

**DATE: 16 DECEMBER 2025**

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**HEARING STATEMENT**

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for

**FALKIRK COUNCIL**

in relation to

**THE GRANGEMOUTH FLOOD PROTECTION SCHEME**

**DPEA REFERENCE: FPS-240-1**

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## 1. INTRODUCTION TO THE SCHEME

- 1.1 Falkirk Council (the “**Council**”) is promoting the Grangemouth Flood Protection Scheme (the “**Scheme**”) under section 60 of the Flood Risk Management (Scotland) Act 2009 (the “**2009 Act**”).<sup>1</sup> The Scheme is the largest flood defence project in Scotland and one of the biggest in the United Kingdom, protecting communities in Grangemouth, Wholeflats, Glensburgh, Langlees, Carron, Carronshore and Camelon (Stirling Road).
- 1.2 Grangemouth and surrounding areas are susceptible to river flooding from the three local river catchments flowing through the area as well as tidal flood risk from the Forth Estuary. With climate change bringing more frequent heavy rainfall events and threatening higher sea levels, river and tidal flood risk will become more evident and more common. A 1 in 200-year flood event is predicted to have a ‘medium’ likelihood of occurring and can be expressed as a 0.5% chance of flooding each year. The proposed Scheme aims to provide flood resilience for 2,760 residential properties and 1,200 commercial buildings in Grangemouth and surrounding communities from a 1 in 200-year event and all smaller, more frequent events.
- 1.3 The Scheme was identified by the Scottish Environment Protection Agency (“**SEPA**”) and the Scottish Government as the top-ranked (number one priority) Flood Protection Scheme in Scotland in 2015. Grangemouth and the surrounding areas remain the largest and most significant flood risk in Scotland in terms of potential negative impacts.
- 1.4 The Scheme proposes flood defences in various locations on the River Avon from Inveravon to the confluence with the Firth of Forth, River Carron from the A9 crossing at Larbert to the confluence with the Firth of Forth, Westquarter Burn from Grandsable cemetery to the M9, Chapel Burn from Carronshore Road to the confluence with the River Carron, Millhall Burn from Millhall Gardens to the confluence with the River Avon, flood relief channel from Rannoch Park to the confluence with the River Avon, Grange Burn between Zetland Park and confluence with the Firth of Forth, the Polmont Burn from Weedingshall to the M9 and the Firth of Forth between the River Carron and River Avon. The total length of proposed flood defences is approximately 28 kilometres.
- 1.5 The Scheme is made under Part 4 of the 2009 Act and in accordance with the requirements of the Flood Risk Management (Flood Protection Schemes, Potentially Vulnerable Areas and Local Plan Districts) (Scotland) Regulations 2010 (“**2010 Regulations**”) [FC008.002].
- 1.6 The consultation period for the Scheme closed on 16 June 2024 following publication of the Scheme notice on 9 May 2024 [FC001.001].
- 1.7 On 23 January 2025, the Council made a preliminary decision to confirm the Scheme without modification at the Executive Committee meeting [FC002.005]. On 27 March 2025, the Scottish Ministers notified the Council that they will not be ‘calling in’ the Scheme (which would have led to the Scottish Ministers holding a Public Local Inquiry and determining the Scheme). The Council is now required to hold a hearing to consider the Scheme before taking a final decision.
- 1.8 This Statement contains the Council’s position on the matters which the appointed Reporter has indicated are likely to be addressed at the hearing. The Council’s position on specific matters raised in the objections to the Scheme are contained in the Council’s responses to objections (which are contained in documents FC004.001 through FC004.020), and the Council will adopt

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<sup>1</sup> Relevant extracts of the 2009 Act have been provided in document FC008.00001. The entirety of the 2009 Act can be accessed here: <https://www.legislation.gov.uk/asp/2009/6/contents>

and rely upon those responses for the purposes of the hearing. Key points addressed in those responses are also discussed in this Statement.

### ***Local Flooding Context***

#### Understanding risk

- 1.9 In September 2007 the Scottish Government identified Falkirk Council as the Local Authority most at risk from flooding with more than 6,000 dwellings in at risk locations (based on a 1 in 200-year flood event), with the town of Grangemouth, an area of strategic national importance being most at risk. Grangemouth Freight Hub was first identified in the Scottish Government's approved National Planning Framework 2 (NPF2), a key element of which was the inclusion of any measures necessary to protect the area from tidal flooding. The Scottish Government highlighted that Falkirk Council has the third highest, primarily tidal, number of properties at risk of flooding in Scotland. NPF3 published in June 2014 and NPF4 published in Feb 2023 [FC0010.010] have consistently highlighted Grangemouth as 'National Development' and referenced the need for flood protection.
- 1.10 Further to this, the publication of the UK Climate Impact Programme findings on 18 June 2009 emphasised this risk, with climate change also to be addressed alongside flooding. Climate change is expected to increase flood risk, potentially doubling it, in some areas of Scotland by the end of the century. The implications of increasing sea level, increased wave heights and more high intensity rainfall events must all be carefully considered.

### ***Flood Risk Management (Scotland) Act 2009 (2009 Act) plan led approach***

#### Development of Flood Risk Management Strategies

- 1.11 Grangemouth already hosts one flood protection scheme, the Grangeburn Road Flood Protection Scheme, which was constructed in the late 1960s under powers granted by the Flood Prevention (Scotland) Act 1961. This scheme was constructed in response to severe flooding of the town and surrounding low-lying areas in the 1950s, although it is now nearing the end of its natural design life.
- 1.12 Following the 1961 Act, the 2009 Act established a plan-led approach to flood risk management across Scotland with the aim of reducing overall flood risk in a sustainable manner. SEPA works in collaboration with responsible authorities which include Scottish Water, Local Authorities, Scottish Forestry and, where appropriate, the National Park Authority to implement the 2009 Act.
- 1.13 In order to manage flooding at a local level, Scotland has been divided into 14 Local Plan Districts ("LPDs"), the boundaries of which have been set based on river catchments and coastal areas which cross administrative and institutional boundaries.
- 1.14 A national public consultation on information contributing to the delivery of the 2009 Act was available for review from December 2014 to June 2015. The consultation was split into two phases:
- 1.14.1 The first phase of the consultation commenced in December 2014 and included a draft summary of the main sources and impacts of flooding and the production of documents describing catchment characteristics and historic flood information.
- 1.14.2 The second phase ran from 2 March 2015 until 2 June 2015. This included the opportunity to comment on the more detailed information which included a draft series of initial objectives where there are known or perceived flood risks, associated potential

actions that could be undertaken to manage that flood risk and further information on the draft flood risk management strategies and plans.

#### Development of FRM Strategies for each LPD

- 1.15 SEPA is responsible for producing a Flood Risk Management Strategy for each LPD.
- 1.16 The first strategies were published by SEPA and the Scottish Government in December 2015 following the 2014 and 2015 consultations and set out the most sustainable combination of actions to address flooding in the areas at greatest risk, where the benefits of intervention can have the greatest impact. The majority of the Falkirk Council area and the entirety of the Scheme area is covered by the Forth Estuary Flood Risk Management Strategy [FC009.002].
- 1.17 The Flood Risk Management Strategies identify the main flood hazards and impacts, and set out objectives for reducing flood risk and the best combination of actions to achieve the objectives. These include a Prioritised List of Actions developed by SEPA in relation to Flood Protection Schemes and Works, Flood Studies (Flood Protection & Natural Flood Management) and Improved understanding Surface Water Management Planning. Each action in these categories has been ranked at a national level, LPD level and at a Local Authority level.
- 1.18 The Forth Estuary Flood Risk Management Strategy identifies several Actions for PVA 10/11 (Grangemouth and surrounding areas). One of these Actions was to implement a flood protection scheme for Grangemouth and the surrounding area. The specific description of the Action is:  
*“A flood protection scheme has been proposed for the Grangemouth area. It would include the River Carron, Grange Burn, River Avon and the Forth Estuary shoreline. The scheme would consist of flood defences, sediment management, tidal barriers/ gates and natural flood management and would provide a 1 in 200-year standard of protection.”*
- 1.19 A flood protection scheme, as defined by the 2009 Act, is a scheme promoted by a local authority for the management of flood risk within the authority area. This includes defence measures formerly promoted under the Flood Prevention (Scotland) Act 1961.
- 1.20 SEPA identified one flood ‘scheme’ and five flood ‘studies’ in the Falkirk Council area. The identified flood scheme to be developed is the Grangemouth Flood Protection Scheme which was identified as the top ranked (number one priority) Flood Protection Scheme in the whole of Scotland.
- 1.21 The prioritisation methodology was developed by SEPA using risk-based assessment and the latest evidence base. The ranking for flood protection schemes was based on cost-benefit ratios supplemented with non-monetised information (i.e. non-economic impacts).

#### Development of LFRMPs

- 1.22 The lead local authority for each LPD is responsible for leading the production, consultation, publication and review of the Local Flood Risk Management Plans. Local Flood Risk Management Plans (“**LFRMPs**”) take each Flood Risk Management Strategy and turn it into a local delivery plan.
- 1.23 The first LFRMPs produced by the lead local authorities were published in June 2016. The LFRMPs include delivery dates, consider funding and identify how actions (such as delivery of the Grangemouth Flood Protection Scheme) can be coordinated at a local level over the next 6-year cycle.
- 1.24 The majority of the Falkirk Council area falls under the Forth Estuary LFRMP [FC009.001] with just a small geographic area close to South Alloa and Dunmore falling under the remit of the Forth

LFRMP. Falkirk Council is the Lead Local Authority for the Forth Estuary LFRMP, and Stirling Council is the Lead Local Authority for Forth LFRMP.

## **2. JUSTIFICATION AND NEED FOR THE SCHEME**

### ***National Significance***

- 2.1 The Grangemouth Industrial Cluster is recognised to be an important economic and industrial hub contributing significantly to Scotland's GDP. The Firth of Forth Estuary is home to the most significant elements of Scotland's and the UK's petrochemical sector, and associated industrial complex, as well as the country's key port facility in Grangemouth. Much of the area is considered at flood risk and has inadequate flood protection leading to the provision of appropriate flood defences being viewed as a national priority. The impact of a significant flood event on one or more of the critical national infrastructure sites could be devastating for the local, regional and national economy.
- 2.2 The petrochemical industry in Scotland has had a significant presence in Grangemouth for over 50 years. Delays in delivery of flood resilience measures may risk a gradual decline of the major industry players' activities at Grangemouth, however it is recognised that the petrochemical industry is already undergoing a significant transformation to newer low-carbon processes and technologies.
- 2.3 Grangemouth is also home to the region's largest port facility catering for in the region of 9 million tonnes of cargo annually. Port operations and associated warehousing, logistics and other uses are vulnerable to flood risk. It is acknowledged that the Port has recently secured Green Freeport status and there are a number of potential development proposals being considered separately. It is noted that any flood protection scheme is primarily intended to offer flood resilience to existing development (residential or commercial) but that it can also be an enabler to support future development where that use has been appropriately considered for its vulnerability to flood risk.
- 2.4 A lack of investment in flood defences is likely to act as a disincentive to any commercial organisations seeking to invest in the region as the risk of flood damage has not yet been addressed. The strategic investment decisions being taken by many of the existing or potential new businesses are often not a choice between Grangemouth and another location in Scotland, but rather between Grangemouth and other international locations. Such a scenario would have repercussions for local, regional and national level economies. It is clear that improved flood resilience across the entire Grangemouth complex would help alleviate concerns from existing businesses as well as those of any prospective new investors.
- 2.5 This assertion is corroborated by the TIF displacement work [FC010.001] which assigns a very low displacement rating to the petrochemical sector. In other words, investment from the petrochemical industry is almost entirely additional and is not displaced from elsewhere in the country.
- 2.6 The potential environmental impact of flood damage to businesses in the chemical sector as a direct result of inadequate flood protection is an issue of national concern. Flood damage to the petrochemical sites could be significantly damaging to the area and to the wider environment of the Forth Estuary, parts of which are internationally recognised for the quality of their habitats. The risk of such damage is recognised in its highly protected status, monitored by SEPA and other bodies. The response to and clear up of any flooding would be a significant issue for SEPA, the Council and the Scottish Government.

### ***Scottish Planning Policy (SPP) and National Planning Framework 4 (NPF4)***

- 2.7 At the time when the Scheme was initially identified (c. 2012), Scottish Planning Policy (“SPP”) [FC010.012] suggested that any areas that were in a Low to Medium Risk Area (annual probability of flooding in the range 0.1% to 0.5%) were suitable for most development and within built-up areas these would be suitable for residential, institutional, commercial and industrial development provided flood prevention measures to the appropriate standard already exist, are under construction or planned as part of a long term development strategy. [FC010.013].
- 2.8 SPP has subsequently been superseded by NPF4, Policy 22 [FC010.010] which sets out four exceptions where development in an area of flood risk may be permissible:
- i. essential infrastructure where the location is required for operational reasons;
  - ii. water compatible uses;
  - iii. redevelopment of an existing building or site for an equal or less vulnerable use; or
  - iv. redevelopment of previously used sites in built up areas where the LDP has identified a need to bring these into positive use and where proposals demonstrate that long term safety and resilience can be secured in accordance with relevant SEPA advice.
- 2.9 NPF4 also allows the protection offered by an existing formal flood protection scheme or one under construction to be taken into account when determining flood risk.
- 2.10 Whilst the primary purpose of the Scheme is to reduce the risk to existing development, it is also seen as a prerequisite to the significant future development proposals around the Grangemouth area.

### ***Land Use Guidance***

- 2.11 Similarly to SPP, SEPA’s Land Use Vulnerability Guidance, first published in July 2012, [FC009.004] provided a framework to assist in the assessment of the vulnerability of different types of land to the impact of flooding. Whilst this guidance is not specifically related to the standard of protection offered by the Scheme, it provides useful guidance as flood protection schemes are often located in built-up areas and, due to their design life often being in excess of 100 years, it will be fairly common for new development, mainly brownfield, to occur in areas behind these schemes at some point after they have been constructed.
- 2.12 SEPA’s Position Statement on Development Protected by Formal Flood Protection Schemes (latest version July 2024) provides specific guidance on the minimum standard of protection for different land use vulnerability classifications for development protected by a flood protection scheme [FC009.005]. Specifically, it identifies that where the standard of protection provided by a scheme has an annual probability of 0.5% (excluding climate change), then development that falls into the following classifications may be acceptable: water compatible uses; essential infrastructure; least vulnerable uses. These classifications would permit shops, offices, restaurants, general industry and storage/ distribution together with several other types of development to take place if they were protected by the scheme. If the standard of protection offered by the scheme was less than a 0.5% annual probability the potential vulnerable classifications of development that would be acceptable would be limited to water compatible uses and essential infrastructure only which excludes shops, offices, restaurants, general industry, and storage/ distribution together with several other types of development.
- 2.13 Given the very flat topography around Grangemouth and the widespread extent of flooding predicted, combined with the future development framework of the Council, Scottish Enterprise,

Scottish Government, and many other organisations, it would be necessary to provide a standard of protection at least to the 1 in 200-year standard as otherwise this would severely constrain the types of future development to water compatible uses and essential infrastructure only.

#### ***Scheme outcomes and objectives***

- 2.14 The primary outcome of the Scheme is to provide a reduction in overall flood risk for the Scheme area. This is articulated in the Scheme’s vision statement:

*“Protecting communities in Grangemouth, Wholeflats, Glensburgh, Langlees, Carron and Carronshore, and the industries which they support”.*

- 2.15 In addition, as a secondary outcome, it is considered that the Scheme will remove a major barrier to long-term investment and facilitate physical and economic development in and around the Scheme area.
- 2.16 To enable delivery of the outcomes outlined above, the Scheme set a number of objectives at the outset that were used to guide the appraisal of options. The aim is and has been to construct a scheme that satisfies the majority of these objectives. These objectives can be found on the Scheme website<sup>2</sup> [FC012.006].

#### ***Strategic Alignment and policies relating to sustainability***

- 2.17 There are a number of strategic regional and local strategies which support the development and delivery of the Scheme. These strategies are described below, including:

- 2.17.1 Falkirk Council – The Council Plan [FC011.001] – sets out aims to be achieved over the next five years and how Falkirk Council intends to deliver them. The Scheme will support delivery of the Council Plan through: Supporting Stronger and Healthier Communities; Promoting Opportunities and Educational Attainment and Reducing Inequalities; and Supporting a thriving Economy and Green Transition
- 2.17.2 Falkirk Council – Falkirk Economic Strategy 2015-2025 [FC011.002] – sets out what Falkirk Council wishes to achieve, considering any obstacles to change and how to overcome them to benefit the local communities. The Scheme will support the strategy by (as a secondary outcome) facilitating growth in Falkirk’s Economy, supporting investment.
- 2.17.3 Falkirk Council – Local Development Plan 2 (“LDP2”) [FC011.008] – guides the future use and development of land within the Council area, containing policies and proposals indicating where development should or should not take place and provides guidance on the future provision of housing, business, transport and infrastructure, recreation, and community facilities. It indicates how our town centres and greenspaces should develop, and how our natural and historic environment should be protected and enhanced. The LDP2 highlighted the importance of infrastructure investment needed to support growth aspirations including delivery of a new flood defence system.
- 2.17.4 Scottish Government / Falkirk Council – Tax Incremental Finance (“TIF”) [FC010.001] – a funding mechanism developed by Scottish Ministers and being piloted in Scotland that allows local authorities to capture locally-generated, incremental non-domestic rate revenue from regeneration development that has arisen as a direct result of their investment in “unlocking” infrastructure. As part of the TIF programme, the Council are progressing a major package of infrastructure interventions across the

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<sup>2</sup> <https://www.grangemouthfloodscheme.com/objectives>



Falkirk area, and anticipate making a financial contribution towards delivery of GFPS. This will unlock and accelerate private sector investment, generate business growth and help to realise the economic potential of the area.

- 2.17.5 UK Government / Scottish Government / Falkirk Council - Falkirk Growth Deal [FC012.005] – provide the strategic framework for driving economic growth and community development in the region. By integrating the Scheme into the Council’s strategic vision, the Council will ensure the safety of the community, protect vital infrastructure, and encourage sustainable growth.
  - 2.17.6 Scottish Government - National Planning Policy Framework 4 (“NPF4”) [FC010.010] – sets out how the Scottish Government’s approach to planning and development will help to achieve a net zero, sustainable Scotland by 2045. As a fundamentally important infrastructure asset which is necessary to maintain industry presence in Grangemouth for future generations, the Scheme is highlighted as a key enabler for the green transition of the Grangemouth Investment Zone within NPF4 (action 8 – Industrial Green Transition Zones). Without the foundations provided by a resilient site with appropriate protection against flood risk, economic growth and a transition to net zero cannot be achieved.
  - 2.17.7 UK Government / Scottish Government – Forth Green Freeport [FC012.004] – As a fundamentally important infrastructure asset which is necessary to maintain industry presence in Grangemouth for future generations, the Scheme is a key enabler for the implementation of the freeport.
  - 2.17.8 Scottish Government – Just transition [FC010.003] – Driving a transitioning to a net zero emissions Scotland for the benefit of the environment, people, and prosperity. A just transition, to the Scottish Government and its agencies, refers both to the outcome of this change – defined as a ‘fairer, greener future for all’ – and, importantly, a process undertaken in partnership with those impacted; be those individuals, communities, regions, or businesses. Doing so helps ensure that this change maximises economic opportunity and is fair and equitable. As a fundamentally important infrastructure asset which is necessary to maintain industry presence in Grangemouth for future generations, the Scheme facilitates the just transition of Scotland’s most important component of national infrastructure.
  - 2.17.9 Scottish Government – Climate change [FC010.004] – emphasises the urgency of adapting to climate change impacts and building resilience across sectors. The Scheme serves as a prime example of local infrastructure projects and national climate policies coming together to meet shared objectives.
- 2.18 Due to the scale and national significance of the Scheme, there are a number of additional plans which support delivery of the Scheme and vice versa, including but not limited to:
- Falkirk Council – Local Housing Strategy [FC011.004]
  - Falkirk Council – Tourism Strategy [FC011.005]
  - Falkirk Council – Digital Falkirk [FC011.006]
  - Forth Valley – Regional Economic Strategy [FC011.007]
  - Scottish Government – More homes [FC011.005]
  - Scottish Government – Biodiversity [FC011.006]
  - HM Government – Industrial Strategy [FC012.002]
  - HM Government – Levelling Up [FC012.003]

***Scheme Development Stages***

- 2.19 The key guidance document [RFC010.008] which supports the implementation of flood protection schemes under the 2009 Act outlines a recommended structure of staged project delivery. This standard 9-stage flood scheme development process can be summarised as follows:
- Stage 1 – Identification of Scheme (complete)
  - Stage 2 – Data Collection (complete)
  - Stage 3 – Options Appraisal (complete)
  - Stage 4 – Outline Design (complete)
  - Stage 5 – Scheme Notification (current stage)
  - Stage 6 – Statutory Consents
  - Stage 7 – Detailed Design
  - Stage 8 – Enabling Works
  - Stage 9 – Main Construction Works
- 2.20 Stages 1 to 4 have been completed and the Scheme is currently progressing through Stage 5. Future stages only commence following confirmation of a scheme.

**3. SCHEME DESIGN**

***Level of Protection***

- 3.1 The Scheme will provide protection up to the 1 in 200-year return period event [FC003.002], also referred to as having a 0.5% chance of occurring in any year. The crest level of the flood defences is based on the predicted 1 in 200-year water level, with an allowance for freeboard [FC003.004] and an allowance for climate change.
- 3.2 The requirement to provide a specific standard (or level) of protection is not defined by any legislation, including the 2009 Act, or statutory body. However, the 1 in 200-year event (0.5% annual probability) is seen by the majority of professionals working in the flood risk management sector as being the minimum target standard of protection with the 1 in 200-year event plus climate change seen as the ‘golden’ standard. Many schemes that have been promoted over the last 10 years have achieved this standard, and those schemes that have adopted a lower standard have often done so to achieve a standard that was deemed to be acceptable when balanced with other factors. For some schemes, a lower standard of protection has been selected based on the outcome of an economic appraisal whereas some have sought to minimise significant visual impacts, e.g. the Hawick FPS adopted a 1 in 75-year standard of protection partly due to the significant increase in height of defences (and consequential visual impacts) to achieve the 1 in 200-year standard.
- 3.3 Adopting a 1 in 200-year standard of protection is in accordance with the published Forth Estuary Flood Risk Management Strategy, set by SEPA and the Scottish Government.
- 3.4 The Council have also constructed another flood protection scheme, the Bo’ness Flood Protection Scheme 2006, immediately east of the extents of the proposed Grangemouth Scheme. This scheme also was designed to provide a 1 in 200-year standard of protection. Providing the same standard of protection for Grangemouth provides consistency in tidal flood risk management within the local authority’s area.

### *Community engagement*

- 3.5 The Scheme has been developed over many years, with major consultation events held on a regular basis. These consultation events have involved affected land and property owners, the public and other statutory and non-statutory stakeholders.
- 3.6 A range of engagement styles were employed including scheme newsletters, social media, workshops, online and in-person events, a mobile exhibition van and one to one meetings with affected parties.
- 3.7 All of the events held were advertised by the Council in the local press, through social media and by notices placed in various public buildings including libraries. The events were staged at accessible venues and included the use of display boards and posters with Council staff and partners in attendance to facilitate and assist with any questions or issues. All material was made available on the Scheme's website and is still available for public reference.<sup>3</sup>
- 3.8 At various stages, the Scheme was reported to the Council committees with approval given to progress through the various stages (see documents FC002.001 through FC002.004).
- 3.9 A number of working groups, with internal and external representatives, were established in 2017 and 2018. Several workshops with these groups were held to ensure their thoughts and views were identified and taken into account when considering alternatives.
- 3.10 Public engagement events in February and April 2018 enabled the public to view and comment on the options being considered and provided further information on the proposals. In particular, flood defence options along the reach of Grange Burn from Rannoch Park, past Zetland Park to the Forth Estuary were considered. Feedback from the consultation event was used to develop further design options. [FC005.001]
- 3.11 Engagement events in May 2019 offered further opportunities to provide residents and business owners with information on the scheme and design developments. [FC005.002]
- 3.12 The feedback from both events was generally positive with the majority of attendees in support of a scheme that would provide protection to the local area and be beneficial to communities. Responses to common concerns or issues have been communicated through the frequently asked questions section of the scheme website.
- 3.13 Due to the challenges of the COVID-19 pandemic, the community engagement events in June 2021 were all undertaken online. As well as two 'overview' sessions outlining the proposals across the full scheme extents, a series of 5 smaller focused community events were held covering localised flood defence areas where residents were likely to have similar comments or concerns. Recordings of all events are available on the Scheme website as are responses to all questions raised during the June 2021 community engagement. [FC005.003 and FC005.004]
- 3.14 Several community engagement events were undertaken in 2023 to allow the public to view the final scheme that the Council planned to take to notification in 2024. These events were supported by the Scheme website and social media channels. [FC005.005 and FC005.006]
- 3.15 In addition to engagement with residents and businesses, an education programme has been developed for roll-out across all 12 local primary schools in the Grangemouth and surrounding areas in the Spring term. The STEM programme (Science, Technology, Engineering, and Mathematics) has allowed local school children to learn about flooding and the impacts that a

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<sup>3</sup> [www.grangemouthfloodscheme.com](http://www.grangemouthfloodscheme.com)

flood protection scheme can have. By educating and inspiring young people, they can act as “third party ambassadors” for the Scheme, taking and sharing their learning at home.

- 3.16 Although not a specific requirement of the 2009 Act, the public and NatureScot were consulted on the Habitats Regulations Appraisal carried out in respect of the Scheme in a separate parallel process. Further information is provided in Section 6.

### ***Scheme Extent***

- 3.17 The Scheme has been developed in line with the principles outlined in:
- 3.17.1 The Forth Estuary Flood Risk Management Strategy [FC009.002], published by the Scottish Environmental Protection Agency (SEPA) in December 2015 and approved by Scottish Ministers.
  - 3.17.2 The Forth Estuary Local Flood Risk Management Plan [FC009.001], coordinated by the City of Edinburgh Council as the Lead Local Authority for the Forth Estuary Local Plan District in 2015.
- 3.18 Taken together, these documents describe the commitment of public bodies to address flooding. The geographic area protected by the Scheme falls with PVA 10/11 and PVA 10/12. In particular, the Scheme generally is contained within Objective Target Areas (“OTA”): 10035, 10036, 10040 and 10041 [FC009.002]. The Objective associated with the above OTA is to reduce economic damages by the implementation of a flood protection scheme or works.
- 3.19 Further modelling has been undertaken as part of the development of the Scheme, which included extending the original model upstream on the River Carron and also the Grange Burn, to better understand flood risk. This additional modelling has been used to refine the areas where there is a significant risk of flooding that needs to be addressed by the Scheme. This exercise resulted in three main additional areas (outwith the OTAs) being identified where there was a significant risk: Stirling Road (A9), Beancross and Millhall.
- 3.20 Whilst the above areas are not specifically covered by the OTA specific objective of reducing economic damages, they fall within an overall Objective (ID: 10099) that applies across the Forth Estuary Local Plan District to reduce overall flood risk. Therefore, the inclusion of these additional areas with the geographic extents of the proposed scheme is deemed appropriate and in accordance with the objectives and actions as set out in the Forth Estuary Flood Risk Management Strategy.

### ***Consideration of alternatives***

- 3.21 An options appraisal study was undertaken to assess the feasibility of potential flood risk mitigation options and identify a preferred solution which could be progressed through the statutory processes set out in the 2009 Act. A multi criteria analysis considered the economic, environmental, social and technical issues associated with the different options [FC003.016].
- 3.22 From an initial long list of flood risk management options, a shorter selection of viable options was taken forward for further investigation and modelling. Options such as flood storage on the River Carron and Grange Burn, dredging of the lower reaches of the Carron, Avon and Grange burn watercourses, a tidal barrier across the Forth Estuary and the use of the Carron Valley Reservoir were all discounted at an early stage due to either their limited effectiveness in reducing flood risk or the significant cost and environmental impacts. It was from the short list that the option of direct flood defences and flow control structures was selected. Other shortlisted options considered included the creation of flood storage reservoirs and the re-meandering of watercourses.

- 3.23 The option appraisal included an engagement process with key stakeholders and the people of Grangemouth and surrounding communities. Refer to paragraphs 3.5 to 3.16 for further information.
- 3.24 At the conclusion of the option appraisal process, the preferred combination of flood risk management measures was identified. This preferred scheme was presented to the Project Board in 2019. Subsequently this preferred scheme was developed in greater detail through the outline design phase to become the Scheme.
- 3.25 During the development of the preferred scheme through the outline design phase, alternative alignments for the flood defences were considered in determining the final alignment presented on the Scheme plans.

*Adequacy of proposals for protecting property*

- 3.26 The Scheme protects communities, businesses and major industry from the risks of river and tidal flood risk events whilst ensuring that surface water flooding is not exacerbated.
- 3.27 An initial study commenced in 2010 to assess the predicted depth and extent of flood risk at Grangemouth. As part of this study, a hydraulic model was developed which represents the three main watercourses and estuary and was used to determine the flood extents and depths for a range of flood event probabilities.
- 3.28 The hydraulic model has continued to be updated and refined from 2012 to 2023. During this period, the model and its input data (e.g. hydrology and digital terrain model (“DTM”)) have been reviewed by SEPA and their comments addressed through model updates. The most recent review by SEPA was carried out in 2020 and the model was updated and thereafter used in 2023 to determine the final flood levels that were used to define heights of flood defences and to assess the impact of the Scheme on flood risk elsewhere. [FC003.017].
- 3.29 The hydraulic model used to develop the Scheme uses the best available data, follows recommended modelling guidance and was reviewed by SEPA on several occasions. The model results are consistent with the flood model developed by SEPA to produce their current published flood inundation maps. The Council are satisfied that the flood model developed for this project is the best tool currently available to assess flood risk within the Scheme area.
- 3.30 The calculation of flood flows has been undertaken in accordance with the methods outlined in the Flood Estimation Handbook (“FEH”) and incorporates data from local flow gauges on the rivers Carron and Avon. The FEH provides a set of methods and associated data to enable recognised standard national methods for rainfall and flood estimation, and rainfall-runoff modelling. They are based on calibration to large hydro-meteorological datasets from gauged locations across the UK. The FEH data and methods are the UK regulatory recommended methods for estimating river flood frequency and design rainfall in Scotland and elsewhere in the UK.
- 3.31 The Scheme protects communities, businesses and major industry from the risks of river and tidal flood risks whilst ensuring that surface water flooding is not exacerbated.
- 3.32 Flood defences are complex engineering structures, designed to contain flood water and reduce the probability of flooding in a particular area. Their design needs to comply with relevant national standards and is very much dependant on local factors, such as ground conditions, ground water, contamination, and a variety of other factors. In the majority of cases the visible parts of flood defences are only a small element of the overall structure – structures often include significant underground elements to provide the necessary structural support and also to minimise the risk of seepage flows under the defences.

#### **4. SCHEME DESIGN AND ALIGNMENT**

##### ***Level of detail available***

- 4.1 The published Scheme documents comply with the requirements of the 2009 Act and the 2010 Regulations.
- 4.2 The level of detail provided in the Scheme plans, Scheme operations and EIA Report is in accordance with guidance published by the Scottish Government [FC010.008]. The level of detail provided is consistent with other published flood protection schemes.
- 4.3 The published Scheme plans show the proposed location of flood defences, relative to land and property boundaries, and are accompanied by a description of scheme operations. In addition, cross-sections are also provided which show the heights of the proposed flood defences relative to the existing ground profile at specific locations. The Scheme plans also show the land affected upon which entry is required for the purpose of carrying out the operations and execution of temporary works.
- 4.4 Figures within the EIA Report give further information on defence heights and defence finishes (e.g. brick or stone clad wall or other materials).

##### ***Scheme alignment and heights***

- 4.5 The height of flood defences is made up of two primary components: the design flood level and the freeboard allowance. The design flood level is the maximum water height that the flood defence is designed to withstand during a specific flood event (e.g., a flood with a 0.5% annual probability of occurring). This level is calculated using complex hydrological and hydraulic modelling that considers river, rain, wave and wind data, river flow capacities, impacts of structures on or near watercourses. The freeboard is an essential safety margin added above the design flood level to account for flood estimations and modelling, physical factors that are difficult to predict, and post-construction settlement of the defence structure. An allowance for climate change can also be included with the defence height to allow for future increases in rain fall that would lead to larger flows in watercourses or for rising sea levels.
- 4.6 The Scheme defences include an allowance for climate change to 2030 to allow for potential increases in rainfall and sea level from finalisation of the flood modelling until the assumed date when the Scheme might start to be implemented.
- 4.7 As part of a managed adaptive approach to deal with the effects of climate change, the defences will be structurally designed to allow their height to be increased by up to 0.6m should that be necessary in the future to deal with the effects of climate change, beyond 2030, without requiring extensive works to their foundations or the complete reconstruction of defences. This approach will significantly reduce any future disturbance should it be necessary to increase the height of defences. Any change to the heights in the Scheme published in 2024 would need to be undertaken by the Council obtaining the necessary consents and approvals for a new scheme in the future. Other measures may also be considered in the future to deal with the effects of climate change.
- 4.8 The visible height of the flood defences has been minimised by careful selection of the alignment of the flood defences e.g. defences have been positioned towards the top of riverbanks rather than the bottom. Where possible flood defences have been positioned to try and follow existing fencelines and boundary features to minimise the loss of useable land.

- 4.9 The alignment of the flood defences was developed following a number of design principles [FC003.008]. Whilst it was not always possible to achieve all the principles at any specific location, every effort was made to satisfy as many as possible. Some of the key principles considered included:
- 4.9.1 Protect existing buildings and infrastructure and land identified in local development plan for development;
  - 4.9.2 Avoid encroachment into sensitive environmental sites;
  - 4.9.3 Minimise disturbance of existing riverbanks and coastline; and
  - 4.9.4 Retain existing undeveloped flood plains.

## **5. CONSTRUCTION EFFECTS**

### ***Timescales and duration***

- 5.1 The project team has benchmarked the Scheme against other recent flood protection schemes constructed in Scotland. From this exercise, it is anticipated that sequential construction of the whole 28km of defences could take around 8-10 years to complete.
- 5.2 However, due to the scale and complexity of the Scheme it is likely that it will be constructed in several phases under separately procured construction contracts. This approach helps to manage project risks and financial expenditure profile and would be aligned with the availability of funding from the Scottish Government, Falkirk Council or other funding partners.
- 5.3 The project team has undertaken an initial assessment of potential construction phasing options. Although there is flexibility in the sequence of construction operations and this would be aligned to project budget profiles, at the current time it is anticipated that residential elements would be constructed first, followed by the industrial elements. Once the Scheme has been confirmed, the Council will work to further develop detailed phasing plans as part of the detailed design stage (Stage 7).

### ***Effects on property***

- 5.4 The effect of the Scheme on property is generally to reduce the risk of flooding for all flood events up to the design flood event (0.5% annual probability of occurrence).

### **Impacts on residential properties**

- 5.5 The design of the flood defences shall take account of existing infrastructure and buildings and seek to eliminate the risk of damage through the careful choice of construction techniques, such as the use of silent or vibrationless piling. In addition, constraints such as vibration limits will be imposed on contractors employed to construct the scheme.
- 5.6 Prior to construction works being carried out, buildings and structures will be surveyed and inspected to ensure any existing damage is identified and recorded. These surveys will be carried out by independent surveyors or engineers appointed by the Council, shared with the property owner and will be repeated when the works are complete. In the unlikely event of any damage being recorded, the contractor responsible for constructing the defences will be required to carry out any repairs to the property owner's satisfaction.
- 5.7 The contractors building the Scheme will comply with working practices and restrictions and contractual obligations put in place to minimise the risk of any damage occurring and minimising disturbance on residents.

- 5.8 During the construction phase a fence or hoarding (approx. 2m in height) will be erected to separate the working area. This will act as a safety barrier segregating people from the construction works but also assist in retaining security and privacy to properties. In areas requiring a higher standard of security, owners and occupiers will be consulted on appropriate fencing and security provisions.

Impact on businesses

- 5.9 Extensive consultation was undertaken with affected businesses to determine the impacts of the Scheme both during the construction phase and when the scheme is in use. Further information relating to the defences within the port area and Dalgrain Road can be found in the supporting documents [FC003.006, FC003.009, FFC003.012, FC003.019 and FC003.020].
- 5.10 The development of the Scheme has considered the impacts on businesses, and the Council have sought, where possible, to address any issues identified during consultation with businesses. Whilst the Council have sought to avoid unnecessary land-take and to reduce the impacts on businesses where practical and reasonable, accommodating all requests made by businesses has not been possible. The Council consider the Scheme achieves the best balance between the various, often competing requirements, of businesses, the environment and achieving the objectives of the project in a sustainable and cost-effective manner.
- 5.11 Prior to construction commencing, owners and occupiers will be consulted on appropriate fencing and security provisions as well as seeking their continued input on other matters such as working areas, traffic management and interface with their infrastructure and operations including the planning of works to ensure they are carried out at times to minimise disruption.
- 5.12 Where pipes, cables and other infrastructure need to be modified or protected, the Council will continue to liaise with the owners of the affected apparatus and agree what measures are necessary, e.g. diversion of pipes and cables. The Council, upon confirmation of the Scheme, has statutory powers that can be used to facilitate this process. The Council will be responsible for any costs incurred in diverting or protecting any existing pipes and cables. All necessary permits and consents from the owner and site operator will be obtained prior to any modification, protection or diversion works taking place
- 5.13 If in the very unlikely event that a diversion of a pipe or cable is not possible, the Council would have no option other than to look at modifying the proposed Scheme to remove the conflict between the flood defences and the pipeline. This would involve the Council developing and publishing a new scheme to replace the current proposed Scheme in the vicinity of the apparatus that cannot be moved.
- 5.14 The Council is open and willing to consider individual non-commercial agreements with affected businesses should they deem this necessary to provide any additional safeguards.

***Disturbance***

- 5.15 In order to reduce disturbance, working hours in residential areas will be limited to weekdays (Monday to Friday inclusive) from 8am to 6pm with no working at weekends or on bank holidays. In non-residential areas (e.g. port or petrochemical sector) working out with these hours is likely to be required to minimise the impact on the operation of these facilities. In those non-residential areas the Council, in conjunction with the affected businesses, will seek to agree working hours, timescales and methods to minimise disruption.
- 5.16 Disturbance from noise, dust and vibration will be minimised through the implementation of mitigation measures as outlined in the EIA Report.



- 5.17 From experience of other similar flood protection schemes, the Council anticipates residents and businesses would be able to remain within their properties during the construction works. If for any reason this was not possible, the Council would look to temporarily house residents and businesses in alternative accommodation.
- 5.18 It is considered that working hours and disturbance mitigation measures can both be secured by any conditions imposed as part of the deemed planning permission.

### ***Restoration***

- 5.19 All land affected by the scheme will be reinstated to its former condition as assessed by the pre-entry surveys that will be undertaken. Reinstatement will also be discussed with individual owners so as to ensure details (e.g. final finishes, landscape replanting, etc.) are agreed.

### ***Effects on access to properties and unprotected land***

- 5.20 Where possible, the Scheme has been designed to minimise the impacts on access to and from land and properties.
- 5.21 Constraints posed by the topography and existing infrastructure has dictated that flood gates and/or demountable flood defences are used where access (e.g. footpaths and roads) needs to be maintained and it is impractical to re-route the defences either over or around these access routes.
- 5.22 In locations where frequent access is needed, flood gates would be left in the open position or demountable defences would not be erected. Where extreme weather and flooding is forecast the Council would be responsible for closing flood gates and erecting the demountable flood defences. Where closure of the gate is necessary, the Council will provide as much notice as possible. It is likely that an operational decision to close flood gates will be made at a minimum of 2-3 hours in advance. Prior to closing the gates, the Council would give as much notice as possible to allow vehicles to be moved to a nearby place of safety. Following a flood event the flood gates and demountable defences would be re-opened or removed as soon as it was deemed safe to do so. During those times the gates are closed, access to and from properties will be affected.
- 5.23 In locations where infrequent access is needed (e.g. access to undeveloped land on the riverward side of flood defences), flood gates are proposed to allow access e.g. for maintenance. These gates would normally be in the closed position. When access was needed the gates would be opened by the Council or with the agreement of the council and closed afterwards.
- 5.24 During the construction phase there will be temporary impacts on access to and from property and through full or partial road closures. Partial or full closures of the public road network will be authorised by the roads authority through the use of temporary traffic regulations orders. The impacts on access within private property will be discussed with the relevant land and property owners and suitable mitigation measures implemented to reduce the impacts as far as practical.

## **6. EFFECTS ON WILDLIFE INCLUDING HABITATS**

### ***Habitats***

- 6.1 The impact of the Scheme on the environment has been fully considered and presented in the Environmental Impact Assessment Report (“**EIAR**”). This considered the impact on trees, wildlife, habitats and invasive non-native species (“**INNS**”) and where adverse impacts are identified appropriate mitigation will be carried out to reduce impacts. It is intended that the proposed mitigation will be secured via appropriate planning conditions applied to the deemed consent. The EIAR is contained within documents FC007.001 through FC007.038.

- 6.2 A wide variety of statutory bodies have been consulted to ensure all relevant concerns were raised and addressed at the earliest stage. These included NatureScot, SEPA, Historic Environment Scotland, and Marine Scotland amongst others.
- 6.3 Further consents will be sought at the appropriate time as and where required. These may include licences to disturb protected species, marine licence for works to be undertaken below mean high water springs, environmental permits and similar.
- 6.4 The potential impact of the scheme on European sites (Special Protection Areas (“SPA”) and Special Areas of Conservation (“SAC”)) has been considered through a Habitats Regulations Appraisal (“HRA”) carried out under the Habitats Regulations. There is no specific requirement under the 2009 Act and its associated regulations to undertake and make available an HRA as part of the Scheme notification process or documents, as the Habitats Regulations are not engaged until the final determination (i.e. Scheme confirmation). The HRA is contained within documents FC006.001 through FC006.005.
- 6.5 An HRA has been carried out for the Scheme, which concluded there was potential in the Firth of Forth SPA/ Ramsar Site for an Adverse Effect on Site Integrity through disturbance of roosting birds. The Council believes there are no alternative solutions and there are imperative reasons of overriding public interest, and suitable compensation has been proposed.
- 6.6 The Council (as competent authority) formally consulted with both the public and NatureScot on the HRA. NatureScot have confirmed “we are now satisfied with the updated HRA and agree with its conclusions, including the sufficiency of the compensation proposals”. The Council are in the process of consulting with the Scottish Ministers on the HRA.
- 6.7 The compensation proposed due to the potential for adverse impacts on the SPA will be constructed in advance of any works which could potentially cause the disturbance to roosting birds.
- 6.8 The Scheme will be constructed in areas affected by INNS. As noted in the EIAR (Chapter 16) [FC007.017], an Ecological Management Plan, inclusive of a Biosecurity Plan, will be prepared and developed in line with SEPA guidance on INNS, to avoid the spread of INNS and manage their removal and disposal during construction.

***Loss of trees and effects of this on privacy, security, wildlife, and amenity***

- 6.9 Tree surveys have been completed to document the age and condition of every tree, identifying the root protection area.
- 6.10 Trees are only being removed where there is no alternative. In many flood risk areas, existing buildings and infrastructure dictate the position and type of flood defences which can be built to protect homes, businesses, and people. It is important to note while the portion of flood defences above ground may seem quite small, there are also extensive engineering measures required below ground. Where defences are located close to trees, their roots could be damaged during the construction either by the flood defences themselves or the heavy construction equipment damaging roots from crushing. [FC003.007 and FC003.010]
- 6.11 The Council have committed to planting, on average, three trees for every tree removed, as well as undertaking a programme of enhanced landscaping measures, tailored to each location affected by tree removal. Where mature trees require to be removed, large trees (c. 3-5m in height) will be planted to replace them. Other planting will also be carried out on completion of the flood defences. In residential areas where security is a concern ‘thorny’ type shrubs and bushes can be planted to discourage access.

- 6.12 To maintain security during construction of the flood defences, as a minimum, a temporary c.2m high fence or hoarding will be erected along the line marking the land affected to separate gardens and other land from the construction works. In some areas it may be necessary to install further measures to ensure any existing security measures are not compromised.
- 6.13 In advance of any construction works starting, detailed surveys will be carried out of the land affected including private gardens. This will record both the types of hard and soft landscaping present but also any notable plants, trees and any other articles. Where possible, the Council would seek to relocate any notable or sentimental plants either temporarily whilst works are carried out or permanently to another location that will not be affected by the construction work.
- 6.14 Within gardens, any outbuildings or other garden furniture that is within the area of garden affected by the construction works will be relocated to another part of the garden, put into temporary storage or demolished depending on the owner's preference.
- 6.15 Vermin are a common occurrence in urban areas. In advance of construction the Council's Environmental Health Officer will determine an appropriate rat and rodent control plan to reduce the likelihood of displacing rats and mice into homes. In the unlikely event that they were displaced and cause nuisance the Council will employ a professional pest control company to remove them and employ further preventative measures.

## **7. LEGAL AND FINANCIAL MATTERS**

### *Access to land and ongoing maintenance*

- 7.1 There are three principal options for the Council to secure the necessary land or rights that it requires to deliver the Scheme. These options are, in summary:
- 7.1.1 obtain the rights by agreement with the landowners (and any other necessary parties with an interest in the land);
  - 7.1.2 rely upon the powers of entry under sections 79-81 of the 2009 Act; or
  - 7.1.3 compulsorily acquire the land or rights under section 66 of the 2009 Act.

### Voluntary Agreements

- 7.2 Section 66 of the 2009 Act gives the Council the power to acquire land by agreement which it requires for the exercise of its functions under Part 4 of the 2009 Act, which includes carrying out operations to which a flood protection scheme relates. The Council's general power to manage flood risk under section 56, which includes doing anything which it considers will contribute to the implementation of current measures in a relevant local flood risk management plan, also includes a power to enter into agreements with any other person for the carrying out by that person or by the Council of any work which could be done by the Council under Part 4 of the 2009 Act.

### Powers of Entry

- 7.3 Under section 79 of the 2009 Act, any person authorised by the Council is entitled to enter any land for various specified purposes. This includes entry to land on which Scheme operations are to be carried out for the purposes of carrying out the operations, or of executing any temporary works in relation to the Scheme operations. It also includes entry to land for the purposes of maintaining flood protection work carried out under section 56 of the 2009 Act. Section 56 of the 2009 Act is the general power to manage flood risk which is stated to include the power to carry out Scheme operations.

- 7.4 There are also a number of ancillary rights to enter adjacent land, take on to the land other persons, take on materials and equipment, and also a general right to do anything else reasonably required to fulfil the purpose for which entry is taken. Additional provisions relating to the exercise of the powers of entry are contained in sections 80 and 81, including provisions for prior notice for the exercise of such rights.

#### Compulsory Acquisition

- 7.5 Section 66 of the 2009 Act gives the Council the power, with the authorisation of the Scottish Ministers, to compulsorily acquire land (other than Crown land) which it requires for the purpose of carrying out scheme operations. Section 66(2) applies the procedure contained in the Acquisition of Land (Authorisation Procedure) (Scotland) Act 1947 (the “1947 Act”) to any compulsory purchase by a local authority in connection with a scheme. Should the Council require to exercise these powers, it will need to promote a compulsory purchase order which will be subject to its own statutory process and related scrutiny.

#### Interaction of Scheme with other operations

- 7.6 The Council intends to work with affected landowners where possible to agree voluntary arrangements to minimise the impact on them and, where relevant, their operational activities.

#### ***Scheme funding***

- 7.7 Funding of the Scheme does not play a part in the primary objectives of the 2009 Act and is subject to separate processes which are not a matter for the hearing. Notwithstanding this position, the Council has summarised the current Scheme funding position below.
- 7.8 Following detailed site investigations, design development progress, land acquisition strategies and monitoring of inflationary pressures, the total project cost is currently estimated at between £450 million to £672 million (Oct 2023). It should, however, be noted that the project costs are incurred incrementally through each successive project stage. Although the cost estimates prepared to date allow for assumed future inflation risks, any delay or change to the delivery schedule could have a bearing on the project total.
- 7.9 Given the scale of the Scheme, it is recognised that a funding model for the delivery phase (Stages 6–9 – refer to paragraph 3.21 above) will need to be tailored and appropriate for Scotland’s highest priority and largest flood scheme. The Scottish Government has stated it is committed to working with Falkirk Council to determine a funding stream for the Scheme.

#### ***Economic Case***

- 7.10 An economic assessment for the Grangemouth Flood Protection Scheme (FPS) was carried out and follows the approaches and guidance in the Scottish Government’s ‘Flood Protection Appraisals: Guidance for SEPA and Responsible Authorities’, the HM Treasury’s Green Book and the Middlesex University’s Multi Coloured Manual and Multi Coloured Handbook 2023 [FC003.0181].
- 7.11 The present value benefits of the scheme have been calculated as £2,390.2 million against present value costs of £556.2 million (mean of cost range), resulting in a benefit cost ratio of 4.3. In other words, for every £1 spent on the Scheme it will deliver £4.30 in benefits.

#### ***Effects on property values and compensation***

- 7.12 The Council does not consider that compensation is a relevant matter for the determination on whether to confirm the Scheme and therefore is not a relevant matter for the hearing.

- 7.13 Notwithstanding this position, the Council notes that the Scottish Parliament has laid down what it has deemed appropriate by way of compensation provisions in sections 82 and 83 of the 2009 Act, which includes provision for compensation for depreciation in the value of a person's interest in land where that occurs. The Council has instructed the Valuation Office Agency to assist in an initial assessment of potential compensation but would note that it is not possible for compensation to be determined at this date as the relevant date for valuation of compensation is triggered by the carrying out of the Scheme operations. An allowance for compensation measures has been included in the basis of cost estimate.

***Responsibility for ongoing maintenance***

- 7.14 The Council will be responsible for the inspection, monitoring and maintenance of the Scheme. This will include any necessary upkeep to ensure that the defences remain effective and in good condition using their powers under section 56(2)(b) to carry out any other flood protection work. Flood protection work means any operation on land for the purpose of protecting any land from flooding, including any work of repair and maintenance. However, the responsibility for maintenance on land not owned or currently maintained by the Council, such as controlling the growth of weeds, cutting grass, trees, or shrubs, will remain unchanged and will continue as it currently stands e.g. with the current landowner or tenant. The Council is committed to ensuring that the flood defence system is well maintained and that any necessary works are carried out promptly and efficiently.

**8. REPRESENTATION AT HEARING SESSIONS**

- 8.1 The Council will be represented at the Hearing Sessions by Mark McMurray (Partner) and Kathryn Nolin (Senior Associate) of CMS Cameron McKenna Nabarro Olswang LLP. The following individuals will also represent the Council to provide the Reporter with evidence on their specialist areas:

- 8.1.1 Alistair Dawson, Infrastructure Projects Manager, Investment Assets and Climate, Falkirk Council
- 8.1.2 Sharon Agnew, Project Co-ordinator, Investment Assets and Climate, Falkirk Council
- 8.1.3 Alan McGowan, Senior Associate Director of Flood Risk Management, Jacobs
- 8.1.4 Richard Meeson, Associate Director of Flood Risk Management, Jacobs
- 8.1.5 Rosanna Mooney, Associate Director of Ecology, Jacobs

- 8.2 The Council reserves the right to amend the list of individuals providing evidence in light of any submissions made by other parties.

**9. DOCUMENTS**

- 9.1 The Council intends to rely upon the documents listed in the Schedule to this document. The Council reserves the right to amend the list of documents in light of any submissions made by other parties.

**10. CONCLUSION**

- 10.1 On the basis of the information contained in this Statement and the documents listed in the Schedule, and the evidence presented at the Hearing, the Council will respectfully submit that it should be recommended that the Scheme is confirmed without modification.

## **SCHEDULE**

### **List of Documents**

This List of Documents is ordered as follows:

<b>Section</b>	<b>Documents</b>
1	Scheme Documents
2	Committee Reports
3	Technical Reports & Notes
4	Objections & Responses to Objections
5	Community Consultation Reports
6	HRA (Including NatureScot's response to consultation)
7	EIA
8	Legislation (Extracts)
9	Flood Risk Management Strategies, Plans and Guidance etc Documents
10	Scottish Government Documents
11	Falkirk Council Documents
12	Other Documents

<b>1. SCHEME DOCUMENTS</b>	
FC001.001	GFPS Scheme Notice
FC001.002	Land Affected Key Plan Sheet 01
FC001.003	Land Affected Sheet 2
FC001.004	Land Affected Sheet 3
FC001.005	Land Affected Sheet 4
FC001.006	Land Affected Sheet 5
FC001.007	Land Affected Sheet 6
FC001.008	Land Affected Sheet 7
FC001.009	Land Affected Sheet 8
FC001.010	Proposed Areas for Environmental compensation and/or Mitigation Overall Plan
FC001.011	Proposed Areas for Environmental Compensation and/or Mitigation Sheet 1
FC001.012	Proposed Areas for Environmental Compensation and/or Mitigation Sheet 2
FC001.013	Proposed Areas for Environmental Compensation and/or Mitigation Sheet 3
FC001.014	Key Plan Scheme Operations Sheet 1 of 5
FC001.015	Plan A Scheme Operations Sheet 2 of 5
FC001.016	Plan B Scheme Operations Sheet 3 of 5
FC001.017	Plan C Scheme Operations Sheet 4 of 5
FC001.018	Plan D Scheme Operations Sheet 5 of 5

FC001.019	Cell 1 Operations Sheet 1 to Sheet 23
FC001.020	Cell 2 Operations Sheet 1 to Sheet 10
FC001.021	Cell 3 Operations Sheet 1 to Sheet 24
FC001.022	Cell 4 Operations Sheet 1 to Sheet 46
FC001.023	Cell 5 Operations Sheet 1 to Sheet 19
FC001.024	Cell 6 Operations Sheet 1 to Sheet 19
FC001.025	Scheme Operations
<b>2. COMMITTEE REPORTS</b>	
FC002.001	Committee Report dated December 2015
FC002.002	Committee Report dated January 2022
FC002.003	Committee Report dated November 2023
FC002.004	Committee Report dated January 2024
FC002.005	Committee Report dated January 2025
<b>3. TECHNICAL REPORTS &amp; NOTES</b>	
FC003.001	Extent of Scheme
FC003.002	Standard of Protection
FC003.003	Climate Change
FC003.004	Freeboard
FC003.005	Not Used
FC003.006	Flood Defence Options for Dalgrain Road Area - Cell 2
FC003.007	Flood Defences in Zetland Park - Cell 4
FC003.008	General Principles for Flood Defence Alignment
FC003.009	Defence Alignment Options for Port of Grangemouth - Cell 3
FC003.010	Park Road Flood Defences - Cell 4
FC003.011	Flood Defences at Dock Street Area, Carronshore - Cell 1
FC003.012	Impact of Construction Works on Port of Grangemouth - Cell 3
FC003.013	North Shore Road Carriageway Width
FC003.014	Water Ingress through Levelling Culverts during design flood event
FC003.015	Basis of Design around Flo Gas Site - Cell 3
FC003.016	Option Appraisal & Summary
FC003.017	Hydraulic Modelling Report



FC003.018	Economic Appraisal
FC003.019	Port Study – Long List
FC003.020	Port Study – Short List
<b>4. OBJECTIONS &amp; RESPONSES TO OBJECTIONS</b>	
FC004.001	OBJ-001 & Responses
FC004.002	OBJ-002 & Responses
FC004.003	OBJ-003 & Responses
FC004.004	OBJ-004 & Responses
FC004.005	OBJ-005 & Responses
FC004.006	OBJ-007 & Responses
FC004.007	OBJ-008 & Responses
FC004.008	OBJ-009 & Responses
FC004.009	OBJ-010 & Responses
FC004.010	OBJ-011 & Responses
FC004.011	OBJ-012 & Responses
FC004.012	OBJ-013 & Responses
FC004.013	OBJ-014 & Responses
FC004.014	OBJ-015 & Responses
FC004.015	OBJ-016 & Responses
FC004.016	OBJ-017 & Responses
FC004.017	OBJ-019 & Responses
FC004.018	OBJ-020 & Responses
FC004.019	OBJ-021 & Responses
FC004.020	OBJ-022 & Responses
<b>5. COMMUNITY CONSULTATION REPORTS</b>	
FC005.001	Grangemouth Flood Protection Scheme – Review of Public Consultation Events Held on 27 <sup>th</sup> February and 19 <sup>th</sup> April 2018
FC005.002	Grangemouth Flood Protection Scheme – Review of Public Exhibition Events held on the 28 and 30 May 2019
FC005.003	Community Engagement June 2021 Response Summary Report
FC005.004	Grangemouth Flood Protection Scheme – Review of Public Engagement Sessions Held June 2021

FC005.005	Community Engagement Event 4 Response Summary Report
FC005.006	Grangemouth Flood Protection Scheme - Engagement Event No. 4 Feedback Survey Report
<b>6. HRA</b>	
FC006.001	Habitats Regulations Appraisal (HRA) Report and Appendices
FC006.002	Habitats Regulations Appraisal (HRA) Figures
FC006.003	HRA Public Engagement
FC006.004	HRA Engagement Feedback Survey Report
FC006.005	NatureScot response to consultation
<b>7. EIA</b>	
FC007.001	Non-technical summary
FC007.002	Chapter 1 Introduction
FC007.003	Chapter 2 Legislation and Regulatory Framework
FC007.004	Chapter 3 EIA Methodology
FC007.005	Chapter 4 The Scheme
FC007.006	Chapter 5 Stakeholder Engagement
FC007.007	Chapter 6 Population and Human Health
FC007.008	Chapter 7 Biodiversity
FC007.009	Chapter 8 Noise and Vibration
FC007.010	Chapter 9 Landscape and Visual Impact Assessment
FC007.011	Chapter 10 Water Environment
FC007.012	Chapter 11 Soils, Geology and Land Contamination
FC007.013	Chapter 12 Air Quality and Climate
FC007.014	Chapter 13 Cultural Heritage
FC007.015	Chapter 14 Traffic and Transport
FC007.016	Chapter 15 Cumulative Effects
FC007.017	Chapter 16 Schedule of Environmental Commitments
FC007.018	Chapter 17 Summary of Significant Residual Effects
FC007.019	Appendix A Scheme Figures

FC007.020	Appendix B6 Population and Human Health
FC007.021	Appendix B7 Biodiversity
FC007.022	Appendix B8 Noise and Vibration
FC007.023	Appendix B9 Landscape and Visual Impact Assessment
FC007.024	Appendix B10 Water Environment
FC007.025	Appendix B11 Soils Geology and Land Contamination
FC007.026	Appendix B12 Air Quality and Climate
FC007.027	Appendix B13 Cultural Heritage
FC007.028	Appendix B14 Traffic and Transportation
FC007.029	Appendix B15 Cumulative Effects
FC007.030	Appendix C3 Screening and Scoping Report and Opinion
FC007.031	Appendix C4 Options, Construction Methodology, Flood Protection Measured
FC007.032	Appendix C7 Biodiversity
FC007.033	Appendix C8 Noise and Vibration
FC007.034	Appendix C9 Landscape and Visual Impact Assessment
FC007.035	Appendix C10 Water Environment
FC007.036	Appendix C11 Soils Geology and Land Contamination
FC007.037	Appendix C12 Air Quality and Climate Change
FC007.038	Appendix C13 Cultural Heritage
<b>8. LEGISLATION (EXTRACTS)</b>	
FC008.001	Flood Risk Management (Scotland) Act 2009
FC008.002	The Flood Risk Management (Flood Protection Schemes, Potentially Vulnerable Areas and Local Plan Districts) (Scotland) Regulations 2010 (as amended)
FC008.003	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)
<b>9. FLOOD RISK MANAGEMENT STRATEGIES, PLANS AND GUIDANCE ETC DOCUMENTS</b>	
FC009.001	City of Edinburgh Council - Forth Estuary Flood Risk Management Plan
FC009.002	SEPA - Forth Estuary Flood Risk Management Strategies
FC009.003	SEPA – Flood Risk Management Plans

FC009.004	SEPA – Flood Risk and Land Use Vulnerability Guidance (latest version July 2024)
FC009.005	SEPA – Position Statement, Position Statement on Development Protected by Formal Flood Protection Schemes (latest version July 2024)
FC009.006	SEPA – Statement on SEPA approach to NPF4
<b>10. SCOTTISH GOVERNMENT DOCUMENTS</b>	
FC010.001	Scottish Government/Falkirk Council – Tax Incremental Finance
FC010.002	Scottish Government – Regeneration
FC010.003	Scottish Government – Just Transition
FC010.004	Scottish Government – Climate Change
FC010.005	Scottish Government – More Homes
FC010.006	Scottish Government - Biodiversity
FC010.007	Scottish Government – Plan for Future of Grangemouth published 19 March 2025
FC010.008	Scottish Government - Flood Risk Management (Scotland) Act 2009: Local Authority Functions under Part 4 Guidance
FC010.009	Scottish Government - Flood protection appraisals: guidance for SEPA and responsible authorities
FC010.010	Scottish Government - National Planning Framework 4 (NPF4) (extracts)
FC010.011	Scottish Government - Chief Planner letter regarding NPF4 policy 22 dated 13 October 2025
FC010.012	Scottish Government - Scottish Planning Policy (extracts)
FC010.013	Scottish Government - Policy on Water
<b>11. FALKIRK COUNCIL DOCUMENTS</b>	
FC011.001	Falkirk Council Plan 2022-2027 Year 2
FC011.002	Falkirk Economic Strategy 2015-2025
FC011.003	Falkirk Council – Councilors and decision making, Committee appendices, Grangemouth Town Centre Masterplan
FC011.004	Falkirk Council – Local Housing Strategy
FC011.005	Falkirk Council – Tourism Strategy
FC011.006	Falkirk Council – Digital Falkirk
FC011.007	Falkirk Council – Regional Economic Strategy

FC011.008	Falkirk Council - Local Development Plan 2
<b>12. OTHER DOCUMENTS</b>	
FC012.001	Scottish Enterprise – Grangemouth Industrial Cluster Strategy
FC012.002	HM Government – Industrial Strategy
FC012.003	HM Government – Levelling Up
FC012.004	UK Government / Scottish Government – Forth Green Freeport
FC012.005	UK Government / Scottish Government / Falkirk Council - Falkirk Growth Deal
FC012.006	Scheme Objectives (excerpt from Scheme website)