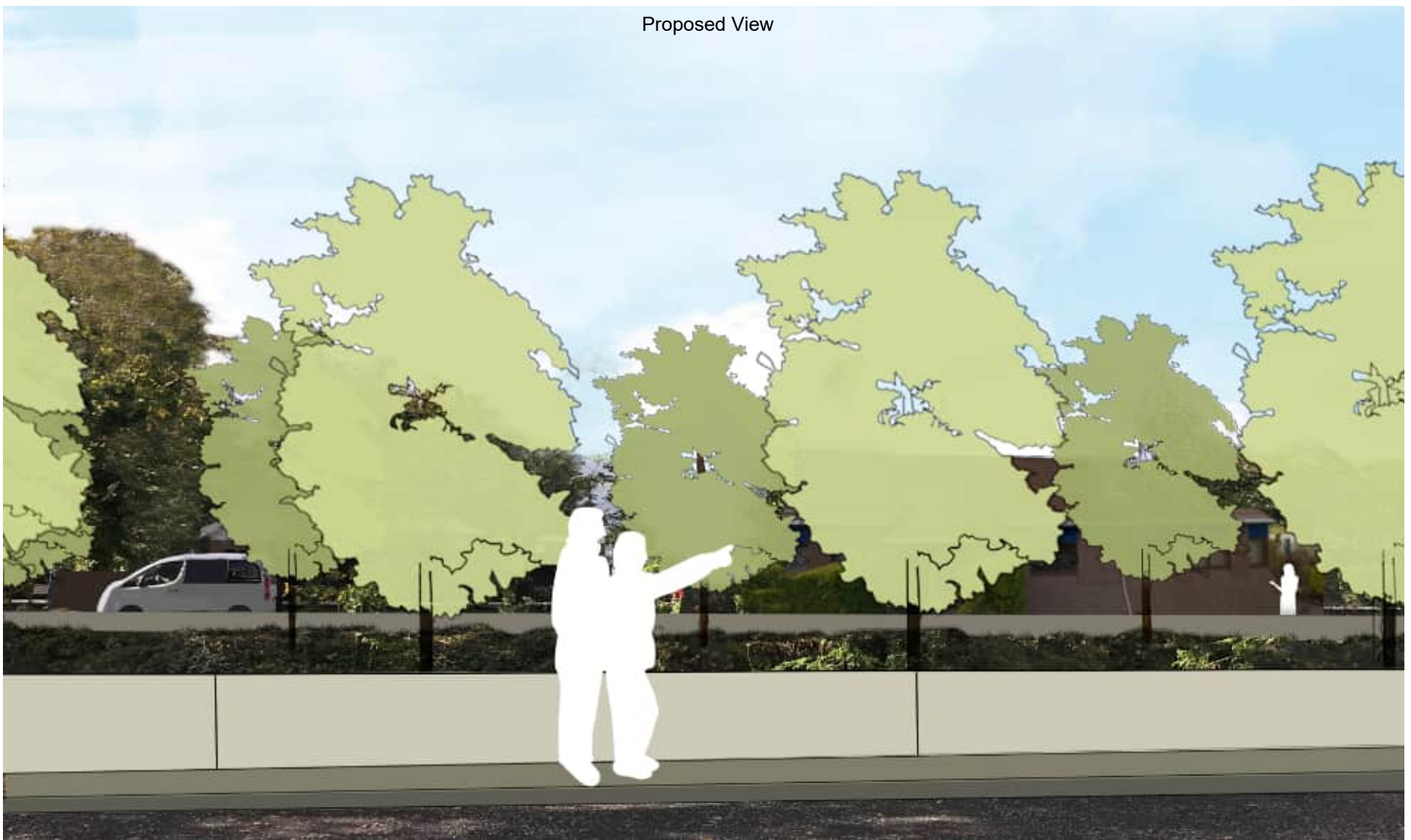
**Location:** Cell 4 (Area 1) Ronaldshay Crescent, Grangemouth.

View north-west from the corner of Park Road and Ronaldshay Crescent and adjacent to Core Path 006/028. The club house and cars parked within the carpark associated with the Grangemouth Bowling Club are visible in the far central and right view.

**Scheme Description:** Proposed approximately 0.8m high flood wall along Park Road (near-side) and just over 1m wall along Abbots Road (B9132), on far side of the Grange Burn, visible beyond. A proposed footpath along the front of the near-side wall (on Park Road) would replace an existing path. Substitute large trees, in a similar location to existing, to replace the loss of the avenue trees along the burn and reinstate a green outlook.



Viewpoint 14 – Grangeburn Road, Grangemouth



**Viewpoint 14 Information:**

**Location:** Cell 4 (Area 1) Grangeburn Road, Grangemouth.

View north-west towards the Grange Burn from the northern end of Grangeburn Road. Existing view towards commercial properties, seen in filtered views beyond vegetation along the burn.

**Scheme Description:** Proposed 0.5m (approximate) high flood walls on the near-side of the burn, with a slightly smaller wall on the opposite side of the burn, with a proposed footpath along the road in front of the near-side wall. Substitute large trees, in a similar location to existing, to replace the loss of avenue trees and reinstate a green outlook.



Viewpoint 15 – Taylor Court, Grangemouth



**Viewpoint 15 Information:**

**Location:** Cell 4 (Area 1) Taylor Court, Grangemouth.

View north from the intersection of Grangeburn Road and Taylor Court towards an existing embankment along Grange Burn with mature trees. Trees on either side of the burn currently help to screen the large warehouse beyond.

**Scheme Description:** Proposed 0.6m (approximate) high flood wall on top of the existing grass embankment. Substitute large trees are proposed in a similar location to existing, between the flood wall and road, to replace the loss of mature trees and reinstate a green outlook from this view. Existing vegetation on the far bank to be retained to help preserve the screening of the industrial units.





# Environmental Impact Assessment Report

Appendix B9.6 Landscape Character Baseline Report

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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



**GRANGEMOUTH**  
Flood Protection Scheme  
Protecting the heart of our communities

## Appendix B9.6 Landscape Character Baseline Report

### Introduction

NatureScot (previously SHN) define Landscape Character Assessment as:

*Landscape Character is created by the way the physical components come together and can be defined as "a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another". Although landscape character is also about experience and sense of place it is not about opinions or judgements on whether one landscape is considered better or worse than another.*

Landscape Character Assessment (NatureScot)

### Landscape Character Areas

In the 1990s SNH (now NatureScot) commissioned 30 regional LCA studies covering areas of Scotland. The Scheme lies within the 'Stirling to Grangemouth Landscape Character Area'. This is in the Midland Valley of Scotland, a relatively low-lying part of the country. It is quite diverse in character ranging from low lying arable farmland to large areas of upland pasture and moorland. The study areas encompass both the Landscape character types of; Lowland River Valley reference area E 'Falkirk to Denny Urban Fringe' and Coastal Margins reference area 'Grangemouth to Bo'ness Flats' as shown in Figure 1. This set of data was used in the scoping report.

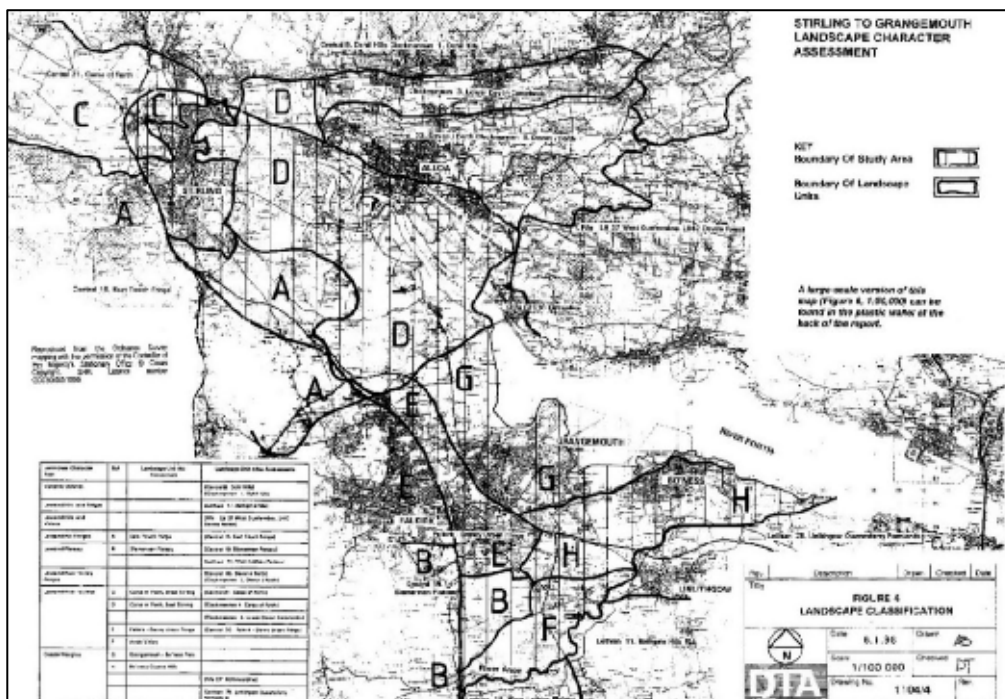


Figure 1: Landscape Character Areas No. 124, SNH, 1999

### Landscape Character Types

In 2019 NatureScot issued a new set of Landscape Character Type (LCT) maps and associated Landscape Character Type descriptions, which now supersede the 1990's LCA descriptions.

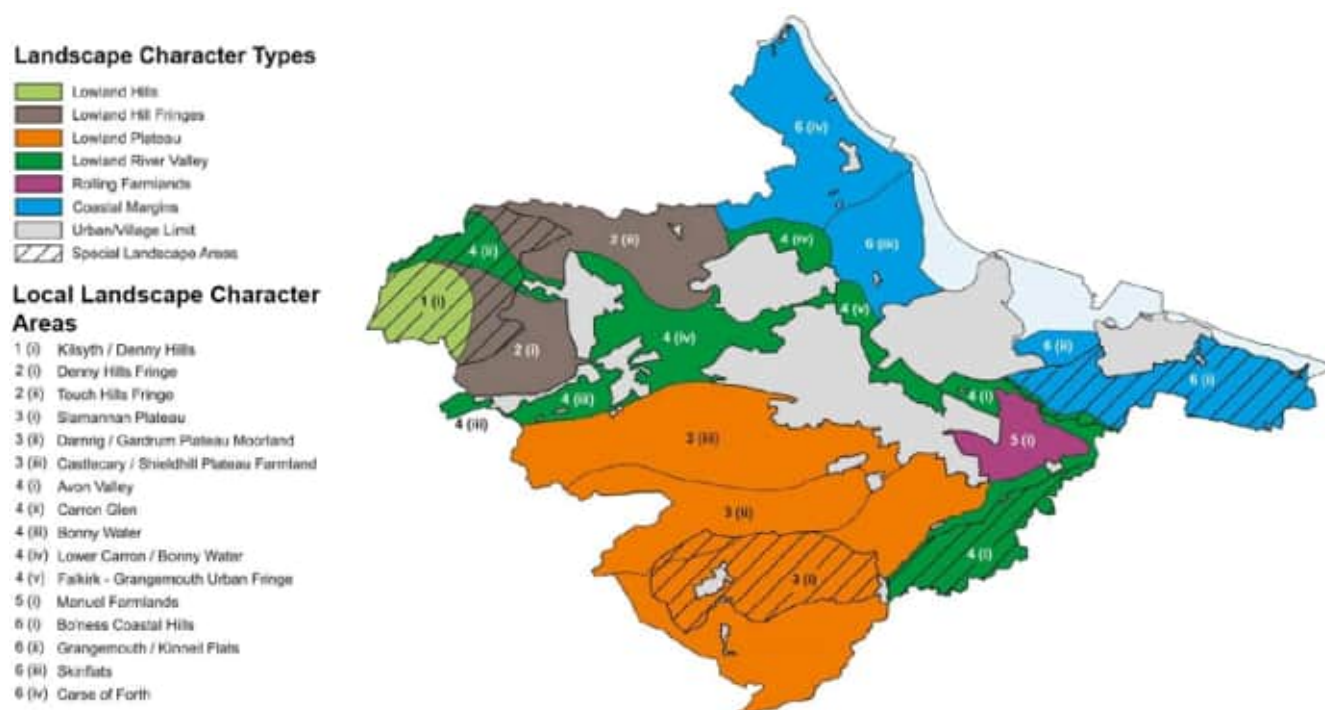
Falkirk Council, as part of SG09 (Landscape Character Assessment and Landscape Designations, July 2015), have acknowledged these Character Types and further defined the different local landscape characters found in the

Falkirk Council area in more detail. The guidance is intended to ensure that the existing landscape is protected and enhanced, and it defines how particular local development plan policies should be applied in practice.

### Falkirk Council SG09 Landscape Character Assessment

Policy GN02 Landscape in LDP2 (Falkirk Council, 2015) notes that the Council will *seek to protect and enhance landscape character throughout the council area in accordance with Supplementary Guidance SG09.*

Eight Landscape Character Types and Sixteen Local Landscape Character Areas (LLCA) have been defined in SG09, see Figure 2 below.



**Figure 2: Local Landscape Character Areas and the generic Landscape Character Types with Special Landscape Areas**

The Scheme features in the following LLCAs:

- LLCA 4(i) Avon Valley and SLA
- LLCA 4(iv) Lower Carron/Bonny Water
- LLCA 4(v) Falkirk-Grangemouth Urban Fringe
- LLCA 6 (ii) Grangemouth/Kinneil Flats
- LLCA 6 (iii) Skinflats
- LLCA Urban Areas.

However, due to the scale of the above LLCAs, it is not anticipated that these areas will be affected by the Scheme and therefore are not assessed further.

### Local Landscape Character Assessment

To make the classification of the local landscape character clear for this assessment, a number of Local Landscape Character Zones (LLCZ) have been defined, which are zoomed in areas affected by the Scheme. They are split into the following 15 zones, and similar character zones are grouped together where they contain similar landscape features (see Figure 3 **Error! Reference source not found.** and list of zones below):

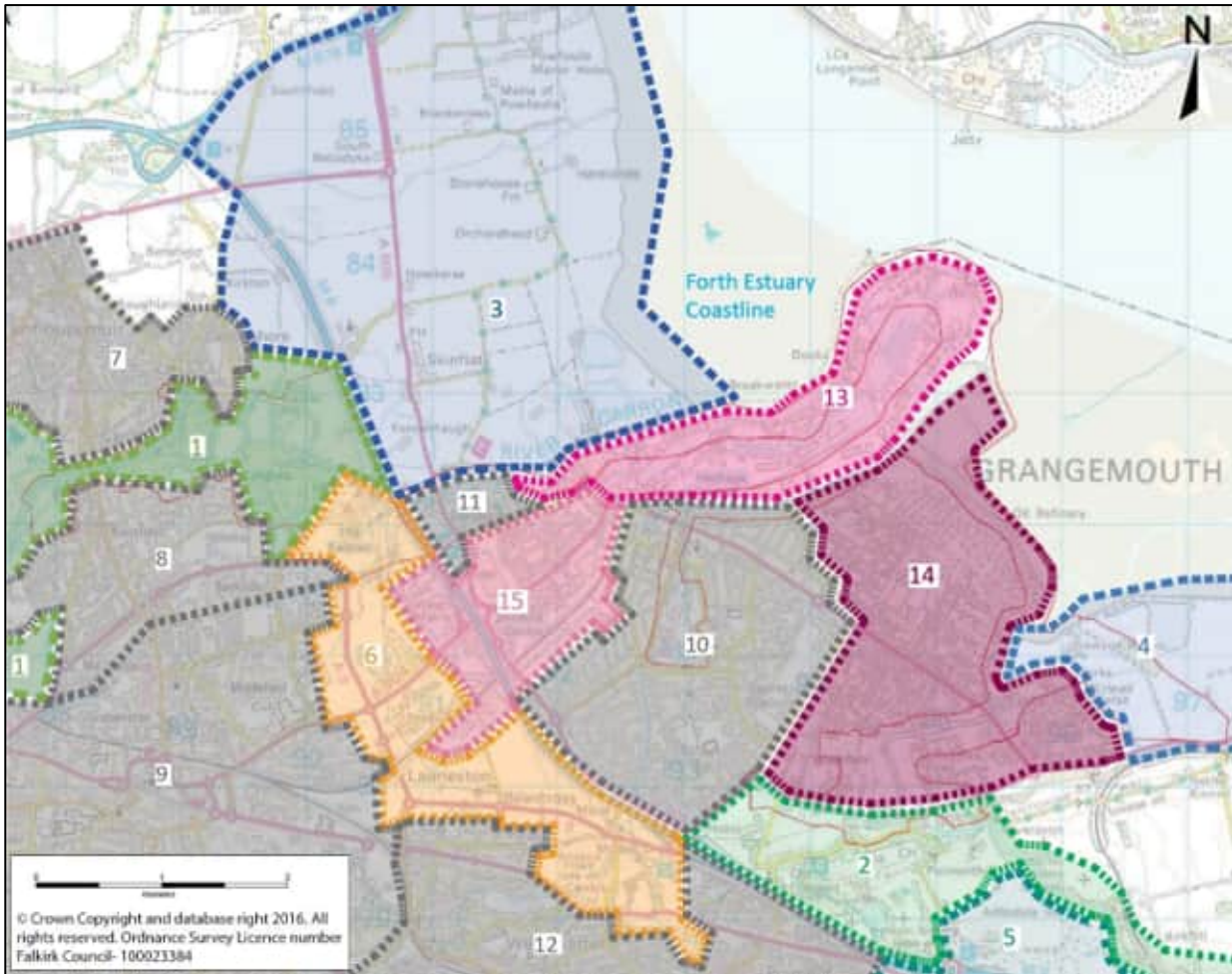


Figure 3: Local Landscape Character Zones

See table below for a key to the LLCZs.

**Table 2: Local Landscape Character Zones**

Local Landscape Character Zones					
Zones	River Valley	Farmland	Urban Fringe	Urban	Industrial
	1. Lower Carron River Valley	3. Skinflats Coastal Farmland	6. Falkirk/ Grangemouth Urban Fringe	7. Stenhousemuir/ Larbert / Carron	13. Grangemouth Ports
	2. Avon River Valley	4. Grangemouth/ Kinneil Flats Coastal Farmland		8. Bainsford	14. Grangemouth Petrochemical
		5. Manuel Rolling Farmland		9. Falkirk	15. Grangemouth Industrial Units (Various)
				10. Grangemouth	
				11. Glensburgh	
				12. Lauriston- Westquarter- Redding- Polmont	

The character of each LLCZ is described below with a plan of the area showing the extent of the character zone in red and the watercourses within the areas in blue.

The Character Zone plan is then overlaid with the Flood Cell boundaries within the zone to see how the Scheme interacts with the character zone. The character zone is changed to white for these drawings, with the Flood Cells shown in the colours on the Scheme Extents Plan (see Appendix A figure A1-1).

Photographs of aerial views and/or views from within each zone, are also included for each zone.

A table detailing the key characteristics of the zone (such as setting, prominent land use, open space, relationship/connection with the river) and comments on the 'likely relevant forces for change' and 'sensitives' (as noted in SG09 and elaborated on where appropriate).

The 'Capacity to Absorb Change' is also noted, which will be then taken onto the assessment table.

Each zone has a number of different characteristics in it, and the Scheme runs through only part of or adjacent to each zone. The nature of the receptor, meaning its sensitivity to any changes (as noted in each zone below), refers to the zone in general rather than specifically to the Flood Cell area as these have been covered in the specific Flood Cell landscape character assessment.

**Notes:**

- North is directly upwards on the page in all plans
- Representative images for each character area are taken from a mix of site photos and photos which have been credited to the owner

### 1. Lower Carron River Valley



Figure 4: Lower Carron River Valley Character Zone



Figure 5: Character Zone 1 with Flood Cell 1 Boundary (character zone has white boundary)



Figure 6: Photo 1 – Aerial view of Langlees & River Carron (P56022, Falkirk Archives)



Figure 7: Photo 2 - River Carron looking towards Carron residential area

Table 3: Lower Carron River Valley - Characteristics

Landscape Character Type	Lowland River Valleys – Central (152)
Setting	Adjoining the River Carron between Stenhousemuir and Bainsford
Topography	Flat river floodplain
Layout and pattern	Meandering river with high proportion of tree cover, adjacent to settlements
Buildings and material	Very few buildings within the zone, an area of industrial buildings to the south-west
Prominent land use	Recreation and farming
Public realm	Riverside walkways and paths through adjacent woodlands
Open space	Horse paddock and some open green space adjacent to river
Biodiversity	Riverbank vegetation, woodland areas
Access and connectivity	Network of paths run through green space and adjacent to river
Relationship to watercourses	Access paths run adjacent to the River Carron providing pedestrian and cycle access with clear view and good access to the river

- Likely Relevant Forces for Change

- Expansion of local conurbations for residential and industry resulting in an increased urbanisation in a rural landscape
- Developments resulting in loss of field boundary trees, roadside trees and hedgerows resulting in more open views
- Development resulting in loss of tree cover which provides valuable screening to urban edges
- Potential new woodlands
- Sensitivities within the LLCZ
  - River Carron corridor
  - Wildlife sites
  - Accessibility and views from/to surrounding settlements to the River Carron
  - Loss of/poor management of existing landscape elements such as woodland, tree groups, individual trees and stone walls and hedgerows that form field and road boundaries
- Capacity to Absorb Change
  - This area has a **high** sensitivity to change, and therefore a low capacity to absorb change, as it is a green corridor between a number of conurbations



## 2. Avon River Valley



Figure 8: Avon River Valley Character Zone

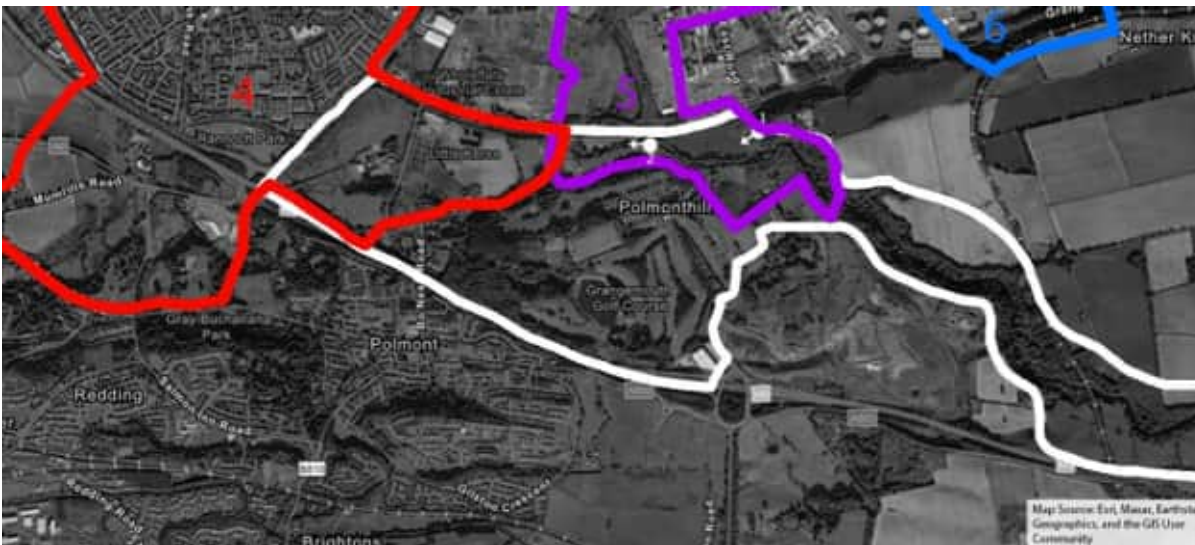


Figure 9: Character Zone 2 with Flood Cells 4, 5 and 6 Boundaries (character zone has white boundary)



Figure 10: Photo 1 – View looking East from road adjacent to Polmonthill



Figure 11: Photo 2 - View looking West along the River Avon at Jinkaboot bridge

Table 4: Avon River Valley - Characteristics

Landscape Character Type	Lowland River Valleys – Central (152)
Setting	Adjoining the River Avon, countryside SE of Grangemouth
Topography	Flat river valley, with adjacent rolling hills towards the M9
Layout and pattern	Meandering river with high proportion of tree cover towards the east (Polmont Woods), open fields dissected with minor roads
Buildings and material	Village of Old Polmont, hotel, golf club, artificial ski centre and some individual dwellings – mix of materials, such as render, brick and stone
Prominent land use	Recreation and farming
Public realm	Core paths, public access through woodland
Open space	Golf course, open fields adjacent to the Grange Burn and the River Avon, Churchyard in Old Polmont
Biodiversity	Riverbank vegetation, woodland areas, golf course/football pitches, marshy grassland
Access and connectivity	Core path network runs through the Polmont Woods, and along the A905, with another Core Path proposed for the west part Smiddy Brae to link to Polmont Woods, NCN 76 runs along the A905. Antonine Wall runs across the zone and is accessible in some locations
Relationship to watercourses	Limited access and views of the Grange Burn on the west of the zone, as screened by vegetation on both sides. Limited access and views also to the River Avon on the east apart from at crossing points. There are views towards the River Avon (over fields) from the A905 between Jinkaboot Bridge and Reddoch Road.

- Likely Relevant Forces for Change
  - Road improvements and other infrastructure resulting in tree and hedgerow loss
  - Tourism/hotel, recreational and canal related developments and expansion of existing developments
  - Poor management of some woodland
  - Potential new woodland planting
- Sensitivities within the LLCZ
  - High sensitivity to tall or large structures on the highest ground on the valley edges due to the extensive visibility and on lower ground where the strong enclosed rural valley character would cause such features to interrupt views and appear out of scale.
  - The area is sensitive to the loss and lack of management of the existing defining landscape elements (such as the strong existing woodland cover, shelterbelts, tree groups, individual trees, hedgerows, stone walls) loss of these features would reduce the intimate wooded valley character and erode the enclosure pattern.

- The east of the River Avon is covered by the Slammanan Plateau/Avon Valley Special Landscape Area.
  - The Antonine Wall World Heritage Site runs through the zone. The setting of this, and views from it, together with the proximity to Polmont, indicates a high level of sensitivity to any development that is poorly screened or designed.
- Capacity to Absorb Change
    - This area has a **high** sensitivity to change, and therefore a low capacity to absorb change, as it is a mostly flat open green space on the edge of the town with a UNESCO site within it.

### 3. Skinflats Coastal Farmland



Figure 12: Skinflats Coastal Farmland Character Zone



Figure 13: Character Zone 3 with Flood Cells, 1, 2 and 3 Boundaries (character zone has white boundary)



Figure 14: Photo 1 – Aerial view of the Skinflats area & River Carron facing NE (P56303, Falkirk Archives)



Figure 15: Photo 2 - View towards the River Carron from Newton Road facing east

Table 5: Skinflats Coastal Farmland - Characteristics

Landscape Character Type	Carselands (153)
Setting	Open farmland north of Grangemouth
Topography	Broad flat floodplain
Layout and pattern	Fields patterns, bounded by the River Carron to the South, the Forth Estuary to the East and motorways to the North and West
Buildings and material	Skinflats village, scattered farmsteads – mostly modern rendered properties
Prominent land use	Predominantly open agriculture, with a small settlement
Public realm	Core path network along the River Carron and through the area, recreation ground in Skinflats Village
Open space	Farmland and some scrubland
Biodiversity	Crops, Scrubland, hedgerows, open farmland for flocks of wintering geese
Access and connectivity	Links through space via Core Path networks, NCN 76
Relationship to watercourses	Open views towards the River Carron at the west side of the southern boundary, view mostly obscured by a bund towards the east. Area very flat so views of Forth Estuary only from next to it.

- Likely Relevant Forces for Change
  - Expansion of Carronshore and Skinflats residential areas in long term, resulting in increased urbanisation in a rural landscape
  - Land reclamation and coastal realignment/flood projects
  - Loss of hedgerows and hedgerow trees to development and road improvements, resulting in more open views.
  - Development resulting in potential loss of trees/tree group cover which provide valuable screening to the urban edge, resulting in more open views.
  - Potential new woodland planting
- Sensitivities within the LLCZ
  - The flat, low lying and generally open character of the area along with limited hedgerow cover allows long views within this landscape character area and therefore make any changes sensitive. All development will therefore have the potential to be highly visible over a long distance and interrupt views
  - Tree cover is valuable and highly sensitive to removal or a lack of management. However, the open flat character of the area means that a balance must be maintained between open areas and woodland
  - National Cycle Route 76 and Core Paths are also sensitive visual receptors to development due to the generally open and flat character of the area.
- Capacity to Absorb Change

- This area has a **medium** sensitivity to change, and therefore a medium capacity to absorb change, as although it is very open, it has some tolerance for change due to its land use.



#### 4. Grangemouth/Kinneil Flats Coastal Farmland

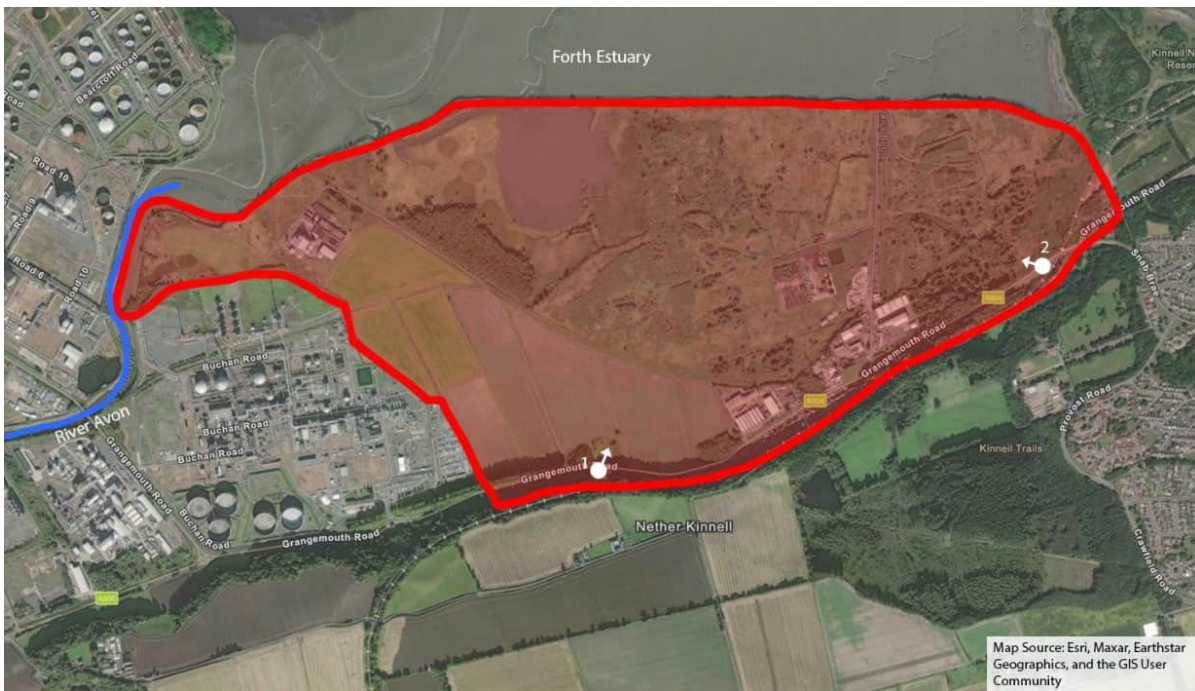


Figure 16: Grangemouth/Kinneil Flats Coastal Farmland Character Zone

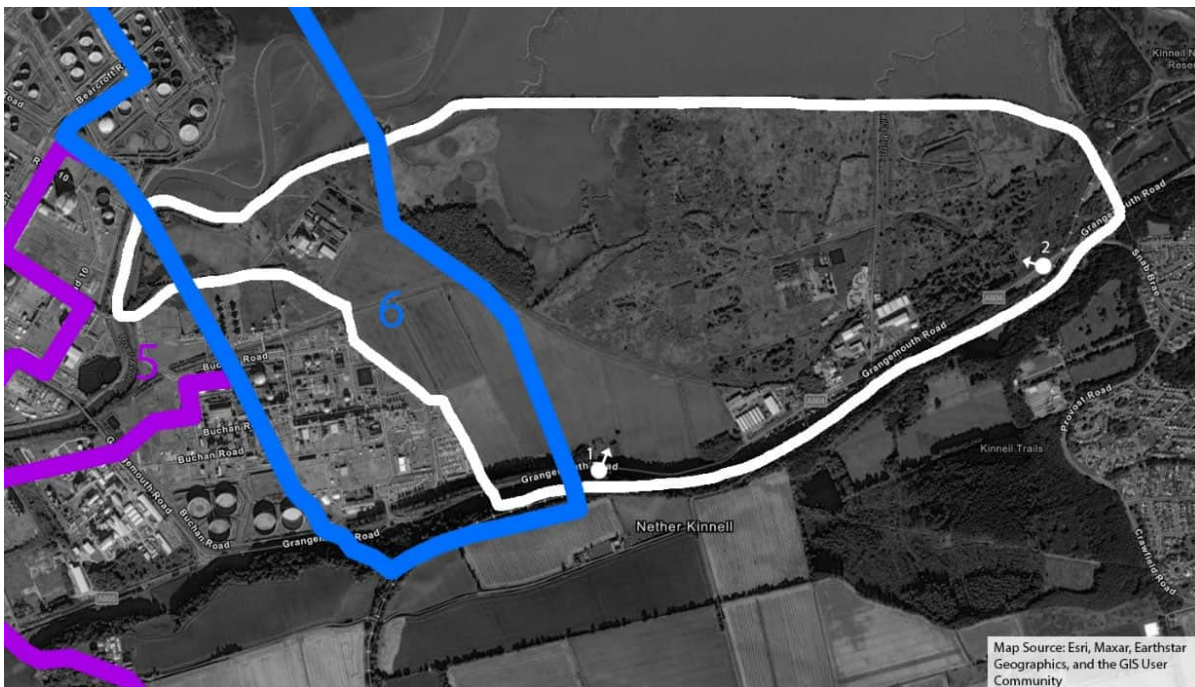


Figure 17: Character Zone 4 with Flood Cells 5 and 6 Boundaries (character zone has white boundary)



Figure 18: Photo 1 - View looking NE from A904



Figure 19: Photo 2 - View looking NW from A904

**Table 6: Grangemouth/Kinneil Flats Coastal Farmland - Characteristics**

Landscape Character Type	Coastal Farmland – Central (155)
Setting	Coastal open land between Grangemouth and Bo’ness
Topography	Broad flat floodplain with lagoon/wetland
Layout and pattern	Fields patterns, open scrubland/reclaimed saltmarsh, small area of woodland, lagoon
Buildings and material	Industrial (Kinneil Kerse recycling centre, sewage works), small number of stone/rendered dwellings adjacent to A904
Prominent land use	Agriculture, industry, reclaimed saltmarsh with lagoon
Public realm	None
Open space	Farmland, saltmarsh and lagoon
Biodiversity	The most important waterbird high tide roost within the Inner Forth
Access and connectivity	Limited
Relationship to watercourses	The saltmarshes are part of the Firth of Forth SPA, but not accessible.  Access and views of the River Avon, to the west of this area, are limited as this is a private land owned by Scottish Water as part of the Kinneil Kerse Waste Water Treatment Works

- Likely Relevant Forces for Change
  - Loss of the few remaining tree and hedgerows, resulting in more open views
  - Expansion of waste water treatment facilities, recycling facilities and petrochemical plant, resulting a loss of greenspace.
- Sensitivities within the LLCZ
  - The adjacent Forth Estuary is a designated SPA and SSSI and there is sensitivity to development on nature conservation grounds.
  - Existing coastal native tree and shrub cover in the eastern part of the area, which contributes to providing some structure and screening and contributes to the setting of Bo’ness.
  - Limited landscape sensitivity in the north western part of the area due to the dominating effect of the Grangemouth complex.
  - Residential and small industrial sensitivities to any development which would form a coalescence of Bo’ness and Grangemouth.
- Capacity to Absorb Change
  - This area has a **high** sensitivity to change, and therefore a low capacity to absorb change, due to the designated landscapes areas within the zone.

### 5. Manuel Rolling Farmland



Figure 20: Manuel Rolling Farmland Character Zone

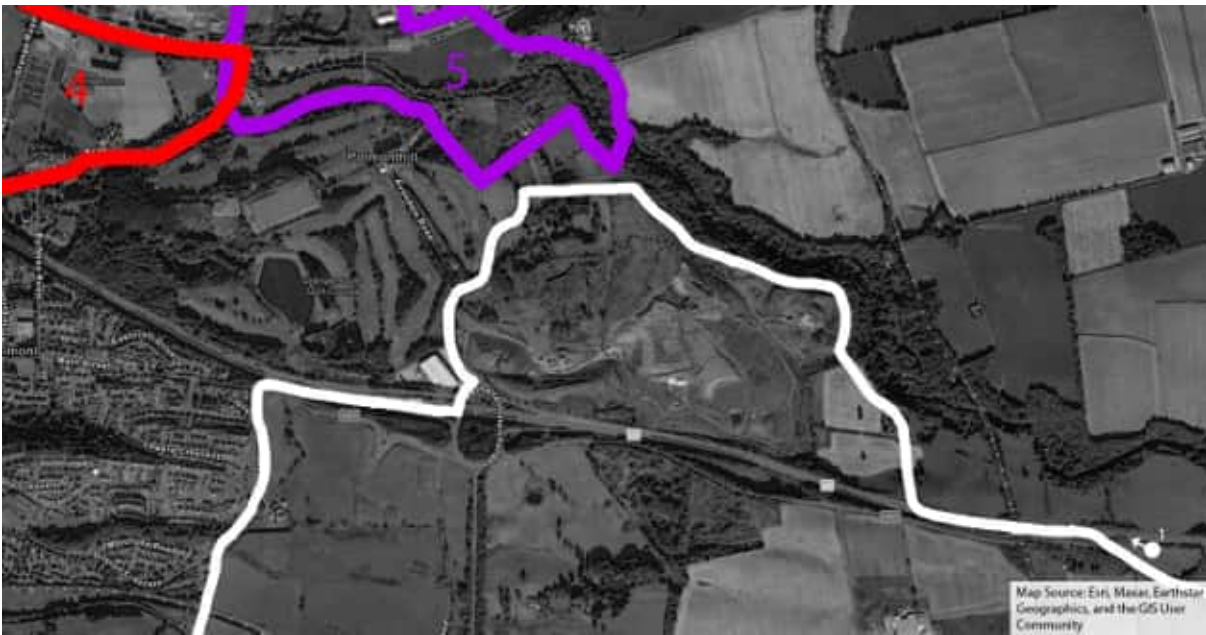


Figure 21: Character Zone 5 with Flood Cells 4 and 5 Boundaries (character zone has white boundary)



Figure 22: Photo 1 – Aerial View looking north west towards Grangemouth (P57420, Falkirk Archives)

**Table 7: Manuel Rolling Farmland - Characteristics**

Landscape Character Type	Coastal Farmland – Central (155)
Setting	Open land east of Polmont inclusive of; Landfill north of M9, and rolling hills south of M9
Topography	Large scale open, low-lying rolling hill landforms, sloping towards the River Avon
Layout and pattern	Farmland and landfill separated by busy motorway
Buildings and material	Listed ruined historic buildings of Avondale House and Lathallan House, and industrial buildings associated with landfill
Prominent land use	Grazing, landfill
Public realm	None
Open space	Farmland, landfill
Biodiversity	Open fields and woodland/tree hedge boundaries
Access and connectivity	Limited access apart from roads which run through the zone
Relationship to watercourses	None

- Likely Relevant Forces for Change
  - Expansion of Polmont eastwards to A801, increasing urbanisation.
  - Enabling developments for renovation of old buildings and sites.
  - Landfill/recycling facilities and expansion, causing a reduction in greenspace.
  - Road improvements and other infrastructure resulting in loss of trees and hedgerows and lack of their management and opening views.
- Sensitivities within the LLCZ
  - The higher ground within the area is particularly sensitive to large or very tall structures, due to the potential for visibility over the wider area.
  - Character area is particularly sensitive to the loss of the existing defining landscape elements, or to a lack of management of these features (e.g. existing woodlands, shelterbelts, tree groups, hedgerows, stone walls).
  - Sensitive to the expansion of the adjacent settlements.
- Capacity to Absorb Change
  - This area has a **medium** sensitivity to change, and therefore a medium capacity to absorb change, as although it is very open, it has some tolerance for change due to its land use.

## 6. Falkirk/Grangemouth Urban Fringe

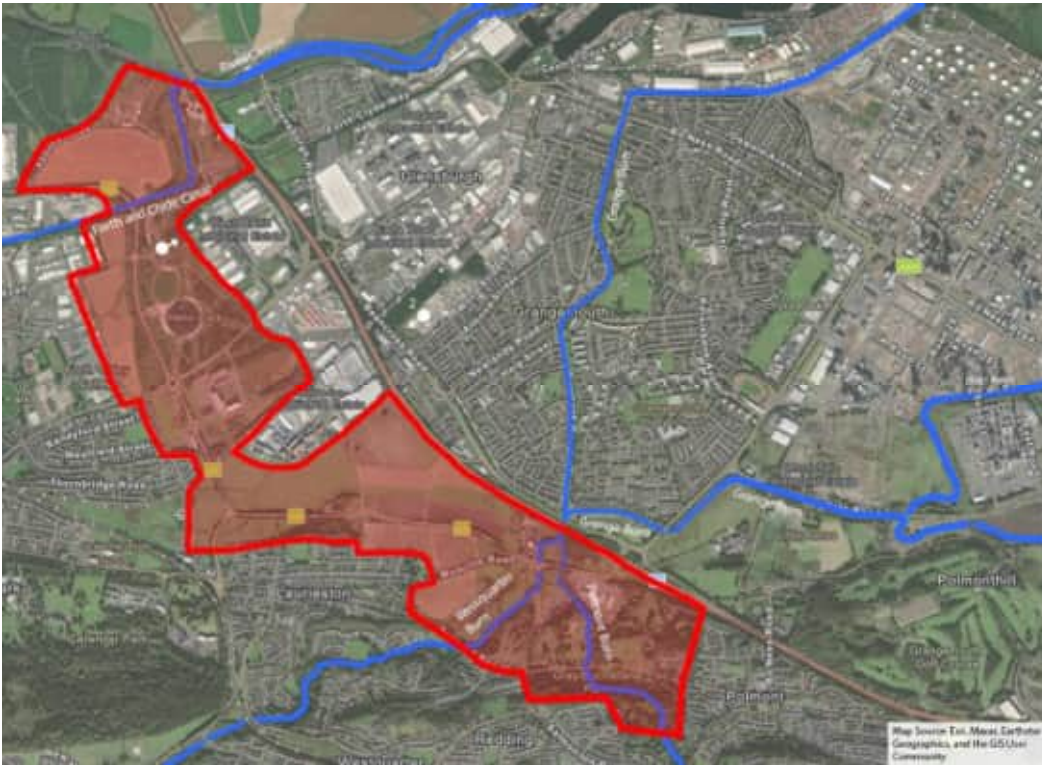


Figure 23: Falkirk/Grangemouth Urban Fringe Character Area



Figure 24: Character Zone 6 with Flood Cells 1, 2 and 4 Boundaries (character zone has white boundary)



**Figure 25: Photo 1 – Aerial View looking north-east over West Mains Industrial estate and Grangemouth Road (P57472, Falkirk Archives)**



**Figure 26: Photo 2 – Aerial view looking south of warehousing, the M9 and railway sidings at Fouldubs, Grangemouth (P57459, Falkirk Archives)**



**Table 8: Falkirk/Grangemouth Urban Fringe - Characteristics**

Landscape Character Type	Lowland River Valleys – Central (152)
Setting	Open land between Grangemouth and Falkirk
Topography	Flat floodplain
Layout and pattern	Field pattern, parklands
Buildings and material	Modern – football stadium, fire station, park buildings, commercial, new distillery
Prominent land use	Agriculture, recreation
Public realm	Helix Park, with numerous Core Paths
Open space	Majority of area consists of fields, parkland
Biodiversity	Woodland and parkland, with field boundaries also contributing
Access and connectivity	Numerous Core Paths and access, route of the Antonine Wall between the M9 and Lauriston
Relationship to watercourses	Forth and Clyde Canal runs along the side of Helix Park with towpath access, the Grange Burn runs across the south of the area, but is not accessible within the zone

- Likely Relevant Forces for Change
  - Urban expansion, particularly industrial and business parks, resulting in loss of greenspace.
  - Recreational development particularly associated with canal and cycle paths.
  - Further loss of field structure and associated boundary trees and hedgerows, opening views.
  - Potential new woodland planting.
  - Development resulting in a loss of tree cover which provides valuable screening to the urban edge.
- Sensitivities within the LLCZ
  - The area is particularly sensitive to further infrastructure development and large industrial development on its edges which could further erode the setting of the locally accessible and highly valued features (Helix park, watercourses, Antonine Wall) and the views out from them.
  - Accessibility and views of landscape from adjacent residential areas are sensitive to any development. Particular issues are poorly screened and designed development and the loss of, or poor management of, existing landscape elements that define the area.
- Capacity to Absorb Change
  - This area has a **high** sensitivity to change, and therefore a low capacity to absorb change, due to its highly valued features (including designated landscape features), and its location between two large towns.

7. Stenhousemuir/Larbert/Carron Urban

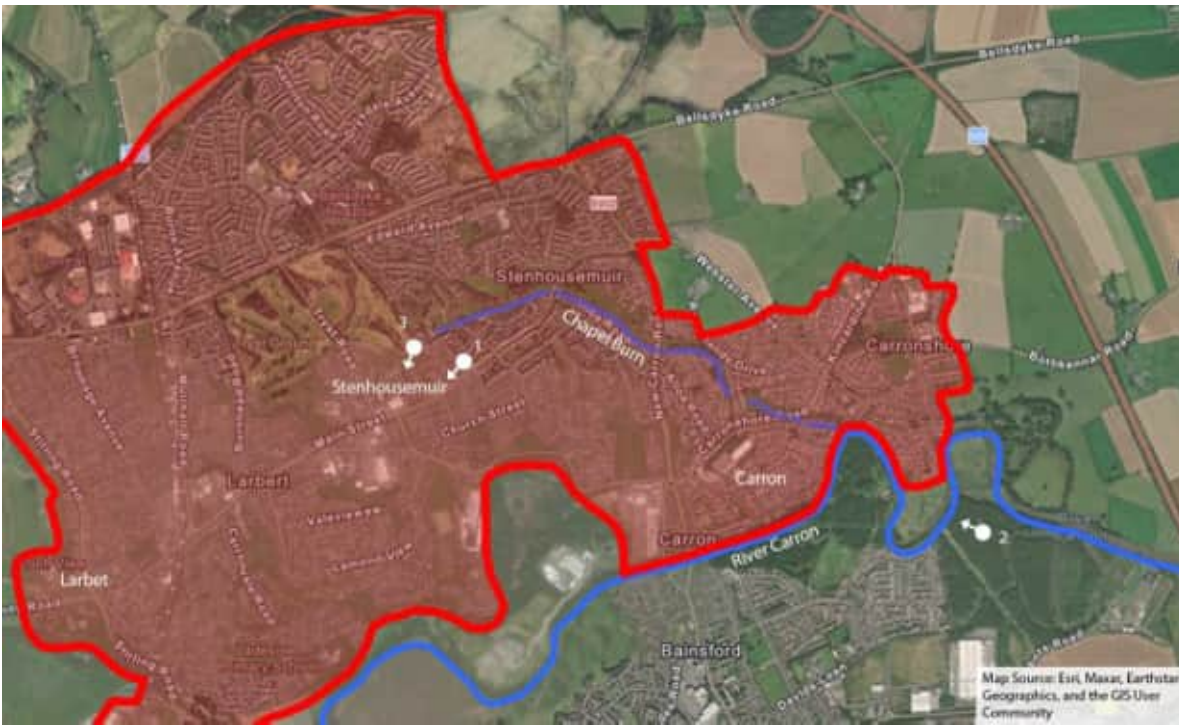


Figure 27: Stenhousemuir/Larbert/Carron Urban Character Zone



Figure 28: Character Zone 7 with Flood Cells 1 and 4 Boundaries (character zone has white boundary)



Figure 29: Photo 1 – Typical Street in Stenhousemuir



Figure 30: Photo 2 – Stenhousemuir town centre



Figure 31: Photo 3 – Aerial view over Stenhousemuir football club stadium

Table 9: Stenhousemuir - Characteristics

Landscape Character Type	Urban
Setting	Settlements north of Falkirk
Topography	Flat valley floor
Layout and pattern	Mainly residential properties, with some schools, a golf course and some green corridors
Buildings and material	Residential settlement; mix of ages and materials –mainly render and brick
Prominent land use	Housing, recreation
Public realm	Core path network throughout the zone
Open space	Golf course, Cricket club, parks, cemetery
Biodiversity	Street trees, parkland, gardens
Access and connectivity	Core path network, streets
Relationship to watercourses	River Carron located to the south of zone; Chapel Burn runs through the housing

- Likely Relevant Forces for Change
  - Urban expansion inside and outside of zone boundary, resulting in the loss of green space
  - Recreational development particularly associated with rivers and cycle paths.
- Sensitivities within the LLCZ
  - Accessibility and views of landscape and watercourse from residential properties are sensitive to any development.
  - Existing open green spaces are sensitive to developments in the area, as they are interspaced between a high-density housing, and provide relief from the mass of buildings.
- Capacity to Absorb Change
  - This area has a **low** sensitivity to change, and therefore a high capacity to absorb change, due to the largely urban nature of the zone.

### 8. Bainsford Urban



Figure 32: Bainsford Urban Character Zone



Figure 33: Character Zone 8 with Flood Cell 1 Boundary (character zone has white boundary)



Figure 34: Photo 1 –Aerial Photo of Bainsford (P46070, Falkirk Archives)



Figure 35: Photo 2 –Typical new housing estate



Figure 36: Photo 3 – Green corridor

Table 10: Bainsford Urban - Characteristics

Landscape Character Type	Urban
Setting	Village north of Falkirk
Topography	Flat valley floor
Layout and pattern	Mainly residential properties, with two primary schools, and an industrial area to the south
Buildings and material	Residential settlement; mostly modern – brick and render, and new industrial
Prominent land use	Housing
Public realm	A small number of Core Paths, Dawson Park
Open space	Dawson Park, area west of Asda DC, pocket parks
Biodiversity	Street trees, parkland, gardens
Access and connectivity	Core Path network, streets
Relationship to watercourses	River Carron located to the north of zone, but views are blocked by woodland; Forth and Clyde Canal runs along the south of the zone with footpath access.

- Likely Relevant Forces for Change
  - Urban expansion inside and outside of zone boundary, particularly in existing open, unused land
  - Recreational development particularly associated with canal and cycle paths.
- Sensitivities within the LLCZ
  - Accessibility to the landscape and watercourses from residential properties are sensitive to any development.
  - The landscape/open spaces are sensitive to any future development due to the high density of buildings
  - Existing open green spaces are sensitive to developments in the area, as they are interspaced between a high-density housing, and provide relief from the mass of buildings.
- Capacity to Absorb Change
  - This area has a **low** sensitivity to change, and therefore a high capacity to absorb change, due to the largely urban nature of the zone.

### 9. Falkirk Urban



Figure 37: Falkirk Urban Character Zone



Figure 38: Character Zone 9 with Flood Cells 1 and 4 Boundaries (character zone has white boundary)





**Figure 39: Photo 1 - Aerial view north-west of Falkirk High Station and the Union Canal (P57406, Falkirk Archives)**



**Figure 40: Photo 2 - Aerial view looking west over East Bridge Street and Callendar Park (P57473, Falkirk Archives)**

**Table 11: Falkirk Urban - Characteristics**

Landscape Character Type	Urban
Setting	Large town
Topography	Flat valley floor
Layout and pattern	Town centre with retail and mixed-use developments, and large residential areas
Buildings and material	Residential - brick, render and stone, modern retail park, modern commercial, historic Callendar House – stone, render
Prominent land use	Retail, mixed use, housing
Public realm	Some Core Paths through the zone, Callendar Park, Victoria Park, some smaller green spaces, town centre public realm
Open space	Callendar Park, Victoria Park, some smaller green spaces
Biodiversity	Street trees, parkland, gardens, woodland
Access and connectivity	Core Path network, streets
Relationship to watercourses	Forth and Clyde Canal runs along the north of the zone with footpath access. Westquarter Burn runs to the south of the zone

- Likely Relevant Forces for Change
  - Urban expansion inside and outside of zone boundary, particularly industrial and business parks.
  - Development of any existing open, unused land.
  - Recreational development particularly associated with canal and cycle paths.
  - Development resulting in a loss of tree cover providing valuable screening to urban edge.
- Sensitivities within the LLCZ
  - Accessibility and views of open and green spaces in the town centre are sensitive to any development due to the high density of buildings
  - Existing open green spaces are sensitive to developments in the area, as they are interspaced between a high-density of housing, and provide relief from the mass of buildings.
  - The area is particularly sensitive to further infrastructure development and large industrial development on its edges which could further erode the setting of the locally accessible and highly valued features (Helix park, watercourses, Antonine Wall) and the views out from them.
  - Accessibility and views of landscape from residential areas are sensitive to any development. Particular issues are poorly screened and designed development and the loss of, or poor management of, existing landscape elements that define the area.
- Capacity to Absorb Change
  - This area has a **medium** sensitivity to change, and therefore a medium capacity to absorb change, as although it is largely urban in nature and therefore generally tolerant to absorbing change, it also has some locally valued landscapes within the zone.

10. Grangemouth Urban



Figure 41: Grangemouth Urban Character Zone



Figure 42: Character Zone 10 with Flood Cells 1, 2, 4, 5 and 6 Boundaries (character zone has white boundary)



Figure 43: Photo 1 - Grange Burn



Figure 44: Photo 2 - Zetland Park



Figure 45: Photo 3 - Aerial view looking north-west towards Grangemouth (P46038, Falkirk Archives)

**Table 12: Grangemouth Urban - Characteristics**

Landscape Character Type	Urban
Setting	Large town
Topography	Flat valley floor
Layout and pattern	Town centre with retail, schools and large residential areas
Buildings and material	Residential – mostly render, with some older stone houses to the north, Schools – modern, industrial - modern
Prominent land use	Mostly housing, small areas of retail, mixed use,
Public realm	Some Core Paths through the zone, Zetland Park, Rannock Park, Inchyra Park, some smaller green spaces
Open space	Zetland Park, Rannock Park, Inchyra Park, some smaller green spaces
Biodiversity	Street trees, parkland, gardens
Access and connectivity	Core Path network, streets, NCN76
Relationship to watercourses	Grange Burn runs through the centre of the zone alongside Zetland Park, where it was canalised. Footpaths are adjacent to it, with easy access

- Likely Relevant Forces for Change
  - Urban expansion inside and outside of zone boundary, particularly industrial and business parks, resulting loss of greenspace.
  - Development of any existing open, unused land.
  - Recreational development particularly associated with the Grange Burn and NCN76 cycle path.
  - Development resulting in a loss of tree cover which provides valuable screening to urban edge.
- Sensitivities within the LLCZ
  - Accessibility and views of open and green spaces in the town centre are sensitive to any development due to the high density of buildings
  - Existing open green spaces are sensitive to developments in the area, as they are interspaced between a high-density of housing, and provide relief from the mass of buildings.
  - The area is particularly sensitive to further infrastructure development and large industrial/petrochemical developments on its edges which could further erode the setting of the locally accessible and highly valued features (adjacent Helix Park, and watercourses) and the views out from them.
  - Accessibility and views of landscape from residential areas are sensitive to any development. Particular issues are poorly screened and designed development and the loss of, or poor management of, existing landscape elements that define the area.
  - Access and views along the Grange Burn are sensitive to any change due to its open location in the centre of town, its proximity to Zetland Park and it also being located opposite housing.
  - Area of Townscape Value covers part of the town.

- Capacity to Absorb Change
  - This area has a **medium** sensitivity to change, and therefore a medium capacity to absorb change, as although it is largely urban in nature and therefore generally tolerant to absorbing change, it also has some locally valued landscapes within the zone.

11. Glensburgh Urban



Figure 46: Glensburgh Urban Character Zone



Figure 47: Character Zone 11 with Flood Cells 1, 2, 3 and 4 Boundaries (character zone has white boundary)



**Figure 48: Photo 1 - Aerial view over River Carron looking north-east (P57472, Falkirk Archives)**



**Figure 49: Photo 2 - View looking north at junction of Tweed Street and Tay Street**



**Table 13: Glensburgh Urban - Characteristics**

Landscape Character Type	Urban
Setting	Small hamlet, north-west of Grangemouth
Topography	Flat valley floor adjacent to the River Carron
Layout and pattern	Grid of residential streets with River Carron and Forth and Clyde Canal to the north, with some additional open space to the west and south-west
Buildings and material	Modern Housing – mostly render
Prominent land use	Residential area of mainly semi-detached houses, with River Carron and Forth and Clyde Canal to the north, with some additional recreation facilities to the west and south
Public realm	Core Paths run through the zone and along the north edge, Dalgrain Park, NCN 76 runs through zone
Open space	Dalgrain Park, Grangemouth Stags Rugby Club, walkway along northern edge/River Avon, Open space north of Grange Manor Hotel
Biodiversity	Street trees, parkland, gardens, rivers edge
Access and connectivity	Core Path network, streets, Charlotte Dundas Heritage Trail, NCN76
Relationship to watercourses	Walkways along the River Carron/Forth and Clyde canal to the north of the zone provide views and access to both watercourses

- Likely Relevant Forces for Change
  - Urban expansion inside and outside of zone boundary, particularly industrial and business parks, reducing green and/or derelict space.
  - Development of any existing open, unused land – area north of Grange Manor Hotel is marked for development.
  - Recreational development particularly associated with the Forth and Clyde Canal and River Carron and also the NCN76 cycle path.
  - Development resulting in a loss of tree cover which provides valuable screening to urban edge.
- Sensitivities within the LLCZ
  - Accessibility to the landscape and watercourses from residential properties are sensitive to any development.
  - Existing open green spaces are sensitive to developments in the area, especially areas which are overlooked by housing.
  - Accessibility and views of landscape from residential areas are sensitive to any development. Particular issues are poorly screened and designed development and the loss of, or poor management of, existing landscape elements that define the area.
  - Access and views along the Forth and Clyde Canal are sensitive to any change due to its open location.

- Capacity to Absorb Change
  - This area has a **medium** sensitivity to change, and therefore a medium capacity to absorb change, due to the largely urban nature of the zone and therefore its tolerance for change due to its land use, however it has a scheduled monument on the northern boundary, which makes it more sensitive than other urban areas.

12. Laurieston-Westquarter-Redding-Polmont Urban



Figure 50: Laurieston-Westquarter-Redding-Polmont Urban Character Zone



Figure 51: Character Zone 12 with Flood Cells 4 and 5 Boundaries (character zone has white boundary)



Figure 52: Photo 1 - Aerial view looking east towards Lauriston and Westquarter (P57492, Falkirk Archives)



Figure 53: Photo 2 - Aerial view looking west over Polmont and the M9 (P57440, Falkirk Archives)



Figure 54: Photo 3 - Westquarter Avenue looking SE

**Table 14: Westquarter Urban - Characteristics**

Landscape Character Type	Urban
Setting	Villages south-east of Falkirk
Topography	Flat valley floor
Layout and pattern	Four villages linked by woodland/greenspace. Mainly residential properties. Watercourses meander through the zone, including the Union Canal to the south
Buildings and material	Residential settlement; mostly modern
Prominent land use	Mostly residential – mix of stone, render and brick
Public realm	A number of Core Paths, including footpaths associated with the watercourses, open recreational spaces, accessible woodland areas
Open space	Polmont Park, a number of playing fields and small open green spaces
Biodiversity	Parkland, woodland, gardens, bankside vegetation, street trees
Access and connectivity	Core Path network, footpaths along watercourse, streets, NCN 754 (along Union Canal), route of the Antonine Wall at Lauriston
Relationship to watercourses	Westquarter Burn and the Polmont Burn meander through the zone. There are open views of the burns when near to housing, and filtered views in the woodland areas, with some access along the edges; Union Canal runs along the south of the zone with footpath access.

- Likely Relevant Forces for Change
  - Urban expansion inside and outside of zone boundary, particularly in existing open, unused land
  - Recreational development particularly associated with canal and cycle paths.
  - Development resulting in a loss of tree cover which provides valuable screening to urban edge.
- Sensitivities within the LLCZ
  - Accessibility to the landscape and watercourses from residential properties are sensitive to any development.
  - The landscape/open spaces are sensitive to any future development due to impacting the village character
  - National Cycle Route 754 and Core Paths are sensitive receptors to development where they run through open and flat areas of the zone
  - Existing open green spaces are sensitive to developments in the area, as they are interspaced between housing, forming a village character
  - Villages (albeit large villages) are sensitive to the merging of them into Falkirk urban sprawl
  - The Antonine Wall World Heritage Site runs through the zone. The setting of this and views from it indicate a high level of sensitivity to any development that is poorly screened or designed.

- Capacity to Absorb Change
  - This area has a **high** sensitivity to change, and therefore a low capacity to absorb change, due to the designated UNESCO site within the zone.

### 13. Grangemouth Port Industrial



Figure 55: Grangemouth Ports Character Zone



Figure 56: Character Zone 13 with Flood Cells 1, 2, 3, 4, 5 and 6 Boundaries (character zone has white boundary)



Figure 57: Photo 1 - Aerial view of Grangemouth docks and River Carron, looking north-east (P57435, Falkirk Archives)



Figure 58: Photo 2 - Aerial view of port (photo credit to [www.forthports.co.uk](http://www.forthports.co.uk))

**Table 15: Grangemouth Port - Characteristics**

Landscape Character Type	Urban
Setting	Industrial area adjacent to the Forth Estuary
Topography	Flat valley floor
Layout and pattern	Industrial buildings and containers adjacent to water basins
Buildings and material	Industrial, modern
Prominent land use	Port industry/shipping
Public realm	River walk to the west, but mostly private land
Open space	Public green space adjacent to riverside to the west, some areas of open green space within the port private land
Biodiversity	Some green spaces/woodland within the private land, grass and woodland areas adjacent to the river
Access and connectivity	Riverside walk on the west, but mostly private land
Relationship to watercourses	Zone runs adjacent to the River Carron and the Forth Estuary but is mostly private land. Small part of the River Carron has a riverside walk, and therefore access to the river on the west

- Likely Relevant Forces for Change
  - Grangemouth is home to Scotland's largest container terminal and reefer facility handling over 250,000 TEUs each year. Grangemouth has over 500,000 sq. ft. of warehousing and provides storage solutions to a diverse range of cargo (<https://www.forthports.co.uk/our-ports/grangemouth/>). Changes in industry pressures could over time change the requirements at the port – potential increase or decrease in trading.
- Sensitivities within the LLCZ
  - Due to the industrial nature of the area, and the existing types of buildings and storage containers, the area is not particular sensitive to any changes.
  - The areas of green spaces in the zone however help to offset the mainly hard landscape, so these areas would be mildly sensitive, to any changes. They would also be sensitive to any loss of biodiversity in the area.
  - The riverside walk to the west of the zone is sensitive with its proximity and access to the river, as there are mainly buildings and barriers to the land side of the walkway.
- Capacity to Absorb Change
  - This area has a **low** sensitivity to change, and therefore a high capacity to absorb change, due to the largely industrial nature of the zone.



14. Grangemouth Petrochemical Industrial



Figure 59: Grangemouth Petrochemical Industrial Zone



Figure 60: Character Zone 14 with Flood Cells 1, 2, 3, 4, 5 and 6 Boundaries (character zone has white boundary)



**Figure 61: Photo 1 - Aerial Photo of Ineos from the south**



**Figure 62: Photo 2 - View from A904 looking north**



**Figure 63: Photo 3 - View from A905 looking north-west**

Table 16: Grangemouth Petrochemical Industrial - Characteristics

Landscape Character Type	Urban
Setting	Petrochemical Industrial area east of Grangemouth, with the Forth Estuary to the East
Topography	Flat valley floor
Layout and pattern	Industrial buildings and petrochemical facilities, set in a grid of streets,
Buildings and material	Industrial, modern
Prominent land use	Petrochemical Works
Public realm	All private land, apart from the A904 road and adjacent footpaths which run through it. A small area of open land by the River Avon is used informally by dog walkers.
Open space	A small area of open land by the River Avon to the south, large area open land and a smaller one on the north-east bank along the estuary. However, these are all private.
Biodiversity	Green space adjacent to the River Avon to the south and open green land to the north-east along the estuary all have potential for biodiversity. Hedges and trees line some of the roads.
Access and connectivity	The A904 runs through the centre of the zone, with public footpaths. Informal use along the River Avon, although this is private land.
Relationship to watercourses	As this is private land there is little public connection with the watercourses. The A904 crosses the River Avon, but there is no access to it here. There is informal access along the River Avon to the south of the zone, but this is technically private land. The Forth Estuary abuts the site to the north East, but again this is private land.

- Likely Relevant Forces for Change
  - Grangemouth is home to Scotland's only crude oil refinery and produces the bulk of fuels used in Scotland. We have the capacity to produce around 9 million tonnes of fuel per annum and 1 million tonnes of petrochemicals per annum. The Grangemouth site contributes 4% of Scottish GDP and makes up approximately 8% of Scotland's manufacturing base (<https://www.ineos.com/sites/grangemouth/about/>). Changes in industry pressures could over time change the requirements for the plant – potential increase or decrease in trading.
- Sensitivities within the LLCZ
  - Due to the industrial nature of the area, and the existing types of buildings and storage containers, the area is not particularly sensitive to any changes.
  - The areas of green spaces in the zone however help to offset the mainly hard landscape, so these areas would be mildly sensitive, to any changes. They would also be sensitive to any loss of biodiversity in the area.

- Capacity to Absorb Change

This area has a low sensitivity to change, and therefore a high capacity to absorb change, due to the largely industrial nature of the zone.

15. Grangemouth Industrial Units (Various)



Figure 64: Grangemouth Industrial Units Character Zone



Figure 65: Character Zone 15 with Flood Cells 1, 2, 3, and 4 Boundaries (character zone has white boundary)



**Figure 66: Photo 1 - Aerial view looking north-east over West Mains Industrial estate and Grangemouth Road (P57469, Falkirk Archives)**



**Figure 67: Photo 2 - View from Earls Road looking south-west**

**Table 17: Grangemouth Industrial Units (Various) - Characteristics**

Landscape Character Type	Urban
Setting	Industrial area adjacent M9 to the west of Grangemouth
Topography	Flat valley floor
Layout and pattern	Industrial/commercial buildings in a grid like pattern
Buildings and material	Industrial, modern
Prominent land use	Industrial and commercial units
Public realm	None
Open space	Undeveloped plots to the south and north
Biodiversity	Street trees, small pockets of green, undeveloped plots to the south and north, small area of woodland
Access and connectivity	Commercial developments, so access for business purposes, roads mainly around the perimeter of zone
Relationship to watercourses	None

- Likely Relevant Forces for Change
  - Development of any existing open, unused land.
  - Loss of tree/hedge cover which provides valuable screening to industrial units and some biodiversity to the zone.
- Sensitivities within the LLCZ
  - Due to the industrial nature of the area, and the existing types of buildings and storage containers, the area is not particular sensitive to any changes.
  - The areas of undeveloped open spaces in the zone help to offset the mainly hard landscape, so these areas would be mildly sensitive to any changes. They would also be sensitive to any loss of biodiversity in the area.
- Capacity to Absorb Change
  - This area has a **low** sensitivity to change, and therefore a high capacity to absorb change, due to the largely industrial nature of the zone and being generally tolerant to absorbing change.

# Environmental Impact Assessment Report

Appendix B9.7 – Landscape/ Townscape Character Effects  
Assessment Table

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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



**GRANGEMOUTH**  
Flood Protection Scheme  
Protecting the heart of our communities



## Appendix B9.7 – Landscape/ Townscape Character Effects Assessment Table

The landscape receptors have been assessed in the below table at the following time periods: construction; winter of year 1 (with primary mitigation only), winter of year 1 with the addition of secondary mitigation; and summer of year 15, also with secondary mitigation.

For the analysis of the winter of year 1 primary/embedded mitigation which is integral to the scheme (refer to section 9.7.3 in Chapter 9) has been included, but not secondary mitigation. Where they are the same, they have been grouped in one row.

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
<p><b>Designated Areas</b></p> <p>Natural designations are covered in Chapter 7 Biodiversity</p> <p>Historical designations are covered in Chapter 13 Cultural Heritage</p> <p>Any designations that are noted in the baseline but not mentioned in this assessment table, are deemed to be too far from any flood protection works to be effected</p>					
UNESCO Antonine Wall World Heritage Site	Cell 4	High	Construction	<p>Moderate</p> <p>Construction of the proposed flood wall at Westquarter Burn (Cell 4) may effect any surviving remains of the Antonine Wall. The Antonine wall in this location is not an existing visible wall feature in the landscape, but the route of the wall is protected as part of its status.</p> <p>Where the location of the wall passes through the A9 road at the junction with of Grandsable Road, the FPS proposals (as agreed with Historic Environment Scotland (HES) as part of the design development and mitigation processes), are to be integrated as part of the road infrastructure and not emulate the Antonine Wall. See report in Appendix C13.2 Westquarter Burn Flood Storage Area Record of Outline Design Development.</p> <p>The Antonine Wall UNESCO World Heritage Site/ Scheduled Monument is present in other FPS cells. There are however no other areas of the flood works which impact the line of the Antonine Wall itself.</p> <p>During the build of the flood walls, there would be a significant amount of disruption to the tranquillity of the area because of the noise and extent of the construction works, disrupting the character of the area. This however would be temporary.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (primary mitigation)	Minor At completion the road infrastructure will be in place and the line of the wall will be as agreed with UNESCO and HES, however it is a slight change to the landscape character which overtime will settle into the landscape.	Moderate adverse
			Winter, Year 1 (with all mitigation)	Minor At completion the road infrastructure will be in place and the line of the wall will be as agreed with UNESCO and HES, however it is a slight change to the landscape character which overtime will settle into the landscape. Secondary mitigation in the form of appropriate wall finishes, materials and sensitive detailing, as agreed with the Local Planning Authority and HES would be required to protect the setting and qualities of the world heritage site.	Moderate adverse
			Summer, Year 15	Negligible There are no further predicted changes in the long term.	Negligible
UNESCO Antonine Wall World Heritage Site Buffer zone	Cell 4 and 5	Medium	Construction	Moderate The construction of the flood wall in cell 4 at Westquarter along the edge of the WHS buffer zone is likely to impact slightly on the integrity of the WHS due to the potential removal of any remains of the wall and associated features. However, the footprint of the proposed wall is small and the overall loss of the integrity of the WHS and changes to the landscape character would be negligible in the overall length of the Antonine Wall. During the build of the flood walls, there would be a significant amount of disruption to the tranquillity of the area because of the noise and extent of the construction works, disrupting the character of the area. This however would be temporary.	Moderate adverse
			Winter, Year 1 (primary mitigation)	Minor At completion the wall, as part of the road infrastructure, will be in place and the line of the wall will be as agreed with UNESCO and HES, however it is a slight change to the landscape character which overtime will settle into the landscape.	Minor adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>At completion the wall, as part of the road infrastructure, will be in place and the line of the wall will be as agreed with UNESCO and HES, however it is a slight change to the landscape character which overtime will settle into the landscape.</p> <p>Secondary mitigation in the form of appropriate wall finishes and materials and sensitive detailing, as agreed with The Local Planning Authority and HES would be required to protect the setting and qualities of the world heritage site buffer zone.</p>	Minor adverse
			Summer, Year 15	<p>Negligible</p> <p>There are no further predicted changes in the long term.</p>	Negligible
Zetland Park Non-inventory Designed Landscapes and Sites with Remnant Designed Landscape Features	Cell 4	High	Construction	<p>Moderate</p> <p>Construction of the proposed flood walls along the Grange Burn and grass embankment, on the western edge of Zetland Park including the removal of some of the existing mature trees would create a large amount of disruption to the setting of the western section of the Park during construction.</p> <p>The loss of one of the three rows of mature trees opens up views of the road and surrounding properties, reducing the green/natural park quality to the landscaped edge.</p> <p>Construction traffic, noise, and physical works including in-water construction and potential culvert (in 200m stretches) of the Grange Burn, would create a significant amount of disruption to the tranquillity of the area. This may result in a temporary change to the character of the park edge and burn and the user's accessibility to it.</p> <p>The building of the embankment and surrounding access to it will pull the construction works further into the park, causing a wider area of disruption.</p> <p>The rest of the Park however should remain unaffected.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The embankment and western flood walls would alter the topography of the park at the western edge. There is an increase to the existing wall height along Abbots Road, but the embankment within the park would be a new feature.</p> <p>The removal of the existing mature trees along Abbots Road would create a gap in the line of vegetation along this stretch, creating a more open landscaped edge to the park.</p> <p>These changes only impact the western edge and therefore would have only a moderate effect on our understanding of the park as a whole, and of the urban setting of the park.</p>	Major adverse
			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>The embankment and western flood wall would alter the local landscape of the park at the western edge. The new wall would be a slight increase to the existing wall height along Abbots Road, forming a slightly larger physical boundary to the park, but the embankment within the park would be a new feature, potentially giving added value, and serving a dual function of flood protection and potentially as a landscape feature within the park itself.</p> <p>The removal of the existing mature trees along Abbots Road would create a gap in the line of vegetation along this stretch, creating a more open landscaped edge to the park, however as part of the mitigation strategy they are to be replaced with large trees, which would reduce the nature of the effect over time as they mature.</p> <p>These changes however would have only a small effect on our understanding of the park as a whole, and of the urban setting of the park.</p>	Moderate adverse
			Summer, Year 15	<p>Minor</p> <p>Over time the new trees would grow and provide a green edge to the park, reinstating with the park landscape character. The embankment would become integrated as part of the park's green infrastructure.</p>	Moderate

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Grangemouth AOTV (Area of Townscape Value)	Cell 4 Area 1	Medium	Construction	<p>Major</p> <p>The construction of walls and embankment and replacement of the Dalratho Road Bridge would create an adverse disruption to the tranquillity of the area within the AOTV due to the increased construction traffic, noise, reduced movement within the area and access to the burn and diversion routes for residents, pedestrians (particularly on Core Paths), cyclists and motorists.</p> <p>The loss of mature trees along the western side of Zetland Park and north along the Grange Burn would have a major detrimental effect on the character of the area, as well as the setting of Zetland Park and buildings within the AOTV.</p> <p>This would continue throughout the build period.</p>	Major adverse
			Winter, Year 1 (primary mitigation)	<p>Major</p> <p>At completion, the Scheme would not impact on the historic urban pattern or buildings which are integral to the character of the AOTV, and this is further assessed in Chapter 13- Cultural Heritage.</p> <p>The height of the flood walls, up to 1.37m along a small stretch along the north-western extents of Zetland Park would have a major detriment to the character at this location. The 1m (or below) walls where there was previously direct access to the river further north of the park, would have a medium detrimental impact to the character and setting of the space.</p> <p>The flood wall along Abbots Road, circa 1.3m high, is only slightly higher than the existing wall, so there would be a limited change in character in relation to this wall.</p> <p>However, the green vegetated character along the burn would be degraded given the removal of the avenue of trees along Abbots Road, and north of the park with no replacement planting.</p> <p>Through primary mitigation the flood wall within the park has been rerouted to enable the retention of two of the mature rows of trees, thereby slightly reducing the negative effect on the AOTV. However, the removal of one of the three rows of mature trees (with no replacement planting) will still greatly impact on the character of the area and setting of the park on the western side.</p> <p>The replacement of Dalratho Road Bridge with new solid 1.2m high parapets would likely have a detrimental impact, changing the existing character and openness of the space, which currently has permeable railings at the edges.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Medium	Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Primary mitigation, particularly in the form of replacing a number of the mature trees with large trees along the Grange Burn, will help to reduce the negative effect at completion. The Scheme however would still be noticeable in the landscape, and the green vegetated character of the burn would be somewhat reduced due to the removal of mature vegetation.</p> <p>Appropriate wall finishes and detailing as well as a suitable bridge design, as agreed with the local Planning Authority as part of secondary mitigation, will help integrate the walls into the landscape and reduce intrusion and value of the spaces, although walls along the north-western extents of Zetland Park and further north along Abbots Road (B9132) would still be dominate boundary/ built features in the area.</p> <p>At the winter of Year 1, even with mitigation planting, the walls and embankments will still be a prominent feature in the landscape and will not have yet become fully integrated into the landscape character.</p>	Moderate adverse
			Summer, Year 15	<p>Minor</p> <p>Replacement vegetation will have established, particularly the avenue trees. The green setting and landscape features of the townscape would return to the something similar to the existing situation. This would provide a green revegetated edge to the Grange Burn and Zetland Park.</p> <p>The flood walls would now be seen as part of the park infrastructure and urban area and mitigation planting would soften views to them. The walls would still be dominant along a stretch of Abbots Road (B9132), even with appropriate finishes, but the continual growth of mitigation planting would enable these walls to further integrate into the AOTV.</p> <p>The embankment would have become integrated as part of the park's green infrastructure.</p>	Minor adverse
<p>Local Landscape Character Zone (LLCZ)</p> <p>Refer to Appendix B9.6</p>					

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Zone 1	Lower Carron River Valley LLCZ	High	Construction	<p>Moderate</p> <p>The River Carron runs directly through this character area, and the flood works will be adjacent to stretches of the river within this zone.</p> <p>The river valley is characterised by the vegetation adjacent to it and as part of the construction works a large number of trees and bank vegetation will be required to be removed to construct the scheme. This will open up the river corridor locally, noticeably changing the river valley character in this area. However, in adjacent areas there will still be large blocks of woodland and vegetation, so the character of the whole area will not change significantly.</p> <p>There will also be potential site compounds located alongside the works noticeably effecting the quiet, natural character, by the addition of construction traffic, noise and machinery.</p>	Major adverse
			Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The river valley is characterised by the vegetation adjacent to it and as part of the construction works a large number of trees and bank vegetation will be removed. With no replacement vegetation this will open up the river corridor locally, noticeably changing the river valley character in this local area in an adverse way.</p> <p>However, in adjacent areas there will still be large blocks of woodland and vegetation, so the character of the whole area will not change significantly.</p>	Major adverse
			Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>There will be replacement vegetation as part of the mitigation, however at this stage it will not have grown significantly.</p>	Major adverse
			Summer, Year 15	<p>Minor</p> <p>With a replacement tree and riverbank vegetation mitigation, over time the riverbank will regenerate and again become a green corridor, however this will take a number of years to establish.</p>	Moderate adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Zone 2	Avon River Valley LLCZ	High	Construction	<p>Minor</p> <p>The SE of cell 4 is within the north part of this character zone. The vegetation along the Grange Burn/A905/Inchyra Road will be removed, reducing the quality of the space with the lack of a green boundary. There is a potential site compound proposed in the field behind the burn, which will disturb the quiet, rural character of the area with construction works and all associated construction activities and traffic. This combination will be a detriment to the current green rural character of this part of the zone.</p> <p>Works to the Millhall Burn will also have a local detrimental disturbance to the character of this area.</p> <p>The south of Cell 5 is also in the north part of this character zone. Flood walls are proposed adjacent to the A905 road. During construction there will be disruption to the character of the area along this stretch of the A905, with building works, construction noise and machinery.</p> <p>The flood works however is only in a small part of the whole character zone, and therefore there is limited effect on the whole character of the zone.</p>	Moderate adverse
			Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>Without planting mitigation the flood walls will be noticeable features in the landscape. However as noted above, the flood works however are only in a small part of the whole character zone, and therefore there is limited effect on the whole character of the zone.</p>	Moderate adverse
			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>There will be mitigation planting along the Grange Burn/A905/Inchyra Road as part of the scheme, which will help to reduce the effect of the loss of vegetation and new flood walls. The replacement vegetation, however at this stage will not have grown significantly.</p> <p>As noted above, the flood works however are only in a small part of the whole character zone, and therefore there is limited effect on the whole character of the zone.</p>	Moderate adverse
			Summer, Year 15	<p>Negligible</p> <p>Mitigation planting and green embankments will have blended into the landscape by year 15, so the effect character of the area should be negligible.</p>	Negligible
Zone 3		Medium	There are no flood works within this area.		



Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
	Skinflats Coastal Farmland LLCZ				
Zone 4	Grangemouth/ Kinneil Flats Coastal Farmland LLCZ	High	Construction	Minor There are high flood walls and embankments (up to 2.6m) proposed to be located mainly along the coastal boundary, within this character zone. There will also be some tree removal required to facilitate bunds. During construction there will be large disruption to the landscape to build the flood defences. However due to the industrial nature of this area, with existing machinery, material storage etc., the nature of effect is limited to minor during construction.	Moderate adverse
			Winter, Year 1 (primary mitigation)	Negligible Once complete the nature of effect would be reduced to negligible, without mitigation, due to the proposed walls being typical features within this landscape character.	Negligible
			Winter, Year 1 (with all mitigation)	Negligible With mitigation of appropriate finishes to the walls, the impact on the character area would still be negligible as they would appear as typical features within this landscape.	Negligible
			Summer, Year 15	Negligible After 15 years the flood proposals would be embedded into the landscape, however due to the size of the flood proposals in this area, the nature of effect is still classed as negligible (rather than none).	Negligible
Zone 5	Manuel Rolling Farmland LLCZ	Medium	There are no flood works within this area.		None

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Zone 6	Falkirk/ Grangemouth Urban Fringe LLCZ	High	Construction	<p>Minor</p> <p>Flood Cell 4 overlaps the character zone only in the south of the area, and within this area there are only minor localised changes due to the following flood measures:</p> <p>Low flood walls are required along the Polmont Burn south of the A9, requiring tree removal. The burn is however located to the rear of commercial units, but the path alongside the burn is a Core Path. The path is likely to be closed during construction and therefore access to this is disrupted. A diversion is unlikely due to limited other route options in this area.</p> <p>Flood walls are proposed along Grandsable Road (on the distillery side), and to the rear of the cemetery along the burn which will require some tree removal. This should only result in a minor change to the character.</p> <p>1-2.2m high flood walls proposed to the rears of commercial units between the A9 and M9, requiring the removal of vegetation. There is no public access to the burn at this location, but the burn can be seen from the adjacent properties and roads.</p> <p>During the construction of these walls there will be minor local disturbance to the landscape character of the zone, due to the construction work required to install the flood walls, and noise and construction traffic disruption.</p> <p>The vegetation removal will reduce the green quality of the riverbank landscape character, opening up the watercourses to the adjacent landscapes.</p>	Moderate adverse
			Winter, Year 1 (primary mitigation)	<p>Negligible</p> <p>Post construction, there will be residual effects of the Scheme with the new flood measures visible in the landscape. There will be no replacement vegetation, which would open up the area.</p> <p>However, over the zone as a whole these effects are negligible.</p>	Negligible
			Winter, Year 1 (with all mitigation)	<p>Negligible</p> <p>The new flood measures will be visible in the landscape. There will be replacement vegetation as part of the mitigation, however at this stage it will not have grown significantly.</p> <p>However, over the zone as a whole these effects are negligible.</p>	Negligible

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Summer, Year 15	Negligible After 15 years the flood proposals would be embedded into the landscape, and within the zone as a whole, the changes would be barely noticeable.	Negligible
Zone 7	Stenhousemuir / Larbert/ Carron Urban LLCZ	Low	There are no flood works within this area.		None
Zone 8	Bainsford Urban LLCZ	Low	Construction	Negligible Flood cell 1 overlaps this character zone to the north where it abuts the Lower River Carron character area. There is no actual flood measure proposed for the urban area itself, however there would likely be some slight disturbance to the area during construction of the flood scheme, due to the construction traffic but the nature of effect is negligible.	Negligible
			Winter, Year 1 (with mitigation)	None Within the character zone itself there would be no changes once the scheme is constructed.	None
			Summer, Year 15	None Within the character zone itself there would be no changes once the scheme is constructed.	None
Zone 9	Falkirk Urban LLCZ	Medium	There are no flood works within this area.		None

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Zone 10	Grangemouth Urban LLCZ	Medium	Construction	<p>Major</p> <p>The Grange Burn runs adjacent to Zetland Park, and opposite residential properties, through the middle of this zone. The flood protection measures run adjacent to the Grange Burn and necessitate the removal of a large number of mature trees along Abbots Road, which are a key feature in this area. This will negatively effect the green parkland type character along the edge of Zetland Park significantly.</p> <p>There will be significant disruption to the centre of Grangemouth (outside of Zetland Park) during construction, with removal of trees along the Grange Burn and building of the defences, due to the construction work required to install the flood walls, and noise and construction traffic disruption.</p> <p>The tranquil residential/parkland character of Rannoch Park to the south of the zone will also be disrupted by the flood works, with construction traffic, noise, and the building of the flood walls. The effect would be less intrusive due to primary mitigation involving moving the line of the flood measures to retain the existing boundary trees. However, as noted on the tree survey, the boundary trees to the north of park will need to be replaced due to them being infected with Chalara Ash Dieback disease, and this is likely to happen as part of this Scheme.</p>	Major adverse
			Winter, Year 1 (primary mitigation)	<p>Major</p> <p>Due to the loss of vegetation during construction, particularly key mature trees along the Grange Burn, which have not been replaced, the town will have lost its green route along the B9132. This significantly impacts the character of this transitional space.</p>	Major adverse
			Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Once the scheme is completed, although the changes will be noticeable, the effected town areas will return to a similar natural green landscape along the edges of the burn, with flood walls as boundaries.</p> <p>With the use of large replacement trees along the burn in the centre of Grangemouth, the changes to the parkland and green riverside character will be reduced.</p>	Moderate adverse
			Summer, Year 15	<p>Minor</p> <p>With growth of the trees, and the banks of the burns regenerating, the character of the town will return to something similar (although not as mature) as the current situation.</p>	Minor adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Zone 11	Glensburgh Urban LLCZ	Medium	There are no flood works within this area.		None
Zone 12	Laurieston-Westquarter-Redding-Polmont Urban LLCZ	High	There are no flood works within this area.		None
Zone 13	Grangemouth Port Industrial LLCZ	Low	Construction	Minor There will be localised disruption to the area, both in public and private land, during construction. In the public area the defences are around 1.6m. In the ports area the defences are higher.	Minor adverse
			Winter, Year 1 (primary mitigation)	Minor There will be a minor change in character along the edge of the River Carron, with the new flood defences, but due to the industrial nature of the area, these are in keeping with the local character.	Minor adverse
			Winter, Year 1 (with all mitigation)	Minor There will be a minor change in character along the edge of the River Carron, with the new flood defences, but due to the industrial nature of the area, these are in keeping with the local character.	Minor adverse
			Summer, Year 15	Negligible The Scheme is now a part of the local landscape character zone.	Negligible

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Zone 14	Grangemouth Petrochemical Industrial LLCZ	Low	Construction	<p>Minor</p> <p>The majority of the works are within industrial private land, but there will be localised construction disruption (construction traffic, noise and other construction activities) during the build period. Some of the flood defences are quite large within this area, however due to the industrial nature of the area (with existing large infrastructure, including flues, boilers, generators and other plant), the character can absorb the changes.</p> <p>There will be localised temporary disruption to some public areas along the edges of the zone during construction (along the A905 and the A904), with some large flood structures. Again, due to the industrial nature of the area, the character will only be minorly impacted.</p>	Minor adverse
			Winter, Year 1 (with mitigation)	<p>Negligible</p> <p>Once the works are completed, the new flood defences will be absorbed into the industrial character of the area due to the proposed structures fitting in with the existing infrastructure.</p>	Negligible
			Summer, Year 15	<p>Negligible</p> <p>The Scheme is now a part of the local landscape character zone.</p>	Negligible
Zone 15	Grangemouth Industrial Units (Various) LLCZ	Low	There are no flood works within this area.		None
Flood Cell Areas					

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1	Area 1 – Stirling Road	Medium	Construction	<p>Moderate</p> <p>Flood measures are located adjacent along a busy A9 road, with existing vegetation located along this line, some of which forms a screen to residential properties.</p> <p>During construction there will be some adverse disruption to the semi-industrial character of the area due to the in-river working, potential site compound, construction traffic, noise, reduced access and parking, and diversion routes for vehicles, pedestrians, and cyclists. Additionally, removal of roadside and riverside vegetation would degrade the character of the area further during the build.</p> <p>There would also be localised disruption to the Falkirk Golf Club grounds whilst building the defences on their boundary line, disrupting the tranquil nature of the facility.</p> <p>The potential compound location suggested within the Camelon Riverside Wildlife Site would not be acceptable due to the designation and type of green protected space that it is, as well as the disruption it would cause to access to the River Carron along Core Paths.</p>	Moderate adverse
			Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Removal of roadside and riverside vegetation would degrade the landscape quality of the area, and with no replacement vegetation, the road edge and riverbanks would be more open and less green.</p>	Moderate adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>By the winter of Year 1 the replacement planting would be installed, although this would not be established at this point. There would be a reduction in screening to the residential properties, although this could be mitigated with either a high fence or additional planting, to be agreed with the landowner.</p> <p>The new flood defences are up to 1.8m in height, which is similar to/lower than the existing walls/barriers in the higher locations.</p> <p>Defences along the west side of Stirling Road, adjacent to the golf course, are around 0.5m high and would be located within the grass verge. There would therefore, be no or very little tree loss, and the green boundary screen would be maintained to the golf course.</p> <p>Defences between the golf course and the bus garage are up to 1.52m high, which, along with mitigation planting provide a screen between the industrial character of the bus garage and the green amenity character of the golf course.</p> <p>The defences therefore would not in themselves create a significant change to the character of the area, and with appropriate finishes, as agreed with The Local Planning Authority, the Falkirk Golf Club, as well as any other affected parties, they would be embedded into the character at the area.</p> <p>Overall the character of the space would mostly revert to the existing semi-industrial character, with some tree loss along the riverbank opening up the riverscape and thereby reducing the quality of the riverbank character.</p>	Minor adverse
			Summer, Year 15	<p>Negligible</p> <p>The new flood features with their mitigation will, by year 15, be fully integrated into the local landscape character.</p>	Negligible



Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)	Area 2 - Bainsford	Medium	Construction	<p>Major</p> <p>South of the river, a large (circa 4m) high flood embankment is proposed between the Mungal Community Woodland and the edge of the Bainsford housing estate. During construction, access between the estate and the open parkland would be reduced as some paths would need to be closed. A number of Core Paths run through this area, and some of these routes will also be closed during construction. The constructing of the large embankment would create a large amount of disruption to the open green character of the Mungal Community Woodland.</p> <p>A haul road is required from the roundabout at Cotland Drive through the parkland. This would cause major disruption throughout the build period.</p> <p>The grassed embankment in front of the houses which face onto the woodland adjacent to the River Carron is set back into the open green space and is up to 1.5m high bund. The defence continues over the path (at a lower level) so this would cause disruption to the area during construction.</p> <p>North of the river the flood defence is proposed behind the wall adjacent to Nicole's Way. Due to the defence being located behind the wall and is therefore not visible to the general public, and due to size of the defence (up to 1.5m) it will not change the character of this area. However, the existing wall may need to be removed during the works as it is potentially unstable, and if this does happen it will change the character of this space and its interaction with the river and road.</p> <p>In general, during construction there will be adverse disruption to the tranquil green open character of the area due to the in-river working, potential site compound north of the river, construction traffic, noise, reduced access, and diversion routes for vehicles, pedestrians, and cyclists. Additionally, removal of riverside and parkland vegetation would degrade the character of the area further during the build.</p>	Major adverse
			Winter, Year 1 (primary mitigation)	<p>Major</p> <p>Once complete the new embankment to the west of the Bainsford housing estate will create a noticeable change in character of the area. Although the embankment will be a green element in the landscape it is a large feature, and with no mitigation this feature would not be integrated into the landscape.</p> <p>The other embankment would also disrupt the character, although to a lesser degree.</p> <p>Additionally, removal of riverside and parkland vegetation would degrade the character of the area further, as these would not be replaced.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)			Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Once complete the new embankment to the west of the Bainsford housing estate will create a noticeable change in character of the area. Although the embankment will be a green element in the landscape it is a very large feature.</p> <p>The embankment to the north of the estate is smaller and although the houses face towards it with the green backdrop, the character will be similar to existing.</p> <p>North of the river a flood defence is proposed behind the wall adjacent to Nicole's Way. However the existing wall may need to be removed, disrupting the character on this side of the river. Careful choice of wall finish will help integrate it into the landscape.</p> <p>Replacement riverside and parkland vegetation would help restore the green character of the area displaced by the construction works, but at this stage would not be established.</p>	Moderate adverse
			Summer, Year 15	<p>Minor</p> <p>The new flood features with their mitigation will, by year 15, will be integrated into the local landscape character, albeit different from the current landscape.</p>	Minor adverse
	Area 3 - Bainsford / Carron	High	Construction	<p>Major</p> <p>Construction works are located around the areas adjacent to the bridges over the River Carron. It is likely that the Stenhouse Road Bridge and the New Carron Road Bridge will be closed during construction, due to the works on the bridges themselves. This will cause disruption to the character of the area due to the large-scale machinery and noise created.</p> <p>The Core Path along the riverside between the bridges will need to be closed due to the 2m (approx) high wall and ground raising located between the river and the Dawson Mission.</p> <p>To the west of Stenhouse Road a low wall is located along and the Mungal Burn culverted. During construction this would cause some disruption as the path would need to be closed, and there would be no access along this Core Path.</p> <p>Access into the parkland from Carronside Street onto a core path, would be impacted whilst works were being undertaken reducing or completely closing the access from this location.</p> <p>The rear of properties along the river require flood protection walls which, although are not high, require the removal off the riverside vegetation, creating a stark environment and reducing privacy for residents.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)			Winter, Year 1 (primary mitigation)	<p>Major</p> <p>With basic concrete flood defences, they would not be integrated into the landscape.</p> <p>The Core Path which runs along the south of the river has a new flood wall which will sever the connection between the footpath and the Dawson Mission. As part of the embedded mitigation ground raising has been introduced to slightly reduce the height of the wall. However due to the wall height being approx 2m, it can now not be seen over, which will result in a major adverse change in character to this area.</p> <p>The core path north from Carronside Street will have a flood defence crossing the path, requiring localised ground raising and also requiring the removal of woodland east of the path.</p> <p>As there is no replacement vegetation, the riverbanks and adjacent areas where vegetation has been removed will be open and bare reducing the quality of the landscape.</p> <p>Boundary treatments to the rear of the residential properties to the north of the river, will be in place, but with no replacement vegetation they will be very visible in the landscape.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>The new works to the existing bridges, if in keeping with the existing structures, should blend into the existing landscape.</p> <p>The Core Path which runs along the south of the river has a new flood wall which will sever the connection between the footpath and the Dawson Mission. As part of the embedded mitigation ground raising has been introduced to slightly reduce the height of the wall. However due to the wall height being approx 2m, it can not be seen over, which will result in a major adverse change in character to this area. Appropriate wall materials, including the possible use of glass panels, as agreed with The Local Planning Authority, could further reduce the impact.</p> <p>Flood works to the west of Stenhouse Road, including the culverting of the Mungal Burn, will have caused the removal of existing vegetation within the works area. Access will be restored but the growth of replacement vegetation will be limited at this stage.</p> <p>The core path north from Carronside Street will be crossed by a flood defence, requiring localised ground raising and the removal of woodland east of the path. Mitigation planting and path works will help to integrate the defence into the landscape, but the effect of the planting in winter of year 1 will be minimal. Boundary treatments to the rear of the residential properties to the north of the river, will be in place, along with replacement riverside vegetation, although this will be at its infancy. The character of the area will therefore feel somewhat barren.</p>	Major adverse
Flood Cell 1 (cont.)			Summer, Year 15	<p>Minor</p> <p>Over time the riverside should revegetate and return to a similar condition to the existing. The walls along the footpaths will still be apparent in the environment but will form part of the 'new' character.</p> <p>Rear garden boundaries will have become part of the local environment and will be partially screened by the riverside vegetation.</p>	Moderate adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
	Area 4 - East Carron/Chapel Burn	Medium	Construction	<p>Major</p> <p>There would be considerable disruption during construction of the embankment, flood walls, ramps, temporary culverting of Chapel Burn and the in-water working area. Removal of riverbank vegetation would open up the area, especially along the Chapel Burn, which currently has a very green, albeit overgrown character.</p> <p>Additionally, the building of boundary treatments to properties, along the Chapel Burn and the River Carron, would be highly disruptive to residents, reducing privacy to properties/rear gardens during construction of these.</p> <p>Overall the construction of the works would reduce the quality and tranquillity of the area due to the increased construction traffic, noise, reduced access and diversion routes for residents, pedestrians, and cyclists.</p>	Major adverse
Winter, Year 1 (primary mitigation)			<p>Major</p> <p>The character along the Chapel Burn would be noticeably changed with the loss of mature vegetation, which also helps provide privacy to properties and flood walls either side of the burn. Although visible, the new flood walls south of the burn (up to 0.6m in height) would form part of or run along property boundaries and would not appear out of place in this setting. However, the flood walls adjacent to the footpath, around 1 to 1.2m high, would sever the burn from the path and end any interaction with it. Additionally with no replacement vegetation along the burn the new flood defences would be very apparent in the landscape.</p> <p>There will also be a reduction in quality of the green eastern riverbank of the Carron due to the loss of vegetation during construction and the new wall locations. Therefore, the river valley landscape character will be adversely effected at year 1.</p>	Major adverse	

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)			Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>The green character along the Chapel Burn would be noticeably different with the loss of mature vegetation, which also helps provide privacy to properties. Although visible, the new flood walls south of the burn (up to 0.6m in height) would form part of or run along property boundaries and would not appear out of place in this setting.</p> <p>However, the flood walls adjacent to the footpath, around 1 to 1.2m high, would sever the burn from the path and end any interaction with it. Even with replacement vegetation along the burn the new flood defences would be very apparent in the landscape, degrading the character.</p> <p>There will also be a reduction in quality of the green eastern riverbank of the Carron due to the loss of vegetation during construction and the new wall locations. Therefore, the river valley landscape character will be adversely effected at year 1.</p> <p>Mitigation riverside planting will however help to reduce this impact, but at year one there will be limited growth. As part of the secondary mitigation and the planting strategy, some larger trees will be included in the mix for riverside planting.</p>	Moderate adverse
			Summer, Year 15	<p>Minor</p> <p>Over time mitigation planting would be established in the landscape, providing screening and privacy back to residents who back onto the watercourses. The Chapel Burn would once again be vegetated, however the burn would be permanently cut off from the footpath by the floodwall, so the character of this space has a permanent minor adverse change.</p> <p>The Carron riverbank would also be revegetated, and the flood walls screened from users of paths on the opposite bank.</p>	Minor adverse
	Area 5 - Carronshore/ Riverside Stables	High	Construction	<p>Major</p> <p>There would be considerable disruption to the area during construction due to the building of the flood walls, ground raising over The Avenue, demolition of storage sheds and yard and in-water working areas and the loss of intervening vegetation. This would reduce the urban and green/ natural quality (river setting and views to woodland) of the area due to the increased construction traffic, noise, reduced access and diversion routes for residents, pedestrians, cyclists and motorists.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)			Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Flood walls to the rear of the properties which back onto the river and the grassed area by the stables are up to 0.9m high, apart from around the stables buildings which rise up to around 2.5m high. These walls will be a visible element in the landscape. The wall around the stables building itself, would however become part of the property infrastructure.</p> <p>The northern riverbank is more open in this stretch, with less abundant planting. Therefore, the reduction in vegetation along the riverbanks due to the in-water working and the building of the walls will only partially reduce the green/natural quality of the landscape. With no replacement planting, however there will be a minor adverse impact to the riverbank character.</p> <p>The low wall as it crosses The Avenue will become a raised table on the road and will be seen as part of the road infrastructure.</p>	Major adverse
			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>The walls and embankments behind the properties and within the area in and adjacent to Riverside Stables and parade ground will create barriers between properties and the river, reducing the connection with the waterside.</p> <p>Mitigation planting along the northern bank would replace vegetation lost during construction and help to soften the landscape around the flood defences (where appropriate). At year one, however, there will be limited growth to new planting.</p> <p>The character of the SINC should not be affected as this is located on the south side of the river and there are no works proposed to this side.</p>	Moderate adverse
			Summer, Year 15	<p>Negligible</p> <p>The flood walls would now form a permanent part of the boundary for properties that back onto the river.</p> <p>Over time, any mitigation planting would be established would form an intrinsic part of the landscape to the south of Carronshore.</p>	Negligible

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 2	Glensburgh/ Grangemouth Docks	Medium	Construction	<p>Minor</p> <p>Cell 2 has a mainly industrial character to the cell, and the majority of the works will be in private industrial land.</p> <p>There is likely to be slight disruption to private land due to construction traffic, noise, demolition of buildings in the east, in-river working, and the building of the flood measures. However, this would not be inconsistent with the industrial nature of the existing facilities, and therefore have only a slight effect on the character.</p> <p>In the west of the cell is the residential area of Glensburgh, which butts up to the end of the construction works. There are however no works directly within the residential area.</p> <p>In the public domain, a flood embankment up to 1.85m high is proposed along the existing southern vegetated riverbank, from approximately the end of the Forth and Clyde Canal along to the first Industrial building on the riverside to the east. The walkway along this part of the riverbank is also designated a Core Path.</p> <p>There is likely to be slight disruption to the character at the eastern end of Glensburgh at the north end of Clyde Street and along Dalgrain Road, Forth-Clyde Way and South Bridge Street, due to construction traffic, noise, in-river working, the building of the flood measures and the location of the potential compounds.</p> <p>There would be more of a disruption to the river character along the western end of the works, due to the removal of riverside vegetation and in-river working. This would continue through the build period, with noticeable changes. Access along the river would also be potentially be restricted due to construction works, with a likely diversion in place.</p>	Minor adverse



Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>As noted for construction above, the cell character is mostly industrial. The new walls within the private areas of the cell are up to 1.8m high and would be consistent with this industrial character, and therefore would not look out of place. There is also an embankment within the private area, which runs through a more open space. This type of flood measure would be the best type to fit in with the existing setting. Three small buildings are to be demolished as part of these works, which would create a slight change to the area.</p> <p>In the open green riverside, a basic embankment is proposed to the west of the zone. The route of the Core Path would need to be considered in relation to this bund in detail design, as well as access over it. The bund is proposed to be 1.8m high at its highest point, so some form of ramp or flood gate would be required. With no mitigation the existing riverbank vegetation would not be replaced and therefore the quality of this space would be reduced.</p> <p>The area north of the river at Grangemouth Docks would not see a noticeable change in character, due to the low size of the flood measures, and the mainly existing industrial character. There would be a minor change to the riverside vegetation to the west due to the lack of replacement riverside vegetation.</p>	Minor adverse
Flood Cell 2 (cont.)			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Limited mitigation would be required within the industrial areas due to the proposed basic walls and embankments being in-keeping with the existing industrial character.</p> <p>The new grassed and planted embankment to the west of the cell, and the Core Path location would be integrated more into the riverside character with replacement planting and consideration of appropriate route along the river. At year one, however, there will be limited growth to new planting.</p> <p>There would be a minor adverse change in character to the north of the river due to the reduced riverside vegetation on the west initially, as replacement planting growth would be limited at this stage.</p>	Minor adverse
			Summer, Year 15	<p>Negligible</p> <p>The new flood features with their mitigation will, by year 15, will be seen as part of the existing landscape character.</p>	Negligible

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 3	Grangemouth Docks	Low	Construction	<p>Minor</p> <p>There will be localised disruption within the private industrial area due to the construction of the flood defences, demolition of two buildings, coastal revetment, ramps, in-water working areas, potential site compounds and proposed flood gates. This would continue throughout the build period.</p> <p>There would also be potential loss of vegetation in the form of scattered trees, as well as coastal and riverside vegetation.</p> <p>However, the works would appear similar to current industrial activities, and therefore there is limited change in character.</p>	Minor adverse
			Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>There will be a minor change in character along the edge of the River Carron, with the new flood defences, but due to the industrial nature of the area, these are in keeping with the local character.</p> <p>The proposed embankments and walls would generally appear as the boundary around the petrochemical complex and Forth Port sites, and therefore be in-keeping with the existing character.</p> <p>The coastal revetment would be somewhat noticeable along the edges of the watercourses, although would not be inconsistent as an edge to an industrial area.</p>	Minor adverse
Flood Cell 3 (cont.)			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>There will be a minor change in character along the edge of the River Carron, with the new flood defences, but due to the industrial nature of the area, these are in keeping with the local character.</p> <p>Potential mitigation planting would replace trees lost during construction and soften views to the walls, although at this stage the plant growth would be limited at this stage.</p>	Minor adverse
			Summer, Year 15	<p>Negligible</p> <p>By this time, grass embankments would have established, and the defences would have settled into the surrounding landscape. Potential mitigation planting would soften visibility of the flood measures.</p>	Negligible

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4	Area 1 – Area north of Zetland Park along the Grange Burn	High	Construction	<p>Major</p> <p>The construction of the flood defences and in-river working along the Grange Burn will create adverse disruption to the tranquillity of the northern part of the town due to the increased construction traffic, noise, reduced access to the river and diversion routes for residents, pedestrians (particularly on Core Paths), cyclists and motorists.</p> <p>The construction works would require the removal of a large amount of vegetation, mainly in the form of mature avenue trees (with a high number of Category A and B trees) adjacent to the Grange Burn. This would be a major detrimental effect to the mature green landscape character of the burn, and also on the character and setting of the Grangemouth AOTV.</p> <p>To the north of Grangeburn Road mature vegetation will be retained on the northern bank of Grange Burn, which will help to retain the screening of the industrial units beyond and reduce the effect on the riverside character along this section. This adverse disturbance would continue throughout the build period.</p>	Major adverse
Flood Cell 4 (cont.)			Winter, Year 1 (primary mitigation)	<p>Major</p> <p>At completion, the Scheme would not impact on the historic urban pattern or buildings which are integral to the character of the AOTV, and this is further assessed in Chapter 13- Cultural Heritage. However, the impact of the Scheme along this stretch would be notable in the landscape/ townscape, as the green vegetated character along the burn would be highly degraded due to the lack of vegetation with no replacement planting.</p> <p>Retention of existing vegetation (as part of the primary mitigation) on the northern bank of the Grange Burn adjacent to South Shore Road, and with the flood wall located to the north of this vegetation, will reduce the impact to the character along this stretch, with views of the industrial units screened from the town. The bank south of the burn however will not be revegetated.</p> <p>The basic flood prevention measures themselves are less than 1m high, in this area of the town, and in some locations replace existing walls. New footpaths adjacent to the flood walls along Park Road and part of Grangeburn Road, as part of the primary mitigation will help to visually reduce the full height of the wall, as well as retaining legibility and enabling movement, in the form of a footpath along this stretch. At the winter of Year 1 with no mitigation the basic walls would have not yet become integrated into the landscape character given the lack of replacement vegetation, which is a key feature of the setting of the urban environment.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Primary mitigation in the form of replacing a number of the mature trees with large trees along the Grange Burn, will help to reduce the negative effect at completion, as well as additional replacement riverside vegetation. The Scheme however would still be notable in the landscape, and the green vegetated character of the burn would be highly reduced due to the lack of mature vegetation.</p> <p>Sensitive detailing and appropriate wall finishes, as agreed with local Planning Authority as part of secondary mitigation, will help integrate the high walls (mostly less than 1m) into the existing local environment and reduce intrusion and value of the spaces, particularly in the AOTV.</p> <p>At the winter of Year 1 however, even with mitigation planting, the walls will still be a prominent feature in the landscape and will have not yet become fully integrated into the landscape character and setting.</p>	Major adverse
			Summer, Year 15	<p>Negligible</p> <p>The flood walls and new paths would have now become part of the street infrastructure with a green backdrop of the burn and its associated vegetation.</p> <p>Replacement vegetation will have established, particularly the avenue trees and the character along the riverside and the green setting and landscape features of the townscape would return to something similar to the existing.</p>	Negligible

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)	Area 1 – Zetland Park	High	Construction	<p>Moderate</p> <p>Zetland Park is the principal open space serving the town and is a green oasis in a central built-up area. It is noted in SG09 as a Non-Inventory Designed Landscape and is within the local designation of "Area of Townscape Value".</p> <p>Due to the construction of walls, embankment, demolition of the kiosk, replacement of Dalratho Bridge and the loss of mature avenue trees (Category A and B), the western side of Zetland Park would experience a significant deterioration to the landscape quality during the construction period. The mature perimeter trees create a green network which provide respite from the urban and post-industrial nature of the town and contribute to the landscape character of the park and therefore the loss of these trees is highly noticeable.</p> <p>There will also be disturbance to the tranquillity of the area due to the in-water construction and potential culvert (in 200m stretches) of the Grange Burn, construction traffic, noise, reduced access to the river and diversion routes for residents, pedestrians (particularly on Core Paths), cyclists and motorists.</p> <p>This would continue throughout the build period. However the rest of the Park however should remain unaffected.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)			Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Due to the “Non- Inventory Designed Landscapes” designation, any changes within Zetland Park would need to follow the guidelines in SG09, to ensure that the FPS measures limit changes to the character and setting of the park and its remaining features. Due to the extensive area of existing parkland a long-term management plan would need to be compiled as part of the scheme. With no mitigation proposed it will be difficult to achieve this.</p> <p>The new embankment (around 1m high) will be a basic grassed feature in the park landscape with no landform mitigation, and not specifically integrated into the park landscape.</p> <p>Through primary mitigation the 1.37m (max, although mostly less than 1m) flood wall within the park has been rerouted to enable retention of two of the mature rows of trees, thereby partially reducing the negative effect on the landscape character and townscape. However, the removal of one of the three rows of mature trees (with no replacement planting) will still greatly affect the character and setting of the park on the western side.</p> <p>The wall along Abbots Road will be mostly around 1.3m high, which will only be slightly higher than the existing wall. The wall will help to reduce the impact of the traffic on the park. The replacement of Dalratho Road Bridge with new solid 1.25m high parapets would likely have a detrimental impact, changing the existing character and openness of the space, which currently has permeable railings at the edges.</p> <p>The flood wall on the east side of the burn would potentially impact on the existing free movement of people accessing the burn along here.</p> <p>These changes however only impact the western edge and therefore would have only a moderate effect on our understanding of the park as a whole, and of the urban setting of the park.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Due to the “Non- Inventory Designed Landscapes” designation, any changes within Zetland Park would need to follow the guidelines in SG09, to ensure that the FPS measures limit changes to the character and setting of the park and its remaining features. Due to the extensive area of existing parkland a long-term management plan would need to be compiled as part of the scheme.</p> <p>The new embankment (around 1m high) will serve a dual function of flood protection and as a landscape feature within the park itself, and will have started to become integrated into the park infrastructure. Ramped access onto and off the bridges will be considered carefully at detail design to integrate them into the landscape.</p> <p>With sensitive detailing and appropriate finishes, as agreed with the Local Planning Authority as part of secondary mitigation, the flood walls within the park (maximum height 1.37 meters) will start to become part of the park infrastructure and should be less intrusive within the landscape. Flood walls along the boundary of the park on Abbots Road, (up to 1.3m), will only be slightly higher than the existing wall. The wall, however will help to reduced the impact of the traffic on the park. Sensitive detailing of the replacement bridge at Dalratho Road will help integrate the bridge into the space.</p> <p>Mitigation planting, in particular the use of large trees to replace existing mature trees along the Grange Burn, will help to reduce the negative effect on the riverbank character, and partially replace the green boundary.</p> <p>These changes however would have only a small effect on our understanding of the park as a whole, and of the urban setting of the park.</p>	Moderate adverse
			Summer, Year 15	<p>Minor</p> <p>Replacement vegetation will have established, particularly the avenue trees and the character along the burn and the green setting, and landscape features of the townscape would return to the something similar to the existing situation. This would provide a green revegetated edge to the Grange Burn and Zetland Park.</p> <p>The flood walls and replacement bridge will now be seen as part of the park/ road infrastructure and in places the flood walls would be softened by mitigation planting.</p> <p>The embankment would have become integrated as part of the park's green infrastructure.</p>	Moderate adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)	Area 2 - Rannoch Park	Medium	Construction	<p>Moderate</p> <p>There will be some amount of negative disruption to the character and tranquillity of the area during to the construction of the flood defences along the northern bank of the Flood Relief Channel, due to construction traffic, noise, ramps, and in-water working, reduced access to the burn and diversion routes for residents, pedestrians (particularly on Core Paths), cyclists and motorists. This would continue throughout the build period.</p> <p>The construction works would also involve the loss of some vegetation. Through primary mitigation the semi-mature row of trees along the northern edge of the burn were to be retained with the realigning of the new flood wall, however due to these trees having Chalara Ash Dieback disease (as noted in the tree survey) and thereby having a severely limited life expectancy, they are likely to be removed.</p>	Moderate adverse
			Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The Flood Relief Channel is located along the north of Rannoch Park, with an existing grass mound on either side.</p> <p>The new basic flood wall at Rannoch Park is located on the northern bank of the Flood Relief Channel and replaces the existing bank edge. It is generally higher than the existing embankment by around 0.7m, but slightly higher by the bridge. With the additional height on top of the existing embankment, it forms a barrier to the northern side of the park along the residential edge, degrading the setting of the park within this space. Where the embankment is at a lower level, the top of the new wall forms a low barrier but enables a partial connection with the park to be retained.</p> <p>From the park itself (south of the Flood Relief Channel), the walls would be partially seen above the existing embankment, and they would slightly increase the screening of the residential properties from the park. This potentially improves the parks tranquil character by reducing visibility of adjacent buildings, and this wall would over time form part of the park infrastructure to the north.</p> <p>Due to the loss of the large trees along the northern boundary due to the Chalara Ash Dieback disease (with no replacement trees), the green character of this northern edge would be severely affected, and the character degraded.</p>	Moderate adverse



Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Sensitive detailing and finishing of the walls, as agreed with the Local Authority, will be required to enable the walls to fit into the character of the park.</p> <p>Mitigation planting along the embankment will help to reinstate the green edge to the north of the park, particularly with the inclusion of large replacement trees at year 1.</p>	Minor adverse
Flood Cell 4 (cont.)			Summer, Year 15	<p>Negligible</p> <p>By year 15, the flood walls will have now become part of the park infrastructure with any replacement vegetation and grass having established.</p>	Negligible
	Area 3 - Westquarter	High	Construction	<p>Moderate</p> <p>Area 3 is a mixed-use area, with a mainly rural character, but with two small areas of commercial developments. The M9 borders the area to the north with the A9 running through the centre, as well as a line of pylons, partially reducing the quality of the character.</p> <p>There will be localised construction disruption to the tranquillity of the area due to construction traffic, noise, location of the potential site compound, in-water working, and the building of the flood measures themselves during the build period. There is also likely to be road closures which would disrupt traffic, and cause congestion along this busy road. The pedestrian underpass will be blocked as part of the works, disrupting pedestrian flow through the area. All of this disruption reduces the quality of the area, albeit temporarily.</p> <p>There would also be a loss of vegetation, particularly bankside vegetation along the watercourses which can be seen from the A9 and M9. This also temporarily reduces the green natural character of the area.</p> <p>Construction of the proposed flood wall may also affect any surviving remains of the Antonine Wall. The Antonine Wall in this location is not an existing visible wall feature in the landscape, but the route of the wall is protected as part of its status. This is discussed further in the Cultural Heritage Chapter.</p> <p>Where the location of the wall passes through the A9 road at the junction with of Grandsable Road, the FPS proposals (as agreed with HES as part of the design development and mitigation processes), are to be integrated as part of the road infrastructure and not emulate the Antonine Wall. See report in Appendix C 13.2 Westquarter Burn Flood Storage Area Record of Outline Design Development.</p> <p>The Antonine Wall UNESCO World Heritage Site/ Scheduled Monument is present in other FPS cells. There are however no other areas of the flood works which impact the line of the Antonine Wall itself.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)	Area 3 – Westquarter (cont.)	High	Winter, Year 1 (primary mitigation)	<p><b>Major</b></p> <p>The Scheme behind the commercial properties to the north of the A9 would mostly be hidden from the units themselves, which turn their back on the high flood walls, which are up to 2m high in sections. Removal of vegetation along this stretch to complete the works would be the more apparent change, especially from the M9. With no replacement vegetation the walls would be a stark element between the parking areas/buildings and the green landscape. The transition from a commercial to a rural character here would be negatively affected, creating a more exposed edge, although this could be considered the boundary to the area.</p> <p>The up to 1.9m high flood walls behind the commercial properties to the south of the A9 would also mostly be hidden from the units themselves, which turn their back on the Core Path and the Polmont Burn. However, vegetation removal and in-river working to build the scheme will greatly disrupt the quality and greenness of the watercourse and thereby degrade its character. Lack of replacement vegetation would mean that the negative effect of the vegetation removal would not be reduced. There is ancient woodland to the south of the Polmont Burn within the cell which could be potentially affected by the works.</p> <p>Due to the loss of mature vegetation and visibility of the new basic walls the landscape character along the A9 would only be slightly affected by the works. The flood wall would appear as the road boundary and is not expected to form an imposing element. It is however, also located partly along the line of the Antonine Wall a UNESCO World heritage site. As noted in the designation section at the start of this table, at completion the road infrastructure will be in place and the line of the wall will be as agreed with UNESCO and HES. It is imperative that the FPS within this area is dealt with sensitively.</p> <p>The new low wall along Grandsable Road will replace the existing boundary wall to the distillery, so is a minor change to the character. There will be a flood wall along the burn behind the cemetery which will be up to 2.2m high, but as this will be mostly hidden from view it will have a limited impact on the landscape character.</p>	Major adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)			Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Replacement bankside vegetation behind commercial properties to the north of the A9, would not have established by the winter of year 1 and therefore the walls would still be a stark element between the parking areas/buildings and the green landscape.</p> <p>Replacement vegetation along the Polmont Burn and Westquarter Burn will help to restore the green quality watercourse, although at this stage any planting would be new and limited in size. There is ancient woodland to the south of the Polmont Burn within the cell which could be potentially affected by the works.</p> <p>Mitigation planting and sensitive and appropriate wall finishes (as agreed with the Local Authority and HES) would be important along the road edges at the A9 and Grandsable Road as these are highly visible.</p> <p>It is imperative that the Scheme within the Antonine Wall designated area is dealt with sensitively. It is however only slight change to the landscape character of the area, which overtime will settle into the landscape.</p>	Major adverse
			Summer, Year 15	<p>Negligible</p> <p>The flood walls have now become part of the local infrastructure with any replacement vegetation having established.</p>	Negligible

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
	Area 4 - Inchyra/ Wholeflats	Low	Construction	<p>Major</p> <p>Area 4 is a mixed-use area, with a mainly open green character, but with some commercial/recreational facilities. Inchyra Road and Wholeflats Road (A9) borders the area to the west and north. A line of pylons also run across the area, partially reducing the quality of the character.</p> <p>There will be localised construction disruption to the tranquillity of the area due to construction traffic, noise, location of the potential site compound, in-water working, and the building of the flood measures themselves during the build period. There is also likely to be road closures which would disrupt traffic, and cause congestion along this busy road. All of this disruption reduces the quality of the area, albeit temporarily.</p> <p>There would also be a loss of vegetation, particularly bankside vegetation along the Flood Relief Channel, which also temporarily reduces the green natural character of the area.</p> <p>The new defences between the car park at Polmont Woodland and Millhall Gardens will require removal of existing vegetation along the bank and to the residents communal garden areas. The defence along Smiddy Brae itself would also require road closures. Therefore, during construction there would be some disruption to this area.</p> <p>During construction there would be a large amount of disturbance to Reddoch Road as this is a narrow road, and also to the adjacent stables.</p>	Moderate adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)			Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>This area is characterised by the busy roads which run through it, as well as the open green spaces, mainly to the south of the road.</p> <p>The loss of some of the mature vegetation and visibility of the new walls along the roads adjacent to the works would reduce the greenness and quality of the area. However, in parts, the walls would appear as the boundary of properties, including at Reddoch Road, Smiddy Brae and the Galaxy Sports playing fields.</p> <p>The low walls along the A905 will be noticeable due to them being located in an existing grass verge and also lower down the banks of the Flood Relief Channel next to Little Kerse. With the removal of existing trees along this stretch and without any mitigation planting there would be limited screening of the Scheme.</p> <p>The character of this area would therefore be somewhat detrimentally affected by the reduction in vegetation and the more open aspect, which would be most apparent from the roads.</p> <p>A low embankment around the north and east of the property north of the Macdonald Inchyra Hotel forms a boundary to the property, as it sits just outside the edge of the vegetation. This will have a minor detrimental effect on the character of the green space.</p> <p>The Area of Townscape Value at Old Polmont Village is not anticipated to be affected by the Scheme, however Millhall Gardens which is a addition to the east of the village (although not within the designation) will have a new flood wall along the west side of the Millhall Burn, which will require removal of a large area of planting. This will adversely effect the character of the space.</p> <p>Proposed flood defences along Reddoch Road adjacent to the Millhall Burn are around 2m high and replace existing defences of gabion baskets and walls. The properties along Reddoch Road do not address the burn, and a number have high property boundaries. The defences wrap around the adjacent stables in this location with around 1.6m high walls. The existing burn is hidden by overgrown vegetation, which will be removed as part of the works, so the character of this space with the new walls, without mitigation planting would be quite barren.</p>	Minor adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would help to partially screen the walls and green up the waterways, although this would not be fully established at this stage.</p> <p>Appropriate detailing and finishing of the walls, as agreed with the Local Authority, will be required to enable them into fit into the local character and existing road infrastructure.</p> <p>Therefore, there will be a minor detriment to the local character because of the reduction in vegetation and the more open aspect at year 1, which would be most apparent from the roads.</p>	Minor adverse
Flood Cell 4 (cont.)			Summer, Year 15	<p>Negligible</p> <p>Over time mitigation planting would help to establish bankside vegetation and provide screening to flood walls, and the walls would have become part of the road infrastructure and local character.</p>	Negligible
Flood Cell 5	Area 1 – Ineos Area	Low	Construction	<p>Minor</p> <p>Area 1 is characterised as private industrial land, with the public A904 road running along the southern boundary of this area across a category C listed bridge.</p> <p>There will be localised construction disruption (construction traffic, noise, potential site compounds, a demolished building, building of the flood measures and coastal revetments and in-water working areas) during the build period within the private area, some of which will also be seen from the road, however this would be in-keeping with the industrial nature of the area.</p> <p>There would also be a loss of vegetation, particularly riverside vegetation along the River Avon, which can be seen from the A904, and also the local road to the west of Scottish Water (see Cell 6). This vegetation reduction slightly opens up view of the industrial works, which is a minor detriment to the character.</p> <p>The existing industrial character is generally able to absorb these changes with only minor effects.</p>	Minor adverse
			Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>Some of the flood defences are quite large within this area (up to 2.5m), however due to the industrial nature of the area (with existing large infrastructure, including flues, boilers, generators and other plant), the character is generally able to absorb the changes, and the walls would appear as the informal boundary around the petrochemical complex.</p>	Minor adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (with all mitigation)	Minor Mitigation planting within this industrial area would replace trees/vegetation lost during construction, particularly along the riverbank and soften views to the walls, particularly from the A904, although it would not be established at this stage.	Minor adverse
			Summer, Year 15	Negligible The grassed embankments would now be established into the surrounding industrial riverside landscape. Mitigation planting will have also softened the visibility of the embankments. The walls would have also become part of the industrial infrastructure within this area.  The Scheme would now generally be part of the local landscape character, although with a slight change to the original character with the new bunds.	Negligible
Flood Cell 5 (cont.)	Area 2 – Versalis Area (north of the A905)	Low	Construction	Moderate Area 2 is industrial in character, but with a large amount of open space in the centre which the River Avon meanders through, with informal public access. The A904 road runs along the north-eastern boundary of this area across a category C listed bridge, and the A905 runs along the south of this area. There are high pylons which run through the central green space adding to the industrial character.  There would be noticeable disruption to the area during the construction of the large walls, two potential site compounds, in river working and general loss of vegetation in the river valley and along the A905.  To construct the large walls (along with the compound area), a wide area of land/green space would need to be disturbed. This would create a local detrimental change in character to this open green central area during construction.  This would continue throughout the build period, and during this time access would also be restricted.	Minor adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The new large walls (over 3m in height) on either side of the river valley would form a large barrier between the industrial areas and the river valley central open green space. At this stage they will be new large landform structures in the landscape, which will have not settled into the landscape character.</p> <p>Vegetation adjacent to the A905 road would be lost as part of construction of the new walls, which will not be replaced. This area, therefore, will have lost the green screening of industrial units from the road and as a consequence some of its green/natural character.</p>	Minor adverse
			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Vegetation adjacent to the A905 road, lost as part of construction of the new walls, is to be replaced as part of the planting mitigation, but at this stage would not be well established. This area, therefore at this stage, would have partially lost the green screening of industrial units from the road and, as a consequence, some of its green/natural character.</p> <p>Potential mitigation planting would also replace trees/vegetation along the riverbank, lost during construction, by the A904 and offset the hard infrastructure of the walls and size of the walls.</p>	Minor adverse
			Summer, Year 15	<p>Negligible</p> <p>Mitigation planting would have also softened the visibility of the walls, and partially infilled the gap between the walls and the A905, helping to once again screen views of the industrial area to the north.</p> <p>The Scheme would now generally be part of the local landscape character, although with a slight change to the original character with the large new bunds.</p>	Negligible



Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 5 (cont.)	Area 3 – Avon Valley (south of the A905)	High	Construction	<p>Moderate</p> <p>Ancient woodland and the Avon Gorge SSSI, although within the cell boundary are not near to the flood works and therefore, are not affected.</p> <p>Large flood walls are proposed along the A905, generally between 1m and 1.75m high, and around 2m high adjacent to the road entrance down to Jinkaboot Bridge.</p> <p>During construction, there will be disruption to the rural green character and tranquillity of the area along this stretch of the A905, with construction work, noise and machinery. Access would also be potentially disrupted along Core Paths, and over Jinkaboot bridge, further adding to the disturbance. And there would likely be road lane closures whilst the walls are built, adding to the disruption.</p>	Major adverse
			Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Large walls, with basic finishes, are proposed adjacent to the road, which creates a solid boundary structure along the edge of the existing open road character, thereby reducing the connection with the open countryside. However, with careful construction methods existing boundary hedges should be able to be retained which would help to reduce the effect on the rural character of the area.</p> <p>The high flood walls adjacent to Jinkaboot bridge would create more of a noticeable detrimental change to the rural character of the area, with basic wall finishes.</p>	Major adverse
			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Appropriate wall finishes to the flood walls, as agreed with the Local Authority, will help this wall partially blend into the landscape, along with any mitigation planting to reinforce the green boundary.</p>	Moderate adverse
			Summer, Year 15	<p>Negligible</p> <p>Mitigation planting will have blended into the landscape by year 15, and the walls would become part of the local road infrastructure.</p>	Negligible

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 6	Area 1 – Ineos Area	Low	Construction	<p>Minor</p> <p>The works in Area 1 are all within industrial private land, but there will be localised construction disruption (construction traffic, noise, potential site compounds, coastal revetment and in-water working areas) during the build period.</p> <p>There would also be potential loss of vegetation in the form of scattered trees, as well as coastal and riverside vegetation.</p>	Minor adverse
Flood Cell 6 (cont.)			Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>Some of the flood defences are quite large within this area, however due to the industrial nature of the area (with existing large infrastructure, including flues, boilers, generators and other plant), the character is able to absorb the changes, and the walls would generally appear as the boundary around the petrochemical complex.</p>	Minor adverse
			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Potential mitigation planting would replace trees/vegetation lost during construction and soften views to the walls.</p>	Minor adverse
			Summer, Year 15	<p>Negligible</p> <p>Defences would now be established into the surrounding landscape. Mitigation planting would have softened visibility of the flood walls. The Scheme would now be integrated with the local landscape character.</p>	Negligible
	Area 2 – Kinneil Area	Low	Construction	<p>Moderate</p> <p>Area 2 is partly industrial in character, but with a large amount of open space, some of which is farmland. There is also public access to this area.</p> <p>Therefore, there would be noticeable disruption during the construction of the large embankment to the north and east, coastal revetment, two potential site compounds and general loss of vegetation.</p> <p>To construct the defence to the east some of the existing woodland would be required to be removed. This would create a local detrimental change to this area.</p> <p>This would continue throughout the build period, and during this time access would also be restricted.</p>	Minor adverse

Landscape Receptor (Character Zone/ Designation/ Flood Cell)	Cell Location (where applicable)	Sensitivity of Landscape/ Townscape Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The new large embankment (up to 2.6m in height, to the north), along with large ramps to get up and over it, would form a large barrier between the road (and Scottish Water Site) and the coastal edge. The embankment would however retain a green outlook and help to screen views to Grangemouth Petrochemical complex buildings to the north-west.</p> <p>An area of trees/vegetation in the eastern block of woodland adjacent to the local road would be lost as part of construction, and this would create a gap between the wall and the existing retained woodland with no replacement vegetation. This would mean the new defence wouldn't be integrated into the existing landscape.</p> <p>As part of the primary mitigation, a change to the coastal revetment type where it meets the woodland area would be changed from rock armour to a soft engineered reinforced slope. This would reduce the long-term effect of the coastal revetment here, as the slope would settle more appropriately into the landscape.</p>	Minor adverse
Flood Cell 6 (cont.)			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Replacement mitigation vegetation for trees lost at the edge of the woodland area adjacent to the road and new wall will help blend it into the landscape. However at this stage they would not have fully established, and therefore this area would still have lost some of its green/natural character.</p> <p>The soft engineered reinforced slope, as a replacement for the coastal revetment, would be revegetated as part of mitigation and the revegetated slope would settle more appropriately into the landscape. Again at this stage the vegetation would be small and not fully established.</p>	Minor adverse
			Summer, Year 15	<p>Negligible</p> <p>The defences would now be established into the surrounding landscape. Mitigation planting would have also softened the visibility of the defences, and somewhat infilled the gap between the wall and the woodland block.</p> <p>The Scheme would now generally be part of the local landscape character, although with a slight change to the original character with the new defences.</p>	Negligible

# Environmental Impact Assessment Report

Appendix B9.8 – Visual Effects Assessment Table

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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



**GRANGEMOUTH**  
Flood Protection Scheme  
Protecting the heart of our communities

## Appendix B9.8 – Visual Effects Assessment Table

The visual receptors have been assessed in the below table at the following time periods: construction; winter of year 1 (with primary mitigation only), winter of year 1 with the addition of secondary mitigation; and summer of year 15, also with secondary mitigation.

For the analysis of the winter of year 1 primary/embedded mitigation which is integral to the scheme (refer to section 9.8.3 in Chapter 9) has been included, but not secondary mitigation. Where they are the same, they have been grouped in one row.

For locations of specific Core Paths listed below, please see Flood Cell maps in Section 9.5 of the main LVIA chapter.

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1	Area 1- A9/ Stirling Road	Residents (A9/ Stirling Road, South Broomage)	A9/Stirling Road, with houses to the south also viewing riverbank vegetation	High	Construction	<p>Major</p> <p>Visual disruption experienced by residents with views of the construction of the embankment and flood walls, ramp and in-water working area given the close-proximity of houses, particularly on the eastern side of Stirling Road and the loss of intervening vegetation. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The view from residential properties in the north of the cell would be changed with the lack of mature vegetation along the riverbank. Tree loss would be apparent from an oblique angle to the south and the loss of trees to the immediate north-east opening views across the river to South Broomage.</p> <p>The walls form a hard edge to the river (up to 1.2m high along the northern section of Stirling Road), which creates a barrier between the river and the footpath, although this is not as apparent from residential properties.</p> <p>The removal of the high green vegetative screen along residential properties to the east of Stirling Road (opposite the bus garage) would adversely effect the outlook from these houses. A new barrier as part of the embedded mitigation, to the road edge of these residential properties would be required to retain their privacy.</p> <p>Although the flood defences themselves would not be apparent in views from properties along the southern edge of South Broomage, the loss of riverside vegetation and greater visibility of commercial buildings would be.</p> <p>In this area the new flood defences are generally only around 1m in height, which are similar to/lower than existing walls/barriers in places. The defences therefore would not in themselves create a significant visual intrusion.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation planting would replace trees lost during construction, helping to reinstate a green barrier to the road and commercial properties, however at this stage the planting would not be established. Given the narrow riverbank in the north, replacement trees here would be limited although properties here would have views to a low wall (less than 1m) backed by trees in South Broomage.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>Mitigation planting along the river would have matured, creating a regenerated riverbank, and soften views of the flood walls. Planting where possible/ barriers along the houses to the east of Stirling Road would now screen and soften views from the houses to the road and commercial buildings beyond.</p>	Moderate adverse
					Construction	<p>Moderate</p> <p>Road travellers would experience a moderate amount of temporary visual disruption during construction given the close-proximity to the works including in-water working area, potential site compound and the loss of mature vegetation.</p> <p>There is also likely to be a temporary closure of the southbound lane and car park and subsequent diversion of traffic, which would also cause visual disruption.</p> <p>This would continue throughout the build period.</p>	Moderate adverse
Road travellers (A9/ Stirling Road)	A9/Stirling Road and adjacent buildings, and at northern end riverbank vegetation	Medium					

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with mitigation)	Minor The view along the road would be different with the lack of mature vegetation along sections of the road and the riverbank and the new flood walls (up to 1.9m in height although mainly at a height of between 0.5m to 1.5m) creating a less green landscape/ outlook. However, as it is a mostly industrial area and considering the duration of views, the view is less significant for road travellers.	Minor adverse
Flood Cell 1 (cont.)		Users of footpaths adjacent to the A9/ Stirling Road	A9/Stirling Road and adjacent buildings, and at northern end riverbank vegetation	Medium	Summer, Year 15	Negligible The walls would still be visible, although views of the regenerated riverbank planting and the screening to the residential properties would be similar to existing.	Negligible
					Construction	Major It is likely the eastern footpath, adjacent to the A9/ Stirling Road would be temporarily closed to enable the construction of the flood defences, although the western footpath will still be accessible. From here and where access to the eastern footpath is available, there would be views to the construction of the embankments, flood walls, flood gates and loss of riverbank vegetation. There would also be partial visibility of the in-water working area. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor The view along the road would be different with the lack of mature vegetation along sections of the road and the riverbank and the new flood walls (up to 1.9m in height, although mainly at a height of between 0.5m to 1.5m) creating a less green landscape/ outlook.	Minor adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees lost during construction and help to reinstate a green outlook from the footpath, however at this stage the planting would not be established.	Minor adverse
					Summer, Year 15	Negligible The walls would still be visible, although over time, the embankments would settle into the landscape and mitigation planting would continue to reinstate a green outlook, particularly along the eastern footpath.	Negligible
Flood Cell 1 (cont.)		Users of Falkirk Golf Course	At 16 <sup>th</sup> hole, filtered views to bus garage as well as internally within golf course	Medium	Construction	Major Due to the removal of existing mature vegetation and installation of the flood wall, the construction works adjacent to hole 16 will cause a large amount of visual disruption to users.	Major adverse
					Winter, Year 1 (primary mitigation)	Major The view of the replacement flood wall and bus garage beyond, with no planting would create a very stark view at the 16 <sup>th</sup> hole.	Major adverse
			At 16 <sup>th</sup> hole, filtered views to bus garage as well as internally within golf course	Medium	Winter, Year 1 (with all mitigation)	Minor With replacement planting adjacent to the wall, of a large size, the wall would be screened or partially screened and the views from the course would be softened.	Minor adverse
					Summer, Year 15	Negligible The walls would still be visible, although through filtered views through mature planting.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		People working at commercial properties	Internal and A9/Stirling Road and it's adjacent vegetation	Low	Construction	Moderate People working at commercial properties would experience disruption with views to the construction of the embankment and flood walls, ramp and in-water working area, the loss of intervening vegetation and the part closure of Stirling Road. There would also be visibility of the potential site compound from properties along the southern section of Stirling Road. This would continue throughout the build period.	Minor adverse
Flood Cell 1 (cont.)					Winter, Year 1 (primary mitigation)	Minor Views from commercial properties would be slightly different with the replacement of the row of tall trees along Stirling Road with a fence and the reduction in riverbank planting as well as the new flood walls (up to 1.9m in height, although mainly at a height of between 0.5m to 1.5m).	Minor adverse
					Winter, Year 1 (with all mitigation)	Mitigation planting would replace trees lost during construction and help to reinstate a green outlook, however at this stage the planting would not be established.	Minor adverse
					Summer, Year 15	Negligible The walls would still be visible, although views of the regenerated riverbank planting and the screening to the residential properties would be similar to existing.	Negligible
		Recreational users of Camelon playing fields	Woodland surrounding the playing fields	Low	Construction	Moderate Some visual disruption experienced by recreational users of the playing fields during construction with partly screened views to the potential site compound.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with mitigation)	Negligible Limited visibility from the northern edge of the playing fields to the southern extents of the proposed scheme with views filtered by intervening vegetation.	Negligible
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would continue to screen views from the playing fields.	Negligible
Flood Cell 1 (cont.)		People using Core Path 001/038 River Carron path: Swing Bridge to Camelon Cemetery (including part of the River Carron Loop Path)	A9/Stirling Road and adjacent vegetation, and Camelon Wildlife Site	High	Construction	Major Users would experience visual disruption with the potential closure of the Core Path during construction, which is where the potential site compound and pedestrian flood gate are located, thereby stopping views from parts of this route. A diversion route would however likely be provided.  This would continue throughout the build period.	Major adverse
					Winter, Year 1 (with mitigation)	Minor Users would experience a minor change to the original view from the path with the addition of the flood gate. The new walls and embankment will be visible from the path, but would form the edge to the car park along with the adjoining bund (which the proposed embankment will merge with) and intervening vegetation.	Moderate adverse
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would continue to screen views from the path.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		People using on Core Path 011/010 (including The River Carron Loop Path and The Helix Larbert Link)	Houses in South Broomage and fields with long views to woodland and commercial properties along the A9/ Stirling Road	High	Construction	Moderate Visual disruption would be experienced by users during construction with views to the construction works including loss of bankside trees, although partly screened by intervening vegetation. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (with mitigation)	Minor Users would experience a change to the original view from the path near South Broomage, where there would be greater visibility of commercial buildings and vehicles on Stirling Road due to loss of vegetation. The new walls and embankment are not expected to be discernible in views given the separation distance and intervening buildings/ vegetation. Replacement vegetation would not be established.	Moderate adverse
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would, by year 15, screening views from the path.	Negligible
		People using Core Path 011/015 (including part of the River Carron Loop Path)	Houses in South Broomage, and surrounding fields and woodland as well as to Camelon Riverside Wildlife Site from the southern section	High	Construction	Moderate Users would experience visual disruption with the partial closure of the path in the south during construction, as it is located on the site compound, thereby stopping views from this route. A diversion would however likely be provided.  From the majority of the path, there would be partly screened views to the flood works and loss of bankside vegetation.  This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Camelon Wildlife Site and playing fields	High	Winter, Year 1 (with all mitigation)	Negligible Users would experience a slight change to the original view from the path near South Broomage, where there would be increased visibility of commercial buildings and vehicles on Stirling Road given the loss of vegetation. The new walls and embankment are not expected to be discernible in views given the separation distance and intervening vegetation, although the flood gates at wildlife site are expected to be visible from the southern section.	Negligible
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would screen views from the path.	Negligible
		People using proposed Core Path 001/048 River Carron Path: Swing Bridge to Camelon Cemetery			Construction	Major Users would experience visual disruption with the potential closure of the Core Path (if adopted pre-construction) during construction, given the location of the potential site compound. Views to the construction of the flood defences would be limited to the flood gates. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (with mitigation)	Negligible Users would experience a barely discernible change to the original view with the addition of the flood gates, which would only be visible from the western extents. The new walls and embankment are not expected to be visible given the separation distance and intervening landform and vegetation.	Negligible
Flood Cell 1 (cont.)					Summer, Year 15	Negligible Mitigation planting and existing tree growth would continue to screen views from the path.	None

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		People using proposed Core Path 001/050 Dorrator Bridge to Cemetery Loop	A9/Stirling Road and adjacent vegetation	High	Construction	Moderate Users would experience visual disruption with views towards the construction of the southern flood defences and loss of vegetation adjoining Stirling Road, reducing the green outlook in this direction. There would also be partly screened views towards the potential site compound to the east. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Negligible Users would experience a barely discernible change to the original view as the flood defences would appear as an extension of the existing bund and property boundary walls. The low defences on the south of the road would be barely discernible in views.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible The grassed embankment and mitigation planting would help to reinstate a green outlook from the northern end of the path, in views north. The low defences on the south of the road would be barely discernible in views.	Negligible
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would continue to screen views from the path.	None
Flood Cell 1 (cont.)	Area 2- Bainsford	Residents (New Carron Village and those along the southern edge of Mungal Community Woodland)	Houses in New Carron Village, Mungal Community Woodland and	High	Construction	Major Considerable visual disruption experienced by residents during construction with views of the embankments (circa 4m in height), ramps and in-water working area given the close-proximity of houses and the loss of intervening vegetation. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			surrounding woodland		Winter, Year 1 (primary mitigation)	Major  The view from residential properties would be noticeably different with the introduction of the new embankments.  Embankments adjoining New Carron Village would appear as imposing features in views from the residences, particularly those higher than fence height and when viewed from the garden spaces of properties.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate  Mitigation planting would help soften views of the area, and the grass would have likely established on the embankments thereby settling them somewhat into the surrounding landscape. However at this stage any tree/shrub planting wouldn't have established.	Major adverse
					Summer, Year 15	Minor  Mitigation planting would help soften views of the area over time, and the grass would establish on the embankments thereby settling them somewhat into the surrounding landscape.  However, the 3.8m high embankment is an imposing visual feature in the landscape which cannot be integrated into the landscape.	Moderate adverse
		People working at commercial properties (Carron Phoenix Ironworks)	Surrounding woodland with long views to urban landscape	Low	Construction	Minor  People working at commercial properties would experience a slight disruption to views during construction of the western end of the embankment to the north of the River Carron, ramp and in-water working area and the loss of intervening vegetation.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (primary mitigation)	Minor People working at commercial properties would experience a slight change to the original view with the loss of some mature trees along the river and visibility of the embankment from the eastern extents of the property.	Minor
					Winter, Year 1 (with all mitigation)	Negligible Mitigation planting is expected to replace some trees lost during construction, returning it (over time) to a view similar to existing.	Negligible
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would screen views from these commercial properties.	None
	People using Core Path 011/008 on Nicole's Way (includes the River Carron Loop Path and The Helix Larbert Link cycle route)	Carron Phoenix (Ironworks) building, River Carron and bankside vegetation and woodland	High	Construction	Minor Some visual disruption experienced by users with views to in-water working areas, ramp and potential loss of some bankside vegetation during construction.	Moderate adverse	
				Winter, Year 1 (primary mitigation)	Minor Users would experience a minor change to the original views with the potential loss of bankside vegetation.	Moderate adverse	
				Winter, Year 1 (with all mitigation)	Minor Mitigation of replacement planting will help reduce this over time, but at this stage planting would not have established.	Moderate adverse	



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Summer, Year 15	Negligible Replacement planting will have matured and the view will be similar to existing.	Negligible
		People using Core Path 001/018 Mungal Riverside (includes the River Carron Loop Path, Bainsford Loop cycle route and the Helix Around Town Tour (HArTT) cycle route)	Mungal Community Woodland open area, River Carron and bankside vegetation and woodland	High	Construction	Major Visual disruption experienced by users during construction with partly screened views to embankments and loss of woodland vegetation. It is likely the eastern edge of the path would be closed (although a diversion should be in place) to enable construction works. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate Users would experience a noticeable change to the original views east from the path, where there would be visibility of the new embankments (in parts, circa 4m in height), with some views partly screened by intervening woodland.	Major adverse
			Winter, Year 1 (with all mitigation)	Moderate Mitigation planting would help soften views of the area, and the grass would have likely established on the embankments thereby settling them somewhat into the surrounding landscape. However at this stage any tree/shrub planting wouldn't have established.	Major adverse		

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	<p>Minor</p> <p>Mitigation planting would be established by this point helping soften views of the area over time and help to settling the embankments somewhat into the surrounding landscape.</p> <p>However, the circa 4m high embankment is an imposing visual feature in the landscape which can't be disguised, and therefore has a minor adverse impact on users of this Core Path.</p>	Moderate adverse
Flood Cell 1 (cont.)		People using Core Path 001/020 Mungal Riverside	Mungal Community Woodland open area, surrounding woodland, New Carron Village and a pylon	High	Construction	<p>Major</p> <p>Considerable visual disruption is experienced by users during construction with the possible closure of the path along the boundary to the housing estate. Where the path is still in use, users would have direct views towards the new embankment (circa 4m in height). This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Users would experience a noticeable change to the original views with a circa 4m high bund blocking views out to the open space.</p> <p>The grass would establish on the embankments thereby settling them somewhat into the surrounding landscape.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation planting would also help to soften views to and along the embankment, replicating open and enclosed views currently experienced by users along this path.</p> <p>However, the circa 4m high embankment would be an imposing feature, visible from the path and therefore would have a moderate adverse impact on users.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	<p>Minor</p> <p>The circa 4m high embankment is an imposing visual feature in the landscape which can't be disguised, and therefore will still be of a minor adverse magnitude.</p> <p>Established mitigation planting will have helped to soften views to and along the embankment, replicating open and enclosed views currently experienced by users along this path.</p>	Moderate adverse
		People using Core Path 001/021 Mungal Riverside (includes HArTT cycle route)	Mungal Community Woodland open area, New Carron Village and pylons	High	Construction	<p>Moderate</p> <p>Visual disruption experienced by users during construction with partly screened views to the embankment to the east (circa 4m in height) and loss of woodland within Mungal Community Woodland. This would continue throughout the build period.</p>	Major adverse
Flood Cell 1 (cont.)					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>Users would experience a change to the original view along sections of the path looking east, where there would be visibility of the new embankment. However, intervening woodland would screen views to the embankment, in this direction.</p>	Moderate adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would also help to soften views to the embankment, replicating open and enclosed views currently experienced by users along this path. However at this stage the planting would not be established.</p>	Moderate adverse
					Summer, Year 15	<p>Negligible</p> <p>Over time, grass would establish on the embankment, helping it to settle into the surrounding landscape. Mitigation planting and existing tree growth would continue to screen and soften views from the path.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		People using the western part of Core Path 004/017 (includes the River Carron Loop Path, Bainsford Loop and HArTT) cycle routes. Users also include horse riders)	Woodland and riverbank vegetation	High	Construction	Moderate Noticeable visual disruption experienced by users with views to the northern embankment and potential loss of some woodland during construction. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (with mitigation)	Minor Users would experience a slight change to the original view along a short stretch of the path (western extents) where the 1.5m high embankment is located and set back from the footpath, and the ground is raised.	Moderate adverse
					Summer, Year 15	Negligible Over time, grass would establish on the embankment, and any replacement vegetation would have established.	Negligible
Flood Cell 1 (cont.)	Area 3 - Bainsford/ Carron	Residents (Carron)	River Carron and bankside vegetation, urban landscape including road network with long views to distant hills	High	Construction	Major Considerable visual disruption will be experienced by residents during construction with views of flood walls, ramps, temporary construction, replacement bridge and in-water working areas, given the close-proximity of houses and the loss of intervening vegetation. Properties north of the River Carron would also have views to the potential site compound and the demolition of a warehouse. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	<p><b>Major</b></p> <p>The view from residential properties would be noticeably different with the loss of mature vegetation along the riverbanks of the River Carron and along the boundaries of properties that back onto the river. Additionally, visibility of the new flood walls (up to 1.3m in height along property boundaries and circa 2m north of Dawson Mission) would also degrade the view.</p> <p>The loss of trees between the River Carron and the rear gardens would create a stark view, reducing privacy from these properties and enabling greater visibility to the surrounding road network.</p> <p>The New Carron Road Bridge is to be replaced with a similar structure on the same alignment, so once built the views of it should be similar.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p><b>Moderate</b></p> <p>Mitigation riverside planting will help to reduce this impact, but at year one the planting will not be established. A mix of large and small trees would be required to limit the impact at this sensitive location.</p> <p>Careful design of the New Carron Road Bridge, to be agreed with the local authority, would integrate it into the landscape, reducing its visual impact.</p>	Major adverse
Flood Cell 1 (cont.)					Summer, Year 15	<p><b>Minor</b></p> <p>The rear garden flood walls would remain visible to residents and would form part of the boundary.</p> <p>Mitigation planting would have softened views to the flood walls on the opposite side of the river and towards roads and vehicles on them, reducing the overall impact to moderate.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Road travellers - Vehicles (Carron Road, Stenhouse Road, B902)	Along the road network, the urban landscape and woodland	Medium	Construction	<p>Major</p> <p>Road travellers would experience a large amount of visual disruption during construction given the close-proximity to the works including the flood defences, in-water working areas, ramps including temporary construction, replacement bridge, potential site compound and the loss of mature vegetation.</p> <p>The temporary closure of Stenhouse Road and the B902, where they are bridged and subsequent diversion of traffic, would also cause visual disruption. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The views from these roads would be different with the lack of mature vegetation along the River Carron and visibility of the new flood walls (up to 2m in height) creating a less green landscape/outlook. Although these views would be over a very short duration and generally from where Stenhouse Road and the B902 are bridged.</p> <p>The New Carron Road Bridge is to be replaced with a similar structure on the same alignment, so once built the views of it should be similar for road users.</p>	Minor adverse
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation riverside planting will help to reduce this impact, but at year one the planting will not be established. A mix of large and small trees would be required to limit the impact at this sensitive location.</p> <p>Sensitive wall and bridge finishes will help integrate the infrastructure into the landscape. However the large wall will still be noticeable.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Negligible The walls would remain apparent in views although with mitigation planting and appropriate finishes, the change in view towards the flood walls would be negligible to the road traveller.	Negligible
		Users of non-designated footpaths (Carron Road, Stenhouse Road, B902)	Along the road network, the urban landscape woodland, the River Carron and riverbank vegetation	Medium	Construction	Major Major visual disruption with the likely closure of footpaths, where these roads are bridged, to enable the works. From where the footpaths would be accessed, there would be noticeable views to the construction of the flood walls and in-water working areas given the close proximity, loss of riverbank vegetation and elevated location. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate The views along these footpaths would be noticeably different with the lack of mature vegetation along the river which once screen views to residential properties and visibility of the new flood walls (circa 2m in height to the south along Dawson Mission and up to 1.3m along the northern riverbank), and a new bridge, creating a less green landscape/ outlook, although this would generally only be from where Stenhouse Road and the B902 are bridged.	Moderate adverse
Flood Cell 1 (cont.)	Area 3 – Bainsford/ Carron (cont.)				Winter, Year 1 (with all mitigation)	Moderate Mitigation riverside planting will help to reduce this impact, but at year one the planting will not be established. A mix of large and small trees would be required to limit the impact at this sensitive location.  Sensitive wall and bridge finishes will help the infrastructure integrate into the landscape, but as it will still be noticeable due to the size.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Negligible The walls would remain apparent in views although with mitigation planting and appropriate finishes, views to the flood walls would be softened.	Negligible
		People working at and visiting Carronbridge Inn/ Soo Hoose Restaurant	Urban landscape including New Carron Village, Carron Road, woodland and pylons	Low	Construction	Moderate The Carronbridge Inn/ Soo House addresses Stenhouse Road/ Carron Road, although there are long views from the property to the proposed works. People working and visiting the Carronbridge Inn/ Soo House would experience some disruption to views during construction of the flood defences, new bridge, in-water working area and the loss of intervening vegetation. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Minor From the Carronbridge Inn/ Soo House, there would be a minor change to the original view at an oblique angle, with the loss of bankside vegetation and visibility of the new flood wall (less than 1m) and raised footbridge over the Mungal Burn. As well as views from the upper floor windows to the flood wall and loss of trees north of Dawson Mission.	Minor adverse
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	Minor Mitigation planting is expected to replace some trees lost during construction, returning it to a view similar to existing. However at this stage the planting would not be established.	Minor adverse
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would soften and screen views from this property.	Negligible



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		People working at and visiting the Dawson Mission	Urban landscape including New Carron Village, road network, woodland and pylons	Medium	Construction	<p>Major</p> <p>Considerable visual disruption will be experienced by people at the Dawson Mission during construction with views of the flood walls, bridge and in-water working areas given the close-proximity and the loss of intervening vegetation.</p> <p>This would also open-up views to the potential site compound and the demolition of a warehouse. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The view from the Dawson Mission would be noticeably different with the loss of mature vegetation along the River Carron and along the northern boundary of the property and visibility of the new flood walls, particularly those to the west and north, as well as the new bridge.</p> <p>The works directly to the north include the increased height of Core Path 004/003 and the new wall up to a height of circa 2m from the raised path. This wall would form a visual barrier between the Dawson Mission and the river.</p>	Major adverse
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation riverside planting, as well as planting on the northern boundary, will help to reduce this impact, but at year one the planting will not be established. A mix of large and small trees would be required to limit the impact at this sensitive location.</p> <p>Sensitive wall and bridge finishes will help the infrastructure integrate into the landscape, but they will still be dominant in the view due to their size.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		People using Core Path 004/022 and 004/001 Cobblebrae	Road network, woodland and pylons	High	Summer, Year 15	Minor The walls and new bridge would remain apparent in views although with mitigation planting and appropriate finishes, views to the flood walls would have softened.	Minor adverse
					Construction	Moderate Some visual disruption experienced by users during construction with partly screened views to the new flood wall along the northern bank of the River Carron, ramp and temporary construction, new bridge, in-water working area and loss of intervening vegetation. This would continue throughout the build period. Flood defences which cross the path near to the end of Carronside Street will create a large amount of visual disruption to users of the paths during construction.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor Users would experience a minor change to the original view along sections of the path looking north, where there would be partially screened views of the new flood wall.  The new wall which crosses the path (changing the levels in this location) will have a minor adverse impact on views with the removal of vegetation to the east, without any replacement vegetation.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting and existing tree growth would eventually screen views from the path, however at this stage it would not be established.	Moderate adverse
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would now be established and would screen views from the path.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		People using Core Path 004/003 the Dawson Mission path (includes the River Carron Loop Path, Bainsford Loop and HArTT) cycle routes)	Road network, the Dawson Mission, River Carron and riverbank vegetation, woodland and pylons	High	Construction	<p>Major</p> <p>Visual disruption experienced by users with views to new flood walls, in-water working areas, a ramp including a temporary construction bridge, new bridge and loss of bankside vegetation, woodland and scattered trees during construction.</p> <p>Sections of the path would be closed (although a diversion should be in place) during construction where it is located within the site boundary/ works footprint, including the pedestrian underpass and north of the Dawson Mission where the path would be raised, thereby stopping views from this route. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>Users would experience a considerable change to the original view as new flood walls (circa 2m in height) would be visible, particularly where they adjoin the path and with the loss of screening vegetation.</p> <p>Ground raising has been included as part of the embedded mitigation to allows views over the flood walls to the river, to help try and maintain a visual connection.</p> <p>The new bridge would be visible within the landscape.</p>	Major adverse
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	<p>Major</p> <p>The walls and bridge would remain apparent in views, but with appropriate finishes they would be integrated into the landscape. Mitigation planting will help to soften views of the flood walls, but the planting at this stage would not be established, and therefore the impact is still major.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		People using Core Path 004/019 Cobblebrae and Core Path 004/018 Cobblebrae – River Carron path	River Carron and riverbank vegetation, house in Carron, woodland and pylon	High	Summer, Year 15	Moderate The walls and bridge are still apparent in views, especially given the limited separation distance on the wall, although with established mitigation planting views to the flood walls would be softened.	Major adverse
					Construction	Moderate Some visual disruption experienced by users during construction with views to the new flood wall along the northern bank of the River Carron, ramp and temporary construction bridge, new bridge, in-water working area and loss of intervening vegetation. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor Users would experience a change to the original view along sections of the path looking north and west. The new flood wall (up to 0.8m in height) would be in front of the boundary wall of the western end properties to the north of the River Carron (east of the bridge) and existing bankside vegetation would help to filter views to it. Views west towards the New Carron Bridge replacement would be different.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting and existing tree growth would help to screen views from the path. Replacement planting however would not be established at this stage.	Moderate adverse
Flood Cell 1 (cont.)					Summer, Year 15	Negligible Established mitigation planting and existing tree growth would continue to screen views from the path.	None

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Users of Core Path 004/023 Cobblebrae (includes the River Carron Loop Path, Bainsford Loop and HArTT) cycle routes)	Woodland and traffic on the B902	High	Construction	Minor Minor visual disruption experienced by users during construction with long views to the new flood wall along the northern bank of the River Carron, and where the B902 is bridged, ramp and temporary construction bridge, in-water working area and loss of intervening vegetation. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (with mitigation)	Negligible Users would experience a slight change to the original long view from the western edge of the path looking north and north-west. The new flood walls (up to 0.8m in height) would sit in front of the boundary wall of properties to the north of the River Carron and existing bankside vegetation would help to filter views to it.	Negligible
					Summer, Year 15	Negligible Existing tree growth would continue to screen views from the path.	None
		People using proposed Core Path 004/035 Cobblebrae to Carron Bridge	Woodland and traffic on the B902	High	Construction	Major Some visual disruption would be experienced by users on the eastern edge of the path during construction with partly screened views to the new flood wall along the northern bank of the River Carron, ramp and temporary construction bridge and loss of intervening vegetation. It is likely that the path would be closed (although a diversion should be in place) during construction where it is located within the site boundary/ works footprint, thereby stopping views from parts of this route. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (primary mitigation)	Minor Users would experience a minor change to the original view along sections of the path looking north, where there would be mainly screened views of the new flood wall.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would help to reduce any residual effects of the construction and new flood measures, however at this stage the planting would not be established.	Moderate adverse
					Summer, Year 15	Negligible Established mitigation planting and existing tree growth would screen views from the path.	None
	Area 4 - East Carron/ Chapel Burn	Residents (Carronshore, Carrondale Care Home)	River Carron and riverbank vegetation, and urban landscape	High	Construction	Major Considerable visual disruption would be experienced by residents living adjacent to the river during construction due to having rear views of the flood walls, ramps, temporary culverting of Chapel Burn and the in-water working area. Additionally, the building of boundary treatments to properties would be highly disruptive during construction of these.  These properties are located in close-proximity to the river, but because they are facing away from the river, the effect is slightly reduced.  The loss of the waterside vegetation, including Category B trees would however additionally open up views of the construction works, with visibility beyond the immediate properties. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (primary mitigation)	Moderate  The view from residential properties would be noticeably different with the loss of mature vegetation, particularly along Chapel Burn reducing privacy from these properties and enabling greater visibility to and from the adjoining Core Path and Carronshore Road.  Although visible, the new flood walls (up to 1.8m in height, although mainly between 0.5m to 1m) would form part of a run along property boundaries and would not appear out of place in this setting.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate Mitigation riverside planting will help to reduce this impact, but at year one there will be limited growth.	Major adverse
					Summer, Year 15	Negligible Mitigation planting would have established providing privacy back residents by screening views from these properties to the walls and the surrounding area.	Negligible
	Road travellers (Carronshore Road, residential roads within Carronshore)	Urban landscape	Medium	Construction	Minor  Minor visual disruption with the likely closure of a short stretch of the southbound lane of Carronshore Road to enable the works. There would be noticeable views to the construction of the flood walls given the close-proximity and loss of riverbank vegetation (including Category B trees), although works would be visible for a short duration. This would continue throughout the build period.	Minor adverse	

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Minor The views from these roads would be more open and less green given the lack of mature vegetation along Chapel Burn. The new walls will be visible to road travellers given their height, length and location. However the wall at the end along the road will appear as part of the road infrastructure.	Minor adverse
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace some vegetation loss during construction and help to soften views to the flood defences, but at year one there will be limited growth. The defence along the edge of the footpath will be still be discernible.	Minor adverse
					Summer, Year 15	Negligible Over time, any replacement vegetation would have established, and the wall would have become part of the infrastructure and landscape view, resulting in very little change from the current view from this receptor.	Negligible
					Construction	Moderate Moderate visual disruption with the likely closure of the car park to enable the construction of the flood wall. There would be noticeable views to the construction of the flood defences given the close-proximity, direct views from the pub building and outdoor seating area and loss of riverbank vegetation (including Category B trees). This would continue throughout the build period.	Moderate adverse
		People visiting and working The Shore pub (includes outdoor seating area and car park)	Urban landscape and Carronshore Road	Medium			



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Minor Views experienced by people would be more open given the lack of mature vegetation visible along Chapel Burn and the new flood wall at the car park. However, for the most part, the new walls are unlikely to form a major part of overall views for this receptor/ from this location.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees loss during construction and help to soften views to the flood defences, but at year one there will be limited growth.	Minor adverse
					Summer, Year 15	Negligible Over time, any replacement vegetation would have established and the wall would have become part of the infrastructure and landscape view, resulting in very little change from the current view from this receptor.	Negligible
Flood Cell 1 (cont.)		People working at and visiting Carrondale Care Home	River Carron and riverbank vegetation, and urban landscape	Low	Construction	Moderate Moderate visual disruption with noticeable views north towards the river, particularly from upper floors of the construction of the flood walls, in-water working area and loss of scattered trees along the riverbank. This would continue throughout the build period.	Minor adverse
Winter, Year 1 (primary mitigation)					Minor Views experienced by people would be more open given the lack of mature vegetation visible in views south towards the River Carron. The new walls are unlikely to form a major element in the overall view from this location/ for this receptor as they would form/appear as the property boundary of care home and adjoining residential properties.	Minor adverse	

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees loss during construction and help to soften views to the flood defences, but at year one there will be limited growth.	Minor adverse
					Summer, Year 15	Negligible Over time mitigation planting would establish and provide filtered views from the care home to the river.	Negligible
Flood Cell 1 (cont.)		People using Core Path 004/018 Cobblebrae – River Carron path	River Carron and riverbank vegetation, houses in Carronshore and woodland	High	Construction	Minor Minor visual disruption would be experienced by users along a short stretch of the north part of this path during construction. There would be partly screened views to the construction of the new flood adjoining the care home and loss of riverbank trees on the north bank. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (with mitigation)	Negligible The new wall would be apparent in long views as the boundary wall along properties that back onto the river.  The riverbank on the north side from an oblique view would have a reduction in vegetation, but this is from a far view, and therefore the effect is negligible.	Negligible
					Summer, Year 15	Negligible Existing tree growth would screen views from the path, and vegetation on the oblique view would have now established.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Users of Core Path 009/001 Carronshore 2000 path	Houses in Carronshore, Chapel Burn, River Carron and riverbank vegetation	High	Construction	Major Visual disruption experienced by users with views to the construction of the flood walls, ramp, in-water working area and temporary culverting of the Chapel Burn. Works would also include the loss of riverbank vegetation, including Category B trees. It is likely that the path would be closed during construction (although a diversion should be in place), thereby restricting views. This would continue throughout the build period.	Major adverse
Flood Cell 1 (cont.)					Winter, Year 1 (primary mitigation)	Moderate Users would experience a detrimental change to the view given the loss of established vegetation and the new defences. The new wall south of the burn (up to 0.6m in height) would appear as boundary walls of adjoining residential properties however the view would be very open. The wall to the north of the burn would be very exposed and form the boundary to the footpath, restricting views to the burn.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate Mitigation planting would over time help to screen views to the boundary wall and create a green waterside but at year one there will be limited growth. A mix of tree sizes is important along this section to help reduce this impact. The wall to the north of the burn would be very exposed and form the boundary to the footpath, restricting views to the burn. Sensitive finishes would be important here.	Major adverse
					Summer, Year 15	Minor Over time replacement vegetation would have established within the burn, but the wall alongside the footpath would still be visible.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		Users of Core Path 009/001 at Rae Court	Houses in Carronshore, River Carron and riverbank vegetation	High	Construction	Minor  Minor visual disruption would be experienced by users only at the southern end of the path, with some visibility to the construction of the new flood walls and loss of riverbank trees. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (primary mitigation)	Negligible  The new wall would tie into high ground, so would be less visible at this end.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible  Mitigation planting along the river's edge, would help to green views from the far end of the path towards the river.	Negligible
					Summer, Year 15	Negligible  Mitigation planting and existing tree growth would continue to screen views from the path.	Negligible
		Users of Core Path 009/005 Carronshore Road to Mill Road	Urban landscape and Carronshore Road	High	Construction	Minor  Minor visual disruption with the likely closure of a short stretch of the path to enable the works. There would be views to the construction of the flood walls given the close-proximity and loss of riverbank vegetation (including Category B trees), although given the path closure, visibility would be limited. This would continue throughout the build period.	Moderate adverse
		Winter, Year 1 (no mitigation)	Minor  The new walls to the south of the burn would appear as the boundary along residential properties that back onto Chapel Burn. The walls to the north of the burn would limit views of the burn itself and present a hard edge.		Moderate adverse		

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with mitigation)	Minor Mitigation planting along the Chapel Burn, would help to green views from the far end of the path towards the burn, although this would be partially blocked by the new wall north of the burn. Replacement vegetation would however not be established at this stage.	Moderate adverse
					Summer, Year 15	Negligible Over time replacement vegetation would have established and the wall would become part of the infrastructure, resulting in very little change from the current view from this receptor.	Negligible
Flood Cell 1 (cont.)	Area 5 – Carronshore/ Riverside Stables	Residents (Carronshore)	Fields, garden space and woodland	High	Construction	Major Considerable visual disruption experienced by residents, particularly by ones which have an open aspect onto the river, during construction with views of the flood walls, demolition of storage sheds and yard and in-water working areas given the close-proximity of houses and the loss of intervening vegetation.  There would be distant views to the construction of the defences from houses south of Riverside Stables and parade ground. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate Properties which back onto the river from Dock Street would have a noticeable difference due to the removal of existing vegetation and the new flood wall (up to a height of 1.9m).  Further south in Carronshore, views of the stark new defences would be from upper floors of properties only.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation planting, sensitive design and appropriate finishes, as agreed with the Local Planning Authority, to be located near to the flood walls along the properties which back onto Dock Street. Mitigation planting wouldn't however be established at this stage.</p> <p>Mitigation planting around the defences by the stables would help to soften views of the defences.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>The walls would now form a permanent part of the boundary for properties that back onto the river.</p> <p>Over time, any mitigation planting would be established, and would form an intrinsic part of the landscape.</p>	Moderate adverse
Flood Cell 1 (cont.)		Road travellers (North Main Street, The Avenue, Dock Street)	Urban landscape with the River Carron and riverbank vegetation seen from The Avenue	Medium	Construction	<p>Moderate</p> <p>Most road travellers on nearby local roads in Carronshore would experience a minor visual disruption during construction, due to their location to the works.</p> <p>Road travellers on The Avenue would however experience more of a visual disruption given the close-proximity to the works including the flood defences and in-water working areas.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Moderate The new walls would not be apparent in views for most road travellers given their height and the intervening built form and vegetation, except for views along Dock Street and The Avenue. From Dock Street, there would be glimpses of the low wall and flood gate to the south-west. There would also only be glimpses of the higher (up to approximately 1.9m) flood wall along the river's edge from The Avenue, looking west.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would help soften long views, but at this stage would not make any impact due to the planting not being established. Sensitive wall finishes again will help integrate the walls.	Minor adverse
					Summer, Year 15	Negligible From some roads, the walls would remain apparent in views although with appropriate finishes and mitigation planting (where possible), views to the flood walls would have been softened. Over time, the vegetation would now be re-established, and the defences would have settled into the surrounding landscape.	Negligible
Flood Cell 1 (cont.)		People working at commercial properties on the southern side of Dock Street	Dock Street and adjacent houses	Low	Construction	Major Visual disruption experienced by people working at commercial properties with views to the construction of the new wall to the east, demolition of adjoining storage shed and yard, ramp and loss of scattered trees. This would continue throughout the build period.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Minor Commercial buildings address the road to the west, although there would be a noticeable change to the existing view south-east given the loss of the storage shed which would open views in this direction and new wall at a maximum height of 1.9m. The new flood wall with possible fence extension to retain privacy, to the east would form the property boundary.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor Where possible, mitigation planting is expected to replace some trees lost during construction, but at this stage they would not be established.	Minor adverse
					Summer, Year 15	Negligible Over time, vegetation would be re-established, and the embankment would settle into the surrounding landscape.	Negligible
		People visiting Riverside Stables and parade ground	Urban landscape, River Carron and vegetation along it, woodland	Medium	Construction	Major Visual disruption experienced by people visiting Riverside Stables and parade ground with views to the new flood walls and ramp. There would also be views to the demolition of the storage sheds and yard to the north and loss of scattered trees.  In addition, the construction works would see the potential temporary closure of the southern end of Dock Street, from where the stables are accessed.  This would continue throughout the build period.	Major adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (primary mitigation)	Moderate The low wall along the south of the residential properties would just be visible from the parade ground. The wall (up to 2.5m) around the stables building to the north would be very imposing. In addition, the flood gate would form a new and alternative access to the site.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor With mitigation planting (including new trees), the existing green edge would be reinstated, however at this stage any planting would not be established. The flood wall around the northern stables building would appear as a boundary fence and is significantly lower than the height of the building.	Minor adverse
					Summer, Year 15	Negligible Over time, the walls would have settled into the landscape, the larger wall would appear as part of the stables building, and replacement vegetation would be established.	Negligible
		People visiting the River Carron Meander Site of Importance for Nature Conservation (SINC)	Urban landscape, River Carron and vegetation along it, woodland	Medium	Construction	Minor Limited visual disruption is likely to be experienced by people visiting the SINC from the southern edges of the river (there are no specific footpaths through this area). Views are generally screened towards the construction of embankments, flood walls, ramps and in-water working areas, apart from the edges. There would also be long views to the demolition of the storage sheds and yard to the west and loss of scattered trees (including Category A and B trees) along the north bank of the river.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with mitigation)	Negligible Views of flood measures are only from the eastern and northern edge of the SINC, and these are generally long views over the river. Views to the embankment and wall at Riverside Stables and parade ground would be filtered by an existing bund and intervening vegetation. As there are no specific paths along this edge, effects on views would be negligible.	Negligible
Flood Cell 1 (cont.)		Users of Core Path 004/004 Abbotshaugh Community Woodland (including the River Carron Loop Path, HArTT and Bainsford Loop cycle routes)	Woodland	High	Summer, Year 15	Negligible Over time any replacement vegetation would have established, so any initial negligible visual effects would have adapted into the landscape.	Negligible
					Construction	Minor Minor visual disruption experienced by people on this path with mostly screened or long views to the construction of flood measures. There would also be long filtered views to the demolition of the storage sheds and yard to the west and loss of scattered trees along the north bank of the river.	Moderate adverse
					Winter, Year 1 (with mitigation)	Negligible There would be long views of the flood walls (at Riverside Stables and parade ground) but the smaller wall would not appear as an imposing element given its height and the separation distance and the larger flood wall would be seen against the backdrop of large adjoining stables building from this path/ route.	Negligible
					Summer, Year 15	Negligible Over time the embankment, and any distant replacement vegetation would have established in the landscape.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Users of Core Path 004/006 Abbotshaugh Community Woodland (including the River Carron Loop Path, HArTT and Bainsford Loop cycle routes) and Proposed Core Path 004/040 Abbotshaugh Bridge	River Carron and vegetation along it, woodland	High	Construction	Minor  Minor visual disruption experienced by people on Core Path 004/1223 with mostly screened or long views to the construction of flood measures and in-water working area. Impacts would be less for people on the proposed Core Path given the greater separation distance. There would also be long filtered views to the demolition of the storage sheds and yard to the west and loss of scattered trees along the north bank of the river.	Moderate adverse
Flood Cell 1 (cont.)					Winter, Year 1 (with mitigation)	Negligible  There would be long views of the low wall to the east and up to 2.5m high flood wall (at Riverside Stables and parade ground) but the lower wall would not appear as an imposing element given its height and the separation distance. The larger flood wall would be seen against the backdrop of the large adjoining stables building from these paths/ routes.	Negligible
					Summer, Year 15	Negligible  Over time the embankment, and any distant replacement vegetation would have established in the landscape.	Negligible
					Construction	Major  Some filtered visual disruption experienced by users with views to the construction of the wall along the river behind the houses at Dock Street.  Additionally there would be disruption during the build of the wall and raised table over the road.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Minor The wall to the west would appear as the boundary of adjoining residential properties and the raised table would appear as part of the road infrastructure.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would help to screen views to the wall to the west, although at this stage the planting would not have established.	Moderate adverse
					Summer, Year 15	Negligible The new walls would now have become part of the landscape features.	Negligible
Flood Cell 2		Residents (Glensburgh- Bank Street, Clyde Street, Kelvin Street)	Urban and industrial landscape, River Carron and bankside vegetation, shrubland at Skinflats	High	Construction	Negligible Long views with slight disruption experienced by residents during construction with views from the upper floors of properties on the northern end of Bank Street and Kelvin Street, and Clyde Street to the potential site compound area.	Negligible
					Winter, Year 1 (with mitigation)	Negligible Following construction, it is unlikely there would views from residential properties to the proposed scheme.	Negligible
					Summer, Year 15	Negligible It is unlikely there would be views from residential properties to the proposed scheme.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Road travellers (northern end of Clyde Street and the A904/ South Bridge Street roundabout)	Urban and industrial landscape and road network	Medium	Construction	Minor Road travellers heading to the north of Clyde Street would experience long views towards the construction of the embankment. Those travelling towards the A904/ South Bridge Street roundabout would have views to the potential site compound although these views would be over a short duration and form part of the wider view towards the surrounding industrial and residential landscape. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (with mitigation)	Negligible The embankment would form a minor and barely discernible feature in views from Clyde Street.	Negligible
					Summer, Year 15	Negligible Over time, grass would establish, and the embankment would settle into the surrounding landscape.	Negligible
Flood Cell 2 (cont.)		People working at commercial and industrial properties	Industrial landscape and shrubland at Skinflats	Low	Construction	Major Visual disruption would be experienced by people working at industrial properties with views to the construction of flood walls, embankments, coastal revetment, ramps, in-water working areas, flood gates, demolition of a buildings in the east, potential site compounds and loss of riverside vegetation in the form of scattered trees. This would continue throughout the build period.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Moderate People working at these properties would experience a change to original views with some visibility of the new embankments and walls, particularly along short sections where the walls are up to approximately 1.85m. These walls would however appear as the northern property boundary within this industrial setting. The loss of vegetation would allow greater visibility of Skinflats, beyond the river.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees lost and soften views to the walls, although at this stage the planting would not have established.	Minor adverse
					Summer, Year 15	Negligible Over time the embankment would settle into the surrounding landscape and mitigation planting would have softened visibility of the flood walls.	Negligible
		Cyclists on NCN Route 76/ people on the Forth Clyde Way	Urban and industrial landscape and road network	High	Construction	Minor Some minor visual disruption experienced by users of these routes with views to the potential site compound near the A904 roundabout, and long views south from Skinflats of construction of embankments and walls. This would continue throughout the build period.	Moderate adverse
Flood Cell 2 (cont.)					Winter, Year 1 (with mitigation)	Negligible Users of these routes would have limited visibility to structures between industrial buildings, including to the north from Clyde Street, although these structures would not be discernible given their height and separation distance from the route.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Negligible Glimpsed views over a very short duration would be experienced between industrial buildings on Dalgrain Road, although the flood wall would appear similar to that existing. Over time any negligible effects would not be discernible in views from these routes.	Negligible
		Users of Core Path 006/002 Rope Walk, Grangemouth Old Town	Urban and industrial landscape, River Carron and shrubland at Skinflats	High	Construction	Minor Some minor visual disruption (along the eastern extents of the path only) would be experienced by users of this Core Path with views to the western embankment and flood wall, coastal revetment, in-water working area and potential site compound. This would continue throughout the build period in this area.	Moderate adverse
	Winter, Year 1 (with mitigation)				Negligible At its nearest, the embankment would be around 1m in height from the path and just visible in views east. Given the separation distance and that it would form part of the industrial edge, the new wall would not be apparent in views from the Core Path.	Negligible	
	Summer, Year 15				Negligible Over time any negligible effects would not be discernible in views from this route.	Negligible	
Flood Cell 2 (cont.)		Users of Core Path 006/008 Rope Walk, Grangemouth Old Town	Urban and industrial landscape, River Carron and shrubland at Skinflats	High	Construction	Major It is likely the path would be closed (although a diversion should be in place) to enable construction of the western embankment and flood wall. From where there would still be access to the Core Path, there would be open views to the construction of flood defences, potential site compound and ramp, in-water working area and coastal revetment. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Users of this Core Path would experience a change to the original view along the path with the loss of existing riverside vegetation and the addition of the embankment (1.85m at its highest) which would run parallel to the path. A ramp as part of the detailed design would be located to continue the access between the industrial buildings towards the road.</p> <p>From here, there would be views towards the flood wall and coastal revetment far east of the path, although these structures would not be prominent in the overall view.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would replace trees lost during construction and help screen the defences, however at this stage the planting would not be established.</p>	Moderate adverse
					Summer, Year 15	<p>Negligible</p> <p>Over time with grass established on it, the embankment would settle into the surrounding landscape. Mitigation planting would help to reestablish the riverbank vegetation and screen views flood wall and coastal revetment.</p>	Negligible
Flood Cell 2 (cont.)		Users of Core Path 006/023 Station Road	Industrial landscape and road network	Medium (the sensitivity of this Core Path has been	Construction	<p>Minor</p> <p>Visual disruption experienced by users along this Core Path with visibility of the potential site compound at the A904 roundabout and glimpsed views between industrial buildings to the construction of the flood wall and demolition of a building. This would continue throughout the build period.</p>	Minor adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
				reduced as it is located within an industrial area with views to mainly industrial buildings)	Winter, Year 1 (with mitigation)	Negligible Glimpsed views over a very short duration would be experienced between industrial buildings on Dalgrain Road, although the flood wall would appear similar to that existing.	Negligible
					Summer, Year 15	Negligible Over time any negligible effects would not be discernible in views from these routes.	Negligible
		Users of Core Path 006/024 River Carron path to Bothkennar pools	Urban and industrial landscape, River Carron and shrubland at Skinflats	High	Construction	Minor A bund adjacent to the path restricts visibility of the industrial properties to the south in parts, with sections having more open views in this direction. There would be some minor visibility to the construction of flood defences and the loss of scattered trees on the south bank although these works may appear similar to current industrial activities. This would continue throughout the build period.	Moderate adverse
		Users of Core Path 006/024 River Carron path to Bothkennar pools (cont.)			Winter, Year 1 (primary mitigation)	Negligible Following construction, it is unlikely there would be a discernible change in views south from this Core Path.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible Mitigation planting would reinstate vegetation lost on the south bank during construction, but this would not be established at this stage.	Negligible
		Flood Cell 2 (cont.)				Summer, Year 15	Negligible It is unlikely there would be a discernible change in views south from this Core Path.

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Users of Core Path 006/033 Dalgrain Road to Bank Street	Urban and industrial landscape, and road network	High	Construction	Negligible Limited visual disruption experienced by users of the Core Path to the construction of the western embankment with long views to the end of Clyde Street.	Negligible
					Winter, Year 1 (with mitigation)	Negligible Once built, the embankment at the end of Clyde Street (at a height of 0.7) would not be discernible in views from this Core Path.	Negligible
					Summer, Year 15	Negligible It is unlikely there would be a discernible change in views from this Core Path.	Negligible
		Users of Core Path 006/034 Dalgrain Road to Bank Street	Industrial landscape and road network	Medium (the sensitivity of this Core Path has been reduced as it is located within an industrial area with views to mainly industrial buildings)	Construction	Minor Minor visual disruption experienced by users along the far eastern section of the path with glimpsed views between industrial buildings to the construction of the flood wall and demolition of a building. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (with mitigation)	Negligible Following construction, it is unlikely there would views from this Core Path to the proposed scheme.	Negligible
					Summer, Year 15	Negligible It is unlikely there would views from the Core Path to the proposed scheme.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 3	Grangemouth Petrochemical complex/ Forth Ports	People working at industrial properties (Grangemouth Petrochemical complex, Forth Ports)	Industrial landscape including Western Channel, River Carron and the Firth of Forth	Low	Construction	<p>Moderate</p> <p>Noticeable visual disruption experienced by people working at industrial properties with views to the construction of the flood defences, coastal revetment, ramps, in-water working areas and flood gates.</p> <p>There would also be views of demolition of a buildings in the west, potential site compounds and loss of vegetation in the form of scattered trees. However, the works are located throughout the cell and would appear similar to current industrial activities.</p> <p>This would continue throughout the build period.</p>	Minor adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>People working at these properties would experience a minor change to original views as the new embankments and walls would generally appear as the boundary around the petrochemical complex and Forth Port sites.</p> <p>Given the angle of view, visibility of the coastal revetment would be limited.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Potential mitigation planting would replace trees lost during construction and soften views to the walls, but this would not be established at this stage.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>Over time the embankments would settle into the surrounding landscape. Potential mitigation planting would have softened visibility of the flood measures.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4	Area 1 - Grangemouth	Residents on the western side of Abbots Road (B9132), between Wallace Street and Talbot Street	Urban landscape, road network, Zetland Park, and mature trees and riverbank vegetation	High	Construction	<p>Major</p> <p>Adverse visual disruption will be experienced by residents with views to the construction of the flood defences and replacement bridge, given the close-proximity of properties.</p> <p>Construction works would require the removal of vegetation, mainly in the form of mature avenue trees (Category A and B) adjacent to the Grange Burn, which would be a major change in views for residents overlooking this section of the burn. Residents would also be visually disturbed by the in-water working construction methods, adjacent to the majority of the flood defences.</p> <p>There may also be visual disturbance due to increased traffic management measures and associated traffic infrastructure to allow for the construction of the works.</p> <p>This would continue throughout the build period.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Residents on the western side of Abbots Road (B9132), between Wallace Street and Talbot Street (cont.)			Winter, Year 1 (primary mitigation)	<p>Major</p> <p>At completion, the Scheme would be visible in the landscape, and residents with a view towards the Grange Burn, would have a major change in views associated with the new flood walls, embankment within Zetland Park and reduced mature vegetation, as well as the new Dalratho Road Bridge.</p> <p>The new flood wall along this section of Abbots Road (B9132) replaces an existing wall, adjacent to the burn and its banks. The proposed flood wall is only slightly higher than the existing one, at around 1.3m above road level. These properties are around 0.5m higher than road level, so the wall can be seen over. A basic finish to the walls would have a detrimental effect to views experienced by residents here.</p> <p>Through primary mitigation, two rows of trees along the burn in the north of Zetland Park have been retained, which will help to soften views to flood defences within Zetland Park and retained some of the green outlook from these properties.</p> <p>The replacement of Dalratho Road Bridge with new solid 1.25m high parapets would likely have a detrimental visual impact, changing the existing openness of the space, which currently has permeable railings at the edges which allow views through the space.</p> <p>At the winter of Year 1 the flood defences would have not yet become fully integrated into the landscape.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Appropriate finishes to the walls and bridge, as agreed with the Local Planning Authority, will help them to integrate into the local environment and reduce visual intrusion. However, the infrastructure would remain dominant feature in views, given its proximity to properties.</p> <p>Large replacement trees will go some way to reforming the green edge along the Grange Burn, although, mitigation vegetation will not have matured at this stage.</p>	Major adverse
Flood Cell 4 (cont.)		Residents on the western side of Abbots Road (B9132), between Wallace Street and Talbot Street (cont.)			Summer, Year 15	<p>Minor</p> <p>Mitigation planting would have established and now provide a green revegetated view towards the Grange Burn and Zetland Park beyond.</p> <p>The flood defences within Zetland Park will have become integrated into the visual environment although the immediate flood wall along Abbots Road (B9132) and the new bridge would remain apparent in views from these properties given their height, separation distance and open views to the east from these properties.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		<p>Residents on Abbots Road (B9132), Park Road and Grangeburn Road (excluding those assessed above)</p> <p>Also, residents on the following roads which have obscured views or a view from the side of their property: Orchard Street, Wallace Street, Kerse Road, Dalratho Road, Talbot Street, Ronaldshay Crescent, A904 Bo'Ness Road, Allan Court, Naismith Court, Paris Street, Taylor Court, Nelson Street, George Street, Kings Road and Albert Avenue</p>	<p>Urban landscape, road network, Zetland Park (in the south), industrial landscape (in the north) and mature trees and riverbank vegetation</p>	<p>High</p>	<p>Construction</p>	<p>Major</p> <p>Adverse visual disruption will be experienced by residents with views of the construction of the flood defences and bridge, given the close-proximity of properties with adjacent visual access to the works, particularly on Abbots Road (B9132), Grangeburn Road and Park Road.</p> <p>The construction works would require the removal of vegetation, mainly in the form of mature avenue trees (Category A and B) adjacent to the Grange Burn and in Zetland Park. This would be a major change in views for residents overlooking this section of the burn.</p> <p>Residents would also be visually disturbed by the in water working construction methods (proposed 200m sections).</p> <p>There may be visual disturbance due to increased traffic management measures and associated traffic infrastructure to allow for the construction of the works.</p> <p>This adverse visual disturbance would continue throughout the build period.</p>	<p>Major adverse</p>

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p><b>Major</b></p> <p>At completion the Scheme would be visible in the landscape, and residents with a view towards the Grange Burn, would have a major change in view associated with the new flood walls, new bridge and lack of mature vegetation.</p> <p>The flood prevention measures themselves are around 1m high in this area of the town (with those adjacent to the intersection of Abbots Road and Wallace Street up to 1.5m at the bridge), and in locations replace existing walls. A basic finish to the walls would have a detrimental effect to the view.</p> <p>Due to the retention of the existing vegetation (as part of the primary mitigation) on the north bank of the Grange Burn adjacent to South Shore Road, and with the flood wall located to the north of this vegetation, the views from the residential areas towards the south of the units would be partially screened.</p> <p>At the winter of Year 1 the walls would have not yet become fully integrated into the residential landscape.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p><b>Moderate</b></p> <p>An appropriate finish to the walls and bridge, as agreed with the Local Planning Authority, will help them to integrate into the local environment and reduce visual intrusion.</p> <p>Large replacement trees will go some way to reforming the green edge along the Grange Burn. Mitigation vegetation along the watercourse will not have matured at this stage.</p>	



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	<p>Minor</p> <p>Mitigation planting would have established and now provide a green revegetated view towards the Grange Burn for residents.</p> <p>The flood walls at Grangeburn Road will have become integrated into the visual environment.</p> <p>Expected visual impacts towards the industrial properties to the north from residents would now be limited as proposed mitigation planting will have established providing filtered views to the units.</p>	Moderate
		Road travellers on Abbots Road (B9132), A904 (Bo'ness Road), Grangeburn Road and Park Road	Along these roads, urban landscape, Zetland Park and mature trees	Medium	Construction	<p>Moderate</p> <p>Road travellers on these roads would experience noticeable adverse views towards the construction of the flood walls, new bridge and the removal of mature avenue vegetation, including Category A and B trees.</p> <p>Travellers would also be visually disturbed by increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections). This would continue throughout the build period.</p> <p>Those travelling on the A904 (Bo'ness Road) would have adverse views to vegetation clearance and flood wall construction in particular on the Bo'ness Road Bridge. These views, however, would be over a short duration and form part of the wider view towards the surrounding industrial and residential landscape.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Once built, the new walls would be noticeable but would not dominate views given their height, the intervening built form and the duration of travel along these roads. In some locations, the new walls would replace existing walls, so the views towards these locations would be similar to existing.</p> <p>However the lack of a green edge along the burn will have a detrimental impact to the views from road travellers.</p>	Moderate adverse
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Replacement mitigation vegetation along the burn will reduce the visual impact for road travellers, especially with the use of larger replacement trees.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>From some roads, the walls would remain apparent in views. With mitigation planting and appropriate finishes, as agreed with the Local Planning Authority, over the 15 year period, the flood walls would become part of the residential and recreational landscape as seen by road travellers.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of the grassed strip/ embankment adjacent to Grange Burn, Grangeburn Road	Grange Burn, Grangeburn Road, urban landscape, industrial landscape and mature trees	Medium	Construction	Major It is likely this grassed strip/ embankment would be temporarily cordoned off to enable the construction of the flood defences, although the footpath along the southern side of Grangeburn Road will still be accessible. From this footpath and where access to the grassed strip/ embankment is available, there would be views to the construction of the flood walls, flood gates, new bridge and loss of mature trees (including Category A and B trees) and riverbank vegetation. There would also be potential visibility of the in-water working areas. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate The view would be different given the lack of mature vegetation along the length of the grassed strip/ embankment, creating a less green outlook/ landscape. Although only 0.6m in height atop the existing embankment (with two very short sections up to 1m), the walls would still form a visual barrier to the Grange Burn, where there were once views.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees lost during construction and help to reinstate a green outlook from the grassed strip/ embankment, however at this stage the planting would not be established.	Minor adverse
					Summer, Year 15	Negligible The walls would still be visible, although mitigation planting would continue to reinstate a green outlook.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		People working at and visiting commercial properties on Abbots Road (B9132) and South Shore Road	Urban landscape, road network, and mature trees and riverbank vegetation	Low	Construction	<p>Moderate</p> <p>Some visual disruption would be experienced by those working on the Abbots Road (B9132) Morson Group property, with views to the construction of flood walls and embankments. There will also be visually disruption by increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections).</p> <p>Commercial properties on South Shore Road and Grangeburn Road would be effected by vegetation clearance (including Category A and B trees) along the Grange Burn with direct views to the construction of the works, such as Rainbow House Spiritual and Holistic Centre, Mandal House and Knight Watson and Co Ltd. (South Shore Road). This would continue throughout the build period.</p>	Minor adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The new walls would be a similar height to those existing along the Grange Burn (approximately 0.8m as seen from these commercial properties). Oblique views to slightly higher walls south along Abbots Road, would be seen by people at Morson Group, although at a distance. The new walls are therefore expected to have a limited visual impact and will not be imposing in views towards the burn.</p>	Minor adverse
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>The mitigation planting along the Grange Burn would reinstate a green outlook from commercial properties on Abbots Road and South Shore Road, although growth would be at an early stage, apart from a few large replacement trees.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>The walls would still be visible, although mitigation planting would continue to reinstate a green outlook.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		People working at or visiting the industrial properties of Whyte Cranes, Meyer Timber and Forth Ports on South Shore Road and a private road within Grangemouth Petrochemical Plant (INEOS)	Urban, commercial and industrial landscape, road network and mature trees	Low	Construction	<p>Minor</p> <p>There would be a visual disturbance due to the building of the flood walls along South Shore Road and along the private road, and the potential construction compound located in the Forth Ports area. But due to the industrial character of the area, it is expected that construction works would be in keeping with existing views.</p>	Minor adverse
					Winter, Year 1 (with mitigation)	<p>Minor</p> <p>The small new flood wall (less than 1m in height) will be located along the edge of the road and is in keeping with the industrial views within the area of South Shore Road.</p> <p>Due to the retention of vegetation on the western embankment of the Grange Burn the outlook from industrial properties (Whyte Cranes and Meyer Timber) should remain largely unchanged.</p> <p>Along the Grangemouth Petrochemical Plant (INEOS) site, the flood walls (generally at a height of up to 1.5m although up to 2m along very short stretches) would appear as the boundary wall, and existing mature vegetation is limited.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>The walls would now be an established part of the industrial view and therefore there is no discernible deterioration in the view.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Recreational users and visitors to Zetland Park	Urban landscape and mature trees	High	Construction	<p>Major</p> <p>Due to the construction of walls, embankments, demolition of the kiosk and the loss of some good quality mature avenue trees (Category A and B trees), recreational visitors to Zetland Park would experience a significant deterioration to the quality of views during the construction period. There may also be visual disturbance due to the potential method of in-water construction and potential culvert (in 200m stretches) of the Grange Burn. This may result in a temporary change of views towards of the burn.</p> <p>Through primary mitigation, the flood wall within the park has been rerouted to enable the retention of two rows of mature trees, thereby reducing the visual impact. However, the removal of one of the three rows of mature trees will majorly disrupt the views in and around the park on the western side. The outlook will now be more open to the road and urban landscape from the western car park, with the lack of this filtered green screen.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The new embankment (maximum height 1m) with no mitigation in the form of landform shaping will be a large structure in the park, which would not as yet be integrated.</p> <p>The views from within Zetland Park to Abbots Road will be more open and less vegetated due to the removal of mature avenue trees, resulting in a major adverse visual effect.</p>	

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>With landform shaping, the new embankment will have started to become integrated into the park infrastructure giving added value, serving a dual function of flood protection and as a landscape feature within the park itself.</p> <p>With mitigation planting, in particular the use of large trees to replace the existing mature trees, the visual effect from within Zetland Park to Abbots Road will be reduced.</p> <p>The flood walls (maximum 1.37m, although mostly less than 1m) within the park will begin to become part of the park infrastructure and with appropriate finishes and sensitive detailing, as agreed with the Local Planning Authority, will be less visually intrusive. The flood wall along the north-west boundary will be less than 1.4m in height (above road level) although mostly around 1.3m and is expected to be more dominant in views along this section of the park.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>The expected visual impact will reduce over time due to mitigation planting which will have established providing filtered views to the Scheme and works as they become part of the recreational landscape.</p> <p>The embankment would become integrated as part of the park's green infrastructure.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Recreational users and visitors to Grangemouth Bowling Club	Urban landscape, road network and mature trees	Low	Construction	<p>Minor</p> <p>Recreational visitors to Grangemouth Bowling Club on Abbots Road would experience views over the road towards the construction of the walls and removal of mature avenue vegetation (including Category A and B trees). Views are expected from the car park when entering and leaving the site and longer views from the bowling greens and viewing areas. Users and visitors may also have visual access to increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections). This would continue throughout the build period.</p>	Minor adverse
Flood Cell 4 (cont.)					<p>Winter, Year 1 (primary mitigation)</p>	<p>Minor</p> <p>Due to the removal of mature vegetation the visitor's views from the car park would be more open and less green towards the Grange Burn.</p> <p>Visual effects are minor, as the immediate wall (around 1m) is replacing an existing wall adjacent to the road, and are on the opposite side of the road from the bowling club. Oblique views to slightly higher walls (up to 1.2m) south along Abbots Road would be visible, generally from the car park, although at a greater distance.</p>	Minor adverse
					<p>Winter, Year 1 (with all mitigation)</p>	<p>Negligible</p> <p>Mitigation planting will help to reduce the less green outlook.</p>	Negligible
					<p>Summer, Year 15</p>	<p>Negligible</p> <p>Replacement vegetation will have established providing a greener outlook from the carpark and bowling greens towards the Grange Burn. Flood walls to the east will be visually integrated in the mixed-use landscape.</p>	Negligible



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Visitors to places of worship - Abbotsgrange Church on Abbots Road, Sacred Heart Catholic Church on Drummond Place and Zetland Parish Church on Ronaldshay Crescent	Urban landscape, road network and mature trees	Low	Construction	<p>Moderate</p> <p>Visitors to places of worship on Abbots Road, Drummond Place and Ronaldshay Crescent would experience views of the construction of the flood defences and removal of mature avenue vegetation (including Category A and B trees) and in water working, as they enter and leave the buildings.</p> <p>Visitors to Abbotsgrange Parish Church on Abbots Road will have direct views of the construction of the walls due to its location adjacent to the Scheme.</p> <p>Sacred Heart Catholic Church on Drummond Place would have distant view towards the works.</p> <p>Zetland Parish Church on Ronaldshay Crescent is set further back and is at right angles to the scheme, so will only have a limited view of the works.</p> <p>They will all likely have visual access to increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections). This would continue throughout the build period.</p>	Minor adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The flood wall (less than 1.4m, and generally around 1.3m above road level) on Abbots Road, to the east of Abbotsgrange Church would be visible in the landscape as well as the loss of mature vegetation along Zetland Park.</p> <p>The flood defences would be less discernible in views from the remaining places of worship given their height, separation distance and intervening built form and vegetation.</p> <p>Views experienced by visitors would however be over a short duration, they would be seeing the Scheme as they enter and leave these buildings.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	Minor Replacement large trees along the Grange Burn would help reduce the visual loss of mature trees and soften views to the flood walls.	Minor adverse
Flood Cell 4 (cont.)					Summer, Year 15	Negligible The flood walls would now appear as part of the urban landscape and the residual impacts from the tree loss would now have been fully mitigated by replacement planting.	Negligible
		Users of NCN Route 76 and Core Path 006/004 Zetland Park and Core Path 006/027 Kersiebank Avenue to Inchyra Park	Urban landscape, road network, Zetland Park and mature trees	High	Construction	Minor Users on the NCN Route 76 and Core Paths 006/1323 and 006/1333, in Zetland Park would experience slight adverse long views of the construction of the flood prevention measures, in water working and removal of mature avenue vegetation (including Category A and B trees) along the Grange Burn and through Zetland Park.  This would be less visually intrusive for users of Core Path 006/027 and NCN Route 76 here as the path/ route deviates to the edge of the park further away from the visual disruption of the works.	Moderate adverse
					Winter, Year 1 (with mitigation)	Negligible The loss of mature trees would create a slight change to views west and north-west along these paths/ route although the flood measures themselves would form minor or barely discernible features in views. Where visible, the flood defences would be seen in long views, screened or partly screened by intervening vegetation.	Negligible
					Summer, Year 15	None Any residual effect from the tree loss would have now been fully mitigated by replacement planting.	None

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of NCN Route 76, Core Path 006/014 Drummond Place and Core Path 006/028 Dalratho Road to Bo'ness Road	Urban landscape, road network, Zetland Park and mature trees	High	Construction	<p>Major</p> <p>Users on the NCN76 and Core Paths 006/014, and 006/028 on the A904 (Bo'ness Road), Park Road and Drummond Place would experience adverse views of the construction of the flood prevention measures, the new Dalratho Road Bridge, in water working and loss of mature avenue vegetation (including Category A and B trees) along the Grange Burn and through Zetland Park.</p> <p>They will also have adverse visual access to increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections) particularly on Bo'ness Road and Park Road, where users will be in close proximity to the works, this would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The new flood wall at the Grange Burn on Park Road would be greater in height than existing (less than 1m) although would form a minor element in overall views to the surrounding urban landscape. The replacement permanent footpath at kerb level (as part of the primary/embedded mitigation) along the burn side of Park Road will enable users to continue to walk along the waterside, as well as visually reducing the height of the wall.</p> <p>Removal of existing waterside vegetation will create a bare landscape along the burn, and with no replacement vegetation this will be a negative impact to the view.</p> <p>The replacement of Dalratho Road Bridge with new solid 1.2m high parapets would likely have a detrimental visual impact, changing the existing openness of the space, which currently has permeable railings at the edges which allow views through the space.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>The mitigation planting along the Grange Burn, would reinstate a green outlook for Core Path/ NCN Route users, although at this point trees would not yet be established and growth would be at an early stage. Large replacement trees, as part of the mitigation strategy would help to reduce the visual effect.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>The flood defences would remain apparent in views, given their limited separation distance from these paths/ route, although as the mitigation planting along the Grange Burn would have established, the overall Scheme would have become visually integrated into the surrounding recreational/ urban landscape.</p>	Moderate
		Users of Core Path 006/003 Zetland Park	Urban landscape, Zetland Park and mature trees	High	Construction	<p>Minor</p> <p>Users on the Core Path 006/003 Zetland Park would experience filtered adverse views of the construction of the flood prevention measures.</p> <p>The proposed removal of mature avenue vegetation (including Category A and B trees) along the Grange Burn and along the western edge of Zetland Park would have the potential to cause minor disturbance to the visual amenity of the park. Due to existing vegetation within the park the visual impacts would be reduced when trees are in leaf with a slight increase in visual disturbance in Winter months.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>Once built, the embankment on the western edge of the park (around 1m high) may be partially noticeable in views from this Core Path and not yet fully integrated into the park infrastructure.</p> <p>With no replacement planting along the burn there would be reduction greenness in the long view.</p>	Moderate adverse
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation vegetation along the Grange Burn will not be fully established, however with the use of some large trees this would help retain the green edge to the park.</p>	Moderate adverse
					Summer, Year 15	<p>Negligible</p> <p>The flood prevention measures would become integrated into the visual landscape and mitigation planting along the Grange Burn established, providing an integrated tree lined edge to screen the park.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Users of Core Path 006/013 Zetland Park	Urban landscape, Zetland Park and mature trees	High	Construction	<p>Major</p> <p>Users of Core Path 006/013 Zetland Park will experience a significant deterioration to the quality of views during construction due to the building of walls and embankment, the demolition of the kiosk and the loss of mature avenue trees (Category A and B trees). The Scheme intersect this Core Path due, where the proposed embankment crosses.</p> <p>There may also be visual disturbance due to the potential method of in-water construction and potential culvert (in 200m stretches) of the Grange Burn. This may result in a temporary change to the visual character of the burn and the user's visual accessibility to it.</p> <p>The removal of one of the three rows of mature trees will disrupt the views in and around the park on the western side. The outlook will now be more open to the road north of the pedestrian bridge, with the lack of this filtered green screen.</p> <p>Under Secondary Mitigation there will be detailed design measures to aid the integration of the embankment and associated ground raising into the park environment.</p>	Major adverse
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>Once built, the embankment within the park at around a height of 1m will be visible in views from this Core Path and not yet fully integrated into the park infrastructure.</p> <p>The removal of the kiosk at the end of the path will open up views, and the proposed kiosk will be visible from this path.</p> <p>With no replacement planting along the burn there would be reduction greenness at the west side of the park.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>With ground modelling (as part of secondary mitigation) the embankment would be integrated into the park's green infrastructure.</p> <p>Mitigation vegetation along the Grange Burn will not be fully established, however large replacement trees would help reinstate the green edge to the park.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>With mitigation, appropriate finishes and sensitive detailing, as agreed with the Local Planning Authority, the embankment and walls would be fully integrated into the park's infrastructure and the mitigation planting along the burn would be established, creating a green backdrop to the park.</p>	Moderate
Flood Cell 4 (cont.)		Users of Core Path 006/023 Station Road	Urban and commercial landscape, road network and mature trees	High	Construction	<p>Moderate</p> <p>Core Path users would experience noticeable adverse views towards the construction of the walls either side of Bo'ness Road Bridge and removal of mature avenue vegetation (including Category A and B trees).</p> <p>Those travelling on the Core Path would have adverse views to vegetation clearance and flood wall construction in particular on the Bo'ness Road Bridge where there is proposed ground raising. These views, however, would be over a short duration and form part of the wider view towards the surrounding commercial and residential landscape.</p> <p>The Core Path users will be visually disturbed by increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections). This would continue throughout the build period.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The new walls would only be slightly visually noticeable for path users given their height of up to 0.5m at the nearest point to the Core Path. In some locations, the new flood wall would replace an existing wall as part of the works, so the views towards these locations are similar to the existing.</p> <p>Removal of existing waterside vegetation will create a bare landscape along the burn, and with no replacement vegetation, there would be a negative impact to the view at the east end of this path as it crosses the burn.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting along the Grange Burn, would reinstate a green outlook for Core Path users at the eastern end of this path. At this point most of the replacement vegetation would not yet be established, but with the use of some large replacement trees, it would help to reduce the visual effect.</p>	Moderate adverse
Flood Cell 4 (cont.)					Summer, Year 15	<p>Negligible</p> <p>With appropriate finishes and mitigation planting, over the 15 year period, views of the flood walls would become a part of the residential and recreation landscape.</p>	Negligible



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Users of Core Path 006/022 Grange Burn, 006/026 Zetland Park and Proposed Core Path 006/043	Urban landscape, Zetland Park, road network and mature trees	High	Construction	<p>Major</p> <p>Users of these Core Paths would have considerable visual disturbance during construction due to the building of walls and embankment, the demolition of the kiosk, replacement of the Dalratho Road Bridge and the loss of mature avenue trees (Category A and B trees). Users would experience a significant deterioration to the quality of panoramic views during the construction period. These Core Path runs adjacent to the Grange Burn on the western side of Zetland Park.</p> <p>There may also be visual disturbance due to the potential method of in-water construction and potential culvert (in 200m stretches) of the Grange Burn. This may result in a temporary change to the visual character of the burn and the user's visual accessibility to it.</p> <p>The removal of one of the three rows of mature trees will majorly disrupt the views in and around the park on the western side adjacent to the Grange Burn from these Core Paths. The outlook will now be more open to the road north of the pedestrian bridges, with the lack of this filtered green screen.</p> <p>Under Secondary Mitigation there will be detailed design measures to aid the integration of the embankment and associated ground raising into the park environment.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of Core Path 006/022 Grange Burn, 006/026 Zetland Park and Proposed Core Path 006/043 (cont.)			Winter, Year 1 (primary mitigation)	<p><b>Major</b></p> <p>The new embankment (at a height of around 1m) with no mitigation in the form of landform shaping will be a large structure in the park, which is not integrated, and highly visible in views from these Core Paths. The new flood walls would also be highly visible given the limited separation (a northern flood wall is located adjacent to Core Path 006/026) and loss of intervening vegetation.</p> <p>The views from within Zetland Park along these Core Paths will be more open and less vegetated due to the removal of the mature avenue trees along Abbots Road and the flood walls adjacent to the path, resulting in a major adverse visual effect.</p> <p>The replacement of Dalratho Road Bridge with new solid 1.25m high parapets would likely have a detrimental visual impact, changing the existing openness of the space, which currently has permeable railings at the edges which allow views through the space.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p><b>Moderate</b></p> <p>With landform shaping, the new embankment will have started to become integrated into the park infrastructure giving added value, serving a dual function of flood protection and as a landscape feature within the park itself.</p> <p>With mitigation planting, in particular the use of large trees to replace existing mature trees along Abbots Road, the detrimental visual impacts along this Core Path will be reduced.</p> <p>The flood walls (around 1.3m from road level) will begin to become part of the park infrastructure and with appropriate finishes and sensitive detailing, as agreed by the Local Planning Authority, will not be so visually intrusive. There will be some visual disturbance to users where the wall is at the maximum height, however the minimum height within the park is 0.25 meters.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of Core Path 006/022 Grange Burn, 006/026 Zetland Park and Proposed Core Path 006/043 (cont.)			Summer, Year 15	<p>Minor</p> <p>The expected visual impact will reduce over time due to the mitigation planting which will have established providing filtered views to the Scheme and works as they become part of the recreational landscape.</p> <p>The embankment would become integrated as part of the park's green infrastructure.</p>	Moderate adverse
	Area 2 - Rannoch Park and Westquarter	Residents (Rannoch Road, Bowhouse Road, Beauly Crescent, Moriston Crescent, Portal Road, Burnbank Road and Gunn Road)	Urban landscape, road network, Rannoch Park, woodland and mature trees	High	Construction	<p>Major</p> <p>Adverse visual disruption would be experienced by residents with views of the construction of the flood defences, ramps, in-water working construction methods (proposed 200m sections), and the potential site compound, given the close-proximity of houses, particularly on Rannoch Road.</p> <p>There may be visual disturbance due to increased traffic management measures and associated traffic infrastructure to allow for the construction of the works.</p> <p>This would continue throughout the build period.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>At completion, the Scheme would be visible in the landscape, and residents would experience a moderate change in views as the new flood wall would be located at the crest of the existing embankment along the northern side of Rannoch Park.</p> <p>The flood wall is located on top of the existing embankment, and would add approximately 0.7m of height onto the embankment with short stretches higher and up to 1.2m including at the pedestrian walkway and bridge.</p> <p>Although views to the grassed spaces within the park will be limited from the ground floor and front gardens of houses along Rannoch Road, there would still be views above the height of the wall towards trees within the park and distant trees and woodland. Views to the park from the upper floors of these properties would remain intact. Impacts from properties at Portal Road, Burnbank Road and Gunn Road would be less given the nearest section of the flood wall would generally be up to 0.8m in height.</p> <p>Embedded mitigation of relocating the flood wall to save the line of trees along the burn has helped to reduce the visual effect along this section. However, as noted on the tree survey these trees have the Chalara Ash Dieback disease, and thereby have a severely limited life expectancy and are likely to be removed as part of this scheme.</p> <p>At the winter of Year 1 the walls would have not yet become fully integrated into the residential landscape.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>An appropriate finish to the walls, as agreed with the Local Planning Authority, will help them to integrate the walls into the local environment and reduce visual intrusion.</p> <p>Large trees to replace those affected by Chalara Ash Dieback will help to reform the green edge along the northern edge of the park.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	Minor Planting would have established and would now provide a green revegetated view towards the park and Grange Burn for residents. Although still visible, the flood wall at Rannoch Park would appear more integrated with the park infrastructure.	Moderate adverse
		Road travellers (A9, M9 and local road network)	Urban landscape, road network, commercial properties on the A9, woodland, pylons	Medium	Construction	Moderate Road travellers would experience a moderate visual disruption during construction due to the construction of flood walls, ramps, and loss of mature vegetation, particularly those along the A9 and Grandsable Road.  There is likely to be the temporary closure of the southbound lane on Grandsable Road and the westbound lane on the A9. As well as the subsequent diversion of traffic, which would also cause visual disruption. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (primary mitigation)	Minor The views along the road network near to the Scheme would have a minor deterioration given the loss of mature vegetation and the visibility of the new walls. In parts, the walls would appear as the boundary of properties, including along Grandsable Road. The proposed walls are not expected to form imposing elements in views given the duration of views from the road.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor Replacement mitigation planting would help to screen and soften views to the new walls.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	<p>Negligible</p> <p>From some roads, the flood walls would remain apparent in views. With mitigation planting and appropriate finishes, as agreed with the Local Planning Authority, over the 15 year period, the walls would appear as part of the surrounding landscape, as seen by road travellers.</p>	Negligible
Flood Cell 4 (cont.)		People working at and visiting commercial properties on the A9 (including restaurants and hotels)	Commercial buildings, road network, fields and scrubland and woodland	Low	Construction	<p>Moderate</p> <p>People working and visiting these locations would experience a moderate visual disruption given the close-proximity to the construction works. Additionally the loss of mature riverbank vegetation, particularly adjoining and visible from the Travelodge and Metro Inns to the north of the A9 and Brewers Fayre and the Premier Inn to the south, would effected these views detrimentally.</p> <p>This would continue throughout the build period.</p>	Minor adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>From most commercial properties south of the A9, the flood wall would not be visible. Views from buildings adjoining it would be barely discernible given its height (generally up to 1.25m with a short section up to 1.9m) and given the angle of view. Similar views would be seen from the existing boundary wall to the west of Brewer's Fayre and the Premier Inn. The loss of mature trees here would however open up views west to fields, scattered trees and houses beyond.</p> <p>The flood defences (up to a height of 2m) would be more apparent in views from the adjoining Travelodge and Metro Inns to the north of the A9 given their height and limited separation. This wall and embankment would however potentially appear as the boundary along these properties.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would soften views to the flood defences, although this would not be established at Year 1.	Minor adverse
Flood Cell 4 (cont.)					Summer, Year 15	Negligible The flood walls to the south of the A9 are not expected to be discernible in views from commercial properties. Over time, mitigation planting is expected to reinstate a similar view from the rear elevation of Brewer's Fayre and the Premier Inn.  The embankment in the north, over time would settle into the landscape and mitigation planting would screen and soften views to the flood wall here.	Negligible
		Visitors to Falkirk Distillery	Commercial buildings, road network, fields and scrubland and woodland	Low	Construction	Moderate People working and visiting Falkirk Distillery would experience a moderate visual disruption during construction, given the close- proximity of the construction works to the entrance of the distillery.  As well as slightly elevated views to the construction of the flood wall and loss of trees along the rear of Grandsable Cemetery, more distant views to the loss of trees along Polmont Burn would also be visible. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Moderate Views from the distillery would be slightly different given the new low flood wall on the east side of the road, although this would be similar to the existing wall.  Additionally the loss of mature trees and proposed wall to the rear of Grandsable Cemetery would be visible in the distance, although the flood wall (up to 2.2m) would appear as the boundary to the cemetery and Grandsable Cottage.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
						Visitors to the distillery would not have visibility to the flood wall to the north-east, at Polmont Burn.	
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would replace trees lost at along the rear boundary to the cemetery and Grandsable Cottage and help to soften views to the flood wall, although this is a long view from the distillery.</p> <p>Sensitive wall finishes, as approved by The Local Planning Authority, would help to visually integrate the new flood wall into the landscape.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>The flood wall alongside the rear of the cemetery and Grandsable Cottage would be not be visible along the road but would appear as the boundary to these properties.</p> <p>The proposed wall to the east along the boundary would be integrated into the road infrastructure.</p> <p>Mitigation planting would, by this time, have matured and helped to create a similar green edge along the road.</p>	Negligible



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Recreational users and visitors to Rannoch Park	Urban landscape, road network, woodland and mature trees	Medium	Construction	<p>Moderate</p> <p>Recreational users and visitors to Rannoch Park would experience a moderate deterioration to the quality of views during the construction period to the north end of the park and to the surrounding residential areas, due to construction traffic, noise, ramps, in-water working and potential culvert of the Grange Burn. This may result in a temporary change in views towards of the burn. Views to the south of the park will remain largely unchanged.</p> <p>The construction works would also involve the loss of some vegetation. As part of primary mitigation the flood wall was realigned to retain the semi-mature row of trees along the northern edge of the burn, however due to the trees having the Chalara Ash Dieback disease it is likely they will be removed, which would open this view up.</p> <p>The visual effect of construction of the walls (although temporary) would disrupt the views in and around the park on the northern side.</p>	Moderate adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The flood wall to the north of the park is located on the top of the existing embankment. So although generally it is only 0.7m in height, with short stretches up to 1.25m (including at the pedestrian walkway/ bridge), it will still be very apparent in the landscape when entering the park from the north, and looking towards the north when in the park.</p> <p>Embedded mitigation of relocating the flood wall to save the line of trees along the burn reduced the negative effect along this section, with retaining green edge. However, as noted on the tree survey these trees have the Ash Dieback disease, and thereby have a severely limited life expectancy, so are likely to be removed.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect	
Flood Cell 4 (cont.)				Low	Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>The walls will begin to become part of the park infrastructure and with sensitive detailing and finishing, as agreed with The Local Planning Authority, will not be so visually intrusive.</p> <p>Replacement vegetation, including large replacement trees, will help to reduce any impact created by removal of the existing trees.</p>	Minor adverse	
					Summer, Year 15	<p>Negligible</p> <p>Over time the walls will become part of the park infrastructure and any replacement vegetation would have established within the visual landscape.</p>	Negligible	
		Visitors to Grandsable Cemetery			Road network, woodland and scattered trees	Construction	<p>Moderate</p> <p>Visitors to Grandsable Cemetery on Grandsable Road would experience adverse visual impacts during the construction of the wall and with the removal of vegetation to the rear. The construction works would be visible from the entrance car park when entering and leaving the site and longer views from greens and memorial areas, which would be sensitive to visual change.</p> <p>Visitors may also have visual effected by increased traffic management measures due to the construction of the Scheme. This visual disturbance would continue throughout the build period.</p>	Minor adverse
		Winter, Year 1 (primary mitigation)			<p>Moderate</p> <p>Due to the removal of vegetation on the Westquarter Burn, the visitor's views from the car park/ entrance area north-east would be more open and less green, albeit with the buildings in the near view.</p>	Minor adverse		

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
						The new flood wall would be up to 2.2m in height and appear as a rear boundary wall. However with a basic finish, this wall would appear very dominant in the landscape.	
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	Minor  Sensitive detailing and finishing, as agreed with The Local Planning Authority, will reduce and mitigate impacts of the Scheme in this area.  Mitigation planting along the burn will help to reinstate the green edge.	Minor adverse
					Summer, Year 15	Negligible  Vegetation will have established providing a greener outlook from the cemetery car park and entrance. Flood walls will be visually integrated into the surrounding mixed-use landscape.	Negligible
					Construction	Major  Residents of Grandsable Cottage on Grandsable Road would experience adverse visual disruption during the construction of the walls and removal of existing vegetation on the north-west of their garden (private land).  The construction works would be visible from the property when entering and leaving the house and views from the upper storey and windows may be disturbed due to construction works.  Residents may also be visually effected by increased traffic management measures due to the construction of the Scheme. This visual disturbance would continue throughout the build period.	Major adverse
		Winter, Year 1 (primary mitigation)	Major  The new basic walls and lack of replacement vegetation would have a large visual impact to these residents.	Major adverse			
		Residents of Grandsable Cottage	Road network, woodland and scattered trees	High			

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)							
					Winter, Year 1 (with all mitigation)	Moderate Mitigation planting would be in place to soften the views of the walls along the burn. Sensitive detailing and design integration, as agreed with The Local Planning Authority, as part of secondary mitigation would help soften views of the new wall, which would appear as the western property boundary.	Major adverse
					Summer, Year 15	Negligible Mitigation planting would have established and the walls integrated into the visual landscape. With the establishment of mitigation vegetation it is expected the views would no longer be adverse.	Negligible
		Users of Core Path 006/009 Grange Burn	Urban landscape, Rannoch Park, Grange Burn, woodland and mature trees	High	Construction	Minor Limited visual disruption experienced by people on this path with visibility to the construction works from the southern extents, including ramps, in-water working and the loss of vegetation. It is likely the southern extent of the path would not be accessible during the construction works, although alternative paths including the northern footpath along Rannoch Road would be. However, views from this path would be mostly screened or distant views to the construction of flood measures.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>There would be immediate views, from the southern extents of the path, of the new wall, with long views along the length of the wall.</p> <p>The basic wall, of between 0.25m and 0.8m in height, along with the removal of the existing trees, will create an outlook which will be less positive than before.</p>	Moderate adverse
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Negligible</p> <p>Sensitive detailing and design integration of the wall, as agreed with The Local Planning Authority as part of secondary mitigation, as well as replacement trees would help soften views of the new wall. It would therefore not appear as much as an imposing element in views towards Rannoch Park.</p>	Negligible
					Summer, Year 15	<p>Negligible</p> <p>Over time the walls and any replacement vegetation would have established in the visual landscape.</p>	Negligible
		Core Path 006/018 Rannoch Road and Core Path 006/007 Rannoch Park	Urban landscape, Rannoch Park, woodland and mature trees	High	Construction	<p>Major</p> <p>Adverse visual disruption with views to the construction of the new flood wall along the northern bank of the Grange Burn, ramps and temporary in-water working areas and potential loss of intervening vegetation. It is likely sections of both paths would be inaccessible during the construction works, although the park itself and the northern footpath along Rannoch Road would provide alternative access to this area. This would continue throughout the build period.</p> <p>The construction works would also involve the loss of vegetation. Through primary mitigation the semi-mature row of trees along the northern edge of the burn were to be retained with the realigning of the new flood wall, however due to the Chalara Ash Dieback disease that they are infected with, they are likely to be removed</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>Users would experience a major change to the original view along sections of the path looking north from 006/007, and south from path 006/018, with the new flood wall being visible on top of the embankment.</p> <p>The wall (which would mainly be at a height of 0.7m with short stretches up to 1.2m including at the pedestrian walkway/ bridge) would create a greater sense of enclosure from Core Path 006/018 as views to the park would be limited along the path.</p> <p>Embedded mitigation of relocating the flood wall to save the line of trees along the burn would have reduced the negative effect along this section, with the retained green edge. However, as noted on the tree survey, these trees have the Chalara Ash Dieback disease, and thereby have a severely limited life expectancy, so are likely to be removed.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Replacement vegetation, including large trees to replace the ones along the embankment, would help to reduce any visual impacts created due to the removal of existing trees.</p> <p>Sensitive detailing and design integration of the wall, as agreed with The Local Planning Authority as part of secondary mitigation, would help soften views of the new wall.</p>	Major adverse
					Summer, Year 15	<p>Negligible</p> <p>Mitigation planting would help screen views from the path, and the walls would have become part of the park infrastructure.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of Core Path 006/016 Beancross Road and Core Path 006/010 Rannoch Park to Cadgers Brae	Urban landscape, Rannoch Park, woodland and mature trees	High	Construction	Moderate  Visual disruption experienced by users on these paths with visibility of the construction of flood measures and removal of the trees, although views from sections of these paths (particularly 006/010) would be screened or at a distance. There would also be interrupted views to the construction compound on Inchyra Road, although beyond the road network.	Major adverse
					Winter, Year 1 (with mitigation)	Minor  There would be mainly long views of the walls (generally at a height of 0.7m in height on top of the embankment, with short stretches up to 1.2m including at the pedestrian walkway/ bridge) and tree removal but would not appear as imposing elements, given the separation distance.	Moderate adverse
					Summer, Year 15	Negligible  Over time the walls and any replacement planting and grass would have established in the visual landscape.	Negligible
		Users of Core Path 006/011 Inchyra Road (Also refer to this Core Path in Area 3)	Urban landscape, MacDonald Inchyra Hotel and surrounds, road network, woodland and mature trees and pylons	High	Construction	Minor  Limited visual disruption experienced by users along the majority of this path with mostly screened or distant views to the construction of flood measures in Rannoch Park and flood measures themselves. Users of the Core Path would have views to the in-water working of the Scheme in the Grange Burn. However, this would be minimal due to retention of some of the existing trees along this part of the Grange Burn and short duration of views. There would also be interrupted views to the construction compound on Inchyra Road, although beyond the road network.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	Negligible There would be long views of the walls (generally at a height of less than 0.8m) but the Scheme would not appear as imposing as they are adjacent in Rannoch Park, with minimal visual disruption. Embedded mitigation of relocating the flood wall to save the line of trees along the burn would have reduced the negative effect along this section, with the retained green edge. However, as noted on the tree survey, these trees have the Chalara Ash Dieback disease, and thereby have a severely limited life expectancy, so are likely to be removed.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible Sensitive detailing and finishings, as agreed with the Local Planning Authority, to the flood walls would further minimise visual impacts of the Scheme. Replacement planting where required (including large trees in Rannoch Park) would help integrate the Scheme into the landscape.	Negligible
					Summer, Year 15	Negligible Over time the flood wall and any replacement planting would have established into the visual landscape.	Negligible
		Users of Core Path 016/011 Rannoch Park to Fairy Glen	Commercial buildings, road network, woodland, mature trees and pylons	High	Construction	Minor Limited visual disruption experienced by users apart from minor views of construction at the far western end where it meets Core Path 016/015, and distant views over fields.	Moderate adverse
		Winter, Year 1 (with mitigation)	Negligible There would be distant views of the flood defences behind Metro Inns and vegetation loss along the Westquarter Burn but they would not appear as imposing elements, given the separation distance. There	Negligible			



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of Core Path 016/015 Cassel Brae / Fairy Glen	Road network, Polmont Burn, woodland and riverbank vegetation	High		would be limited views to the flood wall along the Polmont Burn behind Brewers Fayre.	
					Summer, Year 15	Negligible Over time the flood defences and any replacement vegetation and grass would have established in the visual landscape.	Negligible
					Construction	Major The current established vegetation creates a high quality green landscape along the Polmont Burn. The construction of the Scheme along this Core Path would result in users experiencing a major visual disruption given the close-proximity to the works, the loss of mature vegetation and the construction of flood defences.  Due to the proposed method of in-water working there will be interrupted views to the water itself adversely effecting its visual amenity and the quality of the natural uninterrupted views. The loss of mature vegetation visually opens up the burn to the surrounding mixed-use landscape, detracting from its visual quality and 'green edge'. This would adversely effect the quality of views along the path.	Major adverse
Winter, Year 1 (primary mitigation)	Moderate The views along the Polmont Burn would be effected greatly by the loss of mature vegetation and visibility of the new walls and infrastructure. With no replacement waterside vegetation the burn would appear bare from this Core Path.  In parts, the walls (mainly between 0.5m to 1.25m, with a very short section up to 2m) would appear as the boundary of commercial properties - Premier Inn and Brewers Fayre. These flood defences are not however generally expected to form imposing elements in views given their height.	Major adverse					

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting will help to re-establish the waterside planting and to screen the walls. At this stage the planting however would not have established, but due to the outlying nature of the area, the impact would be reduced.	Moderate adverse
Flood Cell 4 (cont.)		Users of Core Path 015/012 Mumrills Road	Road network, Polmont Burn, woodland and riverbank vegetation	High	Summer, Year 15	Negligible The flood walls would appear as minor elements in overall views and over time, would have integrated into the landscape. Mitigation planting would have established and reinstated a green outlook from the Core Path that screens the surrounding commercial properties and road infrastructure.	Negligible
					Construction	Major During construction there would be some adverse views along this Core Path given the close-proximity to the works along the A9, the loss of mature vegetation and the construction of flood defences. There will be an adverse impact due to the closure of the underpass under the A9 with Core Path diversions in place and the necessary signage.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor There would be long views of the walls (minimum 0.25m and maximum 1.8m) but they would not appear as imposing elements in the visual landscape. The walls are in an elevated position and integrated as part of the road infrastructure, thus minimising its visual impact. There would also be long views towards the defences and vegetation removal on the Westquarter Burn at Grandsable Cemetery. An alternative route with the underpass closure would have been designed and be integrated into the visual landscape.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	Minor Secondary design mitigation such as replacement planting, would be undertaken to minimise visual impacts of the Scheme and the adverse effects on the visual amenity of its surroundings  At year 1, however any replacement vegetation would not have established in the visual landscape, and therefore has a slight detriment to the view.	Moderate adverse
					Summer, Year 15	Negligible Over time, the Scheme would integrate into the visual landscape and mitigation planting would create a green outlook from the Core Path.	Negligible
		Users of HArTT Route on Laurieston A9 By- Pass	Road network, Polmont Burn, woodland and riverbank vegetation	High	Construction	Major During construction there would be some adverse views along this cycle path given the close-proximity to the works along the A9, the loss of mature vegetation and the construction of flood defences.  There will be an adverse impact due to the closure of the underpass under the A9 with Core Path diversions in place and the necessary signage.  The users of the HArTT route would have visual access to the construction compound adjacent to the A9 causing increased visual disturbance.	Major adverse
		Winter, Year 1 (primary mitigation)	Minor There would be long views of the walls travelling on Mumrills Road approaching the A9 (minimum 0.25m and maximum 1.8m) but they would not appear as imposing elements in the visual landscape.  The walls are in an elevated position and integrated as part of the road infrastructure, thus minimising its visual impact.	Moderate adverse			

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
						<p>There would also be long views towards the defences and vegetation removal on the Westquarter Burn at Grandsable Cemetery</p> <p>An alternative route with the underpass closure would have been designed and be integrated into the visual landscape.</p>	
					<p>Winter, Year 1 (with all mitigation)</p>	<p>Minor</p> <p>Secondary design mitigation such as replacement planting, would be undertaken to minimise visual impacts of the Scheme and the adverse effects on the visual amenity of its surroundings</p> <p>At year 1, however any replacement vegetation would not have established in the visual landscape, and therefore has a slight detriment to the view.</p>	<p>Moderate adverse</p>
<p>Flood Cell 4 (cont.)</p>					<p>Summer, Year 15</p>	<p>Negligible</p> <p>Over time, the Scheme would integrate into the visual landscape and mitigation planting would create a green outlook from the HArTT Route.</p>	<p>Negligible</p>

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Users of Antonine Wall Trail	Road network, Polmont Burn, woodland and bankside vegetation	High	Construction	<p>Major</p> <p>During construction there would be some adverse views along parts of the trail given the close-proximity to the works along the A9 and the Polmont Burn, the loss of mature vegetation and the construction of flood defences.</p> <p>On other parts of this trail further away from the construction zones there would be limited visual disruption experienced by users with mostly screened or distant views to the construction of flood measures ramps and walls.</p> <p>There will be an adverse impact due to the closure of the underpass under the A9 with Core Path diversions in place and the necessary signage.</p> <p>The current established vegetation creates a high quality green landscape along the Polmont Burn. The construction of the Scheme along this Core Path would result in users experiencing a major visual disruption given the close-proximity to the works, the loss of mature vegetation and the construction of flood defences.</p> <p>Due to the proposed method of in-water working there will be interrupted views to the water itself adversely effecting its visual amenity and the quality of the natural uninterrupted views. The loss of mature vegetation visually opens up the burn to the surrounding mixed-use landscape, detracting from its visual quality and 'green edge'. This would adversely effect the quality of views along the path.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>Design development around this area of the Antonine Wall Trail has been undertaken at length to minimise impacts of the Scheme on the visual integrity and authenticity of the Antonine Wall site to the South and West of the Scheme, see Chapter 13 – Cultural Heritage. This process resulted in the Scheme being integrated into the road infrastructure minimising potential visual impacts rather than the original design which proposed a dam structure which would have interrupted the important relationship between the low ground and bluff vantage point. This process has been summarised in the document in Appendix C13.2 Westquarter Burn Flood Storage Area Record of Outline Design Development.</p> <p>There would be long views of the walls travelling on Mumrills Road approaching the A9 (minimum 0.25m and maximum 1.8m) but they would not appear as imposing elements in the visual landscape.</p> <p>The walls are in an elevated position integrated as part of the road infrastructure, thus minimising its visual impact.</p> <p>There would also be long views towards the defences and vegetation removal on the Westquarter Burn at Grandsable Cemetery</p> <p>An alternative route with the underpass closure would have been designed and be integrated into the visual landscape.</p> <p>The views along the Polmont Burn part of the trail would be effected greatly by the loss of mature vegetation and visibility of the new walls and infrastructure. In parts, the walls (mainly between 0.5m to 1.25m, with a very short section up to 2m) would appear as the boundary of commercial properties – Premier Inn and Brewers Fayre. These flood defences are not expected to form imposing elements in views given the height.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Secondary design mitigation such as replacement planting, would be undertaken to minimise visual impacts of the Scheme and the adverse effects on the visual amenity of its surroundings. In addition, appropriate wall finishes and materials and sensitive detailing, as agreed with The Local Planning Authority and HES would be required to protect the setting and qualities of the world heritage site.</p> <p>At year 1, however any replacement vegetation would not have established in the visual landscape, and therefore has a slight detriment to the view.</p>	Moderate adverse
					Summer, Year 15	<p>Negligible</p> <p>Over time, the Scheme would integrate into the visual landscape and mitigation planting would create a green outlook from the route.</p> <p>The flood walls would appear as minor elements in overall views and over time, would integrate into the landscape. Mitigation planting would continue to establish and reinstate a green outlook from the Core Path that screens the surrounding commercial properties and road infrastructure.</p>	Negligible
		Users of proposed Core Path 006/042 Rannoch Park to Newlands Road	Urban landscape, road network, Rannoch Park, woodland and roadside trees	High	Construction	<p>Minor</p> <p>Limited visual disruption experienced by people on this proposed Core Path with visibility to the construction works from the eastern extents, including ramps, in-water working and the loss of vegetation. However, views from this path would be mostly screened or distant views to the construction of flood measures.</p>	Moderate adverse
		Winter, Year 1 (with mitigation)	<p>Negligible</p> <p>There would be long views of the Scheme walls but they would not appear as imposing elements, given the separation distance.</p>	Negligible			
		Summer,	<p>Negligible</p>	Negligible			

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Year 15	Over time the Scheme and any distant replacement vegetation would have established in the visual landscape.	
Flood Cell 4 (cont.)		Users of proposed Core Path 015/027 Primrose Avenue to Beancross	Road network, commercial properties on the A9, fields, woodland and roadside trees	High	Construction	Minor Limited visual disruption experienced by people on this proposed Core Paths with mostly screened or distant views to the construction of flood measures ramps and walls. There would be a slight visual disruption where it meets the A9 due to the construction of the flood walls on the opposite side of the road.	Moderate adverse
					Winter, Year 1 (with mitigation)	Negligible There would be long views of the Scheme walls but they would not appear as imposing elements, given the separation distance.	Negligible
					Summer, Year 15	Negligible Over time the Scheme and any distant replacement vegetation would have established in the visual landscape.	Negligible
		Users of proposed Core Paths 006/046 Rannoch Park (2) and 006/047 (Rannoch Park to Inchyra Road)		High	Construction	Moderate Visual disruption experienced by users with visibility to the construction of flood measures, although views from sections of these paths would be screened by the existing embankment to the north and/ or at a distance.	Major adverse
					Winter, Year 1 (with mitigation)	Minor There would be long views of the walls (generally at a height of 0.7m in height, with short stretches up to 1.2m including at the pedestrian walkway/ bridge) but would not appear as imposing elements, given the separation distance and views beyond the flood defences.	Moderate adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Negligible Over time the walls and any replacement planting and grass would have established in the visual landscape.	Negligible
Flood Cell 4 (cont.)	Area 3 - Inchyra /Wholeflats	Residents (A905/ Inchyra Road)	Road network, Macdonald Inchyra Hotel and Spa grounds and roadside trees	High	Construction	Moderate Visual disruption experienced by residents with views of the construction of the flood wall and the potential site compound, although visibility would be partly screened by trees along the western side of the A905. The construction works would also involve the loss of some trees adjacent to Inchyra Road near to the roundabout, including Category B trees. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor The low flood wall, which runs to just south-west of the roundabout, would be noticeable but would not be imposing in views given location within a verge, and other trees and vegetation which are retained and visibility to traffic on the A-road.  With no replacement planting, the outlook would be slightly less green.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would reinstate a green outlook in this direction from houses. However, planting at this stage would not be established.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	<p>Negligible</p> <p>The continued growth of mitigation planting would help to soften and screen views to the wall, seen beyond the road network from these properties.</p>	Negligible
Flood Cell 4 (cont.)		Residents (Reddoch Road, Smiddy Brae, Millhall Gardens) (Also see Cell 5)	Road network, industrial landscape and woodland	High	Construction	<p>Moderate</p> <p>Visual disruption experienced by residents, mainly from the upper floors of buildings to the construction of the flood wall along the A905.</p> <p>Views to the construction works would be more apparent given the close-proximity of the houses and the loss of any intervening vegetation (including Category A and B trees). There are also slightly distant, partly filtered views to the potential site compound to the north.</p> <p>Construction of the defences at Millhall Gardens and Reddoch Road would be very apparent in views, to their proximity.</p> <p>This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The view from residential properties would be slightly different given the loss of some established roadside vegetation, enabling greater visibility to the A905 road and industrial buildings beyond. The flood wall itself would appear as a very minor element in views, at a height of up to 1m to the north.</p> <p>Residents of Millhall Gardens would also have wider open views towards the car park in Polmont Woods, losing their screening.</p> <p>Some residents of Reddoch Road would have more open views onto the flood defences adjacent to the Millhall Burn, although other residents will be screened by vegetation within their own land.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting (avoiding any underground services) would help to screen the walls, roads, and car park and reinstate a green outlook from these properties, although at this stage it would not be fully established.	Moderate adverse
Flood Cell 4 (cont.)					Summer, Year 15	Negligible The walls would not form discernible elements in views north towards the wider industrial landscape, given their height and the establishment of mitigation planting. Mitigation planting would have reinstated a green outlook from these properties.	Negligible
		Road travellers (A905/ Wholeflats Road, Inchyra Road and local road network)	Urban and industrial landscape, roadside trees, pylons	Medium	Construction	Moderate Visual disruption would be experienced by road travellers given the close-proximity to the works including the construction of the flood defences, loss of roadside vegetation (including Category A and B trees) and potential site compound, although over a short duration (given the speed of vehicles). There is also likely to be a temporary closure of sections of these roads. The subsequent diversion of traffic would also cause visual disruption. This would continue throughout the build period.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>There would be a minor adverse change to the view along these roads given the loss of mature vegetation and visibility of the new walls and embankments. In parts, the walls would appear as the boundary of properties, including at Macdonald Inchyra Hotel and Spa and the Galaxy Sports playing fields.</p> <p>Flood defences along the A905 would be more noticeable given their height and existing lack of intervening vegetation in parts. These flood defences are not expected to form imposing elements in views given the duration of views from the road.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would help to screen the walls, and replace the vegetation lost during construction.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>The flood walls would appear as minor elements in overall views. Mitigation planting would continue to screen views to the flood defences from the road.</p>	Negligible
		People working at commercial and industrial properties on the A905/ Wholeflats Road	Industrial landscape, A905, woodland and trees along the road and Flood Relief Channel and pylons	Low	Construction	<p>Minor</p> <p>People working at these locations would experience minor adverse views to the construction of the flood defences, the potential site compound and loss of mature trees (including Category A and B trees), partly screened by intervening vegetation and beyond the A905 and traffic on it. This would continue throughout the build period.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Minor  There would be a minor adverse change to views south with the addition of the flood defences (up to 1.5m in height along the Flood Relief channel), although these would appear at a lesser height from the road and these commercial properties. Views would remain partly screened by vegetation along the boundaries of these properties.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor  Mitigation planting would help to further screen the flood defences, but at this stage it wouldn't be established.	Minor adverse
					Summer, Year 15	Negligible  The flood defences, where visible would appear as minor elements in overall views. Mitigation planting would continue to screen views to the flood defences from these properties.	Negligible
Flood Cell 4 (cont.)		People working and visiting the Macdonald Inchyra Hotel and Spa	Grass and scrubland grounds of the hotel, fields, woodland and pylons	Low	Construction	Moderate  People working and visiting Macdonald Inchyra Hotel and Spa would experience a moderate adverse visual disruption given the close-proximity and elevated views to the construction works and the potential site compound. The works would also include the loss of trees (including Category B trees), which would increase visibility to the surrounding road network.  The majority of construction works are located to the north of the property and direct views from the eastern and southern sides of the hotel and grounds are expected to be limited given the aspect and intervening woodland. This would continue throughout the build period.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Minor  There would be a minor adverse change to views from the hotel with the addition of the new flood wall (less than 1m along the bank) to the north and removed vegetation, although this would be seen in long views from the hotel itself, where there are already views to the surrounding road network in this direction.  The new grassed embankment may also be slightly visible as it adjoins the hotel to the immediate north and east.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor  Mitigation planting would replace the green outlook lost during construction, although at this stage the planting wouldn't be established.	Minor adverse
					Summer, Year 15	Negligible  Over time the embankment would settle into the surrounding landscape. Mitigation planting would have also helped to re-establish bankside vegetation and screen views of the flood wall.	Negligible
Flood Cell 4 (cont.)		People working and visiting Galaxy Sports, Little Kerse playing fields	Road network, fields, woodland and pylons	Low	Construction	Moderate  People working and visiting the playing fields would experience a noticeable adverse visual disruption given the close-proximity of the construction of the flood defences. The works would also include the loss of mature trees (including Category A and B trees) adjoining the A905, which would enable greater visibility to the surrounding road network. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Moderate  The new flood wall along both sides of the Flood Relief Channel (mainly around 1m or less in height) would be visible given the limited separation distance, although would appear as part of the property boundary.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			Urban landscape, road network, Macdonald Inchyra Hotel grounds and trees adjoining Inchyra Road and Grange Burn	High	Winter, Year 1 (with all mitigation)	Moderate Mitigation planting (avoiding services) would replace trees lost during construction and would help to soften and screen views to the adjoining roads and vehicles on them. Mitigation planting however would not be established at this time.	Minor adverse
					Summer, Year 15	Negligible Mitigation planting would have helped to re-establish bankside vegetation and would continue to screen views to the surrounding roads.	Negligible
		Cyclists on NCN Route 76 and users of Core Path 006/011 Inchyra Road			Construction	Minor Visual disruption experienced by users of the Core Path/ cycle route with views across Inchyra Road of the construction of the flood wall on the Macdonald Inchyra Hotel grounds and the potential site compound. The construction works would also involve the loss of scattered trees (including Category B trees) adjacent to Grange Burn, which would enable greater visibility of the hotel grounds. This would continue throughout the build period.	Moderate adverse
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	Negligible The flood wall (less than 1m) would be noticeable but would not be imposing in views given there is existing visibility to traffic on the A-road.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible Mitigation planting would reinstate a green outlook in this direction from the Core Path/ cycle route. However, planting would not be established at this time.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Negligible The continued growth of mitigation planting would have helped to soften and screen views to the wall, as seen beyond the road network from the Core Path/ cycle route.	Negligible
		Cyclists on NCN Route 76 and users of Core Path 016/038	A905, industrial landscape, road network, fields and woodland	High	Construction	Major Users of this cycle route/ Core Path would experience views to the construction of the flood defences, the potential site compound at the Macdonald Inchyra Hotel grounds and loss of mature and roadside trees (including Category A and B trees). Users of this path/ route would experience immediate and long views to the works adjacent to route/ path and it is likely these would be closed for a period of time during construction (although a diversion should be in place). This would continue throughout the build period.	Major adverse
	Winter, Year 1 (primary mitigation)				Minor There would be a slightly adverse change to the view south with the addition of the flood defences, although they would appear at a lesser height from the Core Path.	Moderate adverse	
	Winter, Year 1 (with all mitigation)				Minor Mitigation planting would help to soften views to the flood walls and embankment. Mitigation planting however would not be established at this time.	Moderate adverse	
Flood Cell 4 (cont.)					Summer, Year 15	Negligible The flood defences, where visible would appear as minor elements in overall views and over time, the embankment would be settled into the landscape. Mitigation planting would continue to screen views to the flood defences from the Core Path.	Negligible



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Users of proposed Core Path 016/039 Polmont Woods to Wholeflats Road	Grange Road, MacDonald Inchyra Hotel and grounds, Galaxy Sports site, fields and woodland	High	Construction	Moderate Users would experience a visual disruption during construction with views from the proposed path towards works on the A905/ Wholeflats Road. There would also be visibility to the loss of mature trees (including Category A and B trees) along the A905 and at MacDonald Inchyra Hotel and Spa. It is likely, the northern section of the path would be closed to enable the works, although a diversion route would be provided. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor The flood walls, less than 0.4m at the intersection of the A905/ Wholeflats Road and Grange Road, would be visible from the proposed Core Path given the limited separation distance, although would appear as minor elements and in part as the boundary walls to adjoining properties.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Negligible Mitigation planting would help to soften views to the new walls and this planting would help to replace trees lost during construction, although these will take time to reach the same maturity.	Negligible
					Summer, Year 15	Negligible Mitigation planting would continue to screen views to the flood walls.	Negligible
Flood Cell 5		Residents (Smiddy Brae)	Road network, industrial landscape and woodland	High	Construction	Negligible Long views to the construction works from residential properties, with distant, partly filtered views to the potential site compound to the north.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Negligible Only long views to the defences and any vegetation removal.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible Only long views to the defences and any vegetation removal.	Negligible
					Summer, Year 15	Negligible Only long views to the defences, which are now well established with replacement vegetation also being established.	Negligible
		Road travellers (A905 and A904)	A905 and A904 roads, industrial landscape, fields and woodland	Medium	Construction	Moderate Lane closures along the A905 and A904 where construction works occur is likely during the construction phase, delaying traffic. Where possible, road travellers would experience a moderate amount of temporary visual disruption given the close-proximity to the works directly adjacent to the road, including the construction of the flood walls and embankments and loss of some mature vegetation.  This would continue throughout the build period.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 5 (cont.)		Road travellers (A905 and A904) (cont.)			Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The view along the road would be somewhat different with the loss of scattered mature trees and with visibility of the flood defences given their height and length.</p> <p>The flood walls along the southern side of the A905 will create a sense of enclosure (with walls located at back of footpath of between 1m to 1.5m along an approximately 150m stretch) and restrict views south to fields. However, visibility of the flood defences would be over a short duration (along this section of the road and given the speed of vehicles) and would form part of views to the wider industrial landscape. Defences to the north of the road are set back from the road, and lower in the landscape, but would still be discernible in the landscape.</p> <p>Defences adjacent to the River Avon as it flows under the A904 are set back from the road, but require removal of riverside vegetation to install them, thereby minorly adversely effecting the views from the road.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would help to soften views to the flood defences from the roads and this would reinstate a green outlook for road travellers. However at this stage the planting would not be established.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	<p>Negligible</p> <p>The flood wall along the southern side of A905 would remain apparent in views, given the limited space for mitigation planting here, and the wall would also limit views south to fields along a short section of road. However as this is for a short section of road and for road travellers moving at speed, this is negligible.</p> <p>Mitigation planting would have softened views to the majority of flood defences from the roads and would have reinstated a green outlook for road travellers.</p>	Negligible
Flood Cell 5 (cont.)		People working at Grangemouth Petrochemical complex	Industrial landscape	Low	Construction	<p>Major</p> <p>Visual disruption would be experienced by people working at Grangemouth Petrochemical complex with views to the construction of the flood defences, coastal revetment and in-water working areas at the edges of the industrial working areas.</p> <p>There would also be views of potential site compounds, buildings to be demolished and loss of vegetation (mainly in the form of scattered trees).</p> <p>This would continue throughout the build period.</p>	Moderate adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>People working at the petrochemical complex site would experience a minor change to original views as the new walls would generally appear as the boundary around the petrochemical complex.</p> <p>Given the angle of view, visibility of the coastal revetment, north of the River Avon, would be limited with the revetment at the Scottish Water Treatment Works forming a minor element in overall views.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees lost during construction where possible to soften views to the new walls. However at this stage the planting would not be established.	Minor adverse
					Summer, Year 15	Negligible Over time walls would have settled into the surrounding landscape. Mitigation planting would soften visibility of the flood walls.	Negligible
Flood Cell 5 (cont.)		Recreational users of Grangemouth Golf Course	Golf Course grounds and woodland	Low	Construction	Minor Slight visual disruption experienced by recreational users and visitors to the golf course, with elevated views from the club house and car parking area to the construction of the flood defences and potential site compounds. Views would however be from a distance and filtered by intervening vegetation.  This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Negligible The flood defences are not expected to be discernible elements in views given the separation distance and intervening vegetation.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible Proposed mitigation planting, will help to screen views of the walls, however because the flood defences are not expected to be discernible elements, this would not have a large impact.	Negligible
					Summer, Year 15	Negligible Over time, mitigation planting along with the growth of existing vegetation would have screened views of the walls.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 5 (cont.)		Recreational users of Polmonthill Ski Centre	Ski Centre and woodland	Low	Construction	Minor Slight visual disruption experienced by recreational users, with elevated views from the dry ski slope to the construction of the flood defences. Views would however be filtered by intervening vegetation. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Negligible The flood defences are not expected to be discernible elements in views given the separation distance and intervening vegetation, including proposed mitigation planting.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible Proposed mitigation planting, will help to screen views of the walls, however because the flood defences are not expected to be discernible elements, this would not have a large impact.	Negligible
					Summer, Year 15	Negligible Over time, mitigation planting along with the growth of existing vegetation would continue to screen views.	Negligible
		Cyclists on NCN Route 76 and users of Core Path 016/038 Inveravon to Wholeflats Roundabout and the Antonine Wall Trail	A905 road, industrial landscape, fields and woodland	High	Construction	Major Users would experience a large amount of temporary visual disruption given the close-proximity of the route to the works including the construction of the flood walls and loss of mature vegetation. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Moderate  The view along the cycle route/ path would be somewhat different with the loss of scattered mature trees and with visibility of the flood defences given their height and length, particularly along the southern side of the A905. Along this section, the flood walls would create a sense of enclosure and limit views south to fields and woodland.	Major adverse
					Winter, Year 1 (with all mitigation)	Minor  The flood defences are to be screened in part by mitigation planting, helping to integrate them into the landscape. However at this stage the planting wouldn't be established.  Secondary mitigation in the form of appropriate wall finishes and materials and sensitive detailing, as agreed with The Local Planning Authority and HES would be required to protect the setting and qualities of the world heritage site.	Moderate adverse
					Summer, Year 15	Negligible  Mitigation planting would have softened views to the flood defences from the cycle route/ path and this would reinstate a green outlook for users.  The flood defences along the road would remain visible but would form part of views to the wider road network and industrial landscape.	Negligible
Flood Cell 5 (cont.)		Users of Core Path 016/036 Jinkaboot Bridge, 016/022 Polmonthill and the Antonine Wall Trail	A905 road, industrial landscape, fields and woodland	High	Construction	Moderate  Visual disruption experienced by users with direct views to the construction of a flood wall, flood gate and loss of roadside vegetation.  This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (primary mitigation)	Moderate Users would experience a noticeable change to the original views where there would be visibility of the new flood wall (height varies from 0.4 to 2.2). This would be partially screened by existing vegetation.	Major adverse
					Winter, Year 1 (with all mitigation)	Minor Secondary mitigation in the form of appropriate wall finishes and materials and sensitive detailing, as agreed with The Local Planning Authority and HES would be required to protect the setting and qualities of the world heritage site.  Existing bankside vegetation and mitigation planting would help to screen and soften views to the flood defences. At this stage however the planting would not have established.	Moderate adverse
					Summer, Year 15	Negligible Mitigation planting would help soften views to the flood defences, settling them somewhat into the surrounding landscape, although the flood wall along the southern side of the A905 would remain apparent in views.	Negligible
Flood Cell 6		Road travellers (A904/ Grangemouth Road)	Industrial landscape, fields, woodland and roadside trees	Medium	Construction	Minor Views north to the works from the A904 would generally be screened by roadside vegetation and intervening woodland. Currently, gaps in vegetation enable visibility of Grangemouth Petrochemical complex and fields on either side of the Scottish Water access road.  During construction, the potential site compound would be visible but only for a short duration.  This would continue throughout the build period.	Minor adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with mitigation)	Negligible Given the separation distance and intervening vegetation, there would be limited visibility of the flood defences from the A904/ Grangemouth Road.	Negligible
					Summer, Year 15	Negligible Given the separation distance and intervening vegetation, there would be limited visibility of the flood defences from the A904/ Grangemouth Road.	Negligible
		People working at Grangemouth Petrochemical complex	Industrial landscape and the Firth of Forth	Low	Construction	Major Visual disruption experienced by people working at Grangemouth Petrochemical complex with views to the construction of the flood defences, coastal revetment and in-water working areas, however these views are in-keeping with the industrial nature of the site.  There would also be views of potential site compounds and loss of vegetation. Some of the works are located along coastal areas of the cell and in places (within the petrochemical complex site), would appear similar to current industrial activities  This would continue throughout the build period.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 6 (cont.)					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>People working at the petrochemical complex site would experience only a minor change to original views as the new embankments and walls would generally appear as the boundary around the petrochemical complex and Scottish Water site and would be in keeping with the industrial look of the site. Given the angle of view, visibility of the coastal revetment along the petrochemical complex would be limited with the revetment at the Scottish Water site forming a minor element in overall views.</p> <p>Without any replacement planting, the area has lost some of the only greenness to it.</p>	Minor adverse
		Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would replace trees lost during construction where possible to soften views to the new walls. However at this stage the planting would not be established.</p>	Minor adverse			
		Summer, Year 15	<p>Negligible</p> <p>Grass would establish on the embankments, settling them somewhat into the surrounding landscape. Mitigation planting would soften visibility of the flood walls.</p>	Negligible			
		Construction	<p>Major</p> <p>Noticeable visual disruption experienced by people working at the Scottish Water treatment works, with direct views to the embankment to the north, and wall to the east, coastal revetment, two potential site compounds and loss of vegetation including woodland to the east.</p> <p>This would continue throughout the build period.</p>	Moderate adverse			
People working at Scottish Water, Kinneil Kerse Waste Water Treatment Works	Industrial landscape, Firth of Forth and woodland	Low					

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 6 (cont.)					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>People working at these properties would experience a change to original views as the defence with embankment (up to 2.6m in height) would form a visual barrier to expansive views towards the coastal edge and distant hills. The sheet pile wall with earth embankment would however retain a partial green outlook and help to screen views to Grangemouth Petrochemical complex buildings to the north.</p> <p>Some vegetation would have been lost at construction, which at this stage is not replaced, especially the woodland area next to the road. This reduces the greenness of the area, opening up views.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Trees in the woodland adjacent to the local road would be lost as part of construction, and would be replaced as part of the mitigation, although they would not have established at this stage.</p> <p>Grass would establish on the embankments, settling them somewhat into the surrounding landscape.</p> <p>Mitigation planting would replace vegetation around the cell to help revegetate the area and help the embankment settle into the surrounding landscape.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>Mitigation planting would now be established and would have softened the visibility of the grassed embankment and industrial buildings beyond.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 6 (cont.)		Users of non-designated paths (dog walkers etc.)	Industrial landscape, Firth of Forth and woodland	Medium	Construction	<p>Moderate</p> <p>Non-designated paths are located to the east of the Scottish Water site and these are popular with dog walkers. Users of these paths would experience views, partially screened by woodland, to the construction of the embankment, rock revetment and potential site compound adjoining the Scottish Water site. As well as distant views to works further north, at Grangemouth Petrochemical complex. These views would however form part of overall, expansive views to the petrochemical complex and the coastal edge. It is likely that there would also be disruption to accessing this area during construction.</p>	Moderate adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The flood walls to the far west are not expected to be discernible elements in views given the separation distance.</p> <p>The grassed embankment with wall and coastal revetment east of the Scottish Water site would be partially visible in views, although existing woodland would partially screen views and these flood defences would appear as minor elements in overall views.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Trees in the woodland adjacent to the local road would be lost as part of construction, and would be replaced as part of the mitigation, although they would not have established at this stage.</p> <p>Grass would establish on the embankments, settling them somewhat into the surrounding landscape.</p> <p>Mitigation planting would replace vegetation around the cell to help revegetate the area and help the embankments settle into the surrounding landscape</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Negligible Over time, the embankment would settle into the surrounding landscape and visibility of flood defences would be reduced with mitigation planting.	Negligible
<b>Key Viewpoints</b>							
Key Viewpoint 1	Footpath on Falkirk Golf Club at Hole 16. View north-east from a footpath along the eastern side of the golf course next to Hole 16, towards the rear of the Bus Depot/Cockburn Auto Electrics.	Users of the golf course	Boundary trees/ woodland, filtered views of bus depot, open aspect within golf course	Medium	Construction	Major There would be visual disruption to the immediate view during construction of the flood wall with the removal of vegetation opening up the view to the adjacent industrial units.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate Once constructed, there will be a noticeable change to the original view, with the loss of existing vegetation, and little screening to the industrial units.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor With mitigation planting, including a mix of sizes, the view towards the north will again be screened, enclosing the view back to the surrounds of the golf course.	Minor adverse
					Summer, Year 15	Negligible The planting will have matured and there should be little change.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 2	New Carron Village, on approach to Core Path 001/020 from the residential estate, towards Mungal Community Woodland, facing south-west	Users of the footpath	View south-west from a footpath exiting New Carron Village residential estate towards Mungal Community Woodland. Core Path 001/020 runs adjacent to the rear of the estate at the bottom of the footpath.	Medium	Construction	Major There would be visual disruption to the immediate view during construction of the bund and the closure of the footpath and Core Path. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate Once constructed, there will be a noticeable change to the original view, with a new grassed embankment circa 4m high straight opposite. Vegetation along this section of the path and woodland in the central view would likely be retained.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Moderate There is limited mitigation which can be included here due to the size of the embankment. Additional planting on the embankment could help to reduce its impact somewhat.	Moderate adverse
Key Viewpoint 2 (cont.)					Summer, Year 15	Minor Over time, replacement vegetation (mainly grass and shrubs) between the existing re-routed Core Paths would be established, softening views to the re-routed path.	Minor adverse
Key Viewpoint 3	Core Path 001/018, River Carron Loop Path, HArTT and Bainsford Loop cycle paths, Mungal Community Woodland, facing south-east	Users of the paths and cycle routes	View south-east from the paths/routes, in Mungal Community Woodland, towards houses at New Carron Village, partially screened by woodland.	High	Construction	Major There would be visual disruption to the view during construction of the bund, given the open view across the grass area and loss of intervening shrubs, and this would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate Once constructed, there will be a noticeable change to the original view, with a new grassed embankment circa 3.5m high within the open space and some loss of vegetation. Woodland visible on either side of the existing key view image would remain.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	Moderate There is limited mitigation which can be included here due to the size of the embankment. Additional planting on and around the embankment could help to reduce its impact somewhat, and start to blend it into the landscape, however the embankment would remain visible in this view.	Major adverse
					Summer, Year 15	Minor Over time, vegetation (mainly grass and shrubs) on either side of the bund in the distance would have been established, softening views and blending it into the background. However, the circa 3.5m high embankment would still be an imposing feature, seen by users of the Core Path from this viewpoint.	Moderate
Key Viewpoint 4	Front driveway of residential property on Park Road, New Carron Village, facing west	Residents	View west from the driveway of a residential property, adjacent to Core Path 001/020, River Carron Loop Path and Bainsford Loop and a grassed area. Trees within Mungal Community Woodland along the River Carron and open grassed area to the rear.	High	Construction	Major There would be visual disruption to the view during construction of the bund given the close-proximity to the works, and this would continue throughout the build period.	Major adverse
					Winter, Year 1 (with mitigation)	Minor Once constructed, there will be a moderate change to the original view, with the slope of the grassed bund (currently the flat grassed area) gradually increasing in height to almost 1.5m towards woodland.	Moderate adverse
					Summer, Year 15	Negligible Over time the embankment would settle into the surrounding landscape.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 5a	Stenhouse Road bridge, facing east	Users of the footpath adjoining Stenhouse Road bridge	View east towards the Dawson Mission, from Stenhouse Road bridge over the River Carron.	Medium	Construction	<p>Major</p> <p>Adverse visual disruption from the bridge with the loss of some riverside vegetation on the side of the River Carron to allow for building of the wall and raising of the footpath. Construction traffic and machinery would further disrupt the view.</p> <p>The temporary closure the bridge and subsequent diversion of traffic, would also cause visual disruption.</p> <p>This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The view from the bridge would be noticeably different with a reduction in mature vegetation (as well as a lack of replacement planting) along the riverbank and the new high flood wall behind the footpath, from 1.25m to 2m along its length. The existing retained vegetation will however partially screen the wall from this viewpoint, reducing its visual impact.</p>	Moderate adverse
Key Viewpoint 5a (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>With riverside mitigation planting, especially a mix of large and small sizes, the riverbank would return to its vegetated state and start to soften and further screen the new walls. In the winter of year 1 this would have some impact, if a mix of sizes were used.</p> <p>Appropriate finishes to the walls (as agreed with the Local Planning Authority), including the possibility of including glass panels as windows along the wall, will help to break up the continuous stretch of wall, allowing views over to the Dawson Mission, and would integrate them into the landscape. However due to the size of the wall this would still be a considerable minor detrimental change to this view.</p>	Minor adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Minor  With mitigation planting and appropriate finishes, the view to the flood walls would now be partially screened and softened, but still regarded as a minor detrimental change to the existing view.	Minor adverse
Key Viewpoint 5b	Stenhouse Road bridge, facing east	Road travellers	View east towards the Dawson Mission, from Stenhouse Road Bridge over the River Carron.	Medium	Construction	Major  Adverse visual disruption from the bridge with the reduction in riverside vegetation on the side of the River Carron to allow for building of the wall and raising of the footpath. Construction traffic and machinery would further disrupt the view.  The temporary closure the bridge and subsequent diversion of traffic, would also cause visual disruption.  This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  Once constructed, there will be a noticeable change to the original view, given the reduction in mature vegetation. The new flood wall and the extent of vegetation loss would not be as apparent to road travellers, as it would be users of the footpath adjoining the road, given the height of the stone bridge and the speed of travel.	Moderate adverse
Key Viewpoint 5b (cont.)					Winter, Year 1 (with all mitigation)	Minor  With riverside mitigation planting of mixed large and small sized stock, the riverbank would return to its vegetated state and start to soften and further screen the new walls. In the winter of year 1 this would have some impact.  Appropriate finishes to the walls, as agreed with the Local Planning Authority, including the potential use of glass panels, would integrate them into the landscape.  Due to the speed of travel the view is only seen for a short time and the effect is therefore lessened.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Negligible  By year 15 the trees and riverside vegetation would be established and the wall would have settled somewhat into the surrounding landscape, the change in view experienced by road users would be negligible.	Negligible
Key Viewpoint 6	Core Path 004/003 and the River Carron Loop Path, and the HArTT and Bainsford Loop cycle paths, adjacent to the Dawson Mission, facing west	Users of the paths and cycle routes	View west, along the Core Path/ River Carron Loop Path/ cycle paths with riverbank vegetation along the River Carron on the right and scattered trees along the northern boundary of the Dawson Mission on the left. A large pylon is visible above the height of trees in the central view.	High	Construction	Major  Visual disruption to the view with the loss of some bank-side vegetation adjacent to the footpath as part of the working area and on the far side of the river due to in-water working. This creates greater visibility to the surrounding road network and residential properties. Construction traffic and machinery would further disrupt the view.  Also possible visual disruption of filtered views of the bridge as it is replaced.  The path will be closed for a period of time during construction of the wall and raising of the path, (although a diversion should be in place) which would prevent access and views in this area.  This would continue throughout the build period.	Major adverse
Key Viewpoint 6					Winter, Year 1 (primary mitigation)	Major  The view from the path would significantly change due to the high flood wall in this location (approximately 2m). The path has been severed from the Dawson Mission area resulting in a loss of visual connectivity with the adjacent spaces and obstructing long views to the hills. The loss of some mature riverside vegetation would create a less green landscape, with no replacement planting.  The footpath is to be slightly raised (as part of embedded mitigation) to help reduce the apparent height of the wall from the path.	

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>With mitigation planting, especially a mix of large and small sizes, the riverbank would start to return to its vegetated state and soften the new wall from the riverside. However, given the height of the wall and its location between the path and Dawson Mission area, mitigation planting along the riverbank would have limited impact on softening this view towards the wall.</p> <p>Appropriate finishes to the walls, as agreed with the Local Planning Authority, including the potential use of glass panels, would help reduce the effect of the wall, by allowing staggered views through it, thereby allowing some connection with the Dawson Mission and open space, reducing the sense of enclosure.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>The wall will remain a hard, high edge, which still segregates the path from the Dawson Mission area. Glass panels will allow some views through and a visual connection between the areas either side of the wall. Riverside planting will have matured and will create a green riverside view.</p> <p>The view however cannot be fully mitigated, and will be permanently changed</p>	Moderate

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 7	Core Path 009/1674 adjacent to Chapel Burn, east of Carronshore Road, facing south	Users of the Core Path	View south from Core Path 009/1674, which runs parallel to Chapel Burn and adjacent to the rear gardens of residential properties on Waters End.	High	Construction	<p>Major</p> <p>There would be a large amount of visual disruption to the view along the Chapel Burn during construction of the wall given the close-proximity to the works including the ramp to the river and burn and temporary culverting of the burn. Existing mature vegetation (including Category B trees) would be removed to facilitate the works, creating a stark view, and opening up the rear view of properties (reducing privacy).</p> <p>This would continue throughout the build period.</p> <p>It is also likely that the Core Path would be closed for periods of time during this phase (although a diversion would likely be in place), thereby stopping any views.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Once constructed, there will be a detrimental change to the original view, due to the loss of mature vegetation.</p> <p>The new flood wall on the south of the burn (approximately 0.6m in height) and additional fence on top or next to it (as part of embedded mitigation) will be visible from the path, although this would be consistent with the original height of the existing fence. The houses will also now be more visible from the path, providing less privacy for residents.</p> <p>The 1m to 1.2m high wall to the north of the burn would be very exposed and form the edge to the footpath, restricting views to the burn.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 7 (cont.)					Winter, Year 1 (with all mitigation)	Moderate Mitigation planting would over time help to screen views to the boundary wall and create a green waterside but at year one there would be limited growth. A mix of tree sizes is important along this section to help reduce this impact.  The wall to the north of the burn would be very exposed and form the edge to the footpath, restricting views to the burn. Sensitive finishes would be important here.	Major adverse
					Summer, Year 15	Minor Over time replacement vegetation would have established within the burn, but the wall alongside the footpath would still be visible.  This replacement vegetation would be managed as part of the flood scheme initially and therefore the burn and its environment would be potentially more visually attractive.	Moderate adverse
Key Viewpoint 8	Informal footpath adjacent to the River Carron, facing west	People visiting the River Carron Meander SINC	View west from informal footpath in the River Carron Meander SINC, with views to the River Carron, Carrondale Care Home and adjoining residential properties in Carronshore.	Medium (undesigned recreation route)	Construction	Moderate There would be some visual disruption to the view of the opposite bank during construction of the wall given the close-proximity to the works including the in-water working area. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (primary mitigation)	Moderate Once constructed, there will be a noticeable change to the original view, with visibility to the wall (approximately 0.5 to 1.3m in height), although the care home and houses will not appear more prominent in the view as garden fences provide some screening.  With no mitigation planting, replacing the riverside vegetation, the walls and fences would not be screened.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 8a (cont.)					Winter, Year 1 (with all mitigation)	Moderate Mitigation planting will eventually soften and screen views to the wall, but would not be established at this point.	Moderate adverse
					Summer, Year 15	Negligible Over time, riverbank vegetation would be re-established, thereby reducing the visibility of the wall, and returning the view to something similar to present day.	Negligible
Key Viewpoint 9a	Bowhouse Road, adjacent to the northern boundary of Rannoch Park, facing south	Users of the footpaths adjacent to Bowhouse Road	View south from the southern end of Bowhouse Road, nearing the intersection with Rannoch Road. An existing embankment with mature trees forming the northern edge of Rannoch Park screens views to the grassed areas of the park. The roof of the park facilities building is visible as well as the tops of roadside trees and woodland beyond.	Medium	Construction	Major There would be a major visual disruption to the view during the construction of the flood wall given the close proximity of works. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Major Once constructed, users of the footpaths would experience a noticeable change to the original view, given the proximity of the 0.7m wall atop the embankment.  The row of mature trees are likely to be removed as part of the scheme given their limited life expectancy due to Chalara Ash Dieback disease. With no mitigation planting, views to the wall would be more apparent from this location.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate Mitigation planting, including the use of large replacement trees, would also soften/screen views to the wall.  Appropriate wall finishes and detailing, as agreed with the Local Planning Authority, would help the wall integrate into the landscape. However due to the new size of the barrier between the road and the park, for path users there is still a moderate detrimental effect.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Minor Although still visible, over time, mitigation planting would have softened and screen views to the wall, and it would have become part of the park infrastructure.	Minor
Key Viewpoint 9b	Bowhouse Road, adjacent to the northern boundary of Rannoch Park, facing south	Road travellers	View south from the southern end of Bowhouse Road, nearing the intersection with Rannoch Road. An existing embankment with mature trees forming the northern edge of Rannoch Park screens views to the grassed areas of the park. The roof of the park facilities building is visible as well as the tops of roadside trees and woodland beyond.	Medium	Construction	Major There would be a major visual disruption to road travellers who would experience a view to the construction of the flood wall given the close proximity of works. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate The view from the road would be noticeably different as the new wall (0.7m in height) would be atop an existing embankment and given the loss of mature vegetation in poor health.  The new flood wall and the extent of vegetation loss would not be as apparent to road travellers as it would be users of the footpath adjoining the road given the speed of travel and as the wall would only restrict visibility to the roof of the park building and the tops of some trees/ woodland beyond.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting, including the use of large replacement trees, would also soften/screen views to the wall.  Appropriate wall finishes and details as agreed with the Local Planning Authority, would help the wall integrate into the landscape. However due to the new size of the barrier between the road and the park, for road travellers there is still a minor detrimental effect for road travellers.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Negligible Over time, mitigation planting would have softened and screened visibility of the wall, and it would have become part of the park infrastructure.	Negligible
Key Viewpoint 10a	Abbots Road (B9132), adjacent to the western side of Zetland Park, facing south-east	Users of the footpath adjoining Abbots Road (B9132)	View south-east along Abbots Road. The western side of Zetland Park is visible beyond the road, including mature avenue trees atop embankments either side of the Grange Burn, a bridged pedestrian walkway and a kiosk to the left (which will be	Medium	Construction	Major Adverse visual disruption will be experienced with views of the construction of the flood defences, given the close-proximity of the path with to the works. The construction works would require the removal of vegetation, mainly in the form of mature avenue trees (Category A and B) adjacent to the Grange Burn in Zetland Park. This would be a major change in views for users of the footpath overlooking this section of the burn. The in-water construction works would also have a visual impact. There may be visual disturbance due to increased traffic management measures and associated traffic infrastructure to allow for the construction of the works. This would continue throughout the build period.	Major adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
			demolished as part of the Scheme).		Winter, Year 1 (primary mitigation)	<p>Major</p> <p>Once constructed, there will be a noticeable change to the original view, due to the loss of one row of mature trees along Abbot Road, reducing the green boundary to the park.</p> <p>As part of primary mitigation two rows of existing trees are retained, however the loss of a large number of mature trees, with no replacements, would detrimentally change this view and create a much more open view towards Zetland Park.</p> <p>The new flood wall, at 1.2m would effectively replace the boundary wall along the western side of the park, albeit with a basic finish.</p> <p>The new ramp and raised bridge has more of a detrimental visual impact here due to the height and size.</p>	Major adverse
Key Viewpoint 10a (cont.)					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Appropriate wall finishes and details as agreed with the Local Planning Authority, would help the wall integrate into the local landscape.</p> <p>Mitigation planting, including the use of large replacement trees, would also soften views towards the park, and help reinstate the green edge to the park.</p>	Moderate adverse
					Summer, Year 15	<p>Minor</p> <p>Although the walls would still be visible, they would have become part of the park/road edge infrastructure. Mitigation planting would have fully reinstated the green edge to the park.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 10b	Abbots Road (B9132), adjacent to the western side of Zetland Park, facing south-east	Road travellers	View south-east along Abbots Road. The western side of Zetland Park is visible beyond the road, including mature avenue trees atop embankments either side of the Grange Burn, a bridged pedestrian walkway and a kiosk to the left (which will be demolished as part of the Scheme).	Medium	Construction	Major  There would be a major visual disruption to road travellers who would experience a view to the construction of the flood defences, including the loss of mature avenue trees, demolition of the kiosk, and in river working, given the close proximity of works. They may also be traffic diversions.  This would continue throughout the build period	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  The view for road travellers would be noticeably different with the loss of some mature vegetation along the western side of Zetland Park (although two lines of trees have been retained) and the new 1.2m high flood wall, creating a less green outlook.  The new basic flood wall and the extent of vegetation loss would not be as apparent to road travellers as it would be users of the footpath adjoining the road, given the speed of travel.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor  Appropriate wall finishes and details as agreed with the Local Planning Authority, would help the wall integrate into the local landscape.  Mitigation planting, including the use of large replacement trees, would also soften views towards the park, and help reinstate the green edge to the park.	Minor adverse
Key Viewpoint 10b (cont.)					Summer, Year 15	Negligible  The new flood wall would still be visible, but would appear as the western boundary of the park, as viewed by road travellers. Mitigation planting would have fully reinstated the green edge to the park.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 11	Core Path 006/026, at the northern entrance to Zetland Park, facing south	Users of the Core Path and recreational users of the park	View south from Core Path 006/026 approaching the northern entrance gates of Zetland Park. Mature avenue trees along the Grange Burn are visible to the right and the listed war memorial to the left.	High	Construction	<p>Major</p> <p>There would be a major visual disruption during the construction of the flood walls, including the loss of some mature avenue trees and in river working, given the close proximity of works.</p> <p>There may also be visual disturbance due to the in-water works and construction of the potential culvert (in 200m stretches) of the Grange Burn. This may result in a temporary change to the visual character of the burn.</p> <p>The path may also be closed, with a diversion. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The view from the Core Path/ park entrance would be noticeably different with the reduced mature vegetation along the burn and within the park and the addition of up to 1.37m high basic walls. These changes would restrict the views of the riverbank and create a less green landscape/ outlook from this viewpoint.</p>	Major adverse
Key Viewpoint 11 (cont.)					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Appropriate wall finishes and details as agreed with the Local Planning Authority, would help the wall integrate into the local landscape.</p> <p>Mitigation planting, including the use of large replacement trees, would also soften views within the park, and help reinstate the green edge to the park.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>Although the walls would still be visible (and thereby a permanent change to the view), they would have become part of the park infrastructure. Mitigation planting would have fully reinstated the green edge to the park.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 12a	Dalratho Bridge (the intersection of Core Paths 006/1358, 006/1391 and 006/1400), northern boundary of Zetland Park, facing south	Users of the Core Paths	View south from Dalratho Bridge along Grange Burn and to mature line trees atop embankments. Zetland Park is visible to the left and residential properties on Abbots Road to the right.	High	Construction	Major Adverse visual disruption from the bridge with the loss of mature trees on one side of the Grange Burn to allow for in-water working areas and building the walls. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Major The view from the bridge would be noticeably different with the lack of mature vegetation along one side of the riverbank and the new basic flood walls forming boundaries on either side of the burn (up to 1.37m in height along the eastern side and up to 0.9m along the western/ Abbots Road) and creating a less green landscape/ outlook.	Major adverse
Winter, Year 1 (with all mitigation)					Moderate The flood walls, with sensitive detailing and appropriate finishing, as agreed with the Local Planning Authority, could blend with the park infrastructure and not be so visually intrusive. Mitigation, in the form of large trees as replacements for the mature trees removed, will help to reduce the effect of the tree loss, however due to the mature size of the trees which have been lost, this is still a great impact to the view.	Major adverse	
Key Viewpoint 12a (cont.)					Summer, Year 15	Minor The flood walls, although apparent in this view, will now be seen as part of the park infrastructure and views towards the flood walls would be softened by mitigation planting. Replacement tree planting would have grown and established, restoring the green view.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 12b	Dalratho Bridge, northern boundary of Zetland Park, facing south	Road travellers	View south from Dalratho Bridge along Grange Burn and to mature line of trees atop embankments. Zetland Park is visible to the left and residential properties on Abbots Road to the right.	Medium	Construction	Major  Adverse visual disruption from the bridge with the loss of mature trees on one side of the Grange Burn to allow for in water working areas and building the walls. There would also likely be road closures and diversions. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  The view from the bridge would be noticeably different with the lack of mature/any vegetation along the riverbank and the new flood walls forming boundaries on either side of the burn (up to 1.37m in height along the eastern side and around 1.3m along the western/ Abbots Road) and creating a bare landscape/ outlook. However, as this view is seen from a side angle and from a moving vehicle, it would have slightly less of an effect than from adjoining Core Paths/ footpaths.	Moderate adverse
Winter, Year 1 (with all mitigation)					Moderate  Mitigation, in the form of large trees as replacements for the mature trees removed, will help to reduce the effect of the tree loss, however due to the mature size of the trees which have been lost, this is still a noticeable impact to the view.  The flood walls, with sensitive detailing and appropriate finishing, as agreed with the Local Planning Authority, will help the Scheme to blend in with the park infrastructure and not be so visually intrusive.  As this view is seen from a side angle and from a moving vehicle, there would be slightly less of an effect than from adjoining Core Paths/ footpaths.	Moderate adverse	
Key Viewpoint 12b (cont.)							

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	<p>Minor</p> <p>The flood walls, although apparent in this view, will now be seen as part of the park infrastructure and views towards the flood walls would be softened by mitigation planting.</p> <p>Replacement tree planting would have grown and established, restoring the green view.</p> <p>As this view is seen from a side angle and from a moving vehicle, there would be slightly less of an effect than from adjoining Core Paths/ footpaths.</p>	Minor adverse
Key Viewpoint 13a	Corner of Park Road and Ronaldshay Crescent, facing north-west	Users of the footpaths adjacent to the road	View north-west from Ronaldshay Crescent, near the intersection with Park Road. View to mature trees on embankments either side of the Grange Burn and Grangemouth Bowling Club beyond.	Medium	Construction	<p>Major</p> <p>Adverse visual disruption given the loss of mature trees on both sides of the Grange Burn to allow for in water working areas and building the flood walls, disrupting this view. This would continue throughout the build period.</p>	Major adverse
Key Viewpoint 13a (cont.)					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The view would be majorly different with the lack of any vegetation along the burn (including the loss of the mature trees) and the new basic flood walls (up to 0.8m in height along this stretch) creating a bare landscape/ outlook. Views over the burn, of buildings and infrastructure, will now be much more apparent.</p> <p>A new footpath along the burn side of Park Road, as part of primary/embedded mitigation, will help to visually reduce the full height of the wall, as well as providing footpath access along this stretch.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Sensitive detailing and appropriate finishes to the wall, as agreed with the Local Planning Authority, as part of secondary mitigation, will help integrate the walls visually into the local landscape.</p> <p>Mitigation in the form of large replacement trees, for the mature trees removed, will help to reduce the effect of the tree loss. However due to the mature size of the trees which have been lost, this is still a noticeable change to the view.</p>	Moderate adverse
					Summer, Year 15	<p>Minor</p> <p>The walls and path would have now become part of the street infrastructure with a green backdrop and views of the western bank should now be screened.</p> <p>This is however still a minor change in view from the existing situation, with a reduction in the connection with the burn.</p>	Minor adverse
Key Viewpoint 13b	Ronaldshay Crescent, facing north-west	Road travellers	View north-west from Ronaldshay Crescent, near the intersection with Park Road. View to mature trees on embankments	Medium	Construction	<p>Major</p> <p>Adverse visual disruption from the road given the loss of mature trees on either side of the Grange Burn to allow for in water working areas and building the flood walls.</p> <p>There are also likely to be road closures and diversions, disrupting this view. This would continue throughout the build period.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 13b (cont.)			either side of the Grange Burn and Grangemouth Bowling Club beyond.		Winter, Year 1 (primary mitigation)	Moderate  The view for road travellers would be noticeably different with the lack of any vegetation along the burn (including the loss of the mature trees) and the new basic flood walls (up to 0.8m in height along this stretch) creating a bare landscape/ outlook. Views over the burn, of buildings and infrastructure, will now be much more apparent.  However, as this view is seen from a moving vehicle, it would have slightly less of an effect than from adjoining paths.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor  The flood walls, with sensitive detailing and finishing, (as agreed with the Local Planning Authority), and some large replacement trees will help the Scheme to blend into the local landscape. However due to the mature size of the trees which have been lost, this is still a detrimental change to the view.  As this view is seen from a moving vehicle, it would have less of an effect than for users of adjoining footpaths.	Minor adverse
					Summer, Year 15	Negligible  The walls and path would have now become part of the street infrastructure with a green backdrop and views of the western bank should now be screened.	Negligible
Key Viewpoint 14a	Grangeburn Road, facing north-west	Users of the footpath adjacent to the road	View north-west from Grangeburn Road to mature riverbank vegetation at the Grange Burn.	Medium	Construction	Major  There would be a large amount of visual disruption to the view along the Grange Burn during construction of the walls given the close-proximity to the works, including in-water working areas and the loss of mature vegetation, opening up views. This would continue throughout the build period.	Major adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 14a (cont.)			Commercial properties/ office buildings are visible beyond.		Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The view would be noticeably different with no riverside vegetation the new basic flood walls (up to 0.5m in height along this stretch) creating a bare landscape/ outlook. Views over the burn, of buildings and infrastructure, will be much more apparent.</p> <p>A new footpath along the burn side of Grangeburn Road, as part of the primary mitigation, will help to visually reduce the full height of the wall, as well as providing footpath access along this stretch.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Sensitive detailing and finishes to the wall, as agreed with the Local Planning Authority, as part of secondary mitigation, will help integrate it visually into the local landscape.</p> <p>Mitigation in the form of large replacement trees, for the mature trees removed, will help to reduce the effect of the tree loss. However due to the mature size of the trees which have been lost, this is still a noticeable change to the view.</p>	Moderate adverse
					Summer, Year 15	<p>Minor</p> <p>The walls and path would have now become part of the street infrastructure with a green backdrop and views of the western bank should now be screened.</p> <p>This is however still a minor change in view from the existing situation, with a reduction in the connection with the burn.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 14b	Grangeburn Road, facing north-west	Road travellers	View north-west from Grangeburn Road to mature riverbank vegetation at the Grange Burn. Commercial properties/ office buildings are visible beyond.	Medium	Construction	<p>Major</p> <p>There would be a large amount of visual disruption to the view along Grange Burn during construction of the wall given the close-proximity to the works including in-water working areas and the loss of mature vegetation.</p> <p>There are also likely to be road closures and diversions, disrupting this view. This would continue throughout the build period.</p>	Major adverse
Key Viewpoint 14b (cont.)					<p>Winter, Year 1 (primary mitigation)</p>	<p>Moderate</p> <p>The view for road travellers would be noticeably different with no vegetation along the riverbank and the new basic flood walls (up to 0.5m in height along this stretch) creating a less green landscape/ outlook.</p> <p>However, as this view is seen from a moving vehicle, it would have slightly less of a negative effect than for users of adjoining paths, which has been assessed above in Key Viewpoint 14a.</p>	Moderate adverse
					<p>Winter, Year 1 (with all mitigation)</p>	<p>Minor</p> <p>The flood walls, with sensitive detailing and finishing, (as agreed with the Local Planning Authority), and some large replacement trees will help the Scheme to blend into the local landscape. However due to the mature size of the trees which have been lost, this is still a detrimental change to the view.</p> <p>As this view is seen from a moving vehicle, it would have less of an effect than for users of adjoining footpaths.</p>	Minor adverse
					<p>Summer, Year 15</p>	<p>Negligible</p> <p>The walls and path would have now become part of the street infrastructure with a green backdrop and views of the western bank should now be screened.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 15a	Grangeburn Road, facing north	Users of the footpaths adjoining the road	View north from the intersection of Grangeburn Road and Taylor Court to mature trees on embankments either side of the Grange Burn. A large warehouse is visible beyond.	Medium	Construction	Major  There would be a large amount of visual disruption to the view along Grange Burn during construction of the walls given the close proximity to the works including in-water working areas and the loss of mature vegetation along the southern side of the burn. This would continue throughout the build period.	Major adverse
Key Viewpoint 15a (cont.)					Winter, Year 1 (primary mitigation)	Major  The view would be noticeably different with the lack of mature vegetation along the southern side of the riverbank and the new southern basic flood wall (atop the existing embankment and up to 0.6m in height along this stretch).  This would create a less green landscape/ outlook with the wall blocking views of the bankside vegetation. Views would also be slightly opened up to the large warehouse beyond.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate  Sensitive detailing and finishes to the wall, as part of secondary mitigation, will help integrate it visually into the local landscape.  Mitigation in the form of large replacement trees, for the mature trees removed, will help to reduce the effect of the tree loss. However due to the mature size of the trees which have been lost, this is still a noticeable change to the view.	Moderate adverse
					Summer, Year 15	Minor  The southern wall would have now become part of the street infrastructure with a green backdrop and views of the large warehouse beyond should be fully screened.  This is however still a minor change in view from the existing situation, with a reduction in the connection with the burn.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 15b	Grangeburn Road, facing north	Road travellers	View north from the intersection of Grangeburn Road and Taylor Court to mature trees on embankments either side of the Grange Burn. A large warehouse is visible beyond.	Medium	Construction	<p>Major</p> <p>There would be a large amount of visual disruption to the view along Grange Burn during construction of the wall given the close-proximity to the works including in-water working areas and the loss of mature vegetation.</p> <p>There are also likely to be road closures and diversions, disrupting this view. This would continue throughout the build period.</p>	Major adverse
Key Viewpoint 15b (cont.)					<p>Winter, Year 1 (primary mitigation)</p>	<p>Moderate</p> <p>The view for road travellers would be noticeably different with the lack of mature vegetation along the southern riverbank and the new basic 0.6m high flood wall (atop an existing embankment) to the south of the burn. This would create a less green landscape/ outlook and increase visibility to the large warehouse beyond.</p> <p>However, as this view is seen from a moving vehicle, it would have less of a negative effect than for users of adjoining paths, which has been assessed above in Key Viewpoint 15a.</p>	Moderate adverse
					<p>Winter, Year 1 (with all mitigation)</p>	<p>Minor</p> <p>The flood walls, with sensitive detailing and finishing, (as agreed with the Local Planning Authority), will help it blend it into the local landscape. Large replacement trees in front of the flood wall will also help screen the wall. However due to the mature size of the trees which have been lost in the near view, and the loss of connection with the burn, this is still a detrimental change to the view.</p> <p>As this view is seen from a moving vehicle, it would however have less of an effect than for users of adjoining footpaths.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
					Summer, Year 15	Negligible The southern wall would have now become part of the street infrastructure with a green backdrop and views of the large warehouse beyond should be fully screened.	Negligible

## Appendix B9.8 – Visual Effects Assessment Table

The visual receptors have been assessed in the below table at the following time periods: construction; winter of year 1 (with primary mitigation only), winter of year 1 with the addition of secondary mitigation; and summer of year 15, also with secondary mitigation.

For the analysis of the winter of year 1 primary/embedded mitigation which is integral to the scheme (refer to section 9.8.3 in Chapter 9) has been included, but not secondary mitigation. Where they are the same, they have been grouped in one row.

For locations of specific Core Paths listed below, please see Flood Cell maps in Section 9.5 of the main LVIA chapter.

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1	Area 1- A9/ Stirling Road	Residents (A9/ Stirling Road, South Broomage)	A9/Stirling Road, with houses to the south also viewing riverbank vegetation	High	Construction	<p>Major</p> <p>Visual disruption experienced by residents with views of the construction of the embankment and flood walls, ramp and in-water working area given the close-proximity of houses, particularly on the eastern side of Stirling Road and the loss of intervening vegetation. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The view from residential properties in the north of the cell would be changed with the lack of mature vegetation along the riverbank. Tree loss would be apparent from an oblique angle to the south and the loss of trees to the immediate north-east opening views across the river to South Broomage.</p> <p>The walls form a hard edge to the river (up to 1m high along the northern section of Stirling Road), which creates a barrier between the river and the footpath, although this is not as apparent from residential properties.</p> <p>The removal of the high green vegetative screen along residential properties to the east of Stirling Road (opposite the bus garage) would adversely effect the outlook from these houses. A new barrier as part of the embedded mitigation, to the road edge of these residential properties would be required to retain their privacy.</p> <p>Although the flood defences themselves would not be apparent in views from properties along the southern edge of South Broomage, the loss of riverside vegetation and greater visibility of commercial buildings would be.</p> <p>In this area the new flood defences are only around 1m in height, which are similar to/lower than existing walls/barriers in places. The defences therefore would not in themselves create a significant visual intrusion.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	Moderate  Mitigation planting would replace trees lost during construction, helping to reinstate a green barrier to the road and commercial properties, however at this stage the planting would not be established. Given the narrow riverbank in the north, replacement trees here would be limited although properties here would have views to a low wall (up to 0.5m) backed by trees in South Broomage.	Major adverse
					Summer, Year 15	Minor  Mitigation planting along the river would have matured, creating a regenerated riverbank, and soften views of the flood walls. Planting where possible/ barriers along the houses to the east of Stirling Road would now screen and soften views from the houses to the road and commercial buildings beyond.	Moderate adverse
					Road travellers (A9/ Stirling Road)	A9/Stirling Road and adjacent buildings, and at northern end riverbank vegetation	Medium
					Winter, Year 1 (with mitigation)	Minor  The view along the road would be different with the lack of mature vegetation along sections of the road and the riverbank and the new flood walls (up to 1.8m in height) creating a less green landscape/ outlook. However, as it is a mostly industrial area and considering the duration of views, the view is less significant for road travellers.	Minor adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Summer, Year 15	Negligible The walls would still be visible, although views of the regenerated riverbank planting and the screening to the residential properties would be similar to existing.	Negligible
		Users of footpaths adjacent to the A9/ Stirling Road	A9/Stirling Road and adjacent buildings, and at northern end riverbank vegetation	Medium	Construction	Major It is likely the eastern footpath, adjacent to the A9/ Stirling Road would be temporarily closed to enable the construction of the flood defences, although the western footpath will still be accessible. From here and where access to the eastern footpath is available, there would be views to the construction of the embankments, flood walls, flood gates and loss of riverbank vegetation. There would also be partial visibility of the in-water working area. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor The view along the road would be different with the lack of mature vegetation along sections of the road and the riverbank and the new flood walls (up to 1.8m in height, although mainly at a height of between 0.5m to 1.25m) creating a less green landscape/ outlook.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees lost during construction and help to reinstate a green outlook from the footpath, however at this stage the planting would not be established.	Minor adverse
					Summer, Year 15	Negligible The walls would still be visible, although over time, the embankments would settle into the landscape and mitigation planting would continue to reinstate a green outlook, particularly along the eastern footpath.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		Users of Falkirk Golf Course	At 16 <sup>th</sup> hole, filtered views to bus garage as well as internally within golf course	Medium	Construction	Major  Due to the removal of existing mature vegetation and installation of the flood wall, the construction works adjacent to hole 16 will cause a large amount of visual disruption to users.	Major adverse
					Winter, Year 1 (primary mitigation)	Major  The view of the replacement flood wall and bus garage beyond, with no planting would create a very stark view at the 16 <sup>th</sup> hole.	Major adverse
			At 16 <sup>th</sup> hole, filtered views to bus garage as well as internally within golf course	Medium	Winter, Year 1 (with all mitigation)	Minor  With replacement planting adjacent to the wall, of a large size, the wall would be screened or partially screened and the views from the course would be softened.	Minor adverse
					Summer, Year 15	Negligible  The walls would still be visible, although through filtered views through mature planting.	Negligible
		People working at commercial properties	Internal and A9/Stirling Road and it's adjacent vegetation	Low	Construction	Moderate  People working at commercial properties would experience disruption with views to the construction of the embankment and flood walls, ramp and in-water working area, the loss of intervening vegetation and the part closure of Stirling Road. There would also be visibility of the potential site compound from properties along the southern section of Stirling Road. This would continue throughout the build period.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (primary mitigation)	Minor Views from commercial properties would be slightly different with the replacement of the row of tall trees along Stirling Road with a fence and the reduction in riverbank planting as well as the new flood walls (up to 1.8m in height, although mainly at a height of between 0.5m to 1.25m).	Minor adverse
					Winter, Year 1 (with all mitigation)	Mitigation planting would replace trees lost during construction and help to reinstate a green outlook, however at this stage the planting would not be established.	Minor adverse
					Summer, Year 15	Negligible The walls would still be visible, although views of the regenerated riverbank planting and the screening to the residential properties would be similar to existing.	Negligible
		Recreational users of Camelon playing fields	Woodland surrounding the playing fields	Low	Construction	Moderate Some visual disruption experienced by recreational users of the playing fields during construction with partly screened views to the potential site compound.	Minor adverse
			Winter, Year 1 (with mitigation)		Negligible Limited visibility from the northern edge of the playing fields to the southern extents of the proposed scheme with views filtered by intervening vegetation.	Negligible	
			Summer, Year 15		Negligible Mitigation planting and existing tree growth would continue to screen views from the playing fields.	Negligible	

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		People using Core Path 001/038 River Carron path: Swing Bridge to Camelon Cemetery (including part of the River Carron Loop Path)	A9/Stirling Road and adjacent vegetation, and Camelon Wildlife Site	High	Construction	Major Users would experience visual disruption with the potential closure of the Core Path during construction, which is where the potential site compound and pedestrian flood gate are located, thereby stopping views from parts of this route. A diversion route would however likely be provided.  This would continue throughout the build period.	Major adverse
					Winter, Year 1 (with mitigation)	Minor Users would experience a minor change to the original view from the path with the addition of the pedestrian gate. The new walls and embankment are not expected to be discernible in views from the path given the separation distance, adjoining bund (which the proposed embankment will merge with) and intervening vegetation.	Moderate adverse
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would continue to screen views from the path.	Negligible
		People using on Core Path 011/010 (including The River Carron Loop Path and The Helix Larbert Link)	Houses in South Broomage and fields with long views to woodland and commercial properties along the A9/ Stirling Road	High	Construction	Moderate Visual disruption would be experienced by users during construction with views to the construction works including loss of bankside trees, although partly screened by intervening vegetation. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (with mitigation)	Minor Users would experience a change to the original view from the path near South Broomage, where there would be greater visibility of commercial buildings and vehicles on Stirling Road due to loss of vegetation. The new walls and embankment are not expected to be discernible in views given the separation distance and intervening buildings/ vegetation. Replacement vegetation would not be established.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Summer, Year 15	Negligible Mitigation planting and existing tree growth would, by year 15, screening views from the path.	Negligible
		People using Core Path 011/015 (including part of the River Carron Loop Path)	Houses in South Broomage, and surrounding fields and woodland as well as to Camelon Riverside Wildlife Site from the southern section	High	Construction	Moderate Users would experience visual disruption with the partial closure of the path in the south during construction, as it is located on the site compound, thereby stopping views from this route. A diversion would however likely be provided.  From the majority of the path, there would be partly screened views to the flood works and loss of bankside vegetation.  This would continue throughout the build period.	Major adverse
					Winter, Year 1 (with all mitigation)	Negligible Users would experience a slight change to the original view from the path near South Broomage, where there would be increased visibility of commercial buildings and vehicles on Stirling Road given the loss of vegetation. The new walls and embankment are not expected to be discernible in views given the separation distance and intervening vegetation, although the flood gates at wildlife site are expected to be visible from the southern section.	Negligible
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would screen views from the path.	Negligible
		People using proposed Core Path 001/048 River Carron Path: Swing Bridge to Camelon Cemetery	Camelon Wildlife Site and playing fields	High	Construction	Major Users would experience visual disruption with the potential closure of the Core Path (if adopted pre-construction) during construction, given the location of the potential site compound.  Views to the construction of the flood defences would be limited to the flood gates. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (with mitigation)	Negligible Users would experience a barely discernible change to the original view with the addition of the flood gates, which would only be visible from the western extents. The new walls and embankment are not expected to be visible given the separation distance and intervening landform and vegetation.	Negligible
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would continue to screen views from the path.	None
		People using proposed Core Path 001/050 Dorrator Bridge to Cemetery Loop	A9/Stirling Road and adjacent vegetation	High	Construction	Moderate Users would experience visual disruption with views towards the construction of the southern flood defences and loss of vegetation adjoining Stirling Road, reducing the green outlook in this direction. There would also be partly screened views towards the potential site compound to the east. This would continue throughout the build period.	Major adverse
		Winter, Year 1 (primary mitigation)	Negligible Users would experience a barely discernible change to the original view as the flood defences (up to 1.25m in height along the southern extents) would appear as an extension of the existing bund and property boundary walls. The low defences on the south of the road would be barely discernible in views.	Negligible			
		Winter, Year 1 (with all mitigation)	Negligible The grassed embankment and mitigation planting would help to reinstate a green outlook from the northern end of the path, in views north. The low defences on the south of the road would be barely discernible in views.	Negligible			

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Summer, Year 15	Negligible Mitigation planting and existing tree growth would continue to screen views from the path.	None
	Area 2- Bainsford	Residents (New Carron Village and those along the southern edge of Mungal Community Woodland)	Houses in New Carron Village, Mungal Community Woodland and surrounding woodland	High	Construction	Major Considerable visual disruption experienced by residents during construction with views of the embankments (circa 3.8m in height), ramps and in-water working area given the close-proximity of houses and the loss of intervening vegetation. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Major The view from residential properties would be noticeably different with the introduction of the new embankments. Embankments adjoining New Carron Village would appear as imposing features in views from the residences, particularly those higher than fence height and when viewed from the garden spaces of properties.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate Mitigation planting would help soften views of the area, and the grass would have likely established on the embankments thereby settling them somewhat into the surrounding landscape. However at this stage any tree/shrub planting wouldn't have established.	Major adverse
					Summer, Year 15	Minor Mitigation planting would help soften views of the area over time, and the grass would establish on the embankments thereby settling them somewhat into the surrounding landscape. However, the 3.8m high embankment is an imposing visual feature in the landscape which can not be intergrated into the landscape.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		People working at commercial properties (Carron Phoenix Ironworks)	Surrounding woodland with long views to urban landscape	Low	Construction	Minor People working at commercial properties would experience a slight disruption to views during construction of the western end of the embankment to the north of the River Carron, ramp and in-water working area and the loss of intervening vegetation.	Minor adverse
					Winter, Year 1 (primary mitigation)	Minor People working at commercial properties would experience a slight change to the original view with the loss of some mature trees along the river and visibility of the embankment from the eastern extents of the property.	Minor
					Winter, Year 1 (with all mitigation)	Negligible Mitigation planting is expected to replace some trees lost during construction, returning it (over time) to a view similar to existing.	Negligible
					Summer, Year 15	Negligible Mitigation planting and existing tree growth would screen views from these commercial properties.	None
		People using Core Path 011/008 on Nicole's Way (includes the River Carron Loop Path and The Helix Larbert Link cycle route)	Carron Phoenix (Ironworks) building, River Carron and bankside vegetation and woodland	High	Construction	Minor Some visual disruption experienced by users with views to in-water working areas, ramp and potential loss of some bankside vegetation during construction.	Moderate adverse
					Winter, Year 1 (primary mitigation)	Minor Users would experience a minor change to the original views with the potential loss of bankside vegetation.	Moderate adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	Minor Mitigation of replacement planting will help reduce this over time, but at this stage planting would not have established.	Moderate adverse
					Summer, Year 15	Negligible Replacement planting will have matured and the view will be similar to existing.	Negligible
		People using Core Path 001/018 Mungal Riverside (includes the River Carron Loop Path, Bainsford Loop cycle route and the Helix Around Town Tour (HArTT) cycle route)	Mungal Community Woodland open area, River Carron and bankside vegetation and woodland	High	Construction	Major Visual disruption experienced by users during construction with partly screened views to embankments and loss of woodland vegetation.  It is likely the eastern edge of the path would be closed (although a diversion should be in place) to enable construction works. This would continue throughout the build period.	Major adverse
		Winter, Year 1 (primary mitigation)	Moderate Users would experience a noticeable change to the original views east from the path, where there would be visibility of the new embankments (in parts, up to 3.8m in height), with some views partly screened by intervening woodland.	Major adverse			
		Winter, Year 1 (with all mitigation)	Moderate Mitigation planting would help soften views of the area, and the grass would have likely established on the embankments thereby settling them somewhat into the surrounding landscape. However at this stage any tree/shrub planting wouldn't have established.	Major adverse			

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Summer, Year 15	<p>Minor</p> <p>Mitigation planting would be established by this point helping soften views of the area over time and help to settling the embankments somewhat into the surrounding landscape.</p> <p>However, the up to 3.8m high embankment is an imposing visual feature in the landscape which can't be disguised, and therefore has a minor adverse impact on users of this Core Path.</p>	Moderate adverse
		People using Core Path 001/020 Mungal Riverside	Mungal Community Woodland open area, surrounding woodland, New Carron Village and a pylon	High	Construction	<p>Major</p> <p>Considerable visual disruption is experienced by users during construction with the possible closure of the path along the boundary to the housing estate. Where the path is still in use, users would have direct views towards the new embankment (up to 3.8m in height). This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Users would experience a noticeable change to the original views with a 3.8m high bund blocking views out to the open space.</p> <p>The grass would establish on the embankments thereby settling them somewhat into the surrounding landscape.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation planting would also help to soften views to and along the embankment, replicating open and enclosed views currently experienced by users along this path.</p> <p>However, the up to 3.8m high embankment would be an imposing feature, visible from the path and therefore would have a moderate adverse impact on users.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Summer, Year 15	<p>Minor</p> <p>The up to 3.8m high embankment is an imposing visual feature in the landscape which can't be disguised, and therefore will still be of a minor adverse magnitude.</p> <p>Established mitigation planting will have helped to soften views to and along the embankment, replicating open and enclosed views currently experienced by users along this path.</p>	Moderate adverse
		People using Core Path 001/021 Mungal Riverside (includes HArTT cycle route)	Mungal Community Woodland open area, New Carron Village and pylons	High	Construction	<p>Moderate</p> <p>Visual disruption experienced by users during construction with partly screened views to the embankment to the east (up to 3.8m in height) and loss of woodland within Mungal Community Woodland. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>Users would experience a change to the original view along sections of the path looking east, where there would be visibility of the new embankment. However, intervening woodland would screen views to the embankment, in this direction.</p>	Moderate adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would also help to soften views to the embankment, replicating open and enclosed views currently experienced by users along this path. However at this stage the planting would not be established.</p>	Moderate adverse
					Summer, Year 15	<p>Negligible</p> <p>Over time, grass would establish on the embankment, helping it to settle into the surrounding landscape. Mitigation planting and existing tree growth would continue to screen and soften views from the path.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		People using the western part of Core Path 004/017 (includes the River Carron Loop Path, Bainsford Loop and HArTT) cycle routes. Users also include horse riders)	Woodland and riverbank vegetation	High	Construction	Moderate Noticable visual disruption experienced by users with views to the northern embankment and potential loss of some woodland during construction. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (with mitigation)	Minor Users would experience a slight change to the original view along a short stretch of the path (western extents) where the 1.2m high embankment is located and set back from the footpath, and the ground is raised.	Moderate adverse
					Summer, Year 15	Negligible Over time, grass would establish on the embankment, and any replacement vegetation would have established.	Negligible
	Area 3 - Bainsford/ Carron	Residents (Carron)	River Carron and bankside vegetation, urban landscape including road network with long views to distant hills	High	Construction	Major Considerable visual disruption will be experienced by residents during construction with views of flood walls, ramps, temporary construction, replacement bridge and in-water working areas, given the close-proximity of houses and the loss of intervening vegetation. Properties north of the River Carron would also have views to the potential site compound and the demolition of a warehouse. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The view from residential properties would be noticeably different with the loss of mature vegetation along the riverbanks of the River Carron and along the boundaries of properties that back onto the river. Additionally, visibility of the new flood walls (up to 1.3m in height along property boundaries and 2m north of Dawson Mission) would also degrade the view.</p> <p>The loss of trees between the River Carron and the rear gardens would create a stark view, reducing privacy from these properties and enabling greater visibility to the surrounding road network.</p> <p>The New Carron Road Bridge is to be replaced with a similar structure on the same alignment, so once built the views of it should be similar.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation riverside planting will help to reduce this impact, but at year one the planting will not be established. A mix of large and small trees would be required to limit the impact at this sensitive location.</p> <p>Careful design of the New Carron Road Bridge, to be agreed with the local authority, would integrate it into the landscape, reducing its visual impact.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>The rear garden flood walls would remain visible to residents and would form part of the boundary.</p> <p>Mitigation planting would have softened views to the flood walls on the opposite side of the river and towards roads and vehicles on them, reducing the overall impact to moderate.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		Road travellers - Vehicles (Carron Road, Stenhouse Road, B902)	Along the road network, the urban landscape and woodland	Medium	Construction	<p>Major</p> <p>Road travellers would experience a large amount of visual disruption during construction given the close-proximity to the works including the flood defences, in-water working areas, ramps including temporary construction, replacement bridge, potential site compound and the loss of mature vegetation.</p> <p>The temporary closure of Stenhouse Road and the B902, where they are bridged and subsequent diversion of traffic, would also cause visual disruption. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The views from these roads would be different with the lack of mature vegetation along the River Carron and visibility of the new flood walls (up to 2m in height) creating a less green landscape/ outlook. Although these views would be over a very short duration and generally from where Stenhouse Road and the B902 are bridged.</p> <p>The New Carron Road Bridge is to be replaced with a similar structure on the same alignment, so once built the views of it should be similar for road users.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation riverside planting will help to reduce this impact, but at year one the planting will not be established. A mix of large and small trees would be required to limit the impact at this sensitive location.</p> <p>Sensitive wall and bridge finishes will help integrate the infrastructure into the landscape. However the large wall will still be noticeable.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>The walls would remain apparent in views although with mitigation planting and appropriate finishes, the change in view towards the flood walls would be negligible to the road traveller.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		Users of non-designated footpaths (Carron Road, Stenhouse Road, B902)	Along the road network, the urban landscape woodland, the River Carron and riverbank vegetation	Medium	Construction	Major  Major visual disruption with the likely closure of footpaths, where these roads are bridged, to enable the works. From where the footpaths would be accessed, there would be noticeable views to the construction of the flood walls and in-water working areas given the close proximity, loss of riverbank vegetation and elevated location. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  The views along these footpaths would be noticeably different with the lack of mature vegetation along the river which once screen views to residential properties and visibility of the new flood walls (up to 2m in height to the south along Dawson Mission and up to 1.3m along the northern riverbank), and a new bridge, creating a less green landscape/ outlook, although this would generally only be from where Stenhouse Road and the B902 are bridged.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Moderate  Mitigation riverside planting will help to reduce this impact, but at year one the planting will not be established. A mix of large and small trees would be required to limit the impact at this sensitive location.  Sensitive wall and bridge finishes will help the infrastructure integrate into the landscape, but as it will still be noticable due to the size.	Moderate adverse
					Summer, Year 15	Negligible  The walls would remain apparent in views although with mitigation planting and appropriate finishes, views to the flood walls would be softened.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)	Area 3 – Bainsford/ Carron (cont.)	People working at and visiting Carronbridge Inn/ Soo Hoose Restaurant	Urban landscape including New Carron Village, Carron Road, woodland and pylons	Low	Construction	Moderate  The Carronbridge Inn/ Soo House addresses Stenhouse Road/ Carron Road, although there are long views from the property to the proposed works.  People working and visiting the Carronbridge Inn/ Soo House would experience some disruption to views during construction of the flood defences, new bridge, in-water working area and the loss of intervening vegetation. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Minor  From the Carronbridge Inn/ Soo House, there would be a minor change to the original view at an oblique angle, with the loss of bankside vegetation and visibility of the new flood wall (less than 1m) and raised footbridge over the Mungal Burn. As well as views from the upper floor windows to the flood wall and loss of trees north of Dawson Mission.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor  Mitigation planting is expected to replace some trees lost during construction, returning it to a view similar to existing. However at this stage the planting would not be established.	Minor adverse
					Summer, Year 15	Negligible  Mitigation planting and existing tree growth would soften and screen views from this property.	Negligible



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		People working at and visiting the Dawson Mission	Urban landscape including New Carron Village, road network, woodland and pylons	Medium	Construction	<p>Major</p> <p>Considerable visual disruption will be experienced by people at the Dawson Mission during construction with views of the flood walls, bridge and in-water working areas given the close-proximity and the loss of intervening vegetation.</p> <p>This would also open-up views to the potential site compound and the demolition of a warehouse. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The view from the Dawson Mission would be noticeably different with the loss of mature vegetation along the River Carron and along the northern boundary of the property and visibility of the new flood walls, particularly those to the west and north, as well as the new bridge.</p> <p>The works directly to the north include the increased height of Core Path 004/003 and the new wall up to a height of 2m from the raised path. This wall would form a visual barrier between the Dawson Mission and the river.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation riverside planting, as well as planting on the northern boundary, will help to reduce this impact, but at year one the planting will not be established. A mix of large and small trees would be required to limit the impact at this sensitive location.</p> <p>Sensitive wall and bridge finishes will help the infrastructure integrate into the landscape, but they will still be dominant in the view due to their size.</p>	Moderate adverse
					Summer, Year 15	<p>Minor</p> <p>The walls and new bridge would remain apparent in views although with mitigation planting and appropriate finishes, views to the flood walls would have softened.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		People using Core Path 004/022 and 004/001 Cobblebrae	Road network, woodland and pylons	High	Construction	<p>Moderate</p> <p>Some visual disruption experienced by users during construction with partly screened views to the new flood wall along the northern bank of the River Carron, ramp and temporary construction, new bridge, in-water working area and loss of intervening vegetation. This would continue throughout the build period. Flood defences which cross the path near to the end of Carronside Street will create a large amount of visual disruption to users of the paths during construction.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>Users would experience a minor change to the original view along sections of the path looking north, where there would be partially screened views of the new flood wall.</p> <p>The new wall which crosses the path (changing the levels in this location) will have a minor adverse impact on views with the removal of vegetation to the east, without any replacement vegetation.</p>	Moderate adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting and existing tree growth would eventually screen views from the path, however at this stage it would not be established.</p>	Moderate adverse
					Summer, Year 15	<p>Negligible</p> <p>Mitigation planting and existing tree growth would now be established and would screen views from the path.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		People using Core Path 004/003 the Dawson Mission path (includes the River Carron Loop Path, Bainsford Loop and HARTT) cycle routes)	Road network, the Dawson Mission, River Carron and riverbank vegetation, woodland and pylons	High	Construction	<p>Major</p> <p>Visual disruption experienced by users with views to new flood walls, in-water working areas, a ramp including a temporary construction bridge, new bridge and loss of bankside vegetation, woodland and scattered trees during construction.</p> <p>Sections of the path would be closed (although a diversion should be in place) during construction where it is located within the site boundary/ works footprint, including the pedestrian underpass and north of the Dawson Mission where the path would be raised, thereby stopping views from this route. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>Users would experience a considerable change to the original view as new flood walls (up to 2m in height) would be visible, particularly where they adjoin the path and with the loss of screening vegetation.</p> <p>Ground raising has been included as part of the embedded mitigation to allows views over the flood walls to the river, to help try and maintain a visual connection.</p> <p>The new bridge would be visible within the landscape.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Major</p> <p>The walls and bridge would remain apparent in views, but with appropriate finishes they would be integrated into the landscape. Mitigation planting will help to soften views of the flood walls, but the planting at this stage would not be established, and therefore the impact is still major.</p>	Major adverse
					Summer, Year 15	<p>Moderate</p> <p>The walls and bridge are still apparent in views, especially given the limited separation distance on the wall, although with established mitigation planting views to the flood walls would be softened.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		People using Core Path 004/019 Cobblebrae and Core Path 004/018 Cobblebrae – River Carron path	River Carron and riverbank vegetation, house in Carron, woodland and pylon	High	Construction	Moderate  Some visual disruption experienced by users during construction with views to the new flood wall along the northern bank of the River Carron, ramp and temporary construction bridge, new bridge, in-water working area and loss of intervening vegetation. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor  Users would experience a change to the original view along sections of the path looking north and west. The new flood wall (up to 0.5m in height) would be in front of the boundary wall of the western end properties to the north of the River Carron (east of the bridge) and existing bankside vegetation would help to filter views to it. Views west towards the New Carron Bridge replacement would be different.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor  Mitigation planting and existing tree growth would help to screen views from the path. Replacement planting however would not be established at this stage.	Moderate adverse
					Summer, Year 15	Negligible  Established mitigation planting and existing tree growth would continue to screen views from the path.	None
		Users of Core Path 004/023 Cobblebrae (includes the River Carron Loop Path, Bainsford Loop and HArTT) cycle routes)	Woodland and traffic on the B902	High	Construction	Minor  Minor visual disruption experienced by users during construction with long views to the new flood wall along the northern bank of the River Carron, and where the B902 is bridged, ramp and temporary construction bridge, in-water working area and loss of intervening vegetation. This would continue throughout the build period.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (with mitigation)	Negligible Users would experience a slight change to the original long view from the western edge of the path looking north and north-west.  The new flood walls (up to 0.5m in height) would sit in front of the boundary wall of properties to the north of the River Carron and existing bankside vegetation would help to filter views to it.	Negligible
					Summer, Year 15	Negligible Existing tree growth would continue to screen views from the path.	None
		People using proposed Core Path 004/035 Cobblebrae to Carron Bridge	Woodland and traffic on the B902	High	Construction	Major  Some visual disruption would be experienced by users on the eastern edge of the path during construction with partly screened views to the new flood wall along the northern bank of the River Carron, ramp and temporary construction bridge and loss of intervening vegetation.  It is likely that the path would be closed (although a diversion should be in place) during construction where it is located within the site boundary/ works footprint, thereby stopping views from parts of this route. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor Users would experience a minor change to the original view along sections of the path looking north, where there would be mainly screened views of the new flood wall.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would help to reduce any residual effects of the construction and new flood measures, however at this stage the planting would not be established.	Moderate adverse
					Summer, Year 15	Negligible Established mitigation planting and existing tree growth would screen views from the path.	None

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)	Area 4 - East Carron/ Chapel Burn	Residents (Carronshore, Carrondale Care Home)	River Carron and riverbank vegetation, and urban landscape	High	Construction	<p>Major</p> <p>Considerable visual disruption would be experienced by residents living adjacent to the river during construction due to having rear views of the flood walls, ramps, temporary culverting of Chapel Burn and the in-water working area. Additionally, the building of boundary treatments to properties would be highly disruptive during construction of these.</p> <p>These properties are located in close-proximity to the river, but because they are facing away from the river, the effect is slightly reduced.</p> <p>The loss of the waterside vegetation, including Category B trees would however additionally open up views of the construction works, with visibility beyond the immediate properties. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The view from residential properties would be noticeably different with the loss of mature vegetation, particularly along Chapel Burn reducing privacy from these properties and enabling greater visibility to and from the adjoining Core Path and Carronshore Road.</p> <p>Although visible, the new flood walls (up to 1.3m in height, although mainly between 0.5m to 1m) would form part of or run along property boundaries and would not appear out of place in this setting.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation riverside planting will help to reduce this impact, but at year one there will be limited growth.</p>	Major adverse
					Summer, Year 15	<p>Negligible</p> <p>Mitigation planting would have established providing privacy back residents by screening views from these properties to the walls and the surrounding area.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		Road travellers (Carronshore Road, residential roads within Carronshore)	Urban landscape	Medium	Construction	Minor  Minor visual disruption with the likely closure of a short stretch of the southbound lane of Carronshore Road to enable the works. There would be noticeable views to the construction of the flood walls given the close-proximity and loss of riverbank vegetation (including Category B trees), although works would be visible for a short duration. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Minor  The views from these roads would be more open and less green given the lack of mature vegetation along Chapel Burn.  The new walls will be visible to road travellers given their height, length and location. However the wall at the end along the road will appear as part of the road infrastructure.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor  Mitigation planting would replace some vegetation loss during construction and help to soften views to the flood defences, but at year one there will be limited growth. The defence along the edge of the footpath will be still be discernible.	Minor adverse
					Summer, Year 15	Negligible  Over time, any replacement vegetation would have established, and the wall would have become part of the infrastructure and landscape view, resulting in very little change from the current view from this receptor.	Negligible
		People visiting and working The Shore pub (includes outdoor seating area and car park)	Urban landscape and Carronshore Road	Medium	Construction	Moderate  Moderate visual disruption with the likely closure of the car park to enable the construction of the flood wall. There would be noticeable views to the construction of the flood defences given the close-proximity, direct views from the pub building and outdoor seating area and loss of riverbank vegetation (including Category B trees). This would continue throughout the build period.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (primary mitigation)	Minor Views experienced by people would be more open given the lack of mature vegetation visible along Chapel Burn and the new flood wall at the car park. However, for the most part, the new walls are unlikely to form a major part of overall views for this receptor/ from this location.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees loss during construction and help to soften views to the flood defences, but at year one there will be limited growth.	Minor adverse
					Summer, Year 15	Negligible Over time, any replacement vegetation would have established and the wall would have become part of the infrastructure and landscape view, resulting in very little change from the current view from this receptor.	Negligible
		People working at and visiting Carrondale Care Home	River Carron and riverbank vegetation, and urban landscape	Low	Construction	Moderate Moderate visual disruption with noticeable views north towards the river, particularly from upper floors of the construction of the flood walls, in-water working area and loss of scattered trees along the riverbank. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Minor Views experienced by people would be more open given the lack of mature vegetation visible in views south towards the River Carron. The new walls are unlikely to form a major element in the overall view from this location/ for this receptor as they would form/appear as the property boundary of care home and adjoining residential properties.	Minor adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees loss during construction and help to soften views to the flood defences, but at year one there will be limited growth.	Minor adverse
					Summer, Year 15	Negligible Over time mitigation planting would establish and provide filtered views from the care home to the river.	Negligible
		People using Core Path 004/018 Cobblebrae – River Carron path	River Carron and riverbank vegetation, houses in Carronshore and woodland	High	Construction	Minor Minor visual disruption would be experienced by users along a short stretch of the north part of this path during construction. There would be partly screened views to the construction of the new flood adjoining the care home and loss of riverbank trees on the north bank. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (with mitigation)	Negligible The new wall would be apparent in long views as the boundary wall along properties that back onto the river.  The riverbank on the north side from an oblique view would have a reduction in vegetation, but this is from a far view, and therefore the effect is negligible.	Negligible
					Summer, Year 15	Negligible Existing tree growth would screen views from the path, and vegetation on the oblique view would have now established.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		Users of Core Path 009/001 Carronshore 2000 path	Houses in Carronshore, Chapel Burn, River Carron and riverbank vegetation	High	Construction	Major  Visual disruption experienced by users with views to the construction of the flood walls, ramp, in-water working area and temporary culverting of the Chapel Burn. Works would also include the loss of riverbank vegetation, including Category B trees. It is likely that the path would be closed during construction (although a diversion should be in place), thereby restricting views. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  Users would experience a detrimental change to the view given the loss of established vegetation and the new defences.  The new wall south of the burn (up to 0.6m in height) would appear as boundary walls of adjoining residential properties however the view would be very open. The wall to the north of the burn would be very exposed and form the boundary to the footpath, restricting views to the burn.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate  Mitigation planting would over time help to screen views to the boundary wall and create a green waterside but at year one there will be limited growth. A mix of tree sizes is important along this section to help reduce this impact.  The wall to the north of the burn would be very exposed and form the boundary to the footpath, restricting views to the burn. Sensitive finishes would be important here.	Major adverse
					Summer, Year 15	Minor  Over time replacement vegetation would have established within the burn, but the wall alongside the footpath would still be visible.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		Users of Core Path 009/001 at Rae Court	Houses in Carronshore, River Carron and riverbank vegetation	High	Construction	Minor  Minor visual disruption would be experienced by users only at the southern end of the path, with some visibility to the construction of the new flood walls and loss of riverbank trees. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (primary mitigation)	Negligible  The new wall would tie into high ground, so would be less visible at this end.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible  Mitigation planting along the river's edge, would help to green views from the far end of the path towards the river.	Negligible
					Summer, Year 15	Negligible  Mitigation planting and existing tree growth would continue to screen views from the path.	Negligible
		Users of Core Path 009/005 Carronshore Road to Mill Road	Urban landscape and Carronshore Road	High	Construction	Minor  Minor visual disruption with the likely closure of a short stretch of the path to enable the works. There would be views to the construction of the flood walls given the close-proximity and loss of riverbank vegetation (including Category B trees), although given the path closure, visibility would be limited. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (no mitigation)	Minor  The new walls to the south of the burn would appear as the boundary along residential properties that back onto Chapel Burn. The walls to the north of the burn would limit views of the burn itself and present a hard edge.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (with mitigation)	Minor Mitigation planting along the Chapel Burn, would help to green views from the far end of the path towards the burn, although this would be partially blocked by the new wall north of the burn. Replacement vegetation would however not be established at this stage.	Moderate adverse
					Summer, Year 15	Negligible Over time replacement vegetation would have established and the wall would become part of the infrastructure, resulting in very little change from the current view from this receptor.	Negligible
	Area 5 – Carronshore/ Riverside Stables	Residents (Carronshore)	Fields, garden space and woodland	High	Construction	Major Considerable visual disruption experienced by residents, particularly by ones which have an open aspect onto the river, during construction with views of the flood walls, demolition of storage sheds and yard and in-water working areas given the close-proximity of houses and the loss of intervening vegetation.  There would be distant views to the construction of the defences from houses south of Riverside Stables and parade ground. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate Properties which back onto the river from Dock Street would have a noticeable difference due to the removal of existing vegetation and the new flood wall (up to a height of 1.9m).  Further south in Carronshore, views of the stark new defences would be from upper floors of properties only.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	Moderate  Mitigation planting, sensitive design and appropriate finishes, as agreed with the Local Planning Authority, to be located near to the flood walls along the properties which back onto Dock Street. Mitigation planting wouldn't however be established at this stage.  Mitigation planting around the defences by the stables would help to soften views of the defences.	Major adverse
					Summer, Year 15	Minor  The walls would now form a permanent part of the boundary for properties that back onto the river.  Over time, any mitigation planting would be established, and would form an intrinsic part of the landscape.	Moderate adverse
		Road travellers (North Main Street, The Avenue, Dock Street)	Urban landscape with the River Carron and riverbank vegetation seen from The Avenue	Medium	Construction	Moderate  Most road travellers on nearby local roads in Carronshore would experience a minor visual disruption during construction, due to their location to the works.  Road travellers on The Avenue would however experience more of a visual disruption given the close-proximity to the works including the flood defences and in-water working areas.	Moderate adverse
		Winter, Year 1 (primary mitigation)	Moderate  The new walls would not be apparent in views for most road travellers given their height and the intervening built form and vegetation, except for views along Dock Street and The Avenue.  From Dock Street, there would be glimpses of the low wall and flood gate to the south-west. There would also only be glimpses of the higher (up to approximately 1.9m) flood wall along the river's edge from The Avenue, looking west.	Moderate adverse			

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would help soften long views, but at this stage would not make any impact due to the planting not being established. Sensitive wall finishes again will help integrate the walls.	Minor adverse
					Summer, Year 15	Negligible From some roads, the walls would remain apparent in views although with appropriate finishes and mitigation planting (where possible), views to the flood walls would have been softened. Over time, the vegetation would now be re-established, and the defences would have settled into the surrounding landscape.	Negligible
		People working at commercial properties on the southern side of Dock Street	Dock Street and adjacent houses	Low	Construction	Major Visual disruption experienced by people working at commercial properties with views to the construction of the new wall to the east, demolition of adjoining storage shed and yard, ramp and loss of scattered trees. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (primary mitigation)	Minor Commercial buildings address the road to the west, although there would be a noticeable change to the existing view south-east given the loss of the storage shed which would open views in this direction and new wall at a maximum height of 1.9m. The new flood wall with possible fence extension to retain privacy, to the east would form the property boundary.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor Where possible, mitigation planting is expected to replace some trees lost during construction, but at this stage they would not be established.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Summer, Year 15	Negligible Over time, vegetation would be re-established, and the embankment would settle into the surrounding landscape.	Negligible
		People visiting Riverside Stables and parade ground	Urban landscape, River Carron and vegetation along it, woodland	Medium	Construction	Major Visual disruption experienced by people visiting Riverside Stables and parade ground with views to the new flood walls and ramp. There would also be views to the demolition of the storage sheds and yard to the north and loss of scattered trees.  In addition, the construction works would see the potential temporary closure of the southern end of Dock Street, from where the stables are accessed.  This would continue throughout the build period.	Major adverse
		Winter, Year 1 (primary mitigation)	Moderate The low wall along the south of the residential properties would just be visible from the parade ground. The wall (up to 2.2m) around the stables building to the north would be very imposing. In addition, the flood gate would form a new and alternative access to the site.	Moderate adverse			
		Winter, Year 1 (with all mitigation)	Minor With mitigation planting (including new trees), the existing green edge would be reinstated, however at this stage any planting would not be established. The flood wall around the northern stables building would appear as a boundary fence and is significantly lower than the height of the building.	Minor adverse			
Summer, Year 15	Negligible Over time, the walls would have settled into the landscape, the larger wall would appear as part of the stables building, and replacement vegetation would be established.	Negligible					

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)		People visiting the River Carron Meander Site of Importance for Nature Conservation (SINC)	Urban landscape, River Carron and vegetation along it, woodland	Medium	Construction	Minor  Limited visual disruption is likely to be experienced by people visiting the SINC from the southern edges of the river (there are no specific footpaths through this area). Views are generally screened towards the construction of embankments, flood walls, ramps and in-water working areas, apart from the edges. There would also be long views to the demolition of the storage sheds and yard to the west and loss of scattered trees (including Category A and B trees) along the north bank of the river.	Minor adverse
					Winter, Year 1 (with mitigation)	Negligible  Views of flood measures are only from the eastern and northern edge of the SINC, and these are generally long views over the river. Views to the embankment and wall at Riverside Stables and parade ground would be filtered by an existing bund and intervening vegetation. As there are no specific paths along this edge, effects on views would be negligible.	Negligible
					Summer, Year 15	Negligible  Over time any replacement vegetation would have established, so any initial negligible visual effects would have adapted into the landscape.	Negligible
		Users of Core Path 004/004 Abbotshaugh Community Woodland (including the River Carron Loop Path, HArTT and Bainsford Loop cycle routes)	Woodland	High	Construction	Minor  Minor visual disruption experienced by people on this path with mostly screened or long views to the construction of flood measures. There would also be long filtered views to the demolition of the storage sheds and yard to the west and loss of scattered trees along the north bank of the river.	Moderate adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 1 (cont.)					Winter, Year 1 (with mitigation)	Negligible There would be long views of the flood walls (at Riverside Stables and parade ground) but the smaller wall would not appear as an imposing element given its height and the separation distance and the larger flood wall would be seen against the backdrop of large adjoining stables building from this path/ route.	Negligible
		Summer, Year 15	Negligible Over time the embankment, and any distant replacement vegetation would have established in the landscape.	Negligible			
		Users of Core Path 004/006 Abbotshaugh Community Woodland (including the River Carron Loop Path, HArTT and Bainsford Loop cycle routes) and Proposed Core Path 004/040 Abbotshaugh Bridge	River Carron and vegetation along it, woodland	High	Construction	Minor Minor visual disruption experienced by people on Core Path 004/1223 with mostly screened or long views to the construction of flood measures and in-water working area. Impacts would be less for people on the proposed Core Path given the greater separation distance. There would also be long filtered views to the demolition of the storage sheds and yard to the west and loss of scattered trees along the north bank of the river.	Moderate adverse
		Winter, Year 1 (with mitigation)	Negligible There would be long views of the low wall to the east and up to 2.2m high flood wall (at Riverside Stables and parade ground) but the lower wall would not appear as an imposing element given its height and the separation distance. The larger flood wall would be seen against the backdrop of the large adjoining stables building from these paths/ routes.	Negligible			
		Summer, Year 15	Negligible Over time the embankment, and any distant replacement vegetation would have established in the landscape.	Negligible			

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
		Users of Core Path 009/009 The Avenue to Glensburgh Road (River Carron path)	Urban landscape, River Carron and vegetation along it, woodland	High	Construction	Major Some filtered visual disruption experienced by users with views to the construction of the wall along the river behind the houses at Dock Street. Additionally there would be disruption during the build of the wall and raised table over the road.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor The wall to the west would appear as the boundary of adjoining residential properties and the raised table would appear as part of the road infrastructure.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would help to screen views to the wall to the west, although at this stage the planting would not have established.	Moderate adverse
					Summer, Year 15	Negligible The new walls would now have become part of the landscape features.	Negligible
Flood Cell 2		Residents (Glensburgh- Bank Street, Clyde Street, Kelvin Street)	Urban and industrial landscape, River Carron and bankside vegetation, shrubland at Skinflats	High	Construction	Negligible Long views with slight disruption experienced by residents during construction with views from the upper floors of properties on the northern end of Bank Street and Kelvin Street, and Clyde Street to the potential site compound area.	Negligible
					Winter, Year 1 (with mitigation)	Negligible Following construction, it is unlikely there would views from residential properties to the proposed scheme.	Negligible
					Summer, Year 15	Negligible It is unlikely there would be views from residential properties to the proposed scheme.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 2 (cont.)		Road travellers (northern end of Clyde Street and the A904/ South Bridge Street roundabout)	Urban and industrial landscape and road network	Medium	Construction	Minor  Road travellers heading to the north of Clyde Street would experience long views towards the construction of the embankment. Those travelling towards the A904/ South Bridge Street roundabout would have views to the potential site compound although these views would be over a short duration and form part of the wider view towards the surrounding industrial and residential landscape. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (with mitigation)	Negligible  The embankment would form a minor and barely discernible feature in views from Clyde Street.	Negligible
					Summer, Year 15	Negligible  Over time, grass would establish, and the embankment would settle into the surrounding landscape.	Negligible
		People working at commercial and industrial properties	Industrial landscape and shrubland at Skinflats	Low	Construction	Major  Visual disruption would be experienced by people working at industrial properties with views to the construction of flood walls, embankments, coastal revetment, ramps, in-water working areas, flood gates, demolition of a buildings in the east, potential site compounds and loss of riverside vegetation in the form of scattered trees. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (primary mitigation)	Moderate  People working at these properties would experience a change to original views with some visibility of the new embankments and walls, particularly along short sections where the walls are up to approximately 1.8m. These walls would however appear as the northern property boundary within this industrial setting. The loss of vegetation would allow greater visibility of Skinflats, beyond the river.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 2 (cont.)					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees lost and soften views to the walls, although at this stage the planting would not have established.	Minor adverse
					Summer, Year 15	Negligible Over time the embankment would settle into the surrounding landscape and mitigation planting would have softened visibility of the flood walls.	Negligible
		Cyclists on NCN Route 76/ people on the Forth Clyde Way	Urban and industrial landscape and road network	High	Construction	Minor Some minor visual disruption experienced by users of these routes with views to the potential site compound near the A904 roundabout, and long views south from Skinflats of construction of embankments and walls. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (with mitigation)	Negligible Users of these routes would have limited visibility to structures between industrial buildings, including to the north from Clyde Street, although these structures would not be discernible given their height and separation distance from the route.	Negligible
					Summer, Year 15	Negligible Glimpsed views over a very short duration would be experienced between industrial buildings on Dalgrain Road, although the flood wall would appear similar to that existing. Over time any negligible effects would not be discernible in views from these routes.	Negligible
					Construction	Minor Some minor visual disruption (along the eastern extents of the path only) would be experienced by users of this Core Path with views to the western embankment and flood wall, coastal revetment, in-water working area and potential site compound. This would continue throughout the build period in this area.	Moderate adverse
		Users of Core Path 006/002 Rope Walk, Grangemouth Old Town	Urban and industrial landscape, River Carron and shrubland at Skinflats	High	Construction	Minor Some minor visual disruption (along the eastern extents of the path only) would be experienced by users of this Core Path with views to the western embankment and flood wall, coastal revetment, in-water working area and potential site compound. This would continue throughout the build period in this area.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 2 (cont.)					Winter, Year 1 (with mitigation)	Negligible At its nearest, the embankment would at around 1.1m in height from the path and just visible in views east. Given the separation distance and that it would form part of the industrial edge, the new wall would not be apparent in views from the Core Path.	Negligible
					Summer, Year 15	Negligible Over time any negligible effects would not be discernible in views from this route.	Negligible
		Users of Core Path 006/008 Rope Walk, Grangemouth Old Town	Urban and industrial landscape, River Carron and shrubland at Skinflats	High	Construction	Major It is likely the path would be closed (although a diversion should be in place) to enable construction of the western embankment and flood wall. From where there would still be access to the Core Path, there would be open views to the construction of flood defences, potential site compound and ramp, in-water working area and coastal revetment. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate Users of this Core Path would experience a change to the original view along the path with the loss of existing riverside vegetation and the addition of the embankment (1.85m at its highest) which would run parallel to the path. A ramp as part of the detailed design would be located to continue the access between the industrial buildings towards the road. From here, there would be views towards the flood wall and coastal revetment far east of the path, although these structures would not be prominent in the overall view.	Major adverse
			Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees lost during construction and help screen the defences, however at this stage the planting would not be established.	Moderate adverse		

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 2 (cont.)					Summer, Year 15	Negligible  Over time with grass established on it, the embankment would settle into the surrounding landscape. Mitigation planting would help to reestablish the riverbank vegetation and screen views flood wall and coastal revetment.	Negligible
		Users of Core Path 006/023 Station Road	Industrial landscape and road network	Medium (the sensitivity of this Core Path has been reduced as it is located within an industrial area with views to mainly industrial buildings)	Construction	Minor  Visual disruption experienced by users along this Core Path with visibility of the potential site compound at the A904 roundabout and glimpsed views between industrial buildings to the construction of the flood wall and demolition of a building. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (with mitigation)	Negligible  Glimpsed views over a very short duration would be experienced between industrial buildings on Dalgrain Road, although the flood wall would appear similar to that existing.	Negligible
					Summer, Year 15	Negligible  Over time any negligible effects would not be discernible in views from these routes.	Negligible
		Users of Core Path 006/024 River Carron path to Bothkennar pools	Urban and industrial landscape, River Carron and shrubland at Skinflats	High	Construction	Minor  A bund adjacent to the path restricts visibility of the industrial properties to the south in parts, with sections having more open views in this direction.  There would be some minor visibility to the construction of flood defences and the loss of scattered trees on the south bank although these works may appear similar to current industrial activities.  This would continue throughout the build period.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 2 (cont.)		Users of Core Path 006/024 River Carron path to Bothkennar pools (cont.)			Winter, Year 1 (primary mitigation)	Negligible Following construction, it is unlikely there would be a discernible change in views south from this Core Path.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible Mitigation planting would reinstate vegetation lost on the south bank during construction, but this would not be established at this stage.	Negligible
					Summer, Year 15	Negligible It is unlikely there would be a discernible change in views south from this Core Path.	Negligible
		Users of Core Path 006/033 Dalgrain Road to Bank Street	Urban and industrial landscape, and road network	High	Construction	Negligible Limited visual disruption experienced by users of the Core Path to the construction of the western embankment with long views to the end of Clyde Street.	Negligible
					Winter, Year 1 (with mitigation)	Negligible Once built, the embankment at the end of Clyde Street (at a height of 0.25) would not be discernible in views from this Core Path.	Negligible
					Summer, Year 15	Negligible It is unlikely there would be a discernible change in views from this Core Path.	Negligible
		Users of Core Path 006/034 Dalgrain Road to Bank Street	Industrial landscape and road network	Medium (the sensitivity of this Core Path has	Construction	Minor Minor visual disruption experienced by users along the far eastern section of the path with glimpsed views between industrial buildings to the construction of the flood wall and demolition of a building. This would continue throughout the build period.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 2 (cont.)				been reduced as it is located within an industrial area with views to mainly industrial buildings)	Winter, Year 1 (with mitigation)	Negligible Following construction, it is unlikely there would views from this Core Path to the proposed scheme.	Negligible
					Summer, Year 15	Negligible It is unlikely there would views from the Core Path to the proposed scheme.	Negligible
Flood Cell 3	Grangemouth Petrochemical complex/ Forth Ports	People working at industrial properties (Grangemouth Petrochemical complex, Forth Ports)	Industrial landscape including Western Channel, River Carron and the Firth of Forth	Low	Construction	Moderate Noticeable visual disruption experienced by people working at industrial properties with views to the construction of the flood defences, coastal revetment, ramps, in-water working areas and flood gates.  There would also be views of demolition of a buildings in the west, potential site compounds and loss of vegetation in the form of scattered trees. However, the works are located throughout the cell and would appear similar to current industrial activities.  This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Minor People working at these properties would experience a minor change to original views as the new embankments and walls would generally appear as the boundary around the petrochemical complex and Forth Port sites.  Given the angle of view, visibility of the coastal revetment would be limited.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor Potential mitigation planting would replace trees lost during construction and soften views to the walls, but this would not be established at this stage.	Minor adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 3 (cont.)					Summer, Year 15	Negligible  Over time the embankments would settle into the surrounding landscape. Potential mitigation planting would have softened visibility of the flood measures.	Negligible
Flood Cell 4	Area 1 - Grangemouth	Residents on the western side of Abbots Road (B9132), between Wallace Street and Talbot Street	Urban landscape, road network, Zetland Park, and mature trees and riverbank vegetation	High	Construction	Major  Adverse visual disruption will be experienced by residents with views to the construction of the flood defences and replacement bridge, given the close-proximity of properties.  Construction works would require the removal of vegetation, mainly in the form of mature avenue trees (Category A and B) adjacent to the Grange Burn, which would be a major change in views for residents overlooking this section of the burn. Residents would also be visually disturbed by the in-water working construction methods, adjacent to the majority of the flood defences.  There may also be visual disturbance due to increased traffic management measures and associated traffic infrastructure to allow for the construction of the works.  This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Residents on the western side of Abbots Road (B9132), between Wallace Street and Talbot Street (cont.)			Winter, Year 1 (primary mitigation)	<p><b>Major</b></p> <p>At completion, the Scheme would be visible in the landscape, and residents with a view towards the Grange Burn, would have a major change in views associated with the new flood walls, embankment within Zetland Park and reduced mature vegetation, as well as the new Dalratho Road Bridge.</p> <p>The new flood wall along this section of Abbots Road (B9132) replaces an existing wall, adjacent to the burn and its banks. The proposed flood wall is similar to the existing one, at up to 1.2m above road level. These properties are around 0.5m higher than road level, so the wall can be seen over. A basic finish to the walls would have a detrimental effect to views experienced by residents here.</p> <p>Through primary mitigation, two rows of trees along the burn in the north of Zetland Park have been retained, which will help to soften views to flood defences within Zetland Park and retained some of the green outlook from these properties.</p> <p>The replacement of Dalratho Road Bridge with new solid 1.2m high parapets would likely have a detrimental visual impact, changing the existing openness of the space, which currently has permeable railings at the edges which allow views through the space.</p> <p>At the winter of Year 1 the flood defences would have not yet become fully integrated into the landscape.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p><b>Moderate</b></p> <p>Appropriate finishes to the walls and bridge, as agreed with the Local Planning Authority, will help them to integrate into the local environment and reduce visual intrusion. However, the infrastructure would remain dominant feature in views, given its proximity to properties.</p> <p>Large replacement trees will go some way to reforming the green edge along the Grange Burn, although, mitigation vegetation will not have matured at this stage.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Residents on the western side of Abbots Road (B9132), between Wallace Street and Talbot Street (cont.)			Summer, Year 15	<p>Minor</p> <p>Mitigation planting would have established and now provide a green revegetated view towards the Grange Burn and Zetland Park beyond.</p> <p>The flood defences within Zetland Park will have become integrated into the visual environment although the immediate flood wall along Abbots Road (B9132) and the new bridge would remain apparent in views from these properties given their height, separation distance and open views to the east from these properties.</p>	Moderate adverse
		<p>Residents on Abbots Road (B9132), Park Road and Grangeburn Road (excluding those assessed above)</p> <p>Also, residents on the following roads which have obscured views or a view from the side of their property: Orchard Street, Wallace Street, Kerse Road, Dalratho Road, Talbot Street, Ronaldshay Crescent, A904 Bo' Ness Road, Allan Court, Naismith Court, Paris Street, Taylor Court, Nelson Street, George Street, Kings Road and Albert Avenue</p>	Urban landscape, road network, Zetland Park (in the south), industrial landscape (in the north) and mature trees and riverbank vegetation	High	Construction	<p>Major</p> <p>Adverse visual disruption will be experienced by residents with views of the construction of the flood defences and bridge, given the close-proximity of properties with adjacent visual access to the works, particularly on Abbots Road (B9132), Grangeburn Road and Park Road.</p> <p>The construction works would require the removal of vegetation, mainly in the form of mature avenue trees (Category A and B) adjacent to the Grange Burn and in Zetland Park. This would be a major change in views for residents overlooking this section of the burn.</p> <p>Residents would also be visually disturbed by the in water working construction methods (proposed 200m sections).</p> <p>There may be visual disturbance due to increased traffic management measures and associated traffic infrastructure to allow for the construction of the works.</p> <p>This adverse visual disturbance would continue throughout the build period.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>At completion the Scheme would be visible in the landscape, and residents with a view towards the Grange Burn, would have a major change in view associated with the new flood walls, new bridge and lack of mature vegetation.</p> <p>The flood prevention measures themselves are around 1m high in this area of the town (with those adjacent to the intersection of Abbots Road and Wallace Street up to 1.5m at the bridge), and in locations replace existing walls. A basic finish to the walls would have a detrimental effect to the view.</p> <p>Due to the retention of the existing vegetation (as part of the primary mitigation) on the north bank of the Grange Burn adjacent to South Shore Road, and with the flood wall located to the north of this vegetation, the views from the residential areas towards the south of the units would be partially screened.</p> <p>At the winter of Year 1 the walls would have not yet become fully integrated into the residential landscape.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>An appropriate finish to the walls and bridge, as agreed with the Local Planning Authority, will help them to integrate into the local environment and reduce visual intrusion.</p> <p>Large replacement trees will go some way to reforming the green edge along the Grange Burn. Mitigation vegetation along the watercourse will not have matured at this stage.</p>	

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	<p>Minor</p> <p>Mitigation planting would have established and now provide a green revegetated view towards the Grange Burn for residents.</p> <p>The flood walls at Grangeburn Road will have become integrated into the visual environment.</p> <p>Expected visual impacts towards the industrial properties to the north from residents would now be limited as proposed mitigation planting will have established providing filtered views to the units.</p>	Moderate
		Road travellers on Abbots Road (B9132), A904 (Bo'ness Road), Grangeburn Road and Park Road	Along these roads, urban landscape, Zetland Park and mature trees	Medium	Construction	<p>Moderate</p> <p>Road travellers on these roads would experience noticeable adverse views towards the construction of the flood walls, new bridge and the removal of mature avenue vegetation, including including Category A and B trees.</p> <p>Travellers would also be visually disturbed by increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections). This would continue throughout the build period.</p> <p>Those travelling on the A904 (Bo'ness Road) would have adverse views to vegetation clearance and flood wall construction in particular on the Bo'ness Road Bridge. These views, however, would be over a short duration and form part of the wider view towards the surrounding industrial and residential landscape.</p>	Moderate adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Once built, the new walls would be noticeable but would not dominate views given their height, the intervening built form and the duration of travel along these roads. In some locations, the new walls would replace existing walls, so the views towards these locations would be similar to existing.</p> <p>However the lack of a green edge along the burn will have a detrimental impact to the views from road travellers.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	Minor Replacement mitigation vegetation along the burn will reduce the visual impact for road travellers, especially with the use of larger replacement trees.	Minor adverse
					Summer, Year 15	Negligible From some roads, the walls would remain apparent in views. With mitigation planting and appropriate finishes, as agreed with the Local Planning Authority, over the 15 year period, the flood walls would become part of the residential and recreational landscape as seen by road travellers.	Negligible
		Users of the grassed strip/ embankment adjacent to Grange Burn, Grangeburn Road	Grange Burn, Grangeburn Road, urban landscape, industrial landscape and mature trees	Medium	Construction	Major It is likely this grassed strip/ embankment would be temporarily cordoned off to enable the construction of the flood defences, although the footpath along the southern side of Grangeburn Road will still be accessible. From this footpath and where access to the grassed strip/ embankment is available, there would be views to the construction of the flood walls, flood gates, new bridge and loss of mature trees (including Category A and B trees) and riverbank vegetation. There would also be potential visibility of the in-water working areas.  This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate The view would be different given the lack of mature vegetation along the length of the grassed strip/ embankment, creating a less green outlook/ landscape. Although only 1m in height atop the existing embankment (with two very short sections up to 1m), the walls would still form a visual barrier to the Grange Burn, where there were once views.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would replace trees lost during construction and help to reinstate a green outlook from the grassed strip/embankment, however at this stage the planting would not be established.	Minor adverse
					Summer, Year 15	Negligible The walls would still be visible, although mitigation planting would continue to reinstate a green outlook.	Negligible
		People working at and visiting commercial properties on Abbots Road (B9132) and South Shore Road	Urban landscape, road network, and mature trees and riverbank vegetation	Low	Construction	Moderate Some visual disruption would be experienced by those working on the Abbots Road (B9132) Morson Group property, with views to the construction of flood walls and embankments. There will also be visually disruption by increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections). Commercial properties on South Shore Road and Grangeburn Road would be effected by vegetation clearance (including Category A and B trees) along the Grange Burn with direct views to the construction of the works, such as Rainbow House Spiritual and Holistic Centre, Mandal House and Knight Watson and Co Ltd. (South Shore Road). This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Minor The new walls would be a similar height to those existing along the Grange Burn (approximately 0.8m as seen from these commercial properties). Oblique views to slightly higher walls south along Abbots Road, would be seen by people at Morson Group, although at a distance. The new walls are therefore expected to have a limited visual impact and will not be imposing in views towards the burn.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	Minor The mitigation planting along the Grange Burn would reinstate a green outlook from commercial properties on Abbots Road and South Shore Road, although growth would be at an early stage, apart from a few large replacement trees.	Minor adverse
					Summer, Year 15	Negligible The walls would still be visible, although mitigation planting would continue to reinstate a green outlook.	Negligible
		People working at or visiting the industrial properties of Whyte Cranes, Meyer Timber and Forth Ports on South Shore Road and a private road within Grangemouth Petrochemical Plant (INEOS)	Urban, commercial and industrial landscape, road network and mature trees	Low	Construction	Minor There would be a visual disturbance due to the building of the flood walls along South Shore Road and along the private road, and the potential construction compound located in the Forth Ports area. But due to the industrial character of the area, it is expected that construction works would be in keeping with existing views.	Minor adverse
					Winter, Year 1 (with mitigation)	Minor The small new flood wall (less than 1m in height) will be located along the edge of the road and is in keeping with the industrial views within the area of South Shore Road.  Due to the retention of vegetation on the western embankment of the Grange Burn the outlook from industrial properties (Whyte Cranes and Meyer Timber) should remain largely unchanged.  Along the Grangemouth Petrochemical Plant (INEOS) site, the flood walls (generally at a height of up to 1.5m although up to 2m along very short stretches) would appear as the boundary wall, and existing mature vegetation is limited.	Minor adverse
					Summer, Year 15	Negligible The walls would now be an established part of the industrial view and therefore there is no discernible deterioration in the view.	Negligible



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Recreational users and visitors to Zetland Park	Urban landscape and mature trees	High	Construction	<p>Major</p> <p>Due to the construction of walls, embankments, demolition of the kiosk and the loss of some good quality mature avenue trees (Category A and B trees), recreational visitors to Zetland Park would experience a significant deterioration to the quality of views during the construction period. There may also be visual disturbance due to the potential method of in-water construction and potential culvert (in 200m stretches) of the Grange Burn. This may result in a temporary change of views towards of the burn.</p> <p>Through primary mitigation, the flood wall within the park has been rerouted to enable the retention of two rows of mature trees, thereby reducing the visual impact. However, the removal of one of the three rows of mature trees will majorly disrupt the views in and around the park on the western side. The outlook will now be more open to the road and urban landscape from the western car park, with the lack of this filtered green screen.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The new embankment (maximum height 1m) with no mitigation in the form of landform shaping will be a large structure in the park, which would not as yet be integrated.</p> <p>The views from within Zetland Park to Abbots Road will be more open and less vegetated due to the removal of mature avenue trees, resulting in a major adverse visual effect.</p>	

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>With landform shaping, the new embankment will have started to become integrated into the park infrastructure giving added value, serving a dual function of flood protection and as a landscape feature within the park itself.</p> <p>With mitigation planting, in particular the use of large trees to replace the existing mature trees, the visual effect from within Zetland Park to Abbots Road will be reduced.</p> <p>The flood walls (maximum 1.2m) within the park will begin to become part of the park infrastructure and with appropriate finishes and sensitive detailing, as agreed with the Local Planning Authority, will be less visually intrusive. The flood wall along the north-west boundary will be up to 1.5m in height (above road level) and is expected to be more dominant in views along this section of the park.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>The expected visual impact will reduce over time due to mitigation planting which will have established providing filtered views to the Scheme and works as they become part of the recreational landscape.</p> <p>The embankment would become integrated as part of the park's green infrastructure.</p>	Moderate adverse
					Construction	<p>Minor</p> <p>Recreational visitors to Grangemouth Bowling Club on Abbots Road would experience views over the road towards the construction of the walls and removal of mature avenue vegetation (including Category A and B trees). Views are expected from the car park when entering and leaving the site and longer views from the bowling greens and viewing areas. Users and visitors may also have visual access to increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections). This would continue throughout the build period.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>Due to the removal of mature vegetation the visitor's views from the car park would be more open and less green towards the Grange Burn.</p> <p>Visual effects are minor, as the immediate wall (up to 0.8m) is replacing an existing wall adjacent to the road, and are on the opposite side of the road from the bowling club. Oblique views to slightly higher walls (up to 1.2m) south along Abbots Road would be visible, generally from the car park, although at a greater distance.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Negligible</p> <p>Mitigation planting will help to reduce the less green outlook.</p>	Negligible
					Summer, Year 15	<p>Negligible</p> <p>Replacement vegetation will have established providing a greener outlook from the carpark and bowling greens towards the Grange Burn. Flood walls to the east will be visually integrated in the mixed-use landscape.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Visitors to places of worship - Abbotsgrange Church on Abbots Road, Sacred Heart Catholic Church on Drummond Place and Zetland Parish Church on Ronaldshay Crescent	Urban landscape, road network and mature trees	Low	Construction	<p>Moderate</p> <p>Visitors to places of worship on Abbots Road, Drummond Place and Ronaldshay Crescent would experience views of the construction of the flood defences and removal of mature avenue vegetation (including Category A and B trees) and in water working, as they enter and leave the buildings.</p> <p>Visitors to Abbotsgrange Parish Church on Abbots Road will have direct views of the construction of the walls due to its location adjacent to the Scheme.</p> <p>Sacred Heart Catholic Church on Drummond Place would have distant view towards the works.</p> <p>Zetland Parish Church on Ronaldshay Crescent is set further back and is at right angles to the scheme, so will only have a limited view of the works.</p> <p>They will all likely have visual access to increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections). This would continue throughout the build period.</p>	Minor adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The flood wall (up to 0.9m above road level) on Abbots Road, to the east of Abbotsgrange Church would be visible in the landscape as well as the loss of mature vegetation along Zetland Park.</p> <p>The flood defences would be less discernible in views from the remaining places of worship given their height, separation distance and intervening built form and vegetation.</p> <p>Views experienced by visitors would however be over a short duration, they would be seeing the Scheme as they enter and leave these buildings.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Replacement large trees along the Grange Burn would help reduce the visual loss of mature trees and soften views to the flood walls.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	Negligible The flood walls would now appear as part of the urban landscape and the residual impacts from the tree loss would now have been fully mitigated by replacement planting.	Negligible
		Users of NCN Route 76 and Core Path 006/004 Zetland Park and Core Path 006/027 Kersiebank Avenue to Inchyra Park	Urban landscape, road network, Zetland Park and mature trees	High	Construction	Minor Users on the NCN Route 76 and Core Paths 006/1323 and 006/1333, in Zetland Park would experience slight adverse long views of the construction of the flood prevention measures, in water working and removal of mature avenue vegetation (including Category A and B trees) along the Grange Burn and through Zetland Park.  This would be less visually intrusive for users of Core Path 006/027 and NCN Route 76 here as the path/ route deviates to the edge of the park further away from the visual disruption of the works.	Moderate adverse
					Winter, Year 1 (with mitigation)	Negligible The loss of mature trees would create a slight change to views west and north-west along these paths/ route although the flood measures themselves would form minor or barely discernable features in views. Where visible, the flood defences would be seen in long views, screened or partly screened by intervening vegetation.	Negligible
					Summer, Year 15	None Any residual effect from the tree loss would have now been fully mitigated by replacement planting.	None

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of NCN Route 76, Core Path 006/014 Drummond Place and Core Path 006/028 Dalratho Road to Bo'ness Road	Urban landscape, road network, Zetland Park and mature trees	High	Construction	<p>Major</p> <p>Users on the NCN76 and Core Paths 006/014, and 006/028 on the A904 (Bo'ness Road), Park Road and Drummond Place would experience adverse views of the construction of the flood prevention measures, the new Dalratho Road Bridge, in water working and loss of mature avenue vegetation (including Category A and B trees) along the Grange Burn and through Zetland Park.</p> <p>They will also have adverse visual access to increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections) particularly on Bo'ness Road and Park Road, where users will be in close proximity to the works, this would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The new flood wall at the Grange Burn on Park Road would be greater in height than existing (mainly 1m although up to 1.2m) although would form a minor element in overall views to the surrounding urban landscape. The replacement permanent footpath at kerb level (as part of the primary/embedded mitigation) along the burn side of Park Road will enable users to continue to walk along the waterside, as well as visually reducing the height of the wall.</p> <p>Removal of existing waterside vegetation will create a bare landscape along the burn, and with no replacement vegetation this will be a negative impact to the view.</p> <p>The replacement of Dalratho Road Bridge with new solid 1.2m high parapets would likely have a detrimental visual impact, changing the existing openness of the space, which currently has permeable railings at the edges which allow views through the space.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	Moderate  The mitigation planting along the Grange Burn, would reinstate a green outlook for Core Path/ NCN Route users, although at this point trees would not yet be established and growth would be at an early stage. Large replacement trees, as part of the mitigation strategy would help to reduce the visual effect.	Major adverse
					Summer, Year 15	Minor  The flood defences would remain apparent in views, given their limited separation distance from these paths/ route, although as the mitigation planting along the Grange Burn would have established, the overall Scheme would have become visually integrated into the surrounding recreational/ urban landscape.	Moderate
		Users of Core Path 006/003 Zetland Park	Urban landscape, Zetland Park and mature trees	High	Construction	Minor  Users on the Core Path 006/003 Zetland Park would experience filtered adverse views of the construction of the flood prevention measures.  The proposed removal of mature avenue vegetation (including Category A and B trees) along the Grange Burn and along the western edge of Zetland Park would have the potential to cause minor disturbance to the visual amenity of the park. Due to existing vegetation within the park the visual impacts would be reduced when trees are in leaf with a slight increase in visual disturbance in Winter months.	Moderate adverse
					Winter, Year 1 (primary mitigation)	Minor  Once built, the embankment on the western edge of the park (up to a height of 1m) may be partially noticeable in views from this Core Path and not yet fully integrated into the park infrastructure.  With no replacement planting along the burn there would be reduction greenness in the long view.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	Minor Mitigation vegetation along the Grange Burn will not be fully established, however with the use of some large trees this would help retain the green edge to the park.	Moderate adverse
					Summer, Year 15	Negligible The flood prevention measures would become integrated into the visual landscape and mitigation planting along the Grange Burn established, providing an integrated tree lined edge to screen the park.	Negligible
		Users of Core Path 006/013 Zetland Park	Urban landscape, Zetland Park and mature trees	High	Construction	Major Users of Core Path 006/013 Zetland Park will experience a significant deterioration to the quality of views during construction due to the building of walls and embankment, the demolition of the kiosk and the loss of mature avenue trees (Category A and B trees). The Scheme intersect this Core Path due, where the proposed embankment crosses.  There may also be visual disturbance due to the potential method of in-water construction and potential culvert (in 200m stretches) of the Grange Burn. This may result in a temporary change to the visual character of the burn and the user's visual accessibility to it.  The removal of one of the three rows of mature trees will disrupt the views in and around the park on the western side. The outlook will now be more open to the road north of the pedestrian bridge, with the lack of this filtered green screen.  Under Secondary Mitigation there will be detailed design measures to aid the integration of the embankment and associated ground raising into the park environment.	Major adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>Once built, the embankment within the park at a height of 1m will be visible in views from this Core Path and not yet fully integrated into the park infrastructure.</p> <p>The removal of the kiosk at the end of the path will open up views, and the proposed kiosk will be visible from this path.</p> <p>With no replacement planting along the burn there would be reduction greenness at the west side of the park.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>With ground modelling (as part of secondary mitigation) the embankment would be integrated into the park's green infrastructure.</p> <p>Mitigation vegetation along the Grange Burn will not be fully established, however large replacement trees would help reinstate the green edge to the park.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>With mitigation, appropriate finishes and sensitive detailing, as agreed with the Local Planning Authority, the embankment and walls would be fully integrated into the park's infrastructure and the mitigation planting along the burn would be established, creating a green backdrop to the park.</p>	Moderate

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of Core Path 006/023 Station Road	Urban and commercial landscape, road network and mature trees	High	Construction	<p>Moderate</p> <p>Core Path users would experience noticeable adverse views towards the construction of the walls either side of Bo'ness Road Bridge and removal of mature avenue vegetation (including Category A and B trees).</p> <p>Those travelling on the Core Path would have adverse views to vegetation clearance and flood wall construction in particular on the Bo'ness Road Bridge where there is proposed ground raising. These views, however, would be over a short duration and form part of the wider view towards the surrounding commercial and residential landscape.</p> <p>The Core Path users will be visually disturbed by increased traffic management measures due to the construction of the works (potential to be built in 200-meter sections). This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The new walls would only be slightly visually noticeable for path users given their height of up to 1m at the nearest point to the Core Path. In some locations, the new flood wall would replace an existing wall as part of the works, so the views towards these locations are similar to the existing.</p> <p>Removal of existing waterside vegetation will create a bare landscape along the burn, and with no replacement vegetation, there would be a negative impact to the view at the east end of this path as it crosses the burn.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting along the Grange Burn, would reinstate a green outlook for Core Path users at the eastern end of this path. At this point most of the replacement vegetation would not yet be established, but with the use of some large replacement trees, it would help to reduce the visual effect.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	Negligible  With appropriate finishes and mitigation planting, over the 15 year period, views of the flood walls would become a part of the residential and recreation landscape.	Negligible
		Users of Core Path 006/022 Grange Burn, 006/026 Zetland Park and Proposed Core Path 006/043	Urban landscape, Zetland Park, road network and mature trees	High	Construction	Major  Users of these Core Paths would have considerable visual disturbance during construction due to the building of walls and embankment, the demolition of the kiosk, replacement of the Dalratho Road Bridge and the loss of mature avenue trees (Category A and B trees). Users would experience a significant deterioration to the quality of panoramic views during the construction period. These Core Path runs adjacent to the Grange Burn on the western side of Zetland Park.  There may also be visual disturbance due to the potential method of in-water construction and potential culvert (in 200m stretches) of the Grange Burn. This may result in a temporary change to the visual character of the burn and the user's visual accessibility to it.  The removal of one of the three rows of mature trees will majorly disrupt the views in and around the park on the western side adjacent to the Grange Burn from these Core Paths. The outlook will now be more open to the road north of the pedestrian bridges, with the lack of this filtered green screen.  Under Secondary Mitigation there will be detailed design measures to aid the integration of the embankment and associated ground raising into the park environment.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of Core Path 006/022 Grange Burn, 006/026 Zetland Park and Proposed Core Path 006/043 (cont.)			Winter, Year 1 (primary mitigation)	<p><b>Major</b></p> <p>The new embankment (at a height of 1m) with no mitigation in the form of landform shaping will be a large structure in the park, which is not integrated, and highly visible in views from these Core Paths. The new flood walls would also be highly visible given the limited separation (a northern flood wall is located adjacent to Core Path 006/026) and loss of intervening vegetation.</p> <p>The views from within Zetland Park along these Core Paths will be more open and less vegetated due to the removal of the mature avenue trees along Abbots Road and the flood walls adjacent to the path, resulting in a major adverse visual effect.</p> <p>The replacement of Dalratho Road Bridge with new solid 1.2m high parapets would likely have a detrimental visual impact, changing the existing openness of the space, which currently has permeable railings at the edges which allow views through the space.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p><b>Moderate</b></p> <p>With landform shaping, the new embankment will have started to become integrated into the park infrastructure giving added value, serving a dual function of flood protection and as a landscape feature within the park itself.</p> <p>With mitigation planting, in particular the use of large trees to replace existing mature trees along Abbots Road, the detrimental visual impacts along this Core Path will be reduced.</p> <p>The flood walls (up to 1.2m from road level) will begin to become part of the park infrastructure and with appropriate finishes and sensitive detailing, as agreed by the Local Planning Authority, will not be so visually intrusive. There will be some visual disturbance to users where the wall is at the maximum height, however the minimum height within the park is 0.25 meters.</p>	

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of Core Path 006/022 Grange Burn, 006/026 Zetland Park and Proposed Core Path 006/043 (cont.)			Summer, Year 15	<p>Minor</p> <p>The expected visual impact will reduce over time due to the mitigation planting which will have established providing filtered views to the Scheme and works as they become part of the recreational landscape.</p> <p>The embankment would become integrated as part of the park's green infrastructure.</p>	Moderate adverse
	Area 2 - Rannoch Park and Westquarter	Residents (Rannoch Road, Bowhouse Road, Beauly Crescent, Moriston Crescent, Portal Road, Burnbank Road and Gunn Road)	Urban landscape, road network, Rannoch Park, woodland and mature trees	High	Construction	<p>Major</p> <p>Adverse visual disruption would be experienced by residents with views of the construction of the flood defences, ramps, in-water working construction methods (proposed 200m sections), and the potential site compound, given the close-proximity of houses, particularly on Rannoch Road.</p> <p>There may be visual disturbance due to increased traffic management measures and associated traffic infrastructure to allow for the construction of the works.</p> <p>This would continue throughout the build period.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>At completion, the Scheme would be visible in the landscape, and residents would experience a moderate change in views as the new flood wall would be located at the crest of the existing embankment along the northern side of Rannoch Park.</p> <p>The flood wall is located on top of the existing embankment, and would add approximately 0.9m of height onto the embankment with short stretches higher and up to 1.2m including at the pedestrian walkway and bridge.</p> <p>Although views to the grassed spaces within the park will be limited from the ground floor and front gardens of houses along Rannoch Road, there would still be views above the height of the wall towards trees within the park and distant trees and woodland. Views to the park from the upper floors of these properties would remain intact. Impacts from properties at Portal Road, Burnbank Road and Gunn Road would be less given the nearest section of the flood wall would generally be up to 0.5m in height.</p> <p>Embedded mitigation of relocating the flood wall to save the line of trees along the burn has helped to reduce the visual effect along this section. However, as noted on the tree survey these trees have the Chalara Ash Dieback disease, and thereby have a severely limited life expectancy and are likely to be removed as part of this scheme.</p> <p>At the winter of Year 1 the walls would have not yet become fully integrated into the residential landscape.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>An appropriate finish to the walls, as agreed with the Local Planning Authority, will help them to integrate the walls into the local environment and reduce visual intrusion.</p> <p>Large trees to replace those affected by Chalara Ash Dieback will help to reform the green edge along the northern edge of the park.</p>	

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	<p>Minor</p> <p>Planting would have established and would now provide a green revegetated view towards the park and Grange Burn for residents. Although still visible, the flood wall at Rannoch Park would appear more integrated with the park infrastructure.</p>	Moderate adverse
		Road travellers (A9, M9 and local road network)	Urban landscape, road network, commercial properties on the A9, woodland, pylons	Medium	Construction	<p>Moderate</p> <p>Road travellers would experience a moderate visual disruption during construction due to the construction of flood walls, ramps, and loss of mature vegetation, particularly those along the A9 and Grandsable Road.</p> <p>There is likely to be the temporary closure of the southbound lane on Grandsable Road and the westbound lane on the A9. As well as the subsequent diversion of traffic, which would also cause visual disruption. This would continue throughout the build period.</p>	Moderate adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The views along the road network near to the Scheme would have a minor deterioration given the loss of mature vegetation and the visibility of the new walls. In parts, the walls would appear as the boundary of properties, including along Grandsable Road. The proposed walls are not expected to form imposing elements in views given the duration of views from the road.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Replacement mitigation planting would help to screen and soften views to the new walls.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>From some roads, the flood walls would remain apparent in views. With mitigation planting and appropriate finishes, as agreed with the Local Planning Authority, over the 15 year period, the walls would appear as part of the surrounding landscape, as seen by road travellers.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		People working at and visiting commercial properties on the A9 (including restaurants and hotels)	Commercial buildings, road network, fields and scrubland and woodland	Low	Construction	<p>Moderate</p> <p>People working and visiting these locations would experience a moderate visual disruption given the close-proximity to the construction works. Additionally the loss of mature riverbank vegetation, particularly adjoining and visible from the Travelodge and Metro Inns to the north of the A9 and Brewers Fayre and the Premier Inn to the south, would effected these views detrimentally. This would continue throughout the build period.</p>	Minor adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>From most commercial properties south of the A9, the flood wall would not be visible. Views from buildings adjoining it would be barely discernible given its height (generally up to 1.25m with a short section up to 1.8m) and given the angle of view. Similar views would be seen from the existing boundary wall to the west of Brewer’s Fayre and the Premier Inn. The loss of mature trees here would however open up views west to fields, scattered trees and houses beyond.</p> <p>The flood defences (up to a height of 2.5m) would be more apparent in views from the adjoining Travelodge and Metro Inns to the north of the A9 given their height and limited separation. This wall and embankment would however potentially appear as the boundary along these properties.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would soften views to the flood defences, although this would not be established at Year 1.</p>	Minor adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	<p>Negligible</p> <p>The flood walls to the south of the A9 are not expected to be discernible in views from commercial properties. Over time, mitigation planting is expected to reinstate a similar view from the rear elevation of Brewer’s Fayre and the Premier Inn.</p> <p>The embankment in the north, over time would settle into the landscape and mitigation planting would screen and soften views to the flood wall here.</p>	Negligible
		Visitors to Falkirk Distillery	Commercial buildings, road network, fields and scrubland and woodland	Low	Construction	<p>Moderate</p> <p>People working and visiting Falkirk Distillery would experience a moderate visual disruption during construction, given the close-proximity of the construction works to the entrance of the distillery.</p> <p>As well as slightly elevated views to the construction of the flood wall and loss of trees along the rear of Grandsable Cemetery, more distant views to the loss of trees along Polmont Burn would also be visible. This would continue throughout the build period.</p>	Minor adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Views from the distillery would be slightly different given the new low flood wall on the east side of the road, although this would be similar to the existing wall.</p> <p>Additionally the loss of mature trees and proposed wall to the rear of Grandsable Cemetery would be visible in the distance, although the flood wall (up to 2.2m) would appear as the boundary to the cemetery and Grandsable Cottage.</p> <p>Visitors to the distillery would not have visibility to the flood wall to the north-east, at Polmont Burn.</p>	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would replace trees lost at along the rear boundary to the cemetery and Grandsable Cottage and help to soften views to the flood wall, although this is a long view from the distillery.</p> <p>Sensitive wall finishes, as approved by The Local Planning Authority, would help to visually integrate the new flood wall into the landscape.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>The flood wall alongside the rear of the cemetery and Grandsable Cottage would be not be visible along the road but would appear as the boundary to these properties.</p> <p>The proposed wall to the east along the boundary would be integrated into the road infrastructure.</p> <p>Mitigation planting would, by this time, have matured and helped to create a similar green edge along the road.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Recreational users and visitors to Rannoch Park	Urban landscape, road network, woodland and mature trees	Medium	Construction	<p>Moderate</p> <p>Recreational users and visitors to Rannoch Park would experience a moderate deterioration to the quality of views during the construction period to the north end of the park and to the surrounding residential areas, due to construction traffic, noise, ramps, in-water working and potential culvert of the Grange Burn. This may result in a temporary change in views towards of the burn. Views to the south of the park will remain largely unchanged.</p> <p>The construction works would also involve the loss of some vegetation. As part of primary mitigation the flood wall was realigned to retain the semi-mature row of trees along the northern edge of the burn, however due to the trees having the Chalara Ash Dieback disease it is likely they will be removed, which would open this view up.</p> <p>The visual effect of construction of the walls (although temporary) would disrupt the views in and around the park on the northern side.</p>	Moderate adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The flood wall to the north of the park is located on the top of the existing embankment. So although generally it is only 0.9m in height, with short stretches up to 1.25m (including at the pedestrian walkway/ bridge), it will still be very apparent in the landscape when entering the park from the north, and looking towards the north when in the park.</p> <p>Embedded mitigation of relocating the flood wall to save the line of trees along the burn reduced the negative effect along this section, with retaining green edge. However, as noted on the tree survey these trees have the Ash Dieback disease, and thereby have a severely limited life expectancy, so are likely to be removed.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	Minor  The walls will begin to become part of the park infrastructure and with sensitive detailing and finishing, as agreed with The Local Planning Authority, will not be so visually intrusive.  Replacement vegetation, including large replacement trees, will help to reduce any impact created by removal of the existing trees.	Minor adverse
					Summer, Year 15	Negligible  Over time the walls will become part of the park infrastructure and any replacement vegetation would have established within the visual landscape.	Negligible
		Visitors to Grandsable Cemetery	Road network, woodland and scattered trees	Low	Construction	Moderate  Visitors to Grandsable Cemetery on Grandsable Road would experience adverse visual impacts during the construction of the wall and with the removal of vegetation to the rear. The construction works would be visible from the entrance car park when entering and leaving the site and longer views from greens and memorial areas, which would be sensitive to visual change.  Visitors may also have visual effected by increased traffic management measures due to the construction of the Scheme. This visual disturbance would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Moderate  Due to the removal of vegetation on the Westquarter Burn, the visitor's views from the car park/ entrance area north-east would be more open and less green, albeit with the buildings in the near view.  The new flood wall would be up to 2.2m in height and appear as a rear boundary wall. However with a basic finish, this wall would appear very dominant in the landscape.	Minor adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Sensitive detailing and finishing, as agreed with The Local Planning Authority, will reduce and mitigate impacts of the Scheme in this area.</p> <p>Mitigation planting along the burn will help to reinstate the green edge.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>Vegetation will have established providing a greener outlook from the cemetery car park and entrance. Flood walls will be visually integrated into the surrounding mixed-use landscape.</p>	Negligible
					Construction	<p>Major</p> <p>Residents of Grandsable Cottage on Grandsable Road would experience adverse visual disruption during the construction of the walls and removal of existing vegetation on the north-west of their garden (private land).</p> <p>The construction works would be visible from the property when entering and leaving the house and views from the upperstorey and windows may be disturbed due to construction works.</p> <p>Residents may also be visually effected by increased traffic management measures due to the construction of the Scheme. This visual disturbance would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The new basic walls and lack of replacement vegetation would have a large visual impact to these residents.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation planting would be in place to soften the views of the walls along the burn.</p> <p>Sensitive detailing and design integration, as agreed with The Local Planning Authority, as part of secondary mitigation would help soften views of the new wall, which would appear as the western property boundary.</p>	Major adverse
					Summer, Year 15	<p>Negligible</p> <p>Mitigation planting would have established and the walls integrated into the visual landscape. With the establishment of mitigation vegetation it is expected the views would no longer be adverse.</p>	Negligible
					Construction	<p>Minor</p> <p>Limited visual disruption experienced by people on this path with visibility to the construction works from the southern extents, including ramps, in-water working and the loss of vegetation. It is likely the southern extent of the path would not be accessible during the construction works, although alternative paths including the northern footpath along Rannoch Road would be.</p> <p>However, views from this path would be mostly screened or distant views to the construction of flood measures.</p>	Moderate adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>There would be immediate views, from the southern extents of the path, of the new wall, with long views along the length of the wall.</p> <p>The basic wall, of between 0.25m and 1m in height, along with the removal of the existing trees, will create an outlook which will be less positive than before.</p>	Moderate adverse
					Users of Core Path 006/009 Grange Burn	Urban landscape, Rannoch Park, Grange Burn, woodland and mature trees	High

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	Negligible  Sensitive detailing and design integration of the wall, as agreed with The Local Planning Authority as part of secondary mitigation, as well as replacement trees would help soften views of the new wall. It would therefore not appear as much as an imposing element in views towards Rannoch Park.	Negligible
					Summer, Year 15	Negligible  Over time the walls and any replacement vegetation would have established in the visual landscape.	Negligible
					Construction	Major  Adverse visual disruption with views to the construction of the new flood wall along the northern bank of the Grange Burn, ramps and temporary in-water working areas and potential loss of intervening vegetation. It is likely sections of both paths would be inaccessible during the construction works, although the park itself and the northern footpath along Rannoch Road would provide alternative access to this area. This would continue throughout the build period.  The construction works would also involve the loss of vegetation. Through primary mitigation the semi-mature row of trees along the northern edge of the burn were to be retained with the realigning of the new flood wall, however due to the Chalara Ash Dieback disease that they are infected with, they are likely to be removed	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>Users would experience a major change to the original view along sections of the path looking north from 006/007, and south from path 006/018, with the new flood wall being visible on top of the embankment.</p> <p>The wall (which would mainly be at a height of 0.9m with short stretches up to 1.2m including at the pedestrian walkway/ bridge) would create a greater sense of enclosure from Core Path 006/018 as views to the park would be limited along the path.</p> <p>Embedded mitigation of relocating the flood wall to save the line of trees along the burn would have reduced the negative effect along this section, with the retained green edge. However, as noted on the tree survey, these trees have the Chalara Ash Dieback disease, and thereby have a severely limited life expectancy, so are likely to be removed.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Replacement vegetation, including large trees to replace the ones along the embankment, would help to reduce any visual impacts created due to the removal of existing trees.</p> <p>Sensitive detailing and design integration of the wall, as agreed with The Local Planning Authority as part of secondary mitigation, would help soften views of the new wall.</p>	Major adverse
					Summer, Year 15	<p>Negligible</p> <p>Mitigation planting would help screen views from the path, and the walls would have become part of the park infrastructure.</p>	Negligible



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of Core Path 006/016 Beancross Road and Core Path 006/010 Rannoch Park to Cadgers Brae	Urban landscape, Rannoch Park, woodland and mature trees	High	Construction	Moderate  Visual disruption experienced by users on these paths with visibility of the construction of flood measures and removal of the trees, although views from sections of these paths (particularly 006/010) would be screened or at a distance. There would also be interrupted views to the construction compound on Inchyra Road, although beyond the road network.	Major adverse
					Winter, Year 1 (with mitigation)	Minor  There would be mainly long views of the walls (generally at a height of 0.9m in height on top of the embankment, with short stretches up to 1.2m including at the pedestrian walkway/ bridge) and tree removal but would not appear as imposing elements, given the separation distance.	Moderate adverse
					Summer, Year 15	Negligible  Over time the walls and any replacement planting and grass would have established in the visual landscape.	Negligible
		Users of Core Path 006/011 Inchyra Road (Also refer to this Core Path in Area 3)	Urban landscape, MacDonald Inchyra Hotel and surrounds, road network, woodland and mature trees and pylons	High	Construction	Minor  Limited visual disruption experienced by users along the majority of this path with mostly screened or distant views to the construction of flood measures in Rannoch Park and flood measures themselves. Users of the Core Path would have views to the in-water working of the Scheme in the Grange Burn. However, this would be minimal due to retention of some of the existing trees along this part of the Grange Burn and short duration of views. There would also be interrupted views to the construction compound on Inchyra Road, although beyond the road network.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	Negligible  There would be long views of the walls (generally at a height of 1m) but the Scheme would not appear as imposing as they are adjacent in Rannoch Park, with minimal visual disruption.  Embedded mitigation of relocating the flood wall to save the line of trees along the burn would have reduced the negative effect along this section, with the retained green edge. However, as noted on the tree survey, these trees have the Chalara Ash Dieback disease, and thereby have a severely limited life expectancy, so are likely to be removed.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible  Sensitive detailing and finishings, as agreed with the Local Planning Authority, to the flood walls would further minimise visual impacts of the Scheme.  Replacement planting where required (including large trees in Rannoch Park) would help integrate the Scheme into the landscape.	Negligible
					Summer, Year 15	Negligible  Over time the flood wall and any replacement planting would have established into the visual landscape.	Negligible
		Users of Core Path 016/011 Rannoch Park to Fairy Glen	Commercial buildings, road network, woodland, mature trees and pylons	High	Construction	Minor  Limited visual disruption experienced by users apart from minor views of construction at the far western end where it meets Core Path 016/015, and distant views over fields.	Moderate adverse
					Winter, Year 1 (with mitigation)	Negligible  There would be distant views of the flood defences behind Metro Inns and vegetation loss along the Westquarter Burn but they would not appear as imposing elements, given the separation distance. There would be limited views to the flood wall along the Polmont Burn behind Brewers Fayre.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of Core Path 016/015 Cassel Brae / Fairy Glen	Road network, Polmont Burn, woodland and riverbank vegetation	High	Summer, Year 15	Negligible  Over time the flood defences and any replacement vegetation and grass would have established in the visual landscape.	Negligible
					Construction	Major  The current established vegetation creates a high quality green landscape along the Polmont Burn. The construction of the Scheme along this Core Path would result in users experiencing a major visual disruption given the close-proximity to the works, the loss of mature vegetation and the construction of flood defences.  Due to the proposed method of in-water working there will be interrupted views to the water itself adversely effecting its visual amenity and the quality of the natural uninterrupted views. The loss of mature vegetation visually opens up the burn to the surrounding mixed-use landscape, detracting from its visual quality and 'green edge'. This would adversely effect the quality of views along the path.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  The views along the Polmont Burn would be effected greatly by the loss of mature vegetation and visibility of the new walls and infrastructure. With no replacement waterside vegetaion the burn would appear bare from this Core Path.  In parts, the walls (mainly between 0.5m to 1.25m, with a very short section up to 2.5m) would appear as the boundary of commercial properties - Premier Inn and Brewers Fayre. These flood defences are not however generally expected to form imposing elements in views given their height.	Major adverse
Winter, Year 1 (with all mitigation)	Minor  Mitigation planting will help to re-establish the waterside planting and to screen the walls. At this stage the planting however would not have established, but due to the outlying nature of the area, the impact would be reduced.	Moderate adverse					

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	<p>Negligible</p> <p>The flood walls would appear as minor elements in overall views and over time, would have integrated into the landscape. Mitigation planting would have established and reinstated a green outlook from the Core Path that screens the surrounding commercial properties and road infrastructure.</p>	Negligible
		Users of Core Path 015/012 Mumrills Road	Road network, Polmont Burn, woodland and riverbank vegetation	High	Construction	<p>Major</p> <p>During construction there would be some adverse views along this Core Path given the close-proximity to the works along the A9, the loss of mature vegetation and the construction of flood defences.</p> <p>There will be an adverse impact due to the closure of the underpass under the A9 with Core Path diversions in place and the necessary signage.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>There would be long views of the walls (minimum 0.25m and maximum 1.7m) but they would not appear as imposing elements in the visual landscape. The walls are in an elevated position and integrated as part of the road infrastructure, thus minimising its visual impact.</p> <p>There would also be long views towards the defences and vegetation removal on the Westerquarter Burn at Grandsable Cemetery.</p> <p>An alternative route with the underpass closure would have been designed and be integrated into the visual landscape.</p>	Moderate adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Secondary design mitigation such as replacement planting, would be undertaken to minimise visual impacts of the Scheme and the adverse effects on the visual amenity of its surroundings</p> <p>At year 1, however any replacement vegetation would not have established in the visual landscape, and therefore has a slight detriment to the view.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of HArTT Route on Laurieston A9 By- Pass	Road network, Polmont Burn, woodland and riverbank vegetation	High	Summer, Year 15	Negligible Over time, the Scheme would integrate into the visual landscape and mitigation planting would create a green outlook from the Core Path.	Negligible
					Construction	Major During construction there would be some adverse views along this cycle path given the close-proximity to the works along the A9, the loss of mature vegetation and the construction of flood defences. There will be an adverse impact due to the closure of the underpass under the A9 with Core Path diversions in place and the necessary signage. The users of the HArTT route would have visual access to the construction compound adjacent to the A9 causing increased visual disturbance.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor There would be long views of the walls travelling on Mumrills Road approaching the A9 (minimum 0.25m and maximum 1.7m) but they would not appear as imposing elements in the visual landscape. The walls are in an elevated position and integrated as part of the road infrastructure, thus minimising its visual impact. There would also be long views towards the defences and vegetation removal on the Westerquarter Burn at Grandsable Cemetery An alternative route with the underpass closure would have been designed and be integrated into the visual landscape.	Moderate adverse
Winter, Year 1 (with all mitigation)	Minor Secondary design mitigation such as replacement planting, would be undertaken to minimise visual impacts of the Scheme and the adverse effects on the visual amenity of its surroundings At year 1, however any replacement vegetation would not have established in the visual landscape, and therefore has a slight detriment to the view.	Moderate adverse					

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	Negligible Over time, the Scheme would integrate into the visual landscape and mitigation planting would create a green outlook from the HARTT Route.	Negligible
		Users of Antonine Wall Trail	Road network, Polmont Burn, woodland and bankside vegetation	High	Construction	<p>Major</p> <p>During construction there would be some adverse views along parts of the trail given the close-proximity to the works along the A9 and the Polmont Burn, the loss of mature vegetation and the construction of flood defences.</p> <p>On other parts of this trail further away from the construction zones there would be limited visual disruption experienced by users with mostly screened or distant views to the construction of flood measures ramps and walls.</p> <p>There will be an adverse impact due to the closure of the underpass under the A9 with Core Path diversions in place and the necessary signage.</p> <p>The current established vegetation creates a high quality green landscape along the Polmont Burn. The construction of the Scheme along this Core Path would result in users experiencing a major visual disruption given the close-proximity to the works, the loss of mature vegetation and the construction of flood defences.</p> <p>Due to the proposed method of in-water working there will be interrupted views to the water itself adversely effecting its visual amenity and the quality of the natural uninterrupted views. The loss of mature vegetation visually opens up the burn to the surrounding mixed-use landscape, detracting from its visual quality and 'green edge'. This would adversely effect the quality of views along the path.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>Design development around this area of the Antonine Wall Trail has been undertaken at length to minimise impacts of the Scheme on the visual integrity and authenticity of the Antonine Wall site to the South and West of the Scheme, see Chapter 13 – Cultural Heritage. This process resulted in the Scheme being integrated into the road infrastructure minimising potential visual impacts rather than the original design which proposed a dam structure which would have interrupted the important relationship between the low ground and bluff vantage point. This process has been summarised in the document in Appendix C 13.2 Westquarter Burn Flood Storage Area Record of Outline Design Development.</p> <p>There would be long views of the walls travelling on Mumrills Road approaching the A9 (minimum 0.25m and maximum 1.7m) but they would not appear as imposing elements in the visual landscape.</p> <p>The walls are in an elevated position integrated as part of the road infrastructure, thus minimising its visual impact.</p> <p>There would also be long views towards the defences and vegetation removal on the Westerquarter Burn at Grandsable Cemetery</p> <p>An alternative route with the underpass closure would have been designed and be integrated into the visual landscape.</p> <p>The views along the Polmont Burn part of the trail would be effected greatly by the loss of mature vegetation and visibility of the new walls and infrastructure. In parts, the walls (mainly between 0.5m to 1.25m, with a very short section up to 2.5m) would appear as the boundary of commercial properties – Premier Inn and Brewers Fayre. These flood defences are not expected to form imposing elements in views given the height.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Winter, Year 1 (with all mitigation)	Minor  Secondary design mitigation such as replacement planting, would be undertaken to minimise visual impacts of the Scheme and the adverse effects on the visual amenity of its surroundings. In addition, appropriate wall finishes and materials and sensitive detailing, as agreed with The Local Planning Authority and HES would be required to protect the setting and qualities of the world heritage site.  At year 1, however any replacement vegetation would not have established in the visual landscape, and therefore has a slight detriment to the view.	Moderate adverse
					Summer, Year 15	Negligible  Over time, the Scheme would integrate into the visual landscape and mitigation planting would create a green outlook from the route.  The flood walls would appear as minor elements in overall views and over time, would integrate into the landscape. Mitigation planting would continue to establish and reinstate a green outlook from the Core Path that screens the surrounding commercial properties and road infrastructure.	Negligible
		Users of proposed Core Path 006/042 Rannoch Park to Newlands Road	Urban landscape, road network, Rannoch Park, woodland and roadside trees	High	Construction	Minor  Limited visual disruption experienced by people on this proposed Core Path with visibility to the construction works from the eastern extents, including ramps, in-water working and the loss of vegetation. However, views from this path would be mostly screened or distant views to the construction of flood measures.	Moderate adverse
		Winter, Year 1 (with mitigation)	Negligible  There would be long views of the Scheme walls but they would not appear as imposing elements, given the separation distance.	Negligible			
		Summer, Year 15	Negligible  Over time the Scheme and any distant replacement vegetation would have established in the visual landscape.	Negligible			



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Users of proposed Core Path 015/027 Primrose Avenue to Beancross	Road network, commercial properties on the A9, fields, woodland and roadside trees	High	Construction	Minor  Limited visual disruption experienced by people on this proposed Core Paths with mostly screened or distant views to the construction of flood measures ramps and walls. There would be a slight visual disruption where it meets the A9 due to the construction of the flood walls on the opposite side of the road.	Moderate adverse
					Winter, Year 1 (with mitigation)	Negligible  There would be long views of the Scheme walls but they would not appear as imposing elements, given the separation distance.	Negligible
					Summer, Year 15	Negligible  Over time the Scheme and any distant replacement vegetation would have established in the visual landscape.	Negligible
		Users of proposed Core Paths 006/046 Rannoch Park (2) and 006/047 (Rannoch Park to Inchyra Road)		High	Construction	Moderate  Visual disruption experienced by users with visibility to the construction of flood measures, although views from sections of these paths would be screened by the existing embankment to the north and/ or at a distance.	Major adverse
					Winter, Year 1 (with mitigation)	Minor  There would be long views of the walls (generally at a height of 0.9m in height, with short stretches up to 1.2m including at the pedestrian walkway/ bridge) but would not appear as imposing elements, given the separation distance and views beyond the flood defences.	Moderate adverse
					Summer, Year 15	Negligible  Over time the walls and any replacement planting and grass would have established in the visual landscape.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)	Area 3 - Inchyra /Wholeflats	Residents (A905/ Inchyra Road)	Road network, Macdonald Inchyra Hotel and Spa grounds and roadside trees	High	Construction	<p>Moderate</p> <p>Visual disruption experienced by residents with views of the construction of the flood wall and the potential site compound, although visibility would be partly screened by trees along the western side of the A905. The construction works would also involve the loss of some trees adjacent to Inchyra Road near to the roundabout, including Category B trees. This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The low flood wall, which runs to just south-west of the roundabout, would be noticeable but would not be imposing in views given location within a verge, and other trees and vegetation which are retained and visibility to traffic on the A-road.</p> <p>With no replacement planting, the outlook would be slightly less green.</p>	Moderate adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would reinstate a green outlook in this direction from houses. However, planting at this stage would not be established.</p>	Moderate adverse
					Summer, Year 15	<p>Negligible</p> <p>The continued growth of mitigation planting would help to soften and screen views to the wall, seen beyond the road network from these properties.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		Residents (Reddoch Road, Smiddy Brae, Millhall Gardens) (Also see Cell 5)	Road network, industrial landscape and woodland	High	Construction	<p>Moderate</p> <p>Visual disruption experienced by residents, mainly from the upper floors of buildings to the construction of the flood wall along the A905.</p> <p>Views to the construction works would be more apparent given the close-proximity of the houses and the loss of any intervening vegetation (including Category A and B trees). There are also slightly distant, partly filtered views to the potential site compound to the north.</p> <p>Construction of the defences at Millhall Gardens and Reddoch Road would be very aparent in views, to to their proximity.</p> <p>This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The view from residential properties would be slightly different given the loss of some established roadside vegetation, enabling greater visibility to the A905 road and industrial buildings beyond. The flood wall itself would appear as a very minor element in views, at a height of up to 1m to the north.</p> <p>Residents of Millhall Gardens would also have wider open views towards the car park in Polmont Woods, losing their screening.</p> <p>Some residents of Reddoch Road would have more open views onto the flood defences adjacent to the Millhall Burn, although other residents will be screened by vegetation within their own land.</p>	Moderate adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting (avoiding any underground services) would help to screen the walls, roads, and car park and reinstate a green outlook from these properties, although at this stage it would not be fully established.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	<p>Negligible</p> <p>The walls would not form discernible elements in views north towards the wider industrial landscape, given their height and the establishment of mitigation planting.</p> <p>Mitigation planting would have reinstate a green outlook from these properties.</p>	Negligible
		Road travellers (A905/ Wholeflats Road, Inchyra Road and local road network)	Urban and industrial landscape, roadside trees, pylons	Medium	Construction	<p>Moderate</p> <p>Visual disruption would be experienced by road travellers given the close-proximity to the works including the construction of the flood defences, loss of roadside vegetation (including Category A and B trees) and potential site compound, although over a short duration (given the speed of vehicles).</p> <p>There is also likely to be a temporary closure of sections of these roads. The subsequent diversion of traffic would also cause visual disruption. This would continue throughout the build period.</p>	Moderate adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>There would be a minor adverse change to the view along these roads given the loss of mature vegetation and visibility of the new walls and embankments. In parts, the walls would appear as the boundary of properties, including at Macdonald Inchyra Hotel and Spa and the Galaxy Sports playing fields.</p> <p>Flood defences along the A905 would be more noticeable given their height and existing lack of intervening vegetation in parts. These flood defences are not expected to form imposing elements in views given the duration of views from the road.</p>	Minor adverse
			Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would help to screen the walls, and replace the vegetation lost during construction.</p>	Minor adverse		

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	Negligible The flood walls would appear as minor elements in overall views. Mitigation planting would continue to screen views to the flood defences from the road.	Negligible
		People working at commercial and industrial properties on the A905/ Wholeflats Road	Industrial landscape, A905, woodland and trees along the road and Flood Relief Channel and pylons	Low	Construction	Minor People working at these locations would experience minor adverse views to the construction of the flood defences, the potential site compound and loss of mature trees (including Category A and B trees), partly screened by intervening vegetation and beyond the A905 and traffic on it. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Minor There would be a minor adverse change to views south with the addition of the flood defences (up to 1.6m in height along the Flood Relief channel), although these would appear at a lesser height from the road and these commercial properties. Views would remain partly screened by vegetation along the boundaries of these properties.	Minor adverse
					Winter, Year 1 (with all mitigation)	Minor Mitigation planting would help to further screen the flood defences, but at this stage it wouldn't be established.	Minor adverse
					Summer, Year 15	Negligible The flood defences, where visible would appear as minor elements in overall views. Mitigation planting would continue to screen views to the flood defences from these properties.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		People working and visiting the Macdonald Inchyra Hotel and Spa	Grass and scrubland grounds of the hotel, fields, woodland and pylons	Low	Construction	<p>Moderate</p> <p>People working and visiting Macdonald Inchyra Hotel and Spa would experience a moderate adverse visual disruption given the close-proximity and elevated views to the construction works and the potential site compound. The works would also include the loss of trees (including Category B trees), which would increase visibility to the surrounding road network.</p> <p>The majority of construction works are located to the north of the property and direct views from the eastern and southern sides of the hotel and grounds are expected to be limited given the aspect and intervening woodland. This would continue throughout the build period.</p>	Minor adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>There would be a minor adverse change to views from the hotel with the addition of the new flood wall (less than 1m along the bank) to the north and removed vegetation, although this would be seen in long views from the hotel itself, where there are already views to the surrounding road network in this direction.</p> <p>The new grassed embankment may also be slightly visible as it adjoins the hotel to the immediate north and east.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would replace the green outlook lost during construction, although at this stage the planting wouldn't be established.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>Over time the embankment would settle into the surrounding landscape. Mitigation planting would have also helped to re-establish bankside vegetation and screen views of the flood wall.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)		People working and visiting Galaxy Sports, Little Kerse playing fields	Road network, fields, woodland and pylons	Low	Construction	Moderate  People working and visiting the playing fields would experience a noticeable adverse visual disruption given the close-proximity of the construction of the flood defences. The works would also include the loss of mature trees (including Category A and B trees) adjoining the A905, which would enable greater visibility to the surrounding road network. This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Moderate  The new flood wall along both sides of the Flood Relief Channel (up to 1.7m in height, although mostly less than 1m) would be visible given the limited separation distance, although would appear as part of the property boundary.	Minor adverse
					Winter, Year 1 (with all mitigation)	Moderate  Mitigation planting (avoiding services) would replace trees lost during construction and would help to soften and screen views to the adjoining roads and vehicles on them. Mitigation planting however would not be established at this time.	Minor adverse
					Summer, Year 15	Negligible  Mitigation planting would have helped to re-establish bankside vegetation and would continue to screen views to the surrounding roads.	Negligible
		Cyclists on NCN Route 76 and users of Core Path 006/011 Inchyra Road	Urban landscape, road network, Macdonald Inchyra Hotel grounds and trees adjoining Inchyra Road and Grange Burn	High	Construction	Minor  Visual disruption experienced by users of the Core Path/ cycle route with views across Inchyra Road of the construction of the flood wall on the Macdonald Inchyra Hotel grounds and the potential site compound. The construction works would also involve the loss of scattered trees (including Category B trees) adjacent to Grange Burn, which would enable greater visibility of the hotel grounds. This would continue throughout the build period.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect		
Flood Cell 4 (cont.)					Winter, Year 1 (primary mitigation)	Negligible The flood wall (less than 1m) would be noticeable but would not be imposing in views given there is existing visibility to traffic on the A-road.	Negligible		
					Winter, Year 1 (with all mitigation)	Negligible Mitigation planting would reinstate a green outlook in this direction from the Core Path/ cycle route. However, planting would not be established at this time.	Negligible		
					Summer, Year 15	Negligible The continued growth of mitigation planting would have helped to soften and screen views to the wall, as seen beyond the road network from the Core Path/ cycle route.	Negligible		
				Cyclists on NCN Route 76 and users of Core Path 016/038	A905, industrial landscape, road network, fields and woodland	High	Construction	Major Users of this cycle route/ Core Path would experience views to the construction of the flood defences, the potential site compound at the Macdonald Inchyra Hotel grounds and loss of mature and roadside trees (including Category A and B trees). Users of this path/ route would experience immediate and long views to the works adjacent to route/ path and it is likely these would be closed for a period of time during construction (although a diversion should be in place). This would continue throughout the build period.	Major adverse
						High	Winter, Year 1 (primary mitigation)	Minor There would be a slightly adverse change to the view south with the addition of the flood defences, although they would appear at a lesser height from the Core Path.	Moderate adverse
						High	Winter, Year 1 (with all mitigation)	Minor Mitigation planting would help to soften views to the flood walls and embankment. Mitigation planting however would not be established at this time.	Moderate adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 4 (cont.)					Summer, Year 15	Negligible The flood defences, where visible would appear as minor elements in overall views and over time, the embankment would be settled into the landscape. Mitigation planting would continue to screen views to the flood defences from the Core Path.	Negligible
		Users of proposed Core Path 016/039 Polmont Woods to Wholeflats Road	Grange Road, MacDonald Inchyra Hotel and grounds, Galaxy Sports site, fields and woodland	High	Construction	Moderate Users would experience a visual disruption during construction with views from the proposed path towards works on the A905/ Wholeflats Road. There would also be visibility to the loss of mature trees (including Category A and B trees) along the A905 and at MacDonald Inchyra Hotel and Spa. It is likely, the northern section of the path would be closed to enable the works, although a diversion route would be provided.  This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Minor The flood walls, less than 0.5m at the intersection of the A905/ Wholeflats Road and Grange Road, would be visible from the proposed Core Path given the limited separation distance, although would appear as minor elements and in part as the boundary walls to adjoining properties.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Negligible Mitigation planting would help to soften views to the new walls and this planting would help to replace trees lost during construction, although these will take time to reach the same maturity.	Negligible
					Summer, Year 15	Negligible Mitigation planting would continue to screen views to the flood walls.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 5		Residents (Smiddy Brae)	Road network, industrial landscape and woodland	High	Construction	Negligible Long views to the construction works from residential properties, with distant, partly filtered views to the potential site compound to the north.	Negligible
					Winter, Year 1 (primary mitigation)	Negligible Only long views to the defences and any vegetation removal.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible Only long views to the defences and any vegetation removal.	Negligible
					Summer, Year 15	Negligible Only long views to the defences, which are now well established with replacement vegetation also being established.	Negligible
		Road travellers (A905 and A904)	A905 and A904 roads, industrial landscape, fields and woodland	Medium	Construction	Moderate Lane closures along the A905 and A904 where construction works occur is likely during the construction phase, delaying traffic. Where possible, road travellers would experience a moderate amount of temporary visual disruption given the close-proximity to the works directly adjacent to the road, including the construction of the flood walls and embankments and loss of some mature vegetation. This would continue throughout the build period.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 5 (cont.)		Road travellers (A905 and A904) (cont.)			Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The view along the road would be somewhat different with the loss of scattered mature trees and with visibility of the flood defences given their height and length.</p> <p>The flood walls along the southern side of the A905 will create a sense of enclosure (with walls located at back of footpath of between 1m to 1.75m along an approximately 150m stretch) and restrict views south to fields. However, visibility of the flood defences would be over a short duration (along this section of the road and given the speed of vehicles) and would form part of views to the wider industrial landscape. Defences to the north of the road are set back from the road, and lower in the landscape, but would still be discernible in the landscape.</p> <p>Defences adjacent to the River Avon as it flows under the A904 are set back from the road, but require removal of riverside vegetation to install them, thereby minorly adversely effecting the views from the road.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would help to soften views to the flood defences from the roads and this would reinstate a green outlook for road travellers. However at this stage the planting would not be established.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>The flood wall along the southern side of A905 would remain apparent in views, given the limited space for mitigation planting here, and the wall would also limit views south to fields along a short section of road. However as this is for a short section of road and for road travellers moving at speed, this is negligible.</p> <p>Mitigation planting would have softened views to the majority of flood defences from the roads and would have reinstated a green outlook for road travellers.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 5 (cont.)		People working at Grangemouth Petrochemical complex	Industrial landscape	Low	Construction	<p>Major</p> <p>Visual disruption would be experienced by people working at Grangemouth Petrochemical complex with views to the construction of the flood defences, coastal revetment and in-water working areas at the edges of the industrial working areas.</p> <p>There would also be views of potential site compounds, buildings to be demolished and loss of vegetation (mainly in the form of scattered trees).</p> <p>This would continue throughout the build period.</p>	Moderate adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>People working at the petrochemical complex site would experience a minor change to original views as the new walls would generally appear as the boundary around the petrochemical complex.</p> <p>Given the angle of view, visibility of the coastal revetment, north of the River Avon, would be limited with the revetment at the Scottish Water Treatment Works forming a minor element in overall views.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would replace trees lost during construction where possible to soften views to the new walls. However at this stage the planting would not be established.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>Over time walls would have settled into the surrounding landscape. Mitigation planting would soften visibility of the flood walls.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 5 (cont.)		Recreational users of Grangemouth Golf Course	Golf Course grounds and woodland	Low	Construction	Minor  Slight visual disruption experienced by recreational users and visitors to the golf course, with elevated views from the club house and car parking area to the construction of the flood defences and potential site compounds. Views would however be from a distance and filtered by intervening vegetation.  This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Negligible  The flood defences are not expected to be discernible elements in views given the separation distance and intervening vegetation.	Negligible
					Winter, Year 1 (with all mitigation)	Negligible  Proposed mitigation planting, will help to screen views of the walls, however because the flood defences are not expected to be discernible elements, this would not have a large impact.	Negligible
					Summer, Year 15	Negligible  Over time, mitigation planting along with the growth of existing vegetation would have screened views of the walls.	Negligible
		Recreational users of Polmonthill Ski Centre	Ski Centre and woodland	Low	Construction	Minor  Slight visual disruption experienced by recreational users, with elevated views from the dry ski slope to the construction of the flood defences. Views would however be filtered by intervening vegetation.  This would continue throughout the build period.	Minor adverse
					Winter, Year 1 (primary mitigation)	Negligible  The flood defences are not expected to be discernible elements in views given the separation distance and intervening vegetation, including proposed mitigation planting.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 5 (cont.)					Winter, Year 1 (with all mitigation)	Negligible Proposed mitigation planting, will help to screen views of the walls, however because the flood defences are not expected to be discernible elements, this would not have a large impact.	Negligible
					Summer, Year 15	Negligible Over time, mitigation planting along with the growth of existing vegetation would continue to screen views.	Negligible
		Cyclists on NCN Route 76 and users of Core Path 016/038 Inveravon to Wholeflats Roundabout and the Antonine Wall Trail	A905 road, industrial landscape, fields and woodland	High	Construction	Major Users would experience a large amount of temporary visual disruption given the close-proximity of the route to the works including the construction of the flood walls and loss of mature vegetation. This would continue throughout the build period.	Major adverse
		Winter, Year 1 (primary mitigation)	Moderate The view along the cycle route/ path would be somewhat different with the loss of scattered mature trees and with visibility of the flood defences given their height and length, particularly along the southern side of the A905. Along this section, the flood walls would create a sense of enclosure and limit views south to fields and woodland.	Major adverse			
		Winter, Year 1 (with all mitigation)	Minor The flood defences are to be screened in part by mitigation planting, helping to intergrate then into the landscape. However at this stage the planting wouldn't be established.  Secondary mitigation in the form of appropriate wall finishes and materials and sensitive detailing, as agreed with The Local Planning Authority and HES would be required to protect the setting and qualities of the world heritage site.	Moderate adverse			

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 5 (cont.)					Summer, Year 15	Negligible Mitigation planting would have softened views to the flood defences from the cycle route/ path and this would reinstate a green outlook for users. The flood defences along the road would remain visible but would form part of views to the wider road network and industrial landscape.	Negligible
		Users of Core Path 016/036 Jinkaboot Bridge, 016/022 Polmonthill and the Antonine Wall Trail	A905 road, industrial landscape, fields and woodland	High	Construction	Moderate Visual disruption experienced by users with direct views to the construction of a flood wall, flood gate and loss of roadside vegetation. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate Users would experience a noticeable change to the original views where there would be visibility of the new flood wall (up to 2m in height). This would be partially screened by existing vegetation.	Major adverse
					Winter, Year 1 (with all mitigation)	Minor Secondary mitigation in the form of appropriate wall finishes and materials and sensitive detailing, as agreed with The Local Planning Authority and HES would be required to protect the setting and qualities of the world heritage site. Existing bankside vegetation and mitigation planting would help to screen and soften views to the flood defences. At this stage however the planting would not have established.	Moderate adverse
					Summer, Year 15	Negligible Mitigation planting would help soften views to the flood defences, settling them somewhat into the surrounding landscape, although the flood wall along the southern side of the A905 would remain apparent in views.	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 6		Road travellers (A904/ Grangemouth Road)	Industrial landscape, fields, woodland and roadside trees	Medium	Construction	<p>Minor</p> <p>Views north to the works from the A904 would generally be screened by roadside vegetation and intervening woodland. Currently, gaps in vegetation enable visibility of Grangemouth Petrochemical complex and fields on either side of the Scottish Water access road.</p> <p>During construction, the potential site compound would be visible but only for a short duration.</p> <p>This would continue throughout the build period.</p>	Minor adverse
					Winter, Year 1 (with mitigation)	<p>Negligible</p> <p>Given the separation distance and intervening vegetation, there would be limited visibility of the flood defences from the A904/ Grangemouth Road.</p>	Negligible
					Summer, Year 15	<p>Negligible</p> <p>Given the separation distance and intervening vegetation, there would be limited visibility of the flood defences from the A904/ Grangemouth Road.</p>	Negligible
		People working at Grangemouth Petrochemical complex	Industrial landscape and the Firth of Forth	Low	Construction	<p>Major</p> <p>Visual disruption experienced by people working at Grangemouth Petrochemical complex with views to the construction of the flood defences, coastal revetment and in-water working areas, however these views are in-keeping with the industrial nature of the site.</p> <p>There would also be views of potential site compounds and loss of vegetation. Some of the works are located along coastal areas of the cell and in places (within the petrochemical complex site), would appear similar to current industrial activities</p> <p>This would continue throughout the build period.</p>	Moderate adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 6 (cont.)					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>People working at the petrochemical complex site would experience only a minor change to original views as the new embankments and walls would generally appear as the boundary around the petrochemical complex and Scottish Water site and would be in keeping with the industrial look of the site. Given the angle of view, visibility of the coastal revetment along the petrochemical complex would be limited with the revetment at the Scottish Water site forming a minor element in overall views.</p> <p>Without any replacement planting, the area has lost some of the only greenness to it.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting would replace trees lost during construction where possible to soften views to the new walls. However at this stage the planting would not be established.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>Grass would establish on the embankments, settling them somewhat into the surrounding landscape. Mitigation planting would soften visibility of the flood walls.</p>	Negligible
		People working at Scottish Water, Kinneil Kerse Waste Water Treatment Works	Industrial landscape, Firth of Forth and woodland	Low	Construction	<p>Major</p> <p>Noticeable visual disruption experienced by people working at the Scottish Water treatment works, with direct views to the embankment to the north, and wall to the east, coastal revetment, two potential site compounds and loss of vegetation including woodland to the east.</p> <p>This would continue throughout the build period.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 6 (cont.)					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>People working at these properties would experience a change to original views as the defence with embankment (up to 2.6m in height) would form a visual barrier to expansive views towards the coastal edge and distant hills. The sheet pile wall with earth embankment would however retain a partial green outlook and help to screen views to Grangemouth Petrochemical complex buildings to the north.</p> <p>Some vegetation would have been lost at construction, which at this stage is not replaced, especially the woodland area next to the road. This reduces the greenness of the area, opening up views.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Trees in the woodland adjacent to the local road would be lost as part of construction, and would be replaced as part of the mitigation, although they would not have established at this stage.</p> <p>Grass would establish on the embankments, settling them somewhat into the surrounding landscape.</p> <p>Mitigation planting would replace vegetation around the cell to help revegetate the area and help the embankment settle into the surrounding landscape.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>Mitigation planting would now be established and would have softened the visibility of the grassed embankment and industrial buildings beyond.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Flood Cell 6 (cont.)		Users of non-designated paths (dog walkers etc.)	Industrial landscape, Firth of Forth and woodland	Medium	Construction	<p>Moderate</p> <p>Non-designated paths are located to the east of the Scottish Water site and these are popular with dog walkers. Users of these paths would experience views, partially screened by woodland, to the construction of the embankment, rock revetment and potential site compound adjoining the Scottish Water site. As well as distant views to works further north, at Grangemouth Petrochemical complex. These views would however form part of overall, expansive views to the petrochemical complex and the coastal edge. It is likely that there would also be disruption to accessing this area during construction.</p>	Moderate adverse
					Winter, Year 1 (primary mitigation)	<p>Minor</p> <p>The flood walls to the far west are not expected to be discernible elements in views given the separation distance.</p> <p>The grassed embankment with wall and coastal revetment east of the Scottish Water site would be partially visible in views, although existing woodland would partially screen views and these flood defences would appear as minor elements in overall views.</p>	Minor adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Trees in the woodland adjacent to the local road would be lost as part of construction, and would be replaced as part of the mitigation, although they would not have established at this stage.</p> <p>Grass would establish on the embankments, settling them somewhat into the surrounding landscape.</p> <p>Mitigation planting would replace vegetation around the cell to help revegetate the area and help the embankments settle into the surrounding landscape</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>Over time, the embankment would settle into the surrounding landscape and visibility of flood defences would be reduced with mitigation planting.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
<b>Key Viewpoints</b>							
Key Viewpoint 1	Footpath on Falkirk Golf Club at Hole 16.  View north-east from a footpath along the eastern side of the golf course next to Hole 16, towards the rear of the Bus Depot/Cockburn Auto Electrics.	Users of the golf course	Boundary trees/ woodland, filtered views of bus depot, open aspect within golf course	Medium	Construction	Major  There would be visual disruption to the immediate view during construction of the flood wall with the removal of vegetation opening up the view to the adjacent industrial units.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  Once constructed, there will be a noticeable change to the original view, with the loss of existing vegetation, and little screening to the industrial units.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor  With mitigation planting, including a mix of sizes, the view towards the north will again be screened, enclosing the view back to the surrounds of the golf course.	Minor adverse
					Summer, Year 15	Negligible  The planting will have matured and there should be little change.	Negligible
Key Viewpoint 2	New Carron Village, on approach to Core Path 001/020 from the residential estate, towards Mungal Community Woodland, facing south-west	Users of the footpath	View south-west from a footpath exiting New Carron Village residential estate towards Mungal Community Woodland. Core Path 001/020 runs adjacent to the rear of the estate at the	Medium	Construction	Major  There would be visual disruption to the immediate view during construction of the bund and the closure of the footpath and Core Path. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  Once constructed, there will be a noticeable change to the original view, with a new grassed embankment circa 3.8m high straight opposite. Vegetation along this section of the path and woodland in the central view would likely be retained.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 2 (cont.)			bottom of the footpath.		Winter, Year 1 (with all mitigation)	Moderate  There is limited mitigation which can be included here due to the size of the embankment. Additional planting on the embankment could help to reduce it's impact somewhat.	Moderate adverse
					Summer, Year 15	Minor  Over time, replacement vegetation (mainly grass and shrubs) between the existing re-routed Core Paths would be established, softening views to the re-routed path.	Minor adverse
Key Viewpoint 3	Core Path 001/018, River Carron Loop Path, HARTT and Bainsford Loop cycle paths, Mungal Community Woodland, facing south-east	Users of the paths and cycle routes	View south-east from the paths/ routes, in Mungal Community Woodland, towards houses at New Carron Village, partially screened by woodland.	High	Construction	Major  There would be visual disruption to the view during construction of the bund, given the open view across the grass area and loss of intervening shrubs, and this would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  Once constructed, there will be a noticeable change to the original view, with a new grassed embankment circa 3.8m high within the open space and some loss of vegetation. Woodland visible on either side of the existing key view image would remain.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate  There is limited mitigation which can be included here due to the size of the embankment. Additional planting on and around the embankment could help to reduce it's impact somewhat, and start to blend it into the landscape, however the embankment would remian visible in this view.	Major adverse
					Summer, Year 15	Minor  Over time, vegetation (mainly grass and shrubs) on either side of the bund in the distance would have been established, softening views and blending it into the background. However, the circa 3.8m high embankment would still be an imposing feature, seen by users of the Core Path from this viewpoint.	Moderate

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 4	Front driveway of residential property on Park Road, New Carron Village, facing west	Residents	View west from the driveway of a residential property, adjacent to Core Path 001/020, River Carron Loop Path and Bainsford Loop and a grassed area. Trees within Mungal Community Woodland along the River Carron and open grassed area to the rear.	High	Construction	Major There would be visual disruption to the view during construction of the bund given the close-proximity to the works, and this would continue throughout the build period.	Major adverse
					Winter, Year 1 (with mitigation)	Minor Once constructed, there will be a moderate change to the original view, with the slope of the grassed bund (currently the flat grassed area) gradually increasing in height to almost 1.2m towards woodland.	Moderate adverse
					Summer, Year 15	Negligible Over time the embankment would settle into the surrounding landscape.	Negligible
Key Viewpoint 5a	Stenhouse Road bridge, facing east	Users of the footpath adjoining Stenhouse Road bridge	View east towards the Dawson Mission, from Stenhouse Road bridge over the River Carron.	Medium	Construction	Major Adverse visual disruption from the bridge with the loss of some riverside vegetation on the side of the River Carron to allow for building of the wall and raising of the footpath. Construction traffic and machinery would further disrupt the view.  The temporary closure the bridge and subsequent diversion of traffic, would also cause visual disruption.  This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate The view from the bridge would be noticeably different with a reduction in mature vegetation (as well as a lack of replacement planting) along the riverbank and the new high flood wall behind the footpath, from 1.25m to 2m along its length. The existing retained vegetation will however partially screen the wall from this viewpoint, reducing its visual impact.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 5a (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>With riverside mitigation planting, especially a mix of large and small sizes, the riverbank would return to its vegetated state and start to soften and further screen the new walls. In the winter of year 1 this would have some impact, if a mix of sizes were used.</p> <p>Appropriate finishes to the walls (as agreed with the Local Planning Authority), including the possibility of including glass panels as windows along the wall, will help to break up the continuous stretch of wall, allowing views over to the Dawson Mission, and would integrate them into the landscape. However due to the size of the wall this would still be a considerable minor detrimental change to this view.</p>	Minor adverse
					Summer, Year 15	<p>Minor</p> <p>With mitigation planting and appropriate finishes, the view to the flood walls would now be partially screened and softened, but still regarded as a minor detrimental change to the existing view.</p>	Minor adverse
Key Viewpoint 5b	Stenhouse Road bridge, facing east	Road travellers	View east towards the Dawson Mission, from Stenhouse Road Bridge over the River Carron.	Medium	Construction	<p>Major</p> <p>Adverse visual disruption from the bridge with the reduction in riverside vegetation on the side of the River Carron to allow for building of the wall and raising of the footpath. Construction traffic and machinery would further disrupt the view.</p> <p>The temporary closure the bridge and subsequent diversion of traffic, would also cause visual disruption.</p> <p>This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Once constructed, there will be a noticeable change to the original view, given the reduction in mature vegetation. The new flood wall and the extent of vegetation loss would not be as apparent to road travellers, as it would be users of the footpath adjoining the road, given the height of the stone bridge and the speed of travel.</p>	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 5b (cont.)					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>With riverside mitigation planting of mixed large and small sized stock, the riverbank would return to its vegetated state and start to soften and further screen the new walls. In the winter of year 1 this would have some impact.</p> <p>Appropriate finishes to the walls, as agreed with the Local Planning Authority, including the potential use of glass panels, would integrate them into the landscape.</p> <p>Due to the speed of travel the view is only seen for a short time and the effect is therefore lessened.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>By year 15 the trees and riverside vegetation would be established and the wall would have settled somewhat into the surrounding landscape, the change in view experienced by road users would be negligible.</p>	Negligible
Key Viewpoint 6	Core Path 004/003 and the River Carron Loop Path, and the HArTT and Bainsford Loop cycle paths, adjacent to the Dawson Mission, facing west	Users of the paths and cycle routes	View west, along the Core Path/ River Carron Loop Path/ cycle paths with riverbank vegetation along the River Carron on the right and scattered trees along the northern boundary of the Dawson Mission on the left. A large pylon is visible	High	Construction	<p>Major</p> <p>Visual disruption to the view with the loss of some bank-side vegetation adjacent to the footpath as part of the working area and on the far side of the river due to in-water working. This creates greater visibility to the surrounding road network and residential properties. Construction traffic and machinery would further disrupt the view.</p> <p>Also possible visual disruption of filtered views of the bridge as it is replaced.</p> <p>The path will be closed for a period of time during construction of the wall and raising of the path, (although a diversion should be in place) which would prevent access and views in this area.</p> <p>This would continue throughout the build period.</p>	Major adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 6			above the height of trees in the central view.		Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The view from the path would significantly change due to the high flood wall in this location (approximately 2m). The path has been severed from the Dawson Mission area resulting in a loss of visual connectivity with the adjacent spaces and obstructing long views to the hills. The loss of some mature riverside vegetation would create a less green landscape, with no replacement planting.</p> <p>The footpath is to be slightly raised (as part of embedded mitigation) to help reduce the apparent height of the wall from the path.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>With mitigation planting, especially a mix of large and small sizes, the riverbank would start to return to its vegetated state and soften the new wall from the riverside. However, given the height of the wall and its location between the path and Dawson Mission area, mitigation planting along the riverbank would have limited impact on softening this view towards the wall.</p> <p>Appropriate finishes to the walls, as agreed with the Local Planning Authority, including the potential use of glass panels, would help reduce the effect of the wall, by allowing staggered views through it, thereby allowing some connection with the Dawson Mission and open space, reducing the sense of enclosure.</p>	Major adverse
					Summer, Year 15	<p>Minor</p> <p>The wall will remain a hard, high edge, which still segregates the path from the Dawson Mission area. Glass panels will allow some views through and a visual connection between the areas either side of the wall. Riverside planting will have matured and will create a green riverside view.</p> <p>The view however cannot be fully mitigated, and will be permanently changed</p>	Moderate

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 7	Core Path 009/1674 adjacent to Chapel Burn, east of Carronshore Road, facing south	Users of the Core Path	View south from Core Path 009/1674, which runs parallel to Chapel Burn and adjacent to the rear gardens of residential properties on Waters End.	High	Construction	<p>Major</p> <p>There would be a large amount of visual disruption to the view along the Chapel Burn during construction of the wall given the close-proximity to the works including the ramp to the river and burn and temporary culverting of the burn. Existing mature vegetation (including Category B trees) would be removed to facilitate the works, creating a stark view, and opening up the rear view of properties (reducing privacy).</p> <p>This would continue throughout the build period.</p> <p>It is also likely that the Core Path would be closed for periods of time during this phase (although a diversion would likely be in place), thereby stopping any views.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>Once constructed, there will be a detrimental change to the original view, due to the loss of mature vegetation.</p> <p>The new flood wall on the south of the burn (approximately 0.6m in height) and additional fence on top or next to it (as part of embedded mitigation) will be visible from the path, although this would be consistent with the original height of the existing fence. The houses will also now be more visible from the path, providing less privacy for residents.</p> <p>The 1m high wall to the north of the burn would be very exposed and form the edge to the footpath, restricting views to the burn.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation planting would over time help to screen views to the boundary wall and create a green waterside but at year one there would be limited growth. A mix of tree sizes is important along this section to help reduce this impact.</p> <p>The wall to the north of the burn would be very exposed and form the edge to the footpath, restricting views to the burn. Sensitive finishes would be important here.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 7 (cont.)					Summer, Year 15	Minor Over time replacement vegetation would have established within the burn, but the wall alongside the footpath would still be visible. This replacement vegetation would be managed as part of the flood scheme initially and therefore the burn and its environment would be potentially more visually attractive.	Moderate adverse
Key Viewpoint 8	Informal footpath adjacent to the River Carron, facing west	People visiting the River Carron Meander SINC	View west from informal footpath in the River Carron Meander SINC, with views to the River Carron, Carrondale Care Home and adjoining residential properties in Carronshore.	Medium (undesigned recreation route)	Construction	Moderate There would be some visual disruption to the view of the opposite bank during construction of the wall given the close-proximity to the works including the in-water working area. This would continue throughout the build period.	Moderate adverse
					Winter, Year 1 (primary mitigation)	Moderate Once constructed, there will be a noticeable change to the original view, with visibility to the wall (approximately 0.5 to 1.3m in height), although the care home and houses will not appear more prominent in the view as garden fences provide some screening. With no mitigation planting, replacing the riverside vegetation, the walls and fences would not be screened.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Moderate Mitigation planting will eventually soften and screen views to the wall, but would not be established at this point.	Moderate adverse
					Summer, Year 15	Negligible Over time, riverbank vegetation would be re-established, thereby reducing the visibility of the wall, and returning the view to something similar to present day.	Negligible
Key Viewpoint 9a	Bowhouse Road, adjacent to the northern boundary of Rannoch Park, facing south	Users of the footpaths adjacent to Bowhouse Road	View south from the southern end of Bowhouse Road, nearing the	Medium	Construction	Major There would be a major visual disruption to the view during the construction of the flood wall given the close proximity of works. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 9a (cont.)			insection with Rannoch Road. An existing embankment with mature trees forming the northern edge of Rannoch Park screens views to the grassed areas of the park. The roof of the park facilities building is visible as well as the tops of roadside trees and woodland beyond.		Winter, Year 1 (primary mitigation)	Major  Once constructed, users of the footpaths would experience a noticeable change to the original view, given the proximity of the 0.9m wall atop the embankment.  The row of mature trees are likely to be removed as part of the scheme given their limited life expectancy due to Chalara Ash Dieback disease. With no mitigation planting, views to the wall would be more apparent from this location.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate  Mitigation planting, including the use of large replacement trees, would also soften/screen views to the wall.  Appropriate wall finishes and detailing, as agreed with the Local Planning Authority, would help the wall integrate into the landscape. However due to the new size of the barrier between the road and the park, for path users there is still a moderate detrimental effect.	Moderate adverse
					Summer, Year 15	Minor  Although still visible, over time, mitigation planting would have softened and screen views to the wall, and it would have become part of the park infrastructure.	Minor
Key Viewpoint 9b	Bowhouse Road, adjacent to the northern boundary of Rannoch Park, facing south	Road travellers	View south from the southern end of Bowhouse Road, nearing the insection with	Medium	Construction	Major  There would be a major visual disruption to road travellers who would experience a view to the construction of the flood wall given the close proximity of works. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 9b (cont.)			Rannoch Road. An existing embankment with mature trees forming the northern edge of Rannoch Park screens views to the grassed areas of the park. The roof of the park facilities building is visible as well as the tops of roadside trees and woodland beyond.		Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The view from the road would be noticeably different as the new wall (0.9m in height) would be atop an existing embankment and given the loss of mature vegetation in poor health.</p> <p>The new flood wall and the extent of vegetation loss would not be as apparent to road travellers as it would be users of the footpath adjoining the road given the speed of travel and as the wall would only restrict visibility to the roof of the park building and the tops of some trees/ woodland beyond.</p>	Moderate adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>Mitigation planting, including the use of large replacement trees, would also soften/screen views to the wall.</p> <p>Appropriate wall finishes and details as agreed with the Local Planning Authority, would help the wall integrate into the landscape. However due to the new size of the barrier between the road and the park, for road travellers there is still a minor detrimental effect for road travellers.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>Over time, mitigation planting would have softened and screened visibility of the wall, and it would have become part of the park infrastructure.</p>	Negligible

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 10a	Abbots Road (B9132), adjacent to the western side of Zetland Park, facing south-east	Users of the footpath adjoining Abbots Road (B9132)	View south-east along Abbots Road. The western side of Zetland Park is visible beyond the road, including mature avenue trees atop embankments either side of the Grange Burn, a bridged pedestrian walkway and a kiosk to the left (which will be demolished as part of the Scheme).	Medium	Construction	<p>Major</p> <p>Adverse visual disruption will be experienced with views of the construction of the flood defences, given the close-proximity of the path with to the works.</p> <p>The construction works would require the removal of vegetation, mainly in the form of mature avenue trees (Category A and B) adjacent to the Grange Burn in Zetland Park. This would be a major change in views for users of the footpath overlooking this section of the burn.</p> <p>The in-water construction works would also have a visual impact.</p> <p>There may be visual disturbance due to increased traffic management measures and associated traffic infrastructure to allow for the construction of the works.</p> <p>This would continue throughout the build period.</p>	Major adverse
					Winter, Year 1 (primary mitigation)	<p>Major</p> <p>Once constructed, there will be a noticeable change to the original view, due to the loss of one row of mature trees along Abbot Road, reducing the green boundary to the park.</p> <p>As part of primary mitigation two rows of existing trees are retained, however the loss of a large number of mature trees, with no replacements, would detrimentally change this view and create a much more open view towards Zetland Park.</p> <p>The new flood wall, at 1.2m would effectively replace the boundary wall along the western side of the park, albeit with a basic finish.</p> <p>The new ramp and raised bridge has more of a detrimental visual impact here due to the height and size.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 10a (cont.)					Winter, Year 1 (with all mitigation)	Moderate  Appropriate wall finishes and details as agreed with the Local Planning Authority, would help the wall integrate into the local landscape.  Mitigation planting, including the use of large replacement trees, would also soften views towards the park, and help reinstate the green edge to the park.	Moderate adverse
					Summer, Year 15	Minor  Although the walls would still be visible, they would have become part of the park/road edge infrastructure. Mitigation planting would have fully reinstated the green edge to the park.	Minor adverse
Key Viewpoint 10b	Abbots Road (B9132), adjacent to the western side of Zetland Park, facing south-east	Road travellers	View south-east along Abbots Road. The western side of Zetland Park is visible beyond the road, including mature avenue trees atop embankments either side of the Grange Burn, a bridged pedestrian walkway and a kiosk to the left (which will be demolished as part of the Scheme).	Medium	Construction	Major  There would be a major visual disruption to road travellers who would experience a view to the construction of the flood defences, including the loss of mature avenue trees, demolition of the kiosk, and in river working, given the close proximity of works. They may also be traffic diversions.  This would continue throughout the build period	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  The view for road travellers would be noticeably different with the loss of some mature vegetation along the western side of Zetland Park (although two lines of trees have been retained) and the new 1.2m high flood wall, creating a less green outlook.  The new basic flood wall and the extent of vegetation loss would not be as apparent to road travellers as it would be users of the footpath adjoining the road, given the speed of travel.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 10b (cont.)					Winter, Year 1 (with all mitigation)	Minor  Appropriate wall finishes and details as agreed with the Local Planning Authority, would help the wall integrate into the local landscape.  Mitigation planting, including the use of large replacement trees, would also soften views towards the park, and help reinstate the green edge to the park.	Minor adverse
					Summer, Year 15	Negligible  The new flood wall would still be visible, but would appear as the western boundary of the park, as viewed by road travellers. Mitigation planting would have fully reinstated the green edge to the park.	Negligible
Key Viewpoint 11	Core Path 006/026, at the northern entrance to Zetland Park, facing south	Users of the Core Path and recreational users of the park	View south from Core Path 006/026 approaching the northern entrance gates of Zetland Park. Mature avenue trees along the Grange Burn are visible to the right and the listed war memorial to the left.	High	Construction	Major  There would be a major visual disruption during the construction of the flood walls, including the loss of some mature avenue trees and in river working, given the close proximity of works.  There may also be visual disturbance due to the in-water works and construction of the potential culvert (in 200m stretches) of the Grange Burn. This may result in a temporary change to the visual character of the burn.  The path may also be closed, with a diversion. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Major  The view from the Core Path/ park entrance would be noticeably different with the reduced mature vegetation along the burn and within the park and the addition of 1.5m high basic walls. These changes would restrict the views of the riverbank and create a less green landscape/ outlook from this viewpoint.	Major adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 11 (cont.)					Winter, Year 1 (with all mitigation)	Moderate  Appropriate wall finishes and details as agreed with the Local Planning Authority, would help the wall integrate into the local landscape.  Mitigation planting, including the use of large replacement trees, would also soften views within the park, and help reinstate the green edge to the park.	Major adverse
					Summer, Year 15	Minor  Although the walls would still be visible (and thereby a permanent change to the view), they would have become part of the park infrastructure. Mitigation planting would have fully reinstated the green edge to the park.	Moderate adverse
Key Viewpoint 12a	Dalratho Bridge (the intersection of Core Paths 006/1358, 006/1391 and 006/1400), northern boundary of Zetland Park, facing south	Users of the Core Paths	View south from Dalratho Bridge along Grange Burn and to mature line trees atop embankments. Zetland Park is visible to the left and residential properties on Abbots Road to the right.	High	Construction	Major  Adverse visual disruption from the bridge with the loss of mature trees on one side of the Grange Burn to allow for in-water working areas and building the walls. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Major  The view from the bridge would be noticeably different with the lack of mature vegetation along one side of the riverbank and the new basic flood walls forming boundaries on either side of the burn (up to 1.5m in height along the eastern side and up to 0.9m along the western/ Abbots Road) and creating a less green landscape/ outlook.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 12a (cont.)					Winter, Year 1 (with all mitigation)	Moderate  The flood walls, with sensitive detailing and appropriate finishing, as agreed with the Local Planning Authority, could blend with the park infrastructure and not be so visually intrusive.  Mitigation, in the form of large trees as replacements for the mature trees removed, will help to reduce the effect of the tree loss, however due to the mature size of the trees which have been lost, this is still a great impact to the view.	Major adverse
					Summer, Year 15	Minor  The flood walls, although apparent in this view, will now be seen as part of the park infrastructure and views towards the flood walls would be softened by mitigation planting.  Replacement tree planting would have grown and established, restoring the green view.	Moderate adverse
Key Viewpoint 12b	Dalratho Bridge, northern boundary of Zetland Park, facing south	Road travellers	View south from Dalratho Bridge along Grange Burn and to mature line of trees atop embankments. Zetland Park is visible to the left and residential properties on Abbots Road to the right.	Medium	Construction	Major  Adverse visual disruption from the bridge with the loss of mature trees on one side of the Grange Burn to allow for in water working areas and building the walls. There would also likely be road closures and diversions. This would continue throughout the build period.	Major adverse
					Winter, Year 1 (primary mitigation)	Moderate  The view from the bridge would be noticeably different with the lack of mature/any vegetation along the riverbank and the new flood walls forming boundaries on either side of the burn (up to 1.5m in height along the eastern side and up to 0.9m along the western/ Abbots Road) and creating a bare landscape/ outlook. However, as this view is seen from a side angle and from a moving vehicle, it would have slightly less of an effect than from adjoining Core Paths/ footpaths.	Moderate adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 12b (cont.)					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Mitigation, in the form of large trees as replacements for the mature trees removed, will help to reduce the effect of the tree loss, however due to the mature size of the trees which have been lost, this is still a noticeable impact to the view.</p> <p>The flood walls, with sensitive detailing and appropriate finishing, as agreed with the Local Planning Authority, will help the Scheme to blend in with the park infrastructure and not be so visually intrusive.</p> <p>As this view is seen from a side angle and from a moving vehicle, there would be slightly less of an effect than from adjoining Core Paths/ footpaths.</p>	Moderate adverse
					Summer, Year 15	<p>Minor</p> <p>The flood walls, although apparent in this view, will now be seen as part of the park infrastructure and views towards the flood walls would be softened by mitigation planting.</p> <p>Replacement tree planting would have grown and established, restoring the green view.</p> <p>As this view is seen from a side angle and from a moving vehicle, there would be slightly less of an effect than from adjoining Core Paths/ footpaths.</p>	Minor adverse
Key Viewpoint 13a	Corner of Park Road and Ronaldshay Crescent, facing north-west	Users of the footpaths adjacent to the road	View north-west from Ronaldshay Crescent, near the intersection with Park Road. View to	Medium	Construction	<p>Major</p> <p>Adverse visual disruption given the loss of mature trees on both sides of the Grange Burn to allow for in water working areas and building the flood walls, disrupting this view. This would continue throughout the build period.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 13a (cont.)			mature trees on embankments either side of the Grange Burn and Grangemouth Bowling Club beyond.		Winter, Year 1 (primary mitigation)	Major  The view would be majorly different with the lack of any vegetation along the burn (including the loss of the mature trees) and the new basic flood walls (up to 0.8m in height along this stretch) creating a bare landscape/ outlook. Views over the burn, of buildings and infrastructure, will now be much more apparent.  A new footpath along the burn side of Park Road, as part of primary/embedded mitigation, will help to visually reduce the full height of the wall, as well as providing footpath access along this stretch.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate  Sensitive detailing and appropriate finishes to the wall, as agreed with the Local Planning Authority, as part of secondary mitigation, will help integrate the walls visually into the local landscape.  Mitigation in the form of large replacement trees, for the mature trees removed, will help to reduce the effect of the tree loss. However due to the mature size of the trees which have been lost, this is still a noticeable change to the view.	Moderate adverse
					Summer, Year 15	Minor  The walls and path would have now become part of the street infrastructure with a green backdrop and views of the western bank should now be screened.  This is however still a minor change in view from the existing situation, with a reduction in the connection with the burn.	Minor adverse
Key Viewpoint 13b	Ronaldshay Crescent, facing north-west	Road travellers	View north-west from Ronaldshay Crescent, near the intersection with Park Road. View to mature trees on embankments	Medium	Construction	Major  Adverse visual disruption from the road given the loss of mature trees on either side of the Grange Burn to allow for in water working areas and building the flood walls.  There are also likely to be road closures and diversions, disrupting this view. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 13b (cont.)			either side of the Grange Burn and Grangemouth Bowling Club beyond.		Winter, Year 1 (primary mitigation)	Moderate  The view for road travellers would be noticeably different with the lack of any vegetation along the burn (including the loss of the mature trees) and the new basic flood walls (up to 0.8m in height along this stretch) creating a bare landscape/ outlook. Views over the burn, of buildings and infrastructure, will now be much more apparent.  However, as this view is seen from a moving vehicle, it would have slightly less of an effect than from adjoining paths.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor  The flood walls, with sensitive detailing and finishing, (as agreed with the Local Planning Authority), and some large replacement trees will help the Scheme to blend into the local landscape. However due to the mature size of the trees which have been lost, this is still a detrimental change to the view.  As this view is seen from a moving vehicle, it would have less of an effect than for users of adjoining footpaths.	Minor adverse
					Summer, Year 15	Negligible  The walls and path would have now become part of the street infrastructure with a green backdrop and views of the western bank should now be screened.	Negligible
Key Viewpoint 14a	Grangeburn Road, facing north-west	Users of the footpath adjacent to the road	View north-west from Grangeburn Road to mature riverbank vegetation at the Grange Burn.	Medium	Construction	Major  There would be a large amount of visual disruption to the view along the Grange Burn during construction of the walls given the close-proximity to the works, including in-water working areas and the loss of mature vegetation, opening up views. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 14a (cont.)			Commercial properties/ office buildings are visible beyond.		Winter, Year 1 (primary mitigation)	<p>Major</p> <p>The view would be noticeably different with no riverside vegetation the new basic flood walls (up to 1m in height along this stretch) creating a bare landscape/ outlook. Views over the burn, of buildings and infrastructure, will be much more apparent.</p> <p>A new footpath along the burn side of Grangeburn Road, as part of the primary mitigation, will help to visually reduce the full height of the wall, as well as providing footpath access along this stretch.</p>	Major adverse
					Winter, Year 1 (with all mitigation)	<p>Moderate</p> <p>Sensitive detailing and finishes to the wall, as agreed with the Local Planning Authority, as part of secondary mitigation, will help integrate it visually into the local landscape.</p> <p>Mitigation in the form of large replacement trees, for the mature trees removed, will help to reduce the effect of the tree loss. However due to the mature size of the trees which have been lost, this is still a noticeable change to the view.</p>	Moderate adverse
					Summer, Year 15	<p>Minor</p> <p>The walls and path would have now become part of the street infrastructure with a green backdrop and views of the western bank should now be screened.</p> <p>This is however still a minor change in view from the existing situation, with a reduction in the connection with the burn.</p>	Minor adverse
Key Viewpoint 14b	Grangeburn Road, facing north-west	Road travellers	View north-west from Grangeburn Road to mature riverbank vegetation at the Grange Burn. Commercial properties/ office	Medium	Construction	<p>Major</p> <p>There would be a large amount of visual disruption to the view along Grange Burn during construction of the wall given the close-proximity to the works including in-water working areas and the loss of mature vegetation.</p> <p>There are also likely to be road closures and diversions, disrupting this view. This would continue throughout the build period.</p>	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 14b (cont.)			buildings are visible beyond.		Winter, Year 1 (primary mitigation)	Moderate  The view for road travellers would be noticeably different with no vegetation along the riverbank and the new basic flood walls (up to 0.5m in height along this stretch) creating a less green landscape/outlook.  However, as this view is seen from a moving vehicle, it would have slightly less of a negative effect than for users of adjoining paths, which has been assessed above in Key Viewpoint 14a.	Moderate adverse
					Winter, Year 1 (with all mitigation)	Minor  The flood walls, with sensitive detailing and finishing, (as agreed with the Local Planning Authority), and some large replacement trees will help the Scheme to blend into the local landscape. However due to the mature size of the trees which have been lost, this is still a detrimental change to the view.  As this view is seen from a moving vehicle, it would have less of an effect than for users of adjoining footpaths.	Minor adverse
					Summer, Year 15	Negligible  The walls and path would have now become part of the street infrastructure with a green backdrop and views of the western bank should now be screened.	Negligible
Key Viewpoint 15a	Grangeburn Road, facing north	Users of the footpaths adjoining the road	View north from the intersection of Grangeburn Road and Taylor Court to mature trees on embankments	Medium	Construction	Major  There would be a large amount of visual disruption to the view along Grange Burn during construction of the walls given the close proximity to the works including in-water working areas and the loss of mature vegetation along the southern side of the burn. This would continue throughout the build period.	Major adverse

Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 15a (cont.)			either side of the Grange Burn. A large warehouse is visible beyond.		Winter, Year 1 (primary mitigation)	Major  The view would be noticeably different with the lack of mature vegetation along the southern side of the riverbank and the new southern basic flood wall (atop the existing embankment and up to 0.6m in height along this stretch).  This would create a less green landscape/ outlook with the wall blocking views of the bankside vegetation. Views would also be slightly opened up to the large warehouse beyond.	Major adverse
					Winter, Year 1 (with all mitigation)	Moderate  Sensitive detailing and finishes to the wall, as part of secondary mitigation, will help integrate it visually into the local landscape.  Mitigation in the form of large replacement trees, for the mature trees removed, will help to reduce the effect of the tree loss. However due to the mature size of the trees which have been lost, this is still a noticeable change to the view.	Moderate adverse
					Summer, Year 15	Minor  The southern wall would have now become part of the street infrastructure with a green backdrop and views of the large warehouse beyond should be fully screened.  This is however still a minor change in view from the existing situation, with a reduction in the connection with the burn.	Minor adverse
Key Viewpoint 15b	Grangeburn Road, facing north	Road travellers	View north from the intersection of Grangeburn Road and Taylor Court to mature trees on embankments either side of the Grange Burn. A	Medium	Construction	Major  There would be a large amount of visual disruption to the view along Grange Burn during construction of the wall given the close-proximity to the works including in-water working areas and the loss of mature vegetation.  There are also likely to be road closures and diversions, disrupting this view. This would continue throughout the build period.	Major adverse



Flood Cell/ Key Viewpoint Number	Location	Visual Receptors	Existing View (Predominant Features)	Sensitivity of Visual Receptors	Assessment Timescale	Magnitude of Effect	Significance of Effect
Key Viewpoint 15b (cont.)			large warehouse is visible beyond.		Winter, Year 1 (primary mitigation)	<p>Moderate</p> <p>The view for road travellers would be noticeably different with the lack of mature vegetation along the southern riverbank and the new basic 0.6m high flood wall (atop an existing embankment) to the south of the burn. This would create a less green landscape/ outlook and increase visibility to the large warehouse beyond.</p> <p>However, as this view is seen from a moving vehicle, it would have less of a negative effect than for users of adjoining paths, which has been assessed above in Key Viewpoint 15a.</p>	Moderate adverse
					Winter, Year 1 (with all mitigation)	<p>Minor</p> <p>The flood walls, with sensitive detailing and finishing, (as agreed with the Local Planning Authority), will help it blend it into the local landscape. Large replacement trees in front of the flood wall will also help screen the wall. However due to the mature size of the trees which have been lost in the near view, and the loss of connection with the burn, this is still a detrimental change to the view.</p> <p>As this view is seen from a moving vehicle, it would however have less of an effect than for users of adjoining footpaths.</p>	Minor adverse
					Summer, Year 15	<p>Negligible</p> <p>The southern wall would have now become part of the street infrastructure with a green backdrop and views of the large warehouse beyond should be fully screened.</p>	Negligible

# Environmental Impact Assessment Report

Appendix B9.9 – Outline Design - Flood Wall and Bridge  
Finishes and Gate Types Report

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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



**GRANGEMOUTH**  
Flood Protection Scheme  
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## Appendix B9.9 – Outline Design - Flood Wall and Bridge Finishes and Gate Types Report

### 1. Overview

The types of wall and bridge finishes and gate types to be used along the length of the Proposed Scheme and the locations of these are yet to be finalised and will involve consultation with the Local Authority and Historic Environment Scotland (where flood walls are located within the UNESCO Frontiers of the Roman Empire (Antonine Wall) World Heritage Site and Buffer Zone).

The types of wall finish which are being proposed for the Scheme are:

- Stone Clad Walls;
- Brick Clad Walls;
- Formed/patterned Concrete Walls;
- Plain Concrete Walls;
- Sheet Pile Walls; and
- Glass Barriers.

Note: Grassed embankments are the other form of flood protection measure used within the Scheme.

The wall finishes proposed for this Scheme are located on both sides of the wall.

The flood gate types are also discussed in Section 9 below.

### 2. General Principals

The consideration on the type of wall finish to be used relates to a number of issues:

**Locality** – the existing local architecture around and about the new walls and bridges;

**Sensitivity** – how sensitive is the area, how many people will be seeing the walls and how regularly they are seen;

**Nature/Type of area** – industrial/ public recreation/ residential etc;

**Feasibility** – what is practical in the space available, access to both sides of the wall for maintenance; and

**Cost** – the cost differential between the types of wall and bridge finishes have to be balanced.

### 3. Stone Clad Walls

The stone clad walls are to match in with the local architecture, as well as create a consistency in appearance through the project. There are a number of stone types used locally within the existing walls or architecture, however the most predominant stone is a sandstone type.

This type of wall finish is expensive, due to the cost of materials and workmanship, so would be used in the most sensitive areas, or which are viewed by a large number of people.

Maintenance of the wall is to be taken into account, for example access to both sides needs to be easily obtained for regular checks of joints and repair.

Elements within the design of the stone clad walls which need to be considered are:

- **Laying pattern/Bond** - To match local/existing walls;
- **Finish** - Random rubble with sawn back (easier to build);
- **Sizes** – to limit the width of the walls, and therefore the size of the wall in the space, the depth of the stone should be as narrow as possible. However, it is necessary to achieve a solid, secure finish, and limit the maintenance of the walls as well as the effect of the size of the wall in the environment. Stone slips may be possible at 50mm depth. Stone panels should also be considered;
- **Colour** - Buff Sandstone;
- **Copings:**
  - Review copings used elsewhere in the area should be undertaken;
  - Contrasting colour to walls; and
- **Pillars** - pillars should be used at appropriate intervals to break up large expanses of wall, at gates and changes in direction.



**Figure 67: Sandstone type wall finish example**



**Figure 68: Stone wall with copes (Hawick)**

#### 4. Brick Clad Walls

Brick clad walls are to be located in areas which are visible to a large number of people/general public and where brick architecture is the predominant material in the vicinity.



**Figure 69: Brick flood wall in Edinburgh**

This type of wall finish is less expensive than a stone finish, but more expensive than a concrete finish due to the workmanship and additional materials required.

Maintenance of the wall is to be considered, for example access to both sides needs to be easily obtained for regular checks of joints.

Elements within the design of the brick clad walls which need to be considered are:

- **Laying pattern/ Bond** - To match local/existing walls;
- **Sizes** - to limit the width of the walls, and therefore the size of the wall in the space, the depth of the brick should be as narrow as possible. However, it is necessary to achieve a solid, secure finish, and limit the maintenance of the walls as well as the effect of the size of the wall in the environment. Brick slips may be possible.;
- **Colour** - Red;
- **Copings:**
  - A review of copings used elsewhere in the area should be undertaken;
  - Contrasting colour to walls should be considered;
- **Pillars** - pillars should be used at appropriate intervals to break up large expanses of wall; and
- **Fences** - fences to be located on top of walls for privacy to properties, when appropriate.

## 5. Formed/Patterned Concrete Walls

These are concrete walls which have a pattern imprinted on the wall at the time of construction. There is an opportunity to have different patterns to delineate different areas of the scheme, if desired.

A mould is made of the pattern and then reused a number of times along the wall, which makes this option reasonably cost effective.

Due to the patterns available for the wall finishes, this type of wall is appropriate for well used, but less sensitive areas within the Scheme.

There is potentially less maintenance required for this type of wall, dependant on the pattern chosen, as there are no joints.



**Figure 70: Example of a formed concrete wall**

Elements within the design of the formed concrete walls which need to be considered are:

- **Pattern:**

- Appropriate to the town and river context. There are various patterns available – see Figure below; and
- Large expanses of walls should be broken up with pillar effect or similar interruptions.

- **Colour:**

- the colour of the concrete can be dictated by the colour of the sand, cement and aggregate used to make it and with the use of stains. This should be specified clearly;

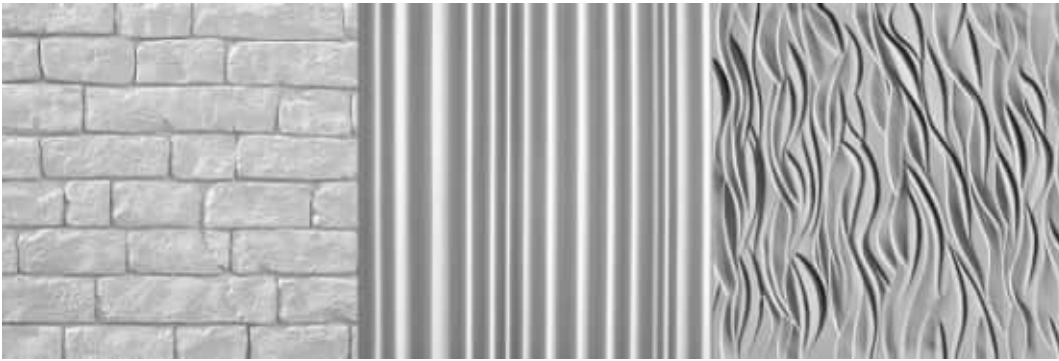


Figure 71: A selection of formed concrete pattern options (© RECKLI GmbH)

- **Copings:**

- Acid etched finish to the top of the concrete walls to be considered.
- Sloped cope to avoid water collection on the top

- **Artistic interventions** - possible artistic elements could be included within the walls design.

## 6. Plain Concrete Walls

This type of wall is formed of concrete, either set in a steel framework, or reinforced L-shaped units which are backfilled. They have no pattern on them and they are very industrial in appearance.

These are therefore more suited to industrial type areas within the Scheme. They are cost effective as they are cheaper to make and install, and there are limited maintenance requirements.



Figure 12: Plain concrete wall example

## 7. Sheet Pile Walls

This is the cheapest form of flood protection but is the least aesthetically pleasing.

This would be appropriate where space is limited (i.e. between a river and a road) and the appearance is less important, as this form is very industrial in nature. Strips of sheet metal can be incorporate along the top of the sheet pile to create a finish to the top (see below).

There are limited maintenance requirements for this type of flood defence.



Figure 73: Sheet Pile example in Perth



## 8. Glass Barriers

Glass barriers help to break up high and large expanses of new walls, opening up views which would otherwise be blocked.

They allow visibility through the walls, helping to reconnect the river and the users of the spaces, and reduce the sense of enclosure.

Glass panels are quite expensive, and therefore would only be appropriate in certain locations as noted above.

There would be some maintenance to the panels, but they are robust and self-cleaning.



Figure 74: Example of glass flood barriers in Wells-next-the-sea (© Flood Control International ltd)

It is possible to have 'windows' within an expanse of wall, rather than a continuous run of glass, as a different approach to opening up a section of wall.



Figure 75: Example of windows within a flood wall (Hawick)

It may be possible to include artistic elements within the glass barriers with appropriate etchings.



**Figure 76: Example of etching on glass (note - this barrier is not a flood wall)**

## 9. Bridges

The Scheme requires the replacement of three bridges: the New Carron Road Bridge (Cell 1), Dalratho Road Bridge (Cell 4) and Reddoch Road Bridge (Cell 4). Each of the bridges have their own existing character and materials, as noted below:

- New Carron Road Bridge

The existing New Carron Road bridge is a single-span structure that carries a single lane, two-way carriageway (B902) and pedestrian footway (on downstream side) over the River Carron. The bridge deck appears to be of composite construction (steel beam support with a reinforced concrete deck) supported off, reinforced concrete bank-seat abutments, with a clear span of ~30m. The parapets are ~1.2m high, of steel construction (Type N1) with open steel mesh infill.

- Dalratho Road Bridge

The existing Dalratho Road bridge is a multi-span structure that carries a single lane, two way carriageway (Dalratho Road) over the Grange Burn, with pedestrian footways on either side. The deck is a reinforced concrete slab supported off reinforced concrete piers, located either side of the Grange Burn channel, with bankseat type abutments set slightly further back on both sides. The total length of the bridge deck is ~14m. The bridge parapets are decorative iron railings approximately 1m in height.

- Reddoch Road Bridge

The existing bridge is a single span reinforced concrete slab supported off what appears to be cast-iron beams. The bridge carries a single lane carriageway over the Millhall Burn. The total length of the bridge deck is ~4m. The bridge parapets are open steel framed approx. 1m high.

Replacement bridges will need to consider the existing local architecture and place (as noted in section 2 above), as well as any elements of the existing bridges which may be required to be replicated. Linking to the finish of any adjacent proposed floodwalls is also an important consideration.

Initial proposals include:

- New Carron Road Bridge

The proposed replacement bridge would be constructed on the same alignment as the existing bridge and would be a single span structure, of similar deck length and width, adopting a similar footprint as the existing

bridge. Construction form may vary with the new bridge designed to withstand flood loading up to a 200-year event. The deck parapets would be ~1.2m high, with a solid fill parapet on the upstream side, at least up to the 200-year flood level (inc. freeboard). The downstream side may be an open type of parapet.

- Dalratho Road Bridge

The proposed replacement bridge would be constructed to withstand loading from a 200-year flood event, is likely to be constructed on the same alignment as the existing bridge and have a similar footprint. The new structure may be designed as a single span, removing the need for piers on either side of the channel, but this may increase deck thickness and reduce clearance below the deck soffit, subject to construction form. Parapets are likely to be ~1.2m high and of solid construction on both sides of the deck due to the tidal nature of the watercourse.

- Reddoch Road Bridge

The proposed replacement structure may take the form of a rectangular box culvert. The culvert will be of reinforced concrete construction and have a similar footprint to the existing bridge. The parapets are likely to be ~1.2m high and be designed to withstand 200-year flood loading. The parapets would be of reinforced concrete construction (cast monolithic with the deck) and may be masonry clad to blend with the surrounding environment. The bed of the culvert would be sunk below the existing bed level and an artificial bed installed on the culvert to replicate the existing condition.

Bridges are to be designed as part of detailed design in consultation with the Local Authority.

## 10. Flood Gates

The Scheme will require flood gate access for pedestrians and/or vehicles where ramps are not appropriate or possible. There are different types of gates which require different maintenance and operational requirements. These include:

- Swing-Hinged Gates

Steel and/or aluminum gate permanently locked in place up against flood wall (until required), and suitable for locations where otherwise a step or ramp would be required over the wall. Securely sealed and locked with lever type locking handles.



**Figure 77: Swing-Hinged Gate (Kendal)**

- Lift-Hinged Gates

Steel and/or aluminum gate permanently locked in place up against flood wall (until required) with a raise-swing mechanism to avoid any recessed ground channels, suitable as a single or double leaf gate.



Figure 78: Lift-Hinged Gate (© Flood Control International ltd)

- Pivot Flood Gates

Steel gate with a raise – lower mechanism, locked into place. Suitable for more industrial locations.



Figure 79: Pivot Flood Gate (© Flood Control International ltd)

- Heavy Duty Sliding Gates

Steel gate kept in location alongside wall and slid into place when required. Avoids requirement for a swing area. Ideally suited for large openings in commercial locations.



Figure 80: Heavy Duty Sliding Gate (© Flood Control International ltd)

- Removable Gates

Channels for gates located at edges of walls, but gates kept in a nearby store. When required, the gate can be quickly installed by sliding the barrier panel into the upright channels and locking into place.



**Figure 81: Removable Gate (© Flood Control International ltd)**

Each type of gate has advantages and disadvantages and will be considered in more detail with the Local Authority at the detailed design stage.

## 11. Summary

Each type of wall, bridge and gate, as noted in this appendix, is suited to certain spaces due to the locality, sensitivity, nature/type of areas, feasibility and cost.

The wall and bridge finishes, and gate types will be chosen at the detail design stage in consultation with the Local Authority.

# Environmental Impact Assessment Report

Appendix B9.10 - Landscape, Ecology and Habitat Management  
Plan

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**Grangemouth Flood Protection Scheme 2024**  
**Falkirk Council**



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## Appendix B9.10 - Landscape, Ecology and Habitat Management Plan

### 1. Introduction

The outline Landscape and Ecological Habitat Management Plan (LEHMP) provides an overview of the planting and grass seeding types and locations required within the Site Boundary to mitigate for habitats lost or damaged during construction of the Grangemouth Flood Protection Scheme. The outline LEHMP also indicates locations within the Site Boundary that can be enhanced to provide positive effects for biodiversity and the local community.

It is anticipated that the Scheme will be completed in four phases over an up to 10-year programme (2026 to 2036) (see Chapter 4: The Proposed Scheme for more details). While, it is not possible at this assessment stage to confirm the locations of mitigation or enhancements sites in areas beyond the Site Boundary, at the detailed design stage, areas beyond the Site Boundary will be identified and secured for mitigation and positive effects for biodiversity in consultation with Falkirk Council.

A commitment to replace trees lost during construction with the Falkirk Council's planning department is discussed in more detail below.

The LEHMP documents will be finalised in advance of construction to contain updated baseline information and consider the full planting/restoration design of the Scheme and the intended construction methods. The final LEHMP will contain detail on the locations and techniques for restoration and creation of habitats and will be agreed in consultation with the relevant stakeholders.

The outline LEHMP describes the management responsibilities required following implementation of the planting and seeding. The landscape specifications in the Scheme contract, prepared as part of detail design by the appointed designer, will detail the maintenance and management requirements for each element of the landscape design over a two-year period following implementation, and will form part of the final LHEMP. The final LEHMP will also include a strategy for subsequent long-term management.

### 2. Design and Management Objectives

The planting design will aim to reinstate vegetation along the watercourses including the River Carron, River Avon, the Chapel Burn, the Grange Burn, the Westquarter Burn, Polmont Burn and Millhall Burn to provide long term, low maintenance native tree and scrub cover, and bank vegetation which reflect the existing vegetation and habitat types.

The Scheme has committed to a replacement of each individual parkland tree with a ratio of 1:1 large size trees in key areas, and a ratio of 3:1 (by area) for replacement woodland habitat. Where possible, woodland planting will be undertaken within the Site Boundary, however, additional areas of woodland planting will be identified beyond the Site Boundary at detailed design in consultation with Falkirk Council.

In the urban and industrial areas of Falkirk and Grangemouth, adjacent to rivers and burns, the soft landscape design will reflect the urban/townscape location and parkland type planting intention. Opportunities will be taken to enhance and extend the existing riparian habitats. The combined planting and seeding works will mitigate vegetation losses required to accommodate temporary construction access for the Scheme. Where possible low value or poor condition habitat will be enhanced to provide long term benefit for biodiversity and the local community.

Along the shoreline of the Firth of Forth, soft landscape design will aim to reinstate coastal habitats including saltmarsh and mudflat habitat and provide biodiversity enhancement where possible.

The planting design will reflect variations in the character of the river corridors as they pass through the urban fringe and industrial estates. It is anticipated that a matrix of habitats will be developed, and that natural regeneration will make a large contribution to the re-establishment of vegetation along the river corridors and the Firth of Forth shores.

The planting design is required to mitigate impacts on amenity and biodiversity and, in the long-term, improve the biodiversity value of the site in the following ways:

- provide new urban/amenity tree planting at a 1 to 1 ratio, at a large size, to replace losses and adding additional trees where opportunities allow;
- replace other trees lost due to construction (including those along riversides and in wooded areas) and identifying additional areas for tree planting within, and where appropriate, beyond the Site Boundary as agreed with Falkirk Council at detailed design;
- replace trees that are lost as a result of Chalara ash dieback disease;
- reinstate all habitats disturbed or damaged to facilitate construction to their original condition, identifying opportunities for enhancement where possible;
- plant new hedgerows, along appropriate flood defences, to provide connectivity and habitat for wildlife;
- restore, maintain and improve where possible, the vegetated corridor along the rivers and burns to facilitate the movement of wildlife;
- include native shrub/scrub and wildflower meadows in the amenity and parkland areas with value for pollinating insects;
- planting appropriate scrub or shrub species on earth embankments to blend in with the surrounding landscape and provide habitat and connectivity for wildlife; and,
- use of native tree species in the replacement of woodland habitat and townscape planting, as appropriate.

### 3. Planting Zones

The soft landscape proposals in zones A to X will comprise:

- Zone A: Carron River Corridor – low- or high-level riparian planting
- Zone B: Falkirk Golf Club – scrub/ woodland mix, grassland
- Zone C: Stirling Road - streetscape planting
- Zone D: Stirling Road Playing Fields - scrub/ woodland mix, wildflower meadow
- Zone E: Mungle Community Woodland – scrub/tree planting, wildflower meadows, grassland, hedgerow planting
- Zone F: Carron River Amenity – scrub/ woodland mix, grassland
- Zone G: Chapel Burn – low or high riparian planting
- Zone H: Stables Adjacent to Dock Street – grassland, hedgerow planting
- Zone I: Port of Grangemouth – saltmarsh and mudflats, wetland planting (reedbeds), scrub/ woodland mix
- Zone J: Grange Burn (excluding Zetland Park) – low- or high-level riparian planting
- Zone K: Zetland Park – streetscape planting, amenity urban park, shrub planting, grassland, wildflower meadows, low-level riparian planting
- Zone L: Petrochemical Plant Land Adjacent to Firth of Forth Estuary – saltmarsh and mudflats, grassland, woodland/ scrub mix
- Zone M: Kinneil Area - wetland planting (reedbeds), hedgerow planting, grassland, scrub
- Zone N: River Avon Corridor – low- or high- level riparian planting including wet woodland planting, wetland planting (reedbeds and swamp)



- Zone O: Ineos Land North of Wholeflats Road – wetland planting (reeds), scrub/woodland mix, grassland, hedgerow
- Zone P: Wholeflats Road – streetscape planting
- Zone Q: Millhall Burn – riparian planting, amenity planting
- Zone R: Grange Burn (Flood Relief Channel) – riparian planting, wetland planting (reedbeds)
- Zone S: Inchyra Road – streetscape planting
- Zone T: Macdonald Inchyra Hotel – grassland/ scrub planting
- Zone U: Rannoch Park – streetscape planting/ amenity urban park
- Zone V: Polmont Burn – riparian planting
- Zone W: Westquarter Burn – low or high river level riparian planting
- Zone X: A9/ Grandsable Road - hedgerow planting, grassland planting, riparian planting

The locations of the zones are shown in Figures B9.a – B9.m at the end of this document.

### **Riparian planting at low- or high-level (Zones A, G, J, N, Q, R, V, W and X)**

Where existing vegetation located at a low river/burn level is disturbed during construction, it is to be reinstated to restore the bank to a naturalistic state. Where appropriate, this will include 'Green Engineering' options such as woven green willow where rapid slope stabilization is desirable. Species to be included in the low-level mix are those typical of open, un-managed riverbank which is periodically flooded.

Existing vegetation on the higher parts of the banks will be replaced with a (high-level) riparian scrub-woodland mix. Trees lost to the Scheme will be replaced in similar locations. Outwith the scrub/woodland planting areas a species rich grassland seed mix of native species typical of this habitat will be established. It is anticipated that natural regeneration, including self-seeded tree and shrub species, will contribute to the establishment of vegetation cover.

New riparian planting proposed in Zone J will be provided in combination with mitigation requirements in the Water Environment chapter (Chapter 10) of the EIA Report. These measures aim to restore morphological diversity along sections of the Grange Burn. Riparian planting in this location will provide positive effects for biodiversity as the Grange Burn banks primarily comprise amenity grassland which is of low ecological value. Plant species selected will be appropriate to the surrounding landscape which is a mixture of parkland and urban.

Where Grange Burn runs adjacent to Zetland Park (Zone K) (low-level) riparian planting is proposed along the bottom of the banks to link with the rest of the Grange Burn (Zone J), but still retain the more urban park style along the high parts of the banks. Local community groups will be consulted regarding the proposals.

Riparian woodland mitigation planting is proposed in Zone O. This comprises new strips of wet woodland alongside the River Avon where the bankside habitat is currently grassland, which will provide connectivity and habitat for wildlife.

### **Scrub/ woodland mix (Zones B, D, E, F, I, L, M, O and T)**

Replacement scrub/ woodland mix on the existing boundary of the Falkirk golf course in Zone B will be planted on the south side of the floodwall. There is the potential here to create a semi-natural woodland area using a mix of native trees and some low height shrubs to provide habitats on the boundary of the golf course and to reinstate the green corridor.

A woodland mitigation site is proposed in the corner of Stirling Road sports field in Zone D, which will provide connectivity to the adjacent Camelon Riverside Wildlife Site.

Scrub planting is proposed to help integrate the large defence embankment within the Mungle Community Woodland (Zone E) into the surrounding landscape. Additionally, new smaller areas of woodland trees will be planted within the amenity grassland, within the Site Boundary, to provide benefit to biodiversity.

The earth embankment defences within Zone K and Zone M will be planted with appropriate scrub/ shrub species to benefit biodiversity and help blend the embankment into the existing landscape.

A woodland mitigation site is proposed in Zone I adjacent to the River Carron.

### **Amenity urban parks (Zones K and U)**

Open, attractive, green spaces with trees and riverside planting adjacent to the Grange Burn and the flood relief channel, will be provided for public amenity use.

The proposals include retaining a number of existing large trees which are to be protected during construction. Trees which need to be removed due to the Scheme will be replaced with large-sized trees in, the same or near to, the original location. Where this is not possible or appropriate, due to the Scheme design (i.e. locations of flood defenses), then replacement additional trees (at a 3:1 ratio) will be planted elsewhere within the Site Boundary. New planting will be included in new urban amenity spaces to provide colour and nectar sources for pollinators as well as increase the biodiversity. The parks will include new amenity grass incorporating species rich areas, wildflower beds, and flowering lawns to provide wildlife habitat and visual interest.

Existing parks impacted by the flood works will be reinstated with appropriate similar or enhanced planting, as required.

### **Streetscape planting (Zones C, K, P, S and U)**

Seven existing streets within the project boundary will be affected by the works: Stirling Road, Abbots Road, Park Road, South Shore Road, Grangeburn Road, Rannoch Road and Inchyra Road.

The planting strategy will include:

- tree planting on the road-side/ river-side of the flood wall with tree species to suit the streetscape;
- tree planting along footpaths;
- swale planting;
- rich species grassland; and
- amenity grass.

### **Mudflats and saltmarsh (Zones I and L)**

Small strips of mudflat and salt marsh habitat are present within the Site Boundary around the edge of the Port of Grangemouth (Zone I) and Petrochemical Plant (Zone L). Where these habitats are disturbed or damaged during works, they will be reinstated or left to regenerate depending on the extent of disturbance. Methods of reinstatement and monitoring will be provided in the final LEHMP.

**Wetland (I, J, L, M, N, O and R)**

Swamp and reedbeds disturbed during the works will be reinstated and monitored. Full details will be provided in the final LEHMP. Where appropriate, reeds will be incorporated into the riparian planting along Grange Burn in Zone J to mitigate the loss of wetland habitat. Mitigation for the loss of wetland habitat is also proposed in the existing damp areas of Zone L. Appropriate species for wetland planting include common reed, reed canary grass and wet woodland species such as alder and willow species.

**Grassland (B, E, F, H, K, L, M, O, T and X)**

Grassland disturbed during the works will be reinstated to its original condition. Where appropriate, amenity grassland will be enhanced with wildflowers to make it species rich and benefit biodiversity.

**Hedgerow planting (E, H, M, O and X)**

Hedgerows damaged or lost to facilitate construction will be reinstated. New hedgerow planting is proposed along sections of flood defences including earth embankments, concrete walls and sheet pile walls. Planting will reflect existing vegetation within the area with a focus on native species. New and reinstated hedgerows will be designed to provide positive effects for biodiversity and creating habitat for wildlife by considering width, structure, species and connectivity.

**Wildflower meadows (D, E and K)**

The existing wildflower meadow in the corner of the Stirling Road sports fields in Zone D will be reinstated. New wildflower meadows will be created in Zetland Park and Mungle Community Woodland within areas of amenity to grassland to provide positive effects for biodiversity.

## 4. Strategy

The following strategies will be adopted to meet the above objectives:

**Strategy 1:** Maintain existing soft landscape features such as trees, shrub planting, woodland planting, riparian vegetation (where accessible), and grassed areas in a good condition, managing them where appropriate to enhance biodiversity and amenity. Grass and wildflower areas, to have a suitable mowing regime identifying frequency and heights of cuts.

**Strategy 2:** New planting using seeds and propagules of native species and local provenance, where appropriate and available; making allowances for the more formal amenity areas which may include some non-native species.

**Strategy 3:** Ensure healthy sustained growth for all new planting and grass swards. New tree planting stations will be maintained weed and grass free for the duration of the contract and maintenance periods.

**Strategy 4:** Establish procedures to inspect, monitor and report on the development of the landscape.

## 5. Management Responsibilities and Tasks

As part of the detailed design process, a maintenance schedule for all soft landscaping elements will be prepared which will indicate the maintenance tasks and the frequency of visits required to maintain the planting in the appropriate condition.

The contractor will be responsible for the first 104 weeks of post completion establishment maintenance. All ongoing maintenance beyond year 2 will fall under Falkirk Council's responsibility.

Within the final LEHMP, operations would typically be specified for a period of five years after completion. It is assumed that the Falkirk Council team will be responsible for the soft landscape maintenance after the end of

the contracted maintenance period and will review the long-term requirements for regenerative treatment (potentially including coppicing and thinning as specified) as and when necessary.

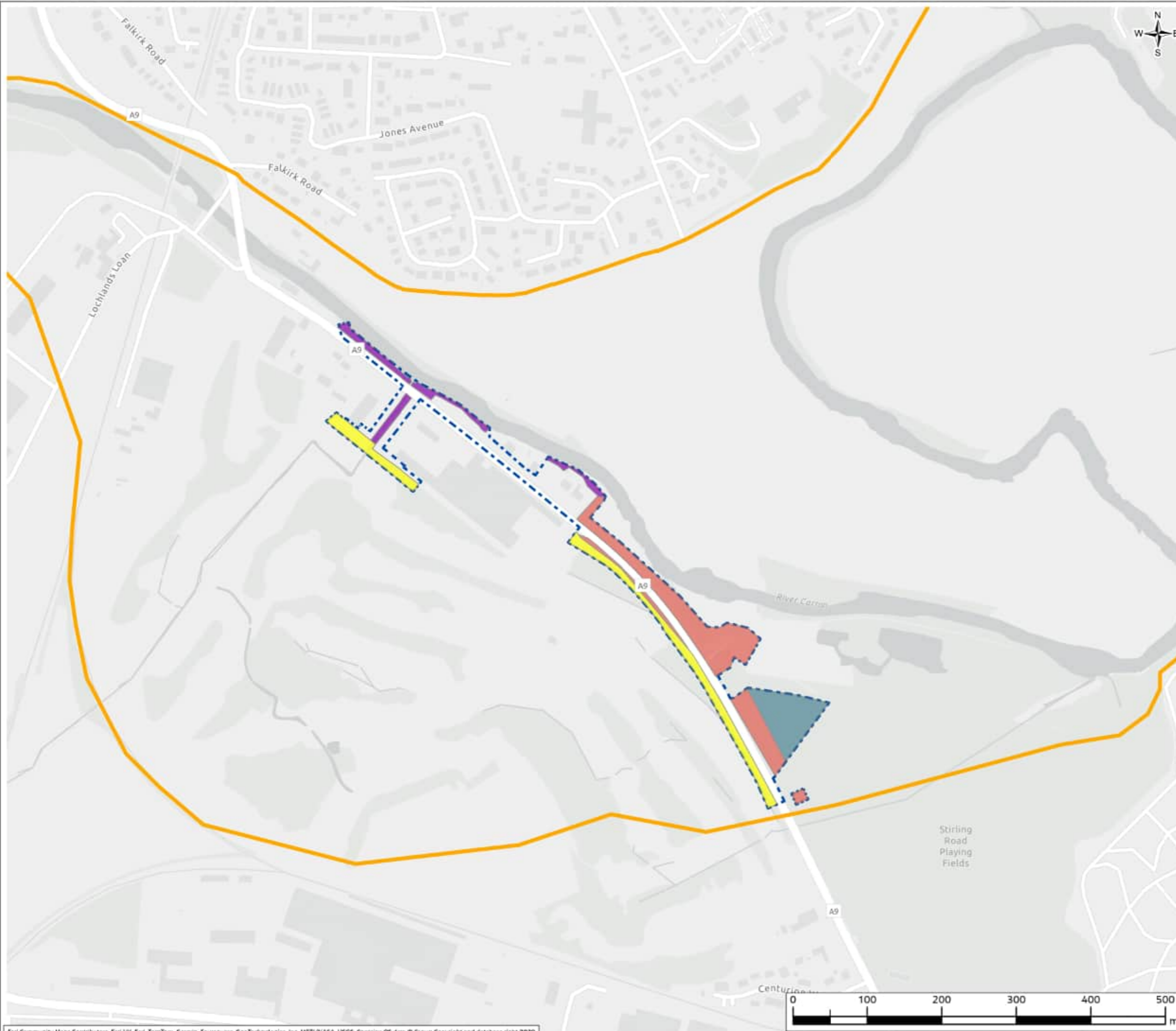
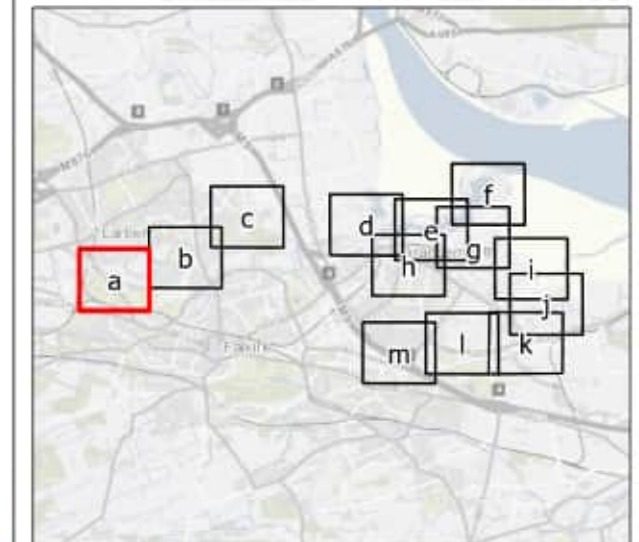
Assuming adequate establishment maintenance is undertaken and planting is allowed to fully establish and develop, the Scheme should become fully integrated into the landscape, with enhanced wildlife habitats and improved habitat connectivity resulting in positive effects for biodiversity with limited ongoing management and without the need for supplementary planting.

**FIGURE B9.10a**

**Legend**

**Landscape Zones**

- Zone A: River Carron Corridor
- Zone B: Falkirk Golf Club
- Zone C: Stirling Road
- Zone D: Stirling Road Playing Fields
- Site Boundary
- Cell 1 Boundary



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Client	FALKIRK COUNCIL
Project	Grangemouth Flood Protection Scheme

Drawing Title	LEHMP- Landscape and Ecological Habitat Management Plan	SHEET 1 OF 13
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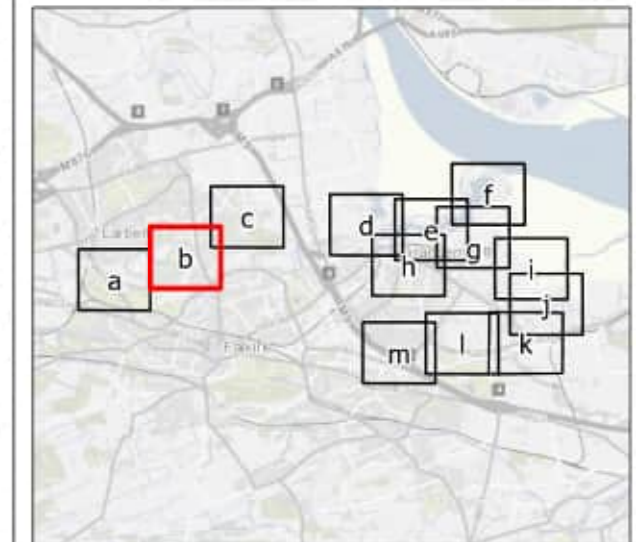
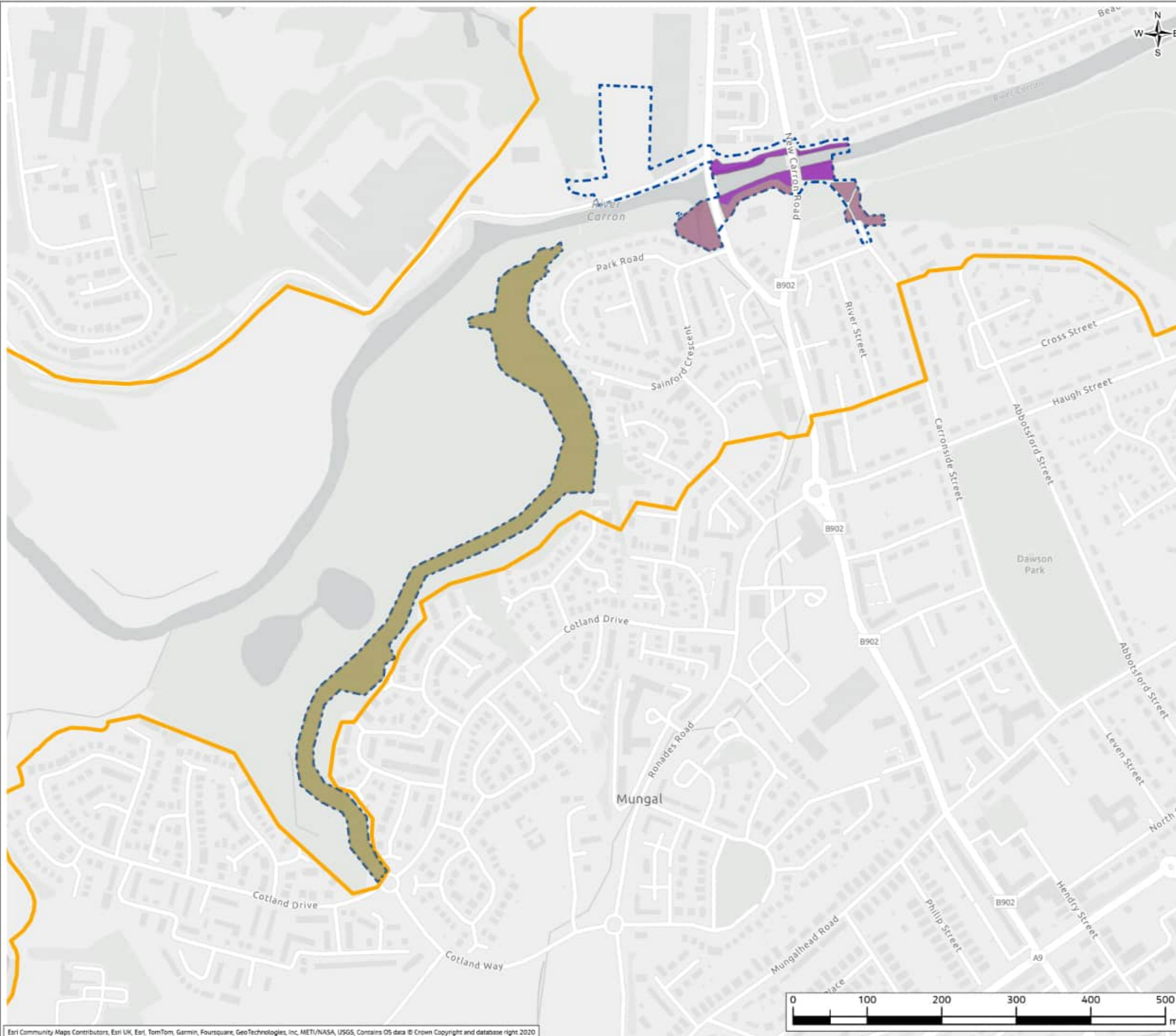


**FIGURE B9.10b**

**Legend**

**Landscape Zones**

- Zone A: River Carron Corridor
- Zone E: Mungle Community Woodland
- Zone F: Carron River Amenity
- Site Boundary
- Cell 1 Boundary



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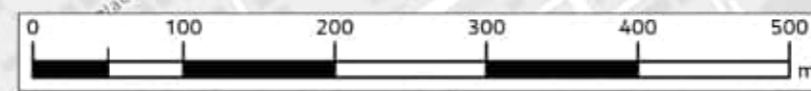
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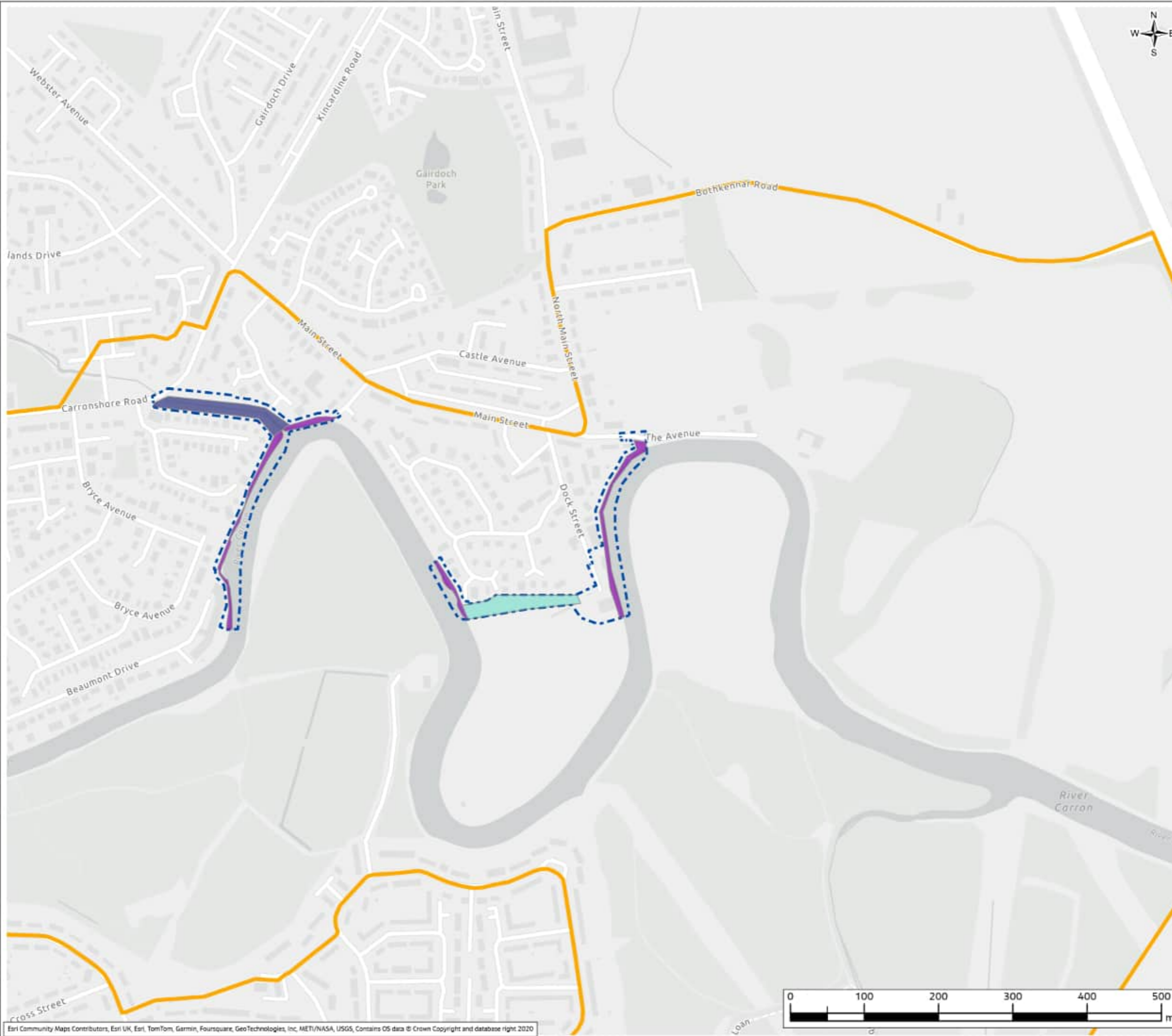
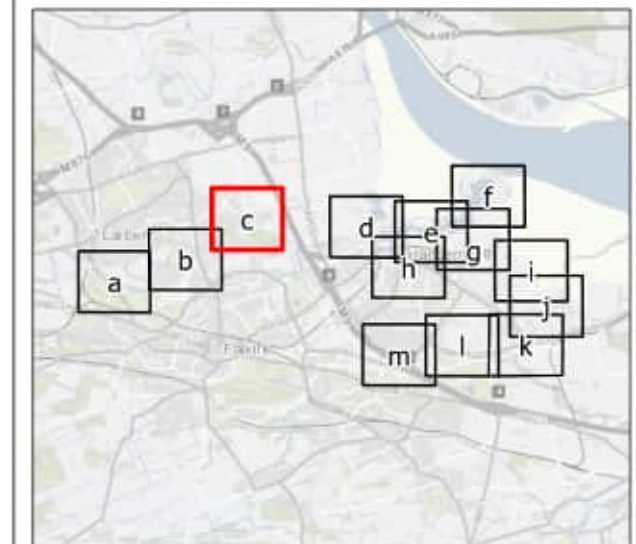


**FIGURE B9.10c**

**Legend**

**Landscape Zones**

- Zone A: River Carron Corridor
- Zone G: Chapel Burn
- Zone H: Stables Adjacent to Dock Street
- Site Boundary
- Cell 1 Boundary



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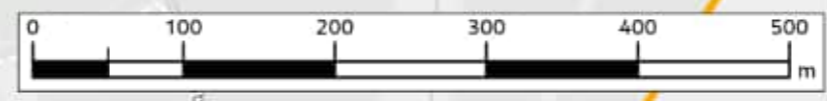


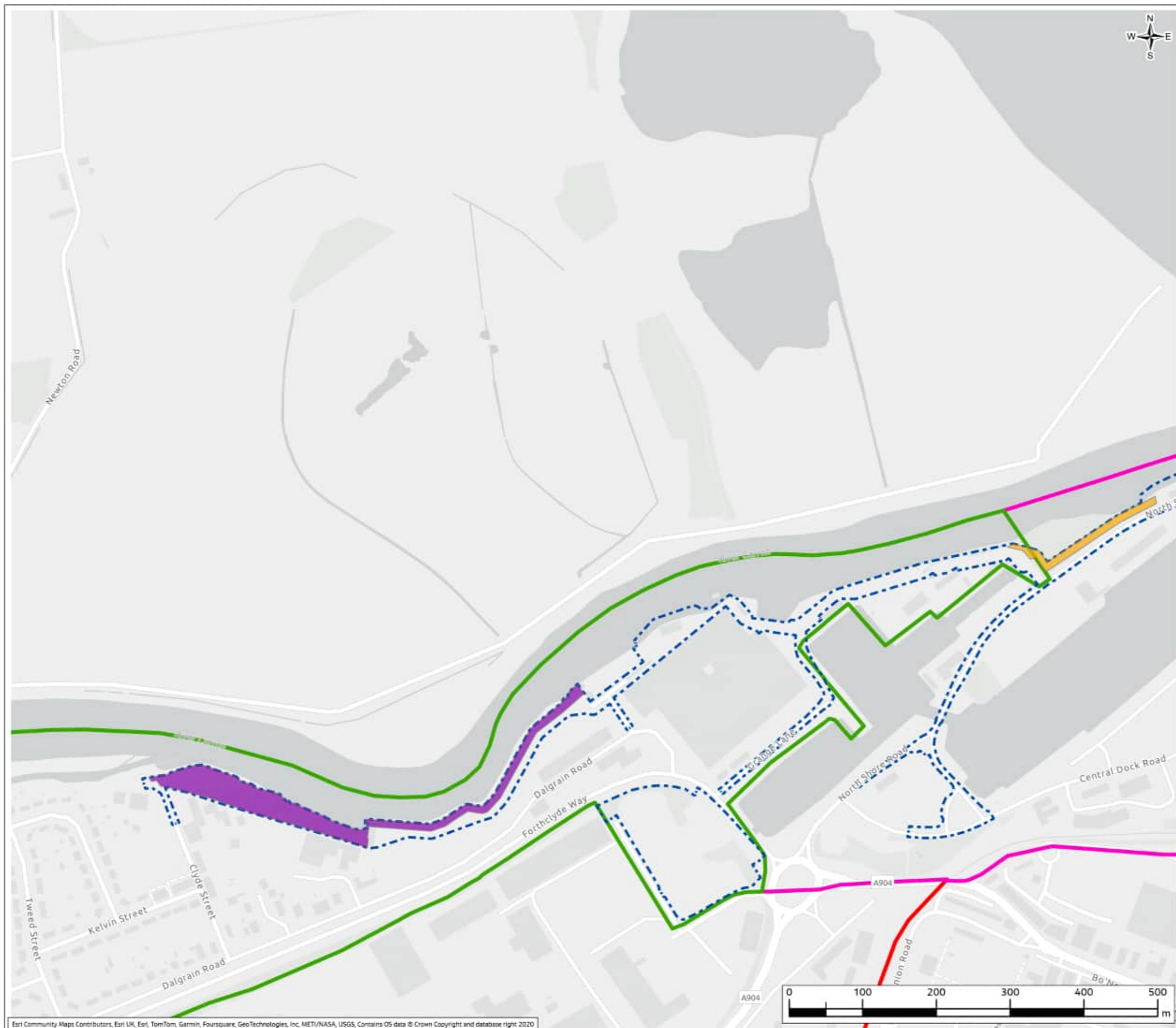
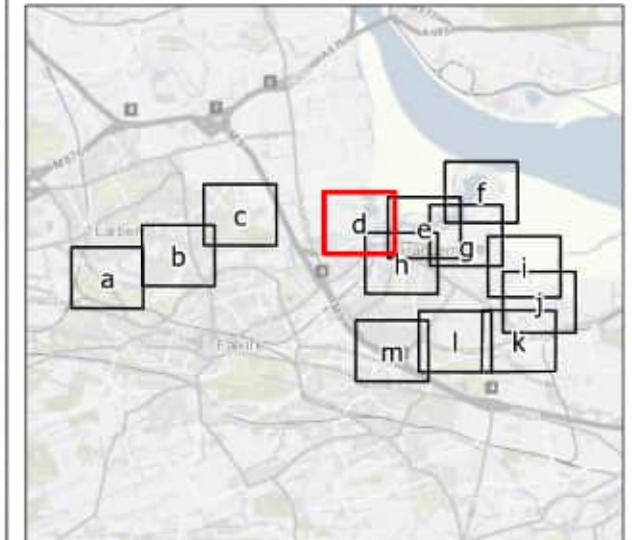
FIGURE B9.10d



**Legend**

Landscape Zones

- Zone A: River Carron Corridor
- Zone I: Port of Grangemouth
- Site Boundary
- Cell 2 Boundary
- Cell 3 Boundary
- Cell 4 Boundary



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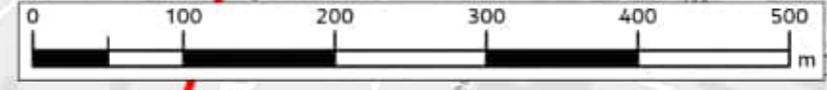


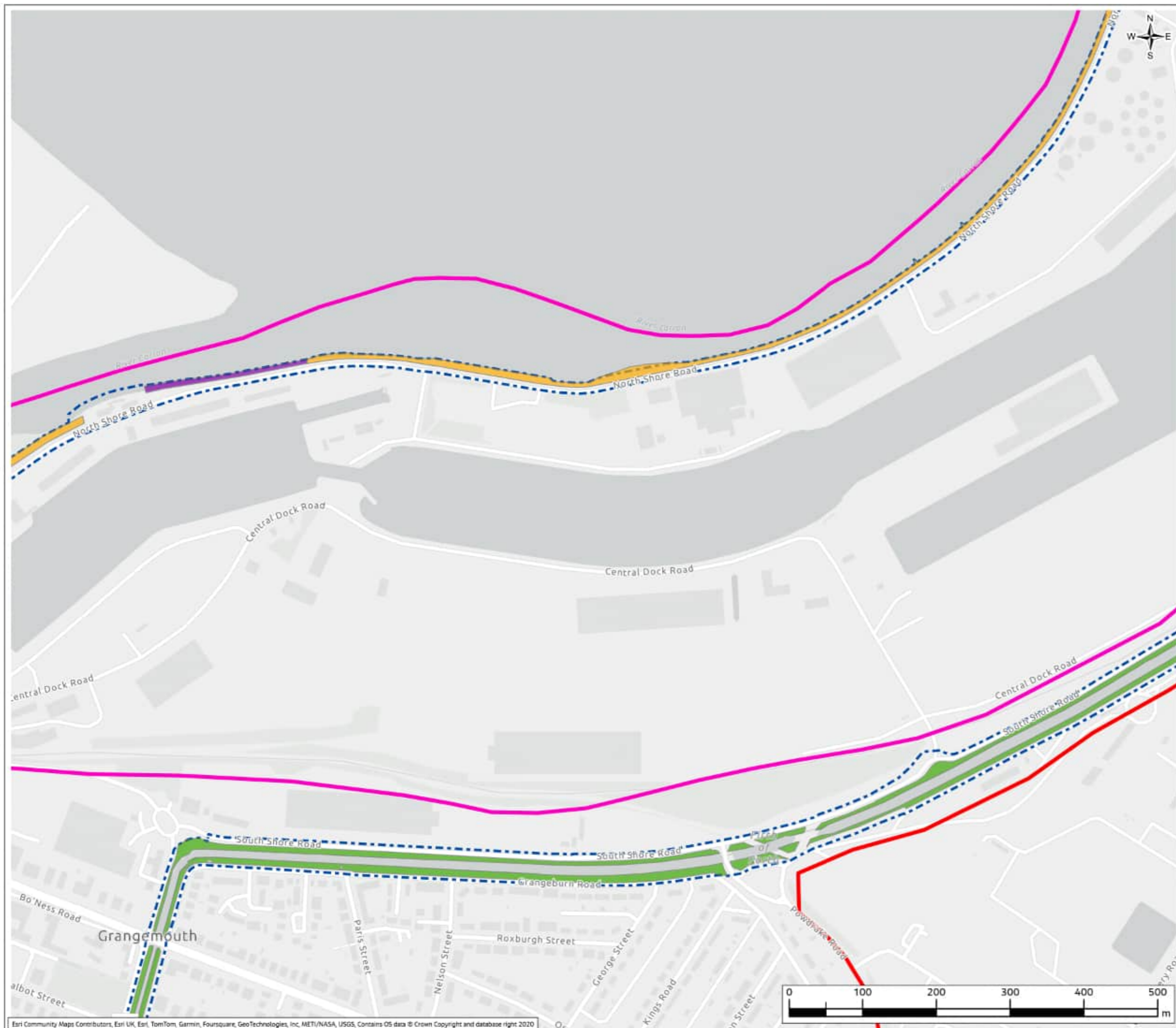
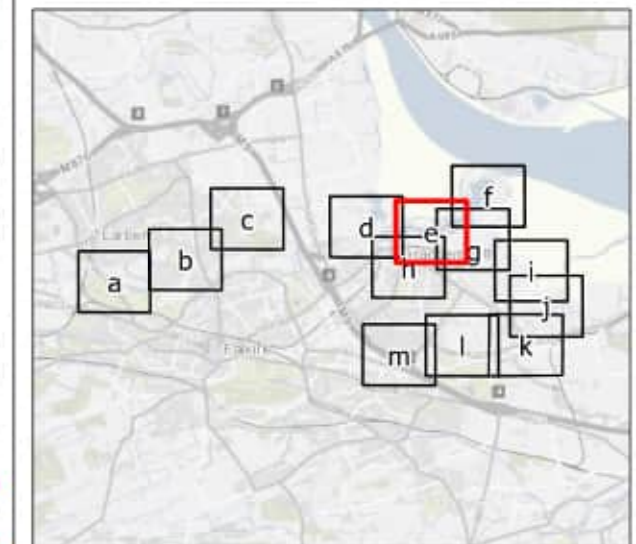


FIGURE B9.10e

**Legend**

Landscape Zones

- Zone A: River Carron Corridor
- Zone I: Port of Grangemouth
- Zone J: Grange Burn
- Site Boundary
- Cell 3 Boundary
- Cell 4 Boundary



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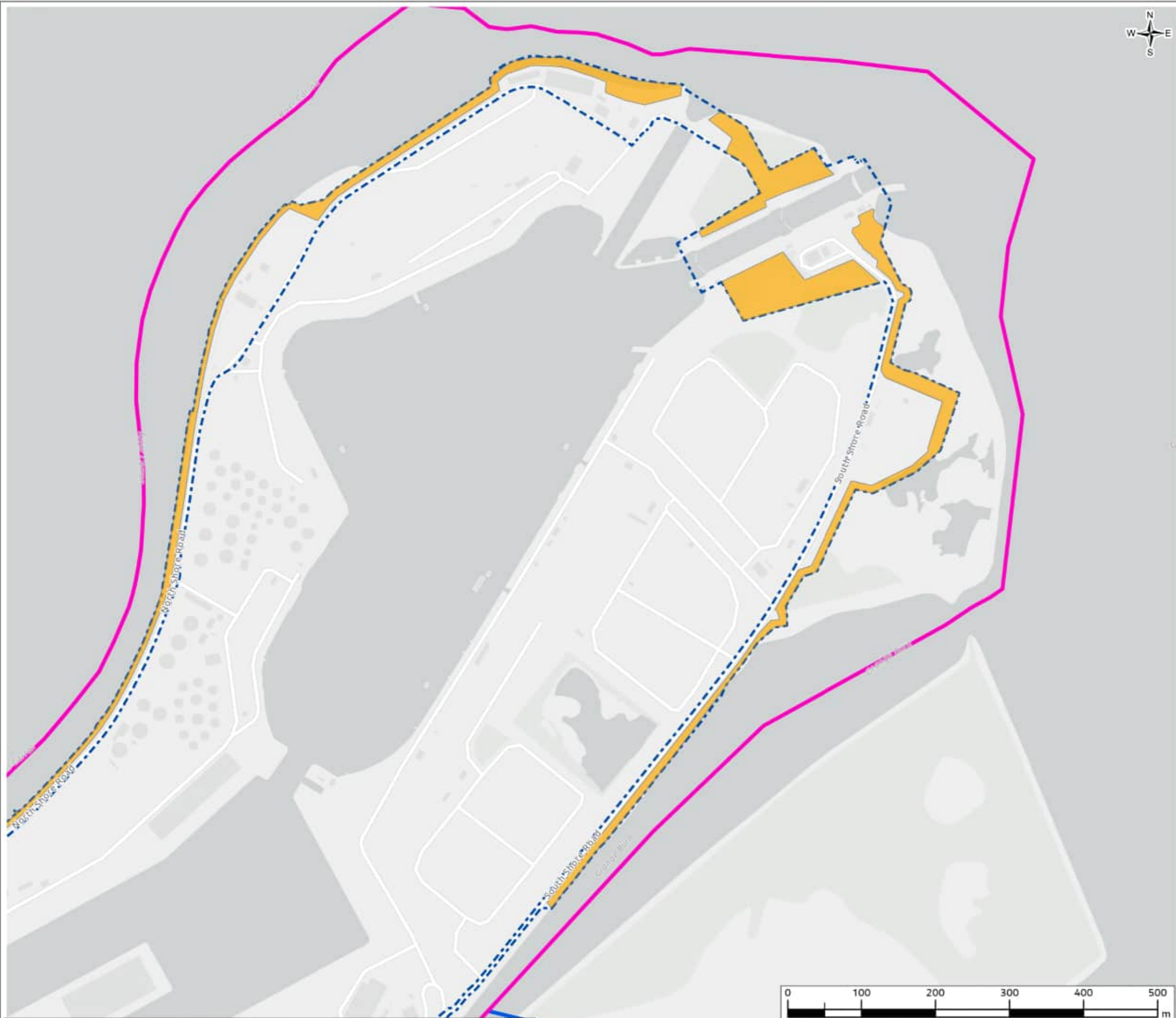
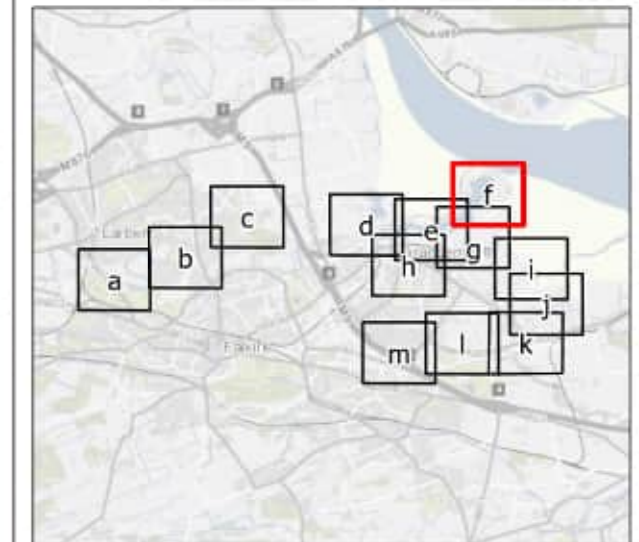
**FIGURE B9.10f**



**Legend**

Landscape Zones

- Zone I: Port of Grangemouth
- Site Boundary
- Cell 3 Boundary
- Cell 6 Boundary



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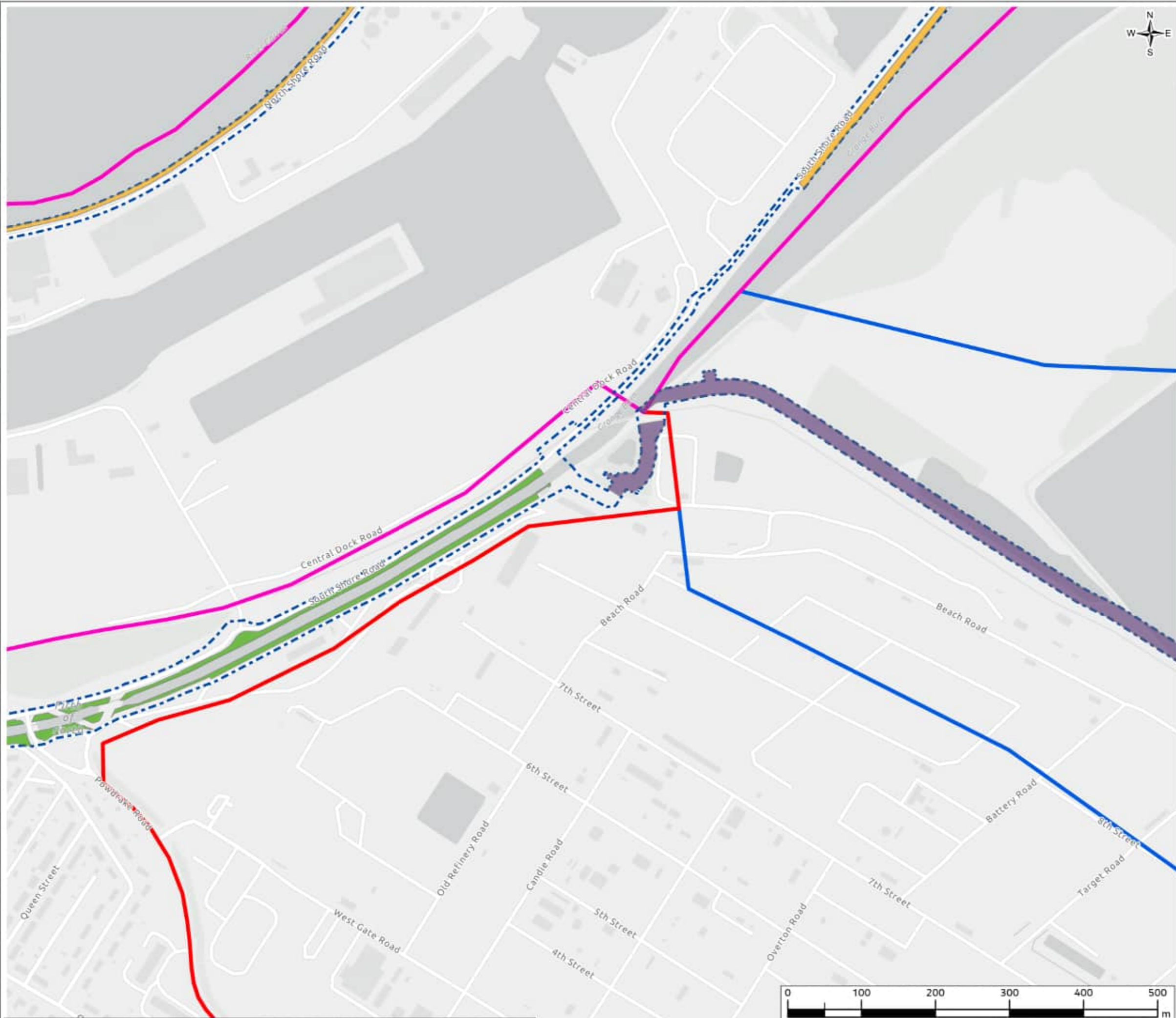
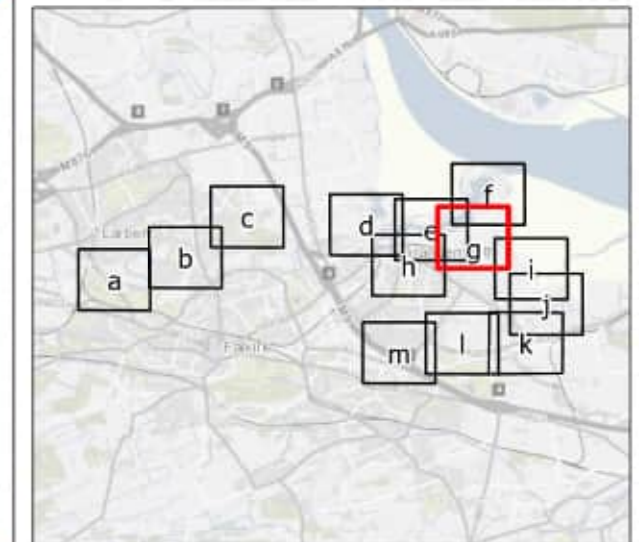
**FIGURE B9.10g**



**Legend**

**Landscape Zones**

- Zone I: Port of Grangemouth
- Zone J: Grange Burn
- Zone L: Petrochemical Plant Land
- Site Boundary
- Cell 3 Boundary
- Cell 4 Boundary
- Cell 6 Boundary



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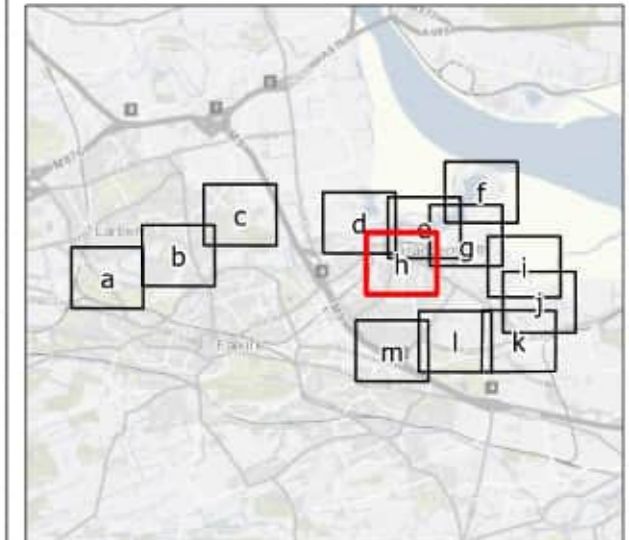
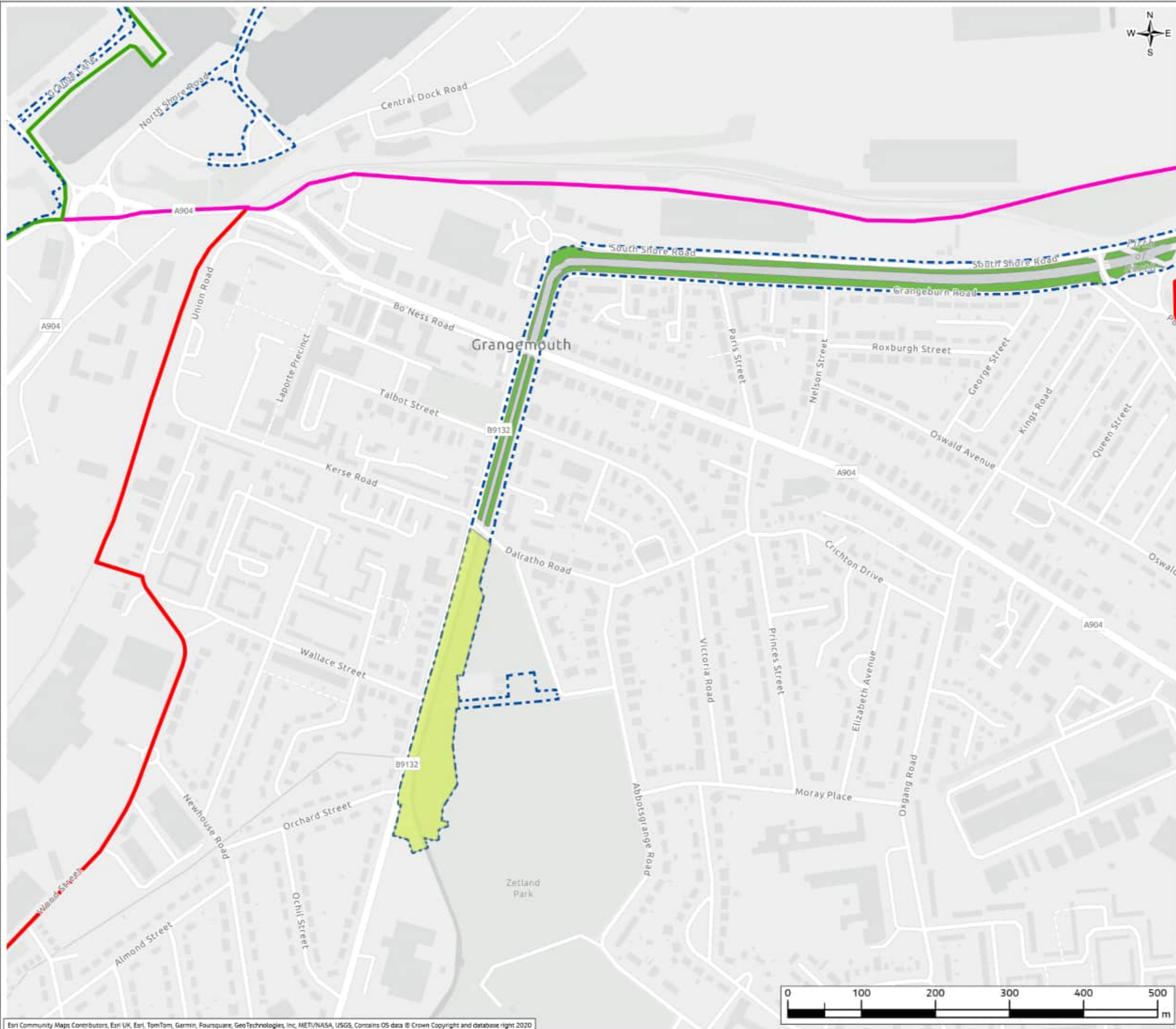
FIGURE B9.10h



**Legend**

**Landscape Zones**

- Zone J: Grange Burn
- Zone K: Zetland Park
- Site Boundary
- Cell 2 Boundary
- Cell 3 Boundary
- Cell 4 Boundary



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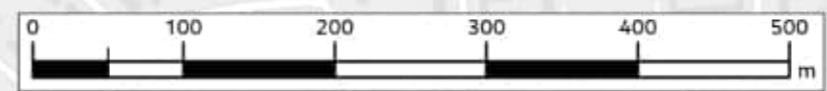
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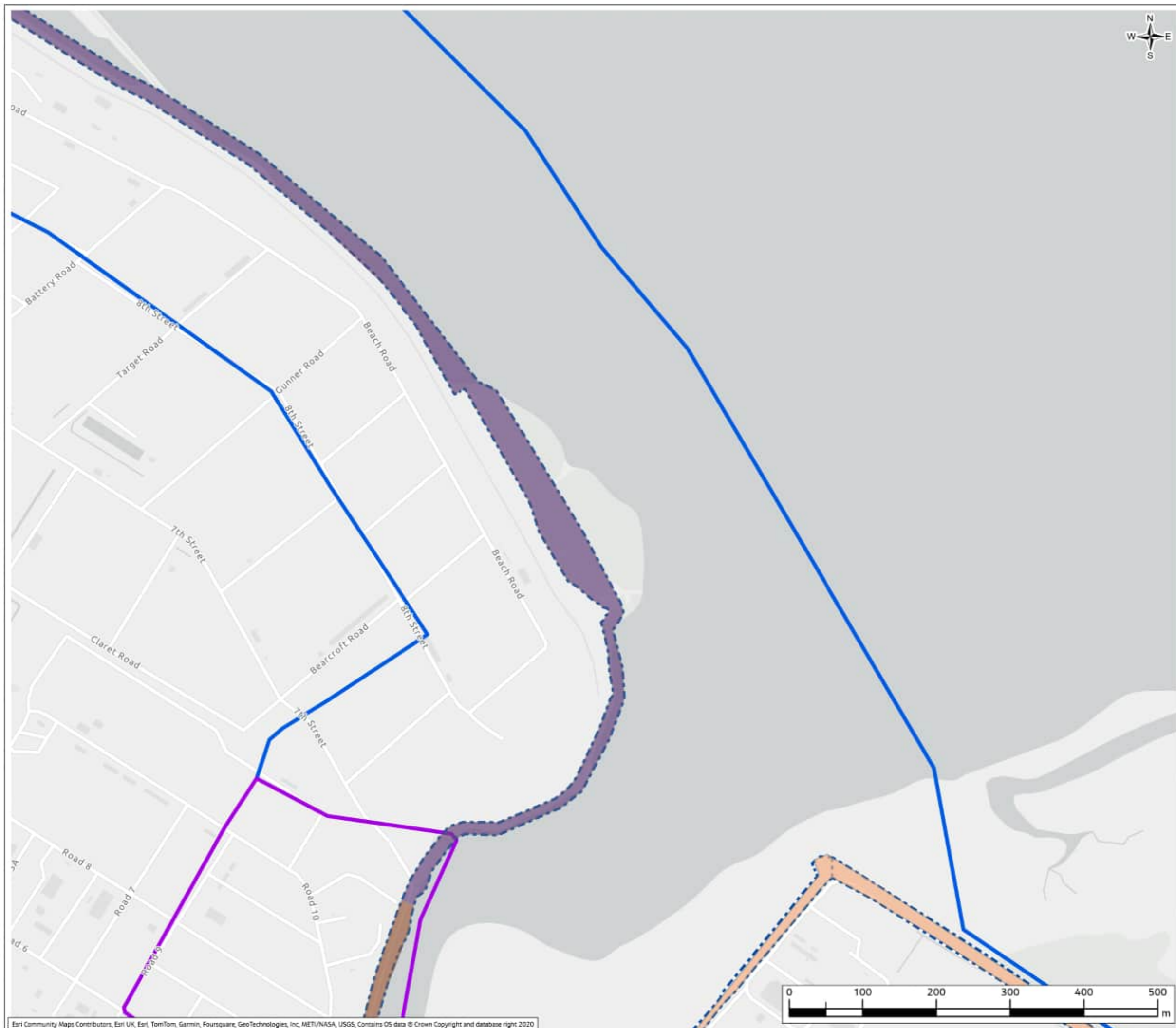
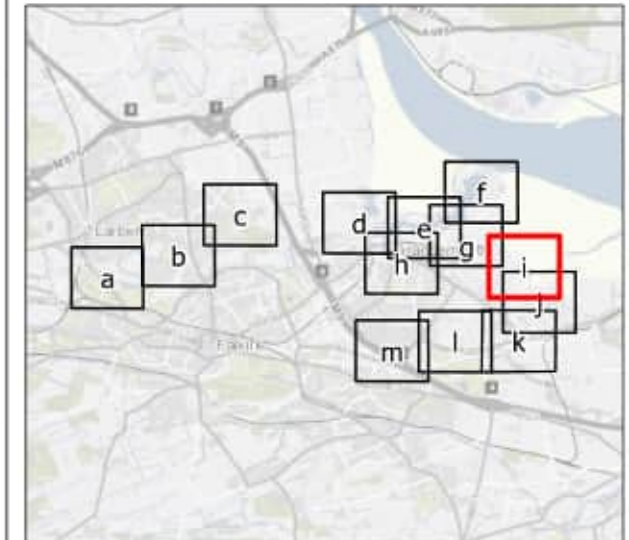
**FIGURE B9.10i**



**Legend**

**Landscape Zones**

-  Zone L: Petrochemical Plant Land
-  Zone M: Kinneil Area
-  Zone N: River Avon Corridor
-  Site Boundary
-  Cell 5 Boundary
-  Cell 6 Boundary



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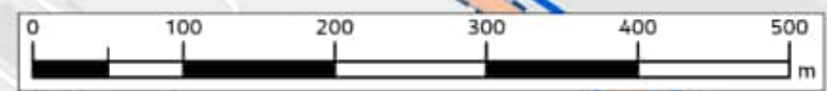
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Drawing No.	FIGURE B9.10i
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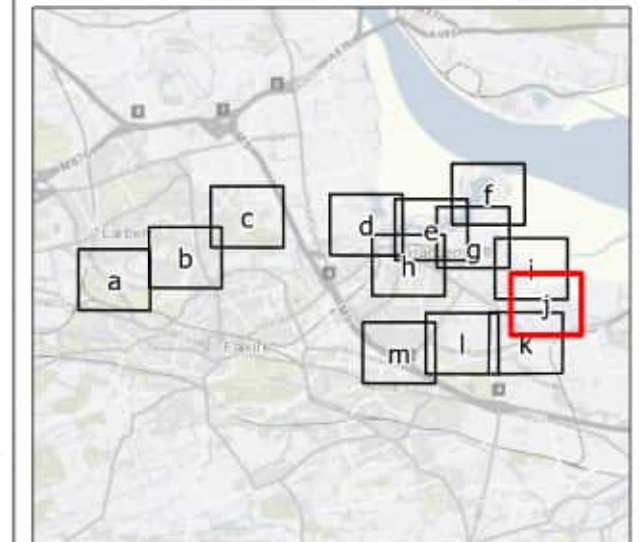


**FIGURE B9.10j**

**Legend**

**Landscape Zones**


- Zone L: Petrochemical Plant Land
- Zone M: Kinneil Area
- Zone N: River Avon Corridor
- Site Boundary
- Cell 5 Boundary
- Cell 6 Boundary



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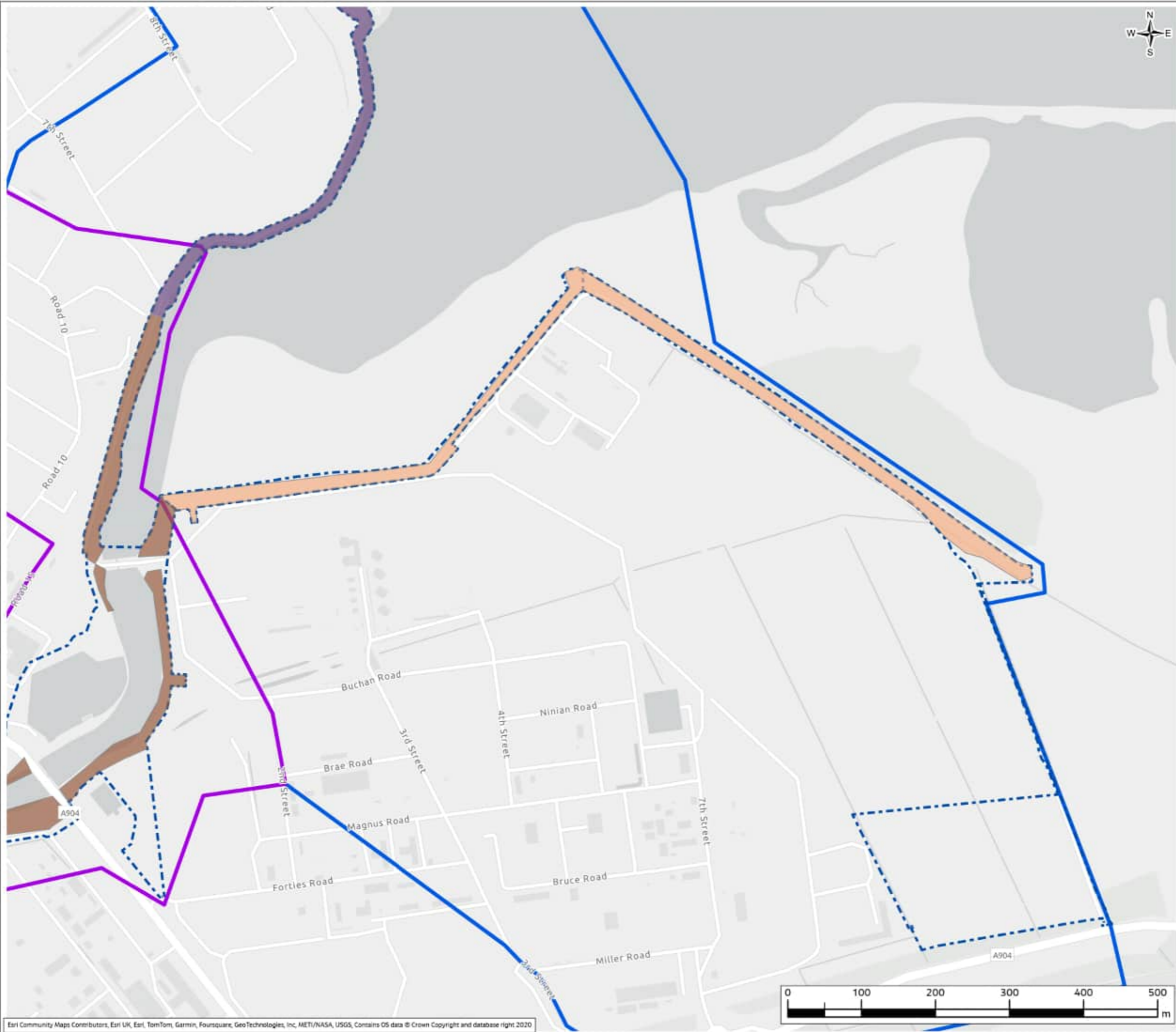
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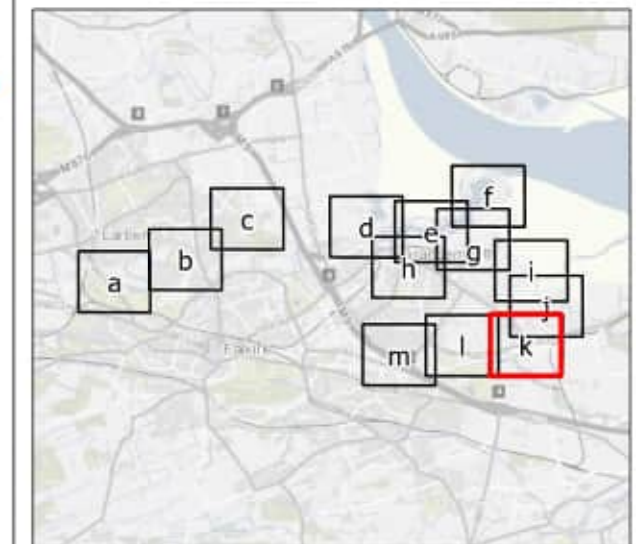
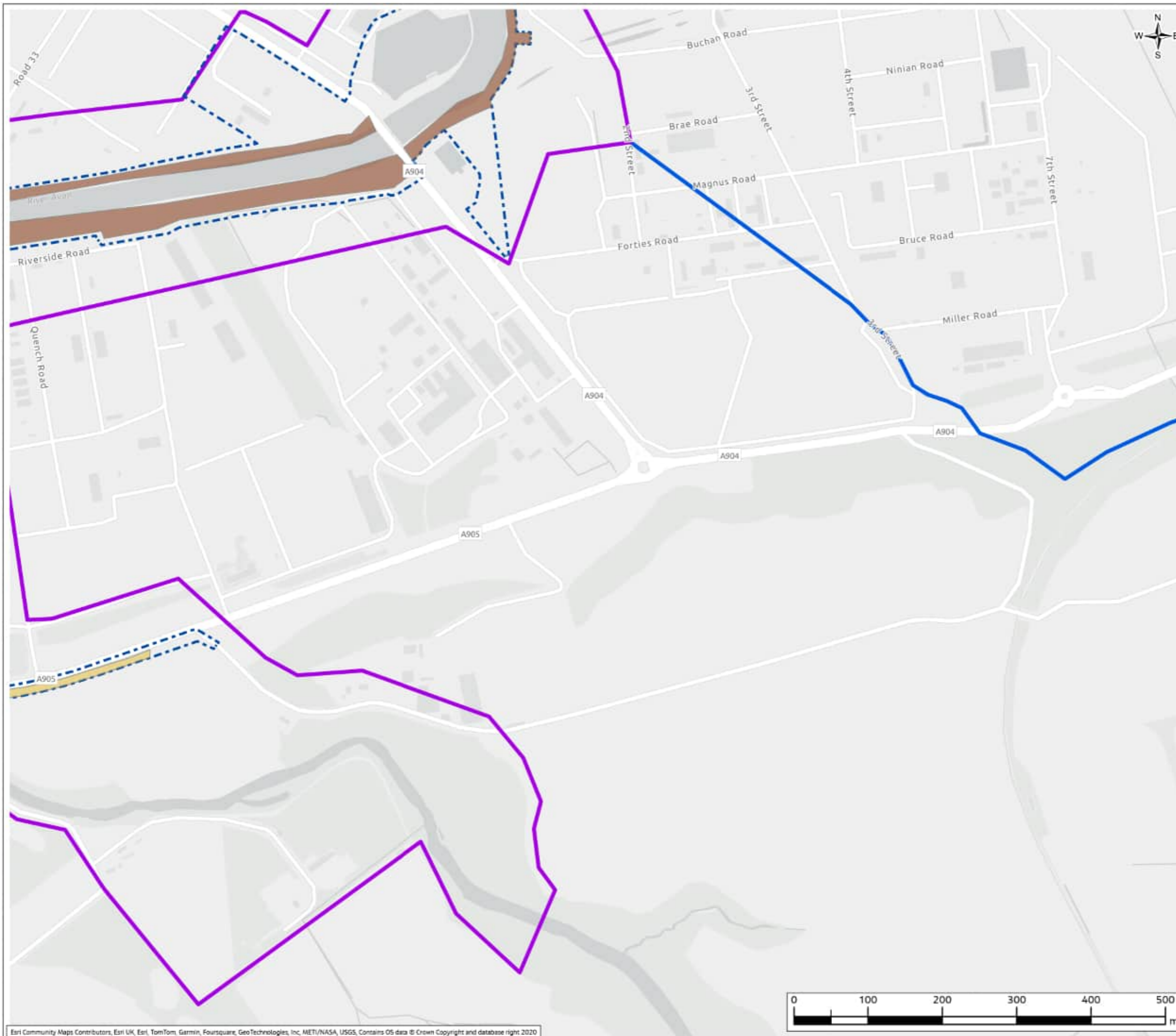


**FIGURE B9.10k**

**Legend**

**Landscape Zones**



- Zone N: River Avon Corridor
- Zone P: Wholeflats Road
- Site Boundary
- Cell 5 Boundary
- Cell 6 Boundary



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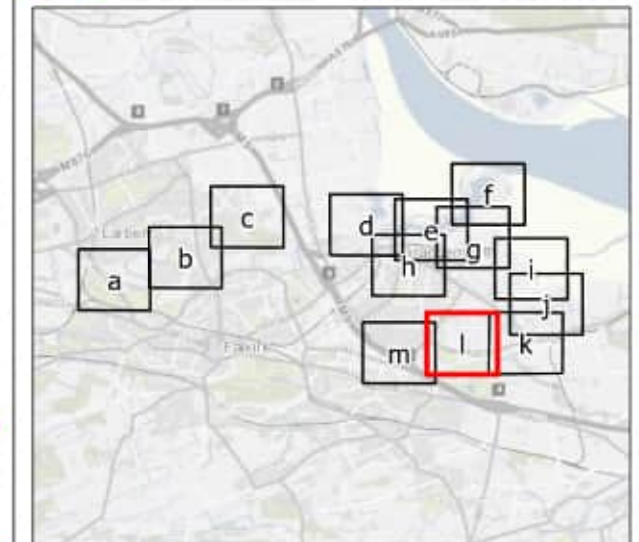


**FIGURE B9.10L**

**Legend**

**Landscape Zones**

- Zone N: River Avon Corridor
- Zone O: Ineos Land North of Wholeflats Road
- Zone P: Wholeflats Road
- Zone Q: Millhall Burn
- Zone R: Grange Burn (Flood Relief Channel)
- Zone S: Inchyra Road
- Zone T: Macdonald Inchyra Hotel
- Site Boundary
- Cell 4 Boundary
- Cell 5 Boundary



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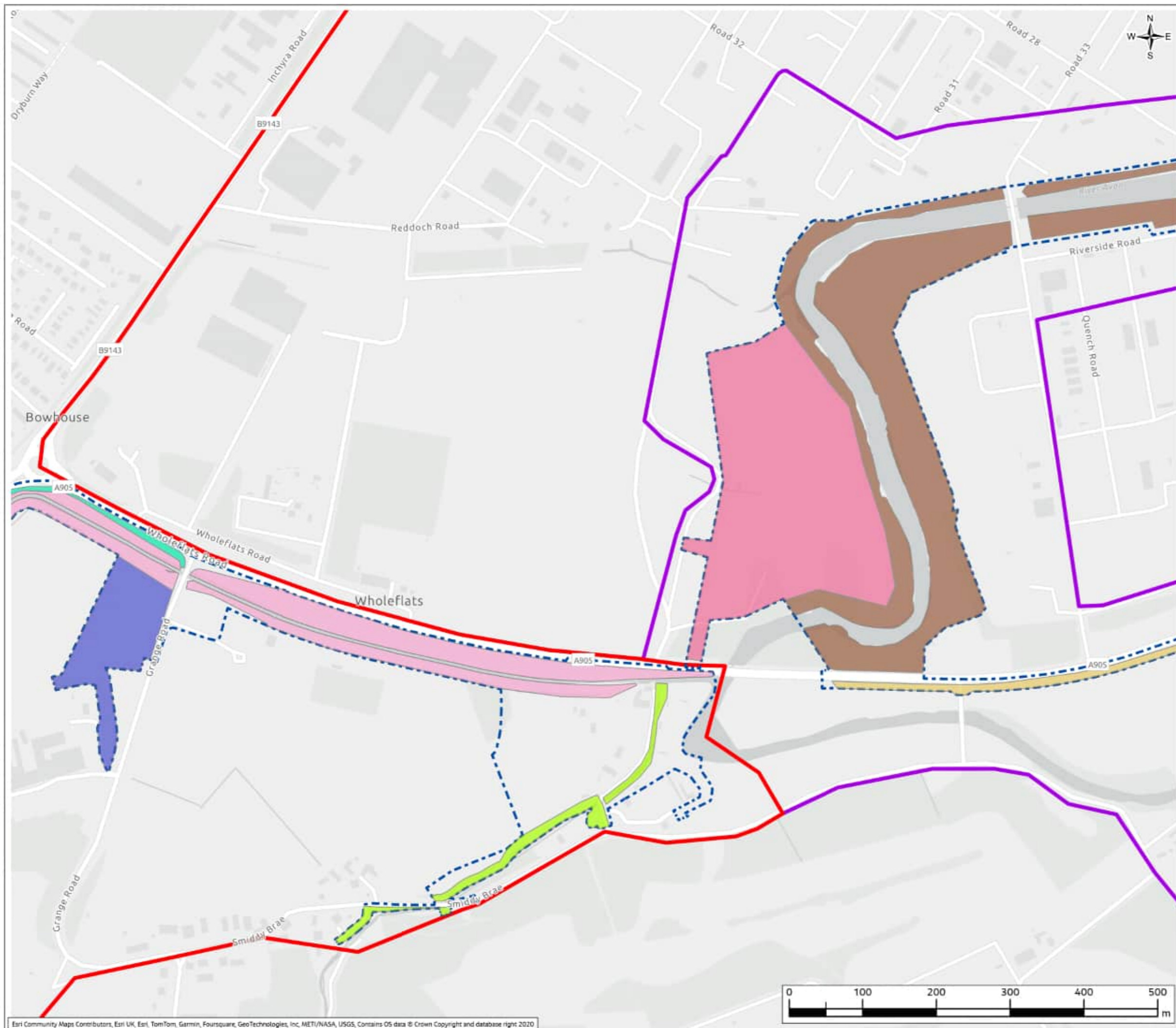
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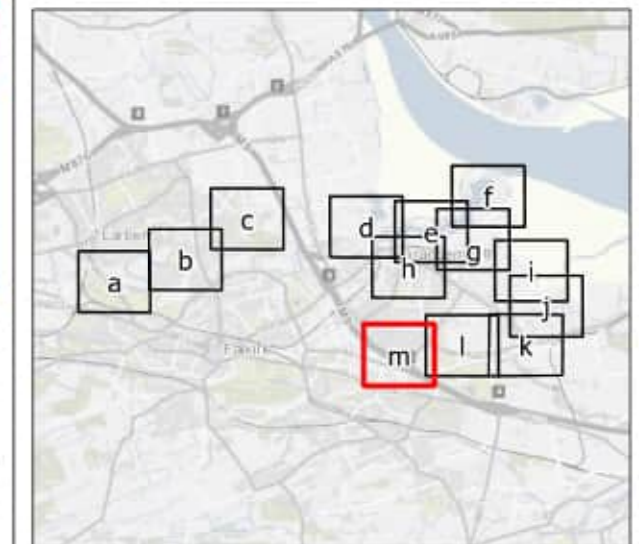


**FIGURE B9.10m**

**Legend**

**Landscape Zones**

- Zone R: Grange Burn (Flood Relief Channel)
- Zone S: Inchyra Road
- Zone T: Macdonald Inchyra Hotel
- Zone U: Rannoch Park
- Zone V: Polmont Burn
- Zone W: Westquarter Burn
- Zone X: A9/ Grandsable Road
- Site Boundary
- Cell 4 Boundary



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