East Lothian Council

Turner & Townsend

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Report

Project Objectives

Musselburgh Flood Protection Scheme
East Lothian Council

making the **difference**

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Controlled document distribution

The Project Objectives (PO) is a controlled document and shall be reviewed, approved and distributed under controlled conditions. Turner & Townsend as the assistant project managers are the holders of the PO and shall be responsible for updating the document during the projects lifecycle.

The PO is to be formally issued to:

Nr	Recipient	Organisation
001	Alan Stubbs	East Lothian Council
002	Dave Northcott	East Lothian Council
003	Conor Price	Turner & Townsend Project Management Ltd. with CPE Consultancy – Project Manager
004	Chris Bone	Turner & Townsend Project Management Ltd. - Contract Manager
005	Project Board	See Project Board Organogram

1 Introduction

1.1 Purpose

This purpose of this document is to confirm the Project Objectives for Musselburgh Flood Protection Scheme.

1.2 Issue status

The Project Manager has prepared the Project Objectives Report and will ensure the proper administration of the document through revision and controlled re-issue. Recipients of documents will be required to confirm that current issues are held and that relevant people are holding applicable information. The status of the report and appendices will be identified within each revision.

2 Background

This project is being managed under the PRINCE2 Project Management System. This report is therefore further to the detail provided on the project's objectives within the Project Mandate and the Project Brief. This document is a separate, stand-alone, report and supersedes those reports: the detail contained within this report defines the project objectives for the Scheme.

The following text from the Project Brief is reproduced for ease of reference only:

The Forth Estuary Local Plan District's Local Flood Risk Management Plan sets out the main flood risk reduction objective for Musselburgh, which is primarily to:

"Reduce economic damages to residential and non-residential properties and risk to people in Musselburgh caused by flooding from the River Esk and coastal flooding." *(Scottish Environment Protection Agency, 2016)*

Other objectives are however identified for the Musselburgh PVA (Potentially Vulnerable Area 10/21 and 10/22) and all of these strategic objectives and associated actions for managing flooding in Musselburgh will be fully reviewed and mapped into the Scheme's stand-alone Project Objectives report which will be prepared by the project team during the Project Initiation Stage.

The Project Mandate provided an overview of the proposed ELC objectives at a 'Strategic', 'Programme' and 'Project' level for this project. It is not intended to develop these objectives further within this report; rather these will be explored within the Project Objectives report. For ease of reference the following key points for consideration, and which were initially defined in the relevant section within the Project Mandate, have been repeated:

Programme:

1. To deliver the Scheme in accordance with the agreed Local Flood Risk Management Plan; and
2. Within the Local Flood Risk Management Plan, Musselburgh is analysed through two Potentially Vulnerable Areas (PVA's) due to a coincidence of location at the boundary of these areas: namely PVA 10/21 and PVA 10/22. Within each PVA, there is a list of 'selected actions' ranging from the delivery of a 'flood protection scheme' to 'self-help' and 'awareness rising'. It is assumed that as a 'flood protection scheme' is the largest of all possible actions that it will, as appropriate, incorporate / assist many, if not all, of the other actions throughout the lifetime of the Scheme's project delivery.

Project:

1. *To reduce the risk to people in Musselburgh from flooding;*
2. *To reduce economic damages to residential and non-residential properties in Musselburgh caused by all sources from flooding in Musselburgh;*
3. *To investigate and develop design solutions for a flood protection scheme (FPS) that are technically sound and the most fit for purpose;*
4. *To ensure the solutions are environmentally acceptable and sustainable;*
5. *To ensure the solutions include appropriate catchment and natural flood management measures;*
6. *To ensure the solution represents the best value for money;*
7. *To consult with stakeholders within and around the FPS area to establish the issues of concern with the local population; and*

8. *To undertake this scheme in accordance with the best available industry practices for the environment.*

3 Key considerations in setting the Project Objectives

A formal flood protection scheme advanced under the Flood Risk Management (Scotland) Act 2009 (the FRM) must comply with the requirements of the FRM Act and its Flood Risk Management (Flood Protection Schemes, Potentially Vulnerable Areas and Local Plan Districts) (Scotland) Regulations 2010 (the 2010 Regulations).

It must also comply with the appropriate Scottish Government guidelines for advancing flood protection schemes in Scotland (e.g. the Chapter 5 Guidelines which are reference further down in this section); all other appropriate pieces of legislation (e.g. CAR Licensing under the Water Environment (Controlled Activities) (Scotland) Regulations 2011); and if funding is desired the criteria for any funding application.

The Selkirk Flood Protection Scheme 2012 was the first major Scheme to be advanced under the FRM and the first scheme advanced under the FRM that had an environmental statement. As such, that Scheme had to continuously interrogate the FRM and its regulations in partnership with the Scottish Government to ensure the Scheme's design was advanced in accordance with the requirements and ethos of the FRM.

In particular, this requires that Scheme to take into account the Scottish Government's new (from February 2012) guidance for Local Authorities on Project Appraisal:

"The FRM – Flood Protection Sche*mes – Guidance for Local Authorities – Chapter 5 – Project Appraisal: Assessment of economic, environment and social impacts*"

The new Scottish Government guidance is considered to be critically important in the consideration of how to design a flood protection scheme. This guidance provides a structure for, and allows for, the consideration and monetisation of environmental and social alongside the normal structural / property damages evaluated by the Economic Appraisal within the Option Appraisal Process. This was a major step forward at the time and replaced the older system (**DEFRA's Flood and Coastal Risk Management Appraisal Guidance (FCERM-AG) interpreted in a Scottish Context**) whereby the economic appraisal did not monetise social and environmental benefits within the Benefit to Cost Ratio (BCR).

It is worth noting the following in relation to the Scottish Government's new Chapter 5:

1. It continues to advance the ethos of the FRM in that flood protection schemes should be environmentally acceptable and sustainable;
2. It provides techniques / tools through which we are capable of monetising social and environmental impacts of flooding for the first time; and
3. It effectively removes the need for the chosen Scheme to be the one with the optimum Benefit Cost Ratio (BCR). This does not reduce the importance of the optimum BCR and the need for appropriate analysis of BCR: it simply increases the importance of sustainability, social, cultural drivers alongside the pure economic driver.

4 The Defined Project Objectives

4.1 General objectives

1. To deliver the Scheme in accordance with the agreed Local Flood Risk Management Plan;
2. To advance as many of the 'selected actions' identified within the Local Flood Risk Management Plan as possible and to a level that is reasonable through the project during the life-cycle of the project;
3. To investigate and develop design solutions for the Scheme that are technically sound and the most fit for purpose;
4. To advance the Scheme under the FRM, its 2010 Regulations and the appropriate guidelines for designing a formal flood protection scheme;
5. To ensure that the Scheme complies with all legislative requirements;
6. The Scheme will strive to consider all possible options for reducing the flood risk within the Option Appraisal Process;
7. That where possible, the Scheme will strive to achieve multiple benefits; and
8. To advance a Scheme that tries to interpret the ethos of the FRM and which is developed in a consultative framework with other internal Council Officers, statutory stakeholders and those that have a real interest in the project.

4.2 Economic objectives:

1. To ensure that the Scheme, as a minimum, achieves a Benefit Cost Ration (BCR) equal to one for each flood cell within the economic analysis (and thereby for the Scheme as a whole). It is assumed that individual flood cells cannot cross-fund each other to achieve a basic 1.0 ratio;
2. To ensure that a full analysis of BCR is undertaken during the Option Appraisal Process (during Stage 3 – the Option Appraisal Process) such that a full understanding of economic benefit and cost is achieved. The Scheme does not require to have the optimum BCR however economic benefit is to remain a key consideration;
3. To reduce the exposure to economic damages from flooding to both residential and non-residential properties in Musselburgh;
4. To choose a Scheme that is considered to be best value for money for the Council and the town of Musselburgh within consideration of both the short and long term.

4.3 Hydraulic objectives:

1. To ensure that the Scheme delivers the maximum level of protection that is achievable within the context of the existing flood risk and all of these objectives. It is noted that the Scheme will be broken into stand-alone flood cells for design and economic appraisal purposes and it is assumed that the level of protection at each flood cell should be determined within the context of that flood cell, the impact of that cell's flood protection on other flood cells, and the town as a whole;
2. That, further to Section No. 4.3.1 of this report, the Scheme will aspire to meet a level of protection to protect against the 0.5% AEP (plus an allowance for climate change) Flood Event;
3. To ensure that the Scheme addresses all sources of flood risk;
4. To ensure that any residual flood risks are fully documented and identified to the Council; and
5. That the Scheme will not materially increase the flood risk to another property through the delivery of flood protection to Musselburgh.

4.4 Technical objectives:

1. To ensure that the Scheme is technically sound;
2. That, further to Section 4.3.1 of this report, the Scheme will be designed (if determined necessary) with the flexibility to have its level of protection increased in the future (future flexibility);
3. To ensure that the Scheme is sustainable;
4. To ensure that the Scheme addresses all appropriate Health & Safety during its design and delivery, including considerations for future operation and maintenance of the Scheme; and
5. To ensure that the Scheme complies with the obligations of BIM.

4.5 Environmental objectives:

1. That the Scheme will achieve as a minimum a neutral impact on the environment;
2. To ensure that the Scheme includes appropriate catchment and natural flood management (NFM) measures;
3. To ensure that the Scheme considers the impact of climate change and includes appropriate provisions to mitigate any impact;
4. To ensure that the Scheme considers in full, and includes for any appropriate measures to protect, the Firth of Forth and its protected statuses; and
5. To ensure that the Scheme consults with all appropriate environmental stakeholders.

4.6 Social and cultural objectives:

1. To ensure that the Scheme does not sever the town from its rivers (through the height / size of flood protection walls and / or embankments) in either the physical or visual sense;
2. To ensure that the Scheme respects the cultural heritage of the town;
3. To ensure that the Scheme takes account of people most vulnerable to flooding;
4. To consult with stakeholders, businesses and the local population; and
5. To remove the real and perceived danger of a flooding event from the communities, individuals and businesses that lie in the floodplain.

4.7 Regeneration objectives:

1. That where possible, and where not detrimental to the core objectives of the Scheme, the Scheme seek to allow for the future regeneration of the town of Musselburgh through: (i) the flood protection provided by the Scheme; (ii) the confidence in investment it restores; and (iii) the engaged consultative process that also seeks to locate appropriate multiple benefits (as per Section 4.1.7 of this report). It is noted that the Scheme will not be paying directly for regeneration but it is assumed that this can be achieved through intelligent use of existing flood protection money and the concept of multiple benefits.

5 Summary of Project Objectives

It is considered that this defined set of project objectives:

1. Has allowed ELC an opportunity to explicitly highlight the specific objectives that it has for the project under discrete headings;

2. Has provided ELC as an organisation, and thereby many of its Heads of Section as individuals, an opportunity to consider the project and input into its objectives;

3. That in developing these objectives through a consultative process, that it provides the Project Team with a simple method of conveying the defined objectives for the Scheme to others throughout the lifetime of the project; and

4. Provides a unique snapshot of the ELC aspirations for the project which can be referenced throughout the project design, and later at the end of the project when contemplating the achievements of the project.