

# **Strategic Environmental Assessment of the Trafford Local Flood Risk Management Strategy**

## **Environmental Report**

**September 2014**



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## 1. INTRODUCTION

### **The Trafford Local Flood Risk Management Strategy**

- 1.1 Under the provisions of the Flood and Water Management Act 2010 ('the Act'), unitary authorities and county councils have been given new responsibilities in relation to the management of flood risk in their area. In particular, the Act established Trafford Metropolitan Borough Council as a Lead Local Flood Authority (LLFA) with the requirement to produce, maintain, apply and monitor a Local Flood Risk Management Strategy (LFRMS) for local flood risk in their area.
- 1.2 Local flood risk is defined by the Act as flood risk derived from surface runoff, groundwater and ordinary watercourses which do not form part of a main river. Flooding from the sea, main rivers and reservoirs are therefore not defined as local flood risk and these sources of flooding are instead the concern of the Environment Agency rather than the LLFA. Such sources of flood risk do however need to be considered insofar as their potential interaction with those flood risks defined as local to ensure that all joint risks of flooding are assessed at the local scale.
- 1.3 The LFRMS is required to be consistent with the National Flood and Coastal Erosion Risk Management Strategy. Although the LFRMS is intended to be a locally specific document that reflects key local issues and which enables communities to be more involved in decision-making regarding flood risk management, LFRMS's are statutorily required to include the following:
- The risk management authorities in the LLFA area and what flood and coastal erosion risk management functions they may exercise in relation to the area. If functions normally carried out by one body will be carried out by another, this also has to be specified.
  - The objectives for managing local flood risk. These will be relevant to the local area and reflect the level of local risk.
  - The measures proposed to achieve the objectives. This could include a wide range of measures such as sustainable drainage systems, designation of features, improvements to the sewage network and application of the planning system.
  - How and when measures are expected to be implemented.
  - The costs and benefits of these measures and how they are paid for.
  - The assessment of local flood risk for the purpose of the strategy. The strategy may identify gaps in the understanding of local flood risk and specify the actions which could close these gaps.
  - How and when the strategy is to be reviewed. The review period is not specified at the national level and it is therefore up to the LLFA to decide what is appropriate.
  - How the strategy contributes to the achievement of wider environmental objectives.

1.4 Trafford Council, as a LLFA, has produced a LFRMS. This strategy:

- Identifies the flood risk management authorities in the Borough and the functions that may be exercised by those bodies;
- Provides an assessment of local flood risk;
- Identifies the objectives for managing local flood risk, the measures proposed to achieve those objectives, the costs and benefits of those measures and how they are expected to be implemented;
- Outlines how the Strategy contributes towards the achievement of wider environmental objectives;
- Outlines how and when the Strategy will be reviewed.

### **Strategic Environmental Assessment**

1.5 In order to ensure that new plans and strategies take into account environmental considerations, the European Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment”, requires a Strategic Environmental Assessment (SEA) of certain plans and strategies to be undertaken. The outcome of this assessment is required to be documented in an Environmental Report and made available for consultation alongside the draft plan or strategy. This requirement for certain plans and strategies to be subject to SEA is transposed into United Kingdom law by the Environmental Assessment of Plans and Programmes Regulations 2004 (the ‘SEA Regulations’).

1.6 The overarching objective of the SEA Directive is: *“To provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans... with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans... which are likely to have significant effects on the environment.”* (Article 1). In particular, it aims to ensure that the potentially significant environmental effects created as a result of the implementation of the plan or strategy on issues such as *“biodiversity, population, human health, fauna, flora, soil, water, air, climatic, material assets including architectural and archaeological heritage, landscape and the interrelationship between the above factors”* are identified and taken into account when developing the plan or strategy (Annex 1(f)).

1.7 This requirement to undertake a SEA applies to a range of plans and strategies prepared by public bodies, including the Trafford LFRMS which meets the relevant criteria in that it has the potential to have significant effects on the environment and is *“prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and is required by legislative, regulatory or administrative provisions”* (Article 2(b)).

1.8 SEA does not constitute a separate stage in the production of a plan or strategy. Instead it represents an iterative, on-going process that forms an integral part of the plan-making process. It involves the identification and evaluation of the environmental impacts of implementing ‘the plan and reasonable alternatives’. In doing so, the SEA provides an

opportunity to consider ways in which the LFRMS can make an effective contribution to sustainable development and provides a means of avoiding or reducing any adverse effects that the plan might have.

### **Aims and Structure of the Report**

1.9 This report documents the SEA process in relation to the Trafford LFRMS and forms the Environmental Report for the purposes of the SEA Regulations. A draft version of this report was published alongside the draft LFRMS to provide the public, statutory consultees and other stakeholders with an opportunity to express opinions on this Environmental Report and to use it as a reference point whilst commenting on the draft LFRMS.

1.10 The report:

- Describes the SEA process and the decisions taken during this process;
- Takes into consideration other relevant plans, programmes and strategies;
- Identifies key environmental issues and provides an environmental context for the LFRMS;
- Appraises the potential effects on the environment of the proposed local flood risk management measures contained within the LFRMS and also contains an assessment of reasonable alternatives to those that have been included within the strategy; and
- Sets out the proposed monitoring measures which will be used to review the Strategy in the future.

1.11 The report has been prepared to comply with the requirements of the SEA Regulations. The reporting requirements of Regulation 12(3) and Schedule 2 of the SEA Regulations are set out in the following table, which also indicates the sections of this SEA report where the relevant requirements have been met.

Table 1.1: Compliance with the SEA Directive

<b>Information to be included in an Environmental Report under the SEA Regulations</b>	<b>Relevant sections in the Environmental Report</b>
An outline of the contents, main objectives of the plan and its relationship with other relevant plans and programmes.	Section 2 (paragraphs 2.1 – 2.14)
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan.	Section 2 (paragraphs 2.15 – 2.30)
The environmental characteristics of areas likely to be significantly affected.	Section 2 (paragraphs 2.15 – 2.30)
Any existing environmental problems which are relevant to the plan, including in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.	Section 2 (paragraphs 2.14 – 2.34)

The environmental protection objectives, established at international, Community or national level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation.	Section 2
The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soils, water, air, climatic factors, material assets, cultural heritage, landscape, and the interrelationship between the above factors.	Section 4 Appendix B
The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan.	Section 4 Appendix B
An outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken including any difficulties.	Section 4 Appendix B
A description of measures envisaged concerning monitoring.	Section 5
A non-technical summary of the information provided above.	Separate document

1.12 This Chapter has provided an overview of the background to the production of the Trafford LFRMS and has also provided an outline of the requirement to undertake an SEA. The remainder of this Environmental Report is structured as follows:

- **Chapter 2** outlines the methodology that has been used for completing the SEA of the LFRMS. It presents the review of plans, programmes and strategies, baseline information and key sustainability issues for Trafford.
- **Chapter 3** presents the SEA framework that has been used for undertaking the appraisal of the LFRMS.
- **Chapter 4** summarises the key findings of the SEA of the LFRMS.
- **Chapter 5** details the approach that will be taken to monitoring the effects of the LFRMS as it is implemented.
- **Chapter 6** provides the conclusions of the SEA and describes the next steps that will be undertaken.

## 2 METHODOLOGY

### Overall Approach

- 2.1 The approach adopted to undertake the SEA of the LFRMS was based on the process set out in the Practical Guide to the Strategic Environmental Assessment Directive<sup>1</sup>. In accordance with this guidance, the SEA comprised the following stages and tasks:

Table 2.1: Stages in the SEA Process

SEA Stage	Tasks
Stage A: Setting the context and objectives, establishing the baseline and deciding on the Scope	A1: Identifying other relevant plans, programmes and environmental protection objectives
	A2: Collecting baseline information
	A3: Identifying environmental problems
	A4: Developing SEA objectives
	A5: Consulting on the scope of the SEA
Stage B: Developing and refining alternatives and assessing effects	B1: Testing the LFRMS objectives or policies against the SEA objectives
	B2: Developing strategic alternatives
	B3: Predicting the effects of the LFRMS, including alternatives
	B4: Evaluating the effects of the LFRMS, including alternatives
	B5: Mitigating adverse effects
	B6: Proposing measures to monitor the environmental effects of implementing the LFRMS
Stage C: Preparing the Environmental Report	C1 : Preparing the Environmental Report
Stage D: Consulting on the draft LFRMS and the Environmental Report	D1: Consulting the public and Consultation Bodies on the LFRMS and the Environmental Report
	D2: Assessing significant changes
	D3: Making decisions and providing information
Stage E: Monitoring the significant effects of implementing the LFRMS on the environment	E1: Developing aims and methods for monitoring
	E2: Responding to adverse effects

#### Stage A: Setting the context and objectives, establishing the baseline and deciding on the Scope

- 2.2 Trafford Council undertook the first stage (Stage A) in summer 2013. As part of this process, the Council produced an SEA Scoping Report which sought to define the scope of the SEA with regard to the LFRMS, and to define the important features of the baseline that will inform the appraisal of the strategy. In particular, the Scoping Report:

- Identified and reviewed other relevant plans, programmes and strategies that may affect and influence the LFRMS;

<sup>1</sup> A Practical Guide to the Strategic Environmental Assessment Directive - practical guidance on applying European Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment'. ODPM, September 2005

- Set out relevant social, environmental and economic baseline information on Trafford and identified the key environmental issues or problems of relevance to the LFRMS; and
  - Established an SEA Framework consisting of objectives against which the LFRMS would be appraised.
- 2.3 The Report also set out the proposed methodology for the SEA, giving an indication of its level of detail and scope.
- 2.4 Article 6(2) of the SEA Directive states that authorities with relevant environmental responsibilities must be given an early and effective opportunity to express their opinion on the draft plan and the accompanying Environmental Report. In compliance with these requirements, and to ensure that the SEA is comprehensive and addresses all relevant issues and objectives, consultation on the SEA Scoping Report took place between June and July 2013. Comments were invited from the consultation bodies required by the SEA Regulations – the Environment Agency, English Heritage and Natural England<sup>2</sup> - and from a number of other stakeholders.
- 2.5 Comments were received on the draft Scoping Report from each of the consultation bodies and from one other consultee. A list of all the comments received along with a description of how each one was addressed is found in Appendix A.

Stage B: Developing and refining alternatives and assessing effects

- 2.6 A draft LFRMS with a series of options and potential projects was developed for review by Trafford Council’s internal steering group. This resulted in a number of potential projects being eliminated from the strategy, primarily due to concerns that it would not be feasible to implement these measures. Section 12(2) of the SEA Regulations only requires the Environmental Report to identify, describe and evaluate the likely significant effects on the environment of implementing the plan and reasonable alternatives. These discounted projects are not considered to constitute reasonable alternatives for the purpose of SEA Regulations due to projects being either unrealistic or undeliverable. As such, the discounted projects have not been assessed in this report.
- 2.7 The remaining projects within the LFRMS have been appraised against the SEA objectives set out in the Scoping Report and the findings of this assessment have been taken into account by Trafford Council when finalising the draft version of the strategy for consultation. The objectives of the LFRMS have also been tested against the SEA objectives, consideration has been given to the need to incorporate measures to mitigate any adverse impacts associated with the implementation of the LFRMS and a framework for monitoring the environmental effects of the strategy has been developed.

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<sup>2</sup> The SEA Regulations require the Environment Agency, English Heritage, English Nature and the Countryside Agency to be consulted on the scope of sustainability appraisals. However, the Natural Environment and Rural Communities (NERC) Act merged the Countryside Agency and English Nature to form a new agency - Natural England.



### Stage C: Preparing the Environmental Report

- 2.8 This report is the output of Stage C of the SEA process.

### Stage D: Consulting on the draft LFRMS and the Environmental Report

- 2.9 A draft version of this Environmental Report was published alongside the draft LFRMS to provide the public, statutory consultees and other stakeholders with an opportunity to express opinions on the findings of the SEA and to use it as a reference point whilst commenting on the LFRMS. This period of public consultation took place between 17<sup>th</sup> February 2014 and 31<sup>st</sup> March 2014. All comments received were analysed and taken into account when finalising the LFRMS. The consultation responses that related directly to the SEA were also taken into account and the Environmental Report has been updated to reflect these comments. An assessment has also been made of the changes that have been made to the LFRMS. However, this exercise concluded that none of the changes to the strategy were significant in SEA terms.

### Stage E: Monitoring the significant effects of implementing the LFRMS on the environment

- 2.10 Proposals for monitoring the significant effects of the LFRMS are detailed in Chapter 5 of this report.

### **Context, Baseline and Key Environmental Issues**

- 2.11 The following sections of this chapter outline some of the key findings of the scoping stage (Stage A) of the SEA process. In particular, it provides an overview of the tasks undertaken to provide context for the draft strategy and to assist with the identification of environmental problems that informed the development of the SEA Framework.

### **Review of Plans, Programmes and Strategies**

- 2.12 Stage A of the SEA process involves establishing the context in which the LFRMS is being prepared, namely the other plans, programmes and strategies that influence its content (and vice-versa) and the opportunities and challenges they present. The SEA Directive specifically requires environmental objectives established at international, European Community or national levels to be taken into account in developing the LFRMS. However, in order to facilitate a comprehensive approach, the review of other plans, programmes and strategies is often widened to consider how a plan can support the full range of other plans, policies and programmes that already exist, including at the regional, sub-regional and local levels.
- 2.13 A review of all relevant plans, programmes and strategies has been undertaken as part of the preparation of the SEA Scoping Report for the LFRMS. In completing this review the aim was to identify the implications for the LFRMS to ensure that the relationship between these other plans, programmes and strategies and the LFRMS has been fully explored. This will in

turn ensure that Trafford Council is able to exploit potential synergies and address any identified inconsistencies between international, national, regional and local objectives.

- 2.14 Table 2.2 below shows a list of the plans, programmes and strategies that were reviewed as part of the SEA. The full review is provided in the SEA Scoping Report, which is available on the Council's website.

Table 2.2: List of all Plans, Programmes and Strategies reviewed as part of the SEA

<b>International Level</b>
The Ramsar Convention on Wetlands of International Importance (1971)
European Commission (1979 (Amended in 1997)) - EC Council Directive 79/409/EEC, on the Conservation of Wild Birds
European Commission (1985 (Amended in 1997)) - EC Council Directive 85/337/EEC & 97/11/EC, on the Assessment of the Effects of certain Public and Private Projects on the Environment
United Nations (1992) - The Kyoto Protocol and UN Framework Convention on Climate Change
European Commission (1992) - EC Council Directive 92/43/EEC, on the Conservation of Natural Habitats and of Wild Fauna and Flora
European Commission (1998) - EU Biodiversity Strategy
European Commission (1998) - EC Council Directive 98/83/EC on the quality of water intended for human consumption
European Commission (1999) - EC Council Directive 1999/31/EC, on the landfill of waste
European Commission (2000) - EC Council Directive 2000/60/EC, establishing a framework for Community action in the field of water policy
European Commission (2006) - EC Council Directive 2006/118/EC on the protection of groundwater against pollution and deterioration
European Commission (2007) - EC Council Directive 2007/60/EC on the assessment and management of flood risks
<b>National Level</b>
English Nature (2003) - Accessible Natural Greenspace Standards in Towns and Cities: a Review and Toolkit for their Implementation
DCLG (2004) - The Environmental Assessment of Plans and Programmes Regulations (S.I. 2004 No. 1633)
Defra (2005) - Securing the Future - UK Government Sustainable Development Strategy
ODPM/Scottish Executive/Welsh Assembly Government/DoENI (2005) - A Practical Guide to the Strategic Environmental Assessment Directive
UK Parliament (2006) - Contaminated Land (England) Regulations
Defra (2013) Government Forestry and Woodlands Policy Statement
Department for Culture, Media and Sport/Welsh Assembly Government (2007) – Heritage protection for the 21st Century – White Paper
DTI (2007) - Meeting the Energy Challenge: A White Paper on Energy
Defra (2007) - Guidance for Local Authorities on Implementing the Biodiversity Duty
Pitt Review (2008) - Learning lessons from the 2007 floods
UK Parliament (2008) - Climate Change Act 2008
UK Parliament (2009) - The Flood Risk Regulations 2009
Defra (2009) - Safeguarding our Soils – A Strategy for England
Environment Agency (2009) - Water for People and the Environment; Water Resources Strategy for England and Wales

DCLG (2009) - Development and Flood Risk PPS25 Practice Guide
UK Parliament (2010) - The Flood and Water Management Act 2010
HM Government (2010) - Healthy Lives, Healthy People: Our strategy for public health in England (White Paper)
HM Government (2010) - Local growth: realising every place's potential (Local Growth White Paper)
Defra (2010) - The Conservation of Habitats and Species Regulations 2010
DCLG (2011) - PPS10: Planning for Sustainable Waste Management
Environment Agency (2011) - The National Flood and Coastal Erosion Risk Management Strategy for England
Defra (2011) - Biodiversity 2020 - A strategy for England's wildlife and ecosystem services
HM Government (2011) - The Natural Choice (Natural Environment White Paper)
HM Treasury (2011) - National Infrastructure Plan 2011
Defra (2011) - Guidance for risk management authorities on sustainable development in relation to their flood and coastal erosion risk management functions
Defra (2011) - Government Review of Waste Policy in England 2011
Environment Agency (2011) - SEA and Climate Change: Guide for Practitioners
DCLG (2012) - National Planning Policy Framework
DCLG (2012) - Technical Guidance to the National Planning Policy Framework
UK Parliament - The Wildlife and Countryside Act 1981, as amended
UK Parliament - The Countryside and Rights of Way Act 2000
Environment Agency On Line Flood Map (December 2013)
Natural Environment and Rural Communities (NERC) Act 2006
<b>Regional and Sub-Regional</b>
Red Rose Forest (1994) - Red Rose Forest Plan
Association of Greater Manchester Authorities (AGMA) (2002) - Greater Manchester Derelict Land Strategy
AGMA (2006) - Manchester City Region Spatial Strategy
GONW (2008) - North West of England Plan – Regional Spatial Strategy to 2021
AGMA (2008) - Towards a Green Infrastructure Framework for GM
Manchester City Council / Salford City Council / Trafford Council (2008) - Irwell City Park Planning Guidance
AGMA (2008) - Strategic Flood Risk Assessment (SFRA) for Greater Manchester
AGMA (2009) - Prosperity for all: The Greater Manchester Strategy
United Utilities (2009) - Business Plan 2010-2015: Planning for the Future
Environment Agency (2009) - Irwell Catchment Flood Management Plan (Summary Report)
Environment Agency (2009) - Mersey Estuary Catchment Flood Management Plan (Summary Report)
Environment Agency (2009) - Upper Mersey Catchment Flood Management Plan (Summary Report)
Environment Agency (2009) - Water for life and livelihoods: River Basin Management Plan – North West River Basin District
Greater Manchester Biodiversity Project (2009) - Greater Manchester Biodiversity Action Plan
NWRA (2010) - Atlantic Gateway – Accelerating Growth Across the Manchester and Liverpool City Regions – Framework for a Global Growth Opportunity
Transport for Greater Manchester and Greater Manchester Combined Authority (2011) – Greater Manchester's third Local Transport Plan 2011/12 – 2015/16
Manchester City Council / Salford City Council / Trafford Council (2010/11) - Manchester, Salford, Trafford Hybrid Strategic Flood Risk Assessment (SFRA)

AGMA (2012) - Greater Manchester Joint Waste DPD
AGMA (2013) - Greater Manchester Joint Minerals DPD
<b>Local Level</b>
Revised Trafford Unitary Development Plan (UDP) (2006)
Trafford Vision 2021: a blueprint – Sustainable Community Strategy (2010)
Trafford Preliminary Flood Risk Assessment (2011)
Trafford Local Plan: Core Strategy (2012)
Sustainable Trafford (2013)

### **Baseline Information and Key Environmental Issues**

- 2.15 The collection and analysis of baseline data is central to the SEA process. In particular, Annex 1 of the SEA Directive sets out that the following is required:

*“The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;*

*The environmental characteristics of areas likely to be significantly affected; and,*

*Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.”*

- 2.16 Baseline information facilitates the identification of the environmental issues and problems that need to be taken into account when developing the LFRMS. It also assists in the formation of objectives, indicators and targets for the strategy and provides the information necessary to assist in predicting and monitoring its effects.
- 2.17 For the LFRMS, baseline data was obtained from a wide range of sources and is both quantitative and qualitative. The analysis of the key baseline characteristics for Trafford, together with an assessment of other relevant plans, policies and programmes, has facilitated the identification of the key issues that must be considered when developing the strategy.
- 2.18 The full review of baseline information is provided in the SEA Scoping Report. A summary of the key environmental issues raised by this review is provided below. The source and base date of all evidence referred to in this summary is as per the Scoping Report. For clarity, this summary is grouped under the topics referred to within Annex 1(f) of the SEA Directive.

#### Human Health

- 2.19 Life expectancy in Trafford exceeds the national average. The SEA Scoping report does however note that flooding, particularly involving sewers, can have profound impacts on physical health, and in severe cases may cause a risk to lives. The Scoping Report also notes that perceived flood risk can impact on stress levels and mental health.

### Biodiversity (including fauna and flora)

- 2.20 Although Trafford is predominantly urban and suburban in character, the Scoping Report identifies that the Borough contains a number of sites that have been designated for their biodiversity value, including two Sites of Special Scientific Interest (SSSIs), both of which are in a 'favourable' condition. Trafford also contains a number of Sites of Biological Importance, several species and habitats that are protected through the Greater Manchester Biodiversity Action Plan, and Carrington Moss which has been identified as a key area for conservation and enhancement. The Scoping Report emphasises the need for the LFRMS to take this into account and highlights that measures to reduce flood risk can create new habitats but also have the potential to have a negative impact on some aspects of biodiversity.

### Soil

- 2.21 The Scoping Report notes that Trafford has had a long history of intense industrial activity, and faces a considerable challenge in dealing with its legacy of contaminated land. In particular, it observes that 1527 potentially contaminated sites have been identified in Trafford, 59 of which are landfill sites. The Scoping Report therefore identifies the need for the LFRMS to consider the issue of contaminated land in relation to sites where flooding could lead to the release of pollutants into watercourses or groundwater.
- 2.22 Trafford contains the majority (76%) of the Grade 2 agricultural land in Greater Manchester (more than 2300 hectares). This best and most versatile agricultural land represents a significant resource. The Scoping Report notes that the LFRMS may impact on land use and therefore on soil resources.

### Water and Flood Risk

- 2.23 Although there have been major improvements in water quality in Greater Manchester in recent decades, the Scoping Report notes that latest figures indicate that Trafford has 12.5% of watercourses in the 'Good' category. Trafford is classified as being within an area of relatively low water stress. Flood risk is however a significant issue for the Borough. Flood risk in Trafford arises from main rivers, particularly the Mersey, Timperley Brook, Baguley Brook, Fairywell Brook, Sinderland Brook, Red Brook and Bollin, and also from sewers, canals and surface water. The Manchester Ship Canal and Bridgewater Canal potentially present significant risks to extensive areas of land alongside them.
- 2.24 In Trafford, the total number of residential properties in Flood Zone 2 is 2776 and in Flood Zone 3 is 554. The number of residential properties that fall within Flood Zone 2 and are also within the top 10% of most deprived areas according to the IMD is 71. There are no residential properties that fall within Flood Zone 3 and are also within the top 10% of most deprived areas according to the IMD.

### Population

- 2.25 The population of Trafford grew by 7.8% between 2001 and 2011 which is higher than the national average. There has also been significant housing growth in Trafford over the last eight years, with a particularly significant increase in the proportion of apartments in the dwelling stock. Trafford has levels of unemployment that are lower than the national average

but there are parts of the Borough where deprivation is a serious issue. The Scoping Report notes that an adequate supply of good-quality, safe housing, which is free from or resilient to flood risk, is needed to support sustainable growth and to reduce social and economic exclusion and stress. It also observes that failure to protect employment and service concentrations, transport routes, and other infrastructure and assets from flooding could reduce the attractiveness of Trafford to existing and new businesses and residents.

#### Material Assets

- 2.26 The Scoping Report notes that Trafford has a complex network of roads, rail, tram and bus services, which are an essential part of the infrastructure underpinning population and economic stability and growth. It also notes that the borough has a number of important canals, a complex network of utility infrastructure, waste management facilities and areas related to actual or potential mineral extraction. Given that flooding can have a serious impact on infrastructure and material assets, the Scoping Report notes that it will be important for the LFRMS to seek to address this.

#### Air Quality

- 2.27 The SEA of the National Flood and Coastal Erosion Risk Management Strategy concluded that significant impacts on air quality as a result of the strategy were unlikely to occur and therefore it was scoped out of the assessment. Similarly, the SEA Scoping Report concluded that significant impacts on air quality as a result of the LFRMS are also unlikely to occur and air quality was therefore also scoped out of this SEA.

#### Climatic Factors

- 2.28 Although Trafford has road transport emissions that are below the UK per capita average, its overall per capita greenhouse gas emissions exceed the national average which largely reflects the fact that commercial and industrial emissions are very high in the Borough. Research funded by the Joseph Rowntree Foundation<sup>3</sup> indicates that large parts of Trafford are more vulnerable than the national average to both flood risk and risk associated with heat waves, both of which are predicted to be exacerbated by climate change. Given that flood risk management makes a significant contribution to how well adapted communities are to the increased risk of flooding as a result of climate change, this is a key issue that should be taken into account by the LFRMS.

#### Cultural Heritage

- 2.29 Trafford contains a wide number of designated heritage assets, including 340 listed buildings (6 of which are Grade I listed and 9 of which are Grade II\* listed), a scheduled ancient monument, 21 conservation areas and 3 registered parks and gardens. A number of these listed building and conservation areas have been listed as 'at risk' by English Heritage<sup>4</sup>. Trafford also has non-designated heritage assets such as buildings of local interest, archaeological sites and monuments, and historic landscapes. A number of these heritage assets are adjacent to watercourses, such as weirs and canalside warehouses. The Scoping

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<sup>3</sup> Climate Change, Justice and Vulnerability – Joseph Rowntree Foundation, November 2011

<sup>4</sup> Heritage at Risk Register – English Heritage, 2013

Report notes that the LFRMS may affect the use of land and therefore impact on built aspects of cultural heritage.

#### Landscape

- 2.30 There are no designated landscapes within Trafford. The Borough does however contain areas of green infrastructure which can make a contribution towards climate change mitigation and flood risk reduction by, for example, lessening the urban heat island effect and providing areas of natural drainage. Actions from the LFRMS may affect the use of land and changes in flood risk and water levels, thus having an impact on landscape. Such changes may present opportunities to create new landscape features and enhance the landscape.

#### **Habitat Regulations Assessment**

- 2.31 Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna – the ‘Habitats Directive’ – provides legal protection for habitats and species of European importance. Article 6 of this Directive introduced the requirement to undertake a ‘Habitat Regulation Assessment’ (HRA) of the implications of proposed land use plans for the integrity of nature conservation sites of European importance. Such sites are known as Natura 2000 sites, and include Special Areas of Conservation (SACs), candidate Special Areas of Conservation (cSACs), Special Areas of Protection (SPAs), potential Special Areas of Protection (pSPAs), Ramsar sites and Offshore Marine Sites (OMSs).
- 2.32 The requirements of this Directive are transposed into United Kingdom law by the Conservation of Habitats and Species Regulations 2010. Section 61 of these Regulations requires an assessment to be carried out on any plan or project which, either alone or in combination with other plans or projects, would be likely to have a significant effect on a European Site, and is not directly connected with the management of the site for nature conservation.
- 2.33 The HRA process is separate from SEA. The purpose of a HRA is to determine whether or not significant effects on European sites are likely and to suggest ways in which they could be avoided. Under the provisions of the Habitats Directive, consent can only be granted for such a plan if, as a result of the HRA, it can be demonstrated that the integrity of the sites will not be adversely affected or, where adverse impacts are anticipated, there is shown to be no alternative solutions and imperative reasons of overriding public interest for the plan to go ahead.
- 2.34 There are no European designations within Trafford. Nevertheless, there is a need to screen the potential effects of the LFRMS to determine whether it would be likely to have an impact on any European sites outside of Borough. Accordingly, the Greater Manchester Ecological Unit (GMEU) has undertaken a HRA (Screening) of the draft strategy. This assessment concluded that no European sites will be affected by the implementation of the draft LFRMS. It also concluded that the LFRMS would not have any adverse effects on a European site ‘in combination’ with other plans and strategies. The full findings of this assessment are available in a separate document which can be downloaded from the Council’s website.



### 3 STRATEGIC ENVIRONMENTAL ASSESSMENT FRAMEWORK

#### Strategic Environmental Assessment Objectives

- 3.1 Establishing the SEA Framework is central to the appraisal process. Although the SEA Directive does not specifically require their use, the SEA Framework typically comprises a series of objectives that are derived from the review of relevant plans, programmes and strategies, analysis of baseline information and identified environmental issues and problems.
- 3.2 These objectives form the basis for evaluating the effects of implementing a plan on a range of environmental, social and economic issues. The approach to SEA is therefore fundamentally an objectives-led approach whereby the potential impacts of a plan are gauged in relation to a series of objectives for sustainable development. The establishment of these objectives therefore provides the methodological yardstick against which the sustainability effects of a plan can be described, assessed and compared.
- 3.3 As part of Stage A of the SEA process, the Scoping Report for the LFRMS identifies twelve SEA objectives that reflect key environmental issues facing Trafford. These objectives cover a range of issues, for example relating to flooding, health, climate change, water quality, landscape and investment and growth. These objectives are listed in Table 3.1 below.

Table 3.1: SEA Objectives

<b>OBJECTIVE NO.</b>	<b>SEA OBJECTIVE</b>
<b>1</b>	Minimise the probability and consequences of flooding
<b>2</b>	Minimise the probability and consequences of climate change
<b>3</b>	Maintain and where possible enhance the quality of water resources, water bodies and their environment
<b>4</b>	Maintain and where possible enhance biodiversity, geodiversity and soils
<b>5</b>	Protect and where possible enhance the landscape and green infrastructure
<b>6</b>	Protect and where possible enhance townscapes and cultural heritage
<b>7</b>	Ensure the efficient use of land
<b>8</b>	Protect and enhance the health and well-being of the population
<b>9</b>	Support the sustainable growth of the City Region
<b>10</b>	Minimise economic and social exclusion for all
<b>11</b>	Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth
<b>12</b>	Maintain and where possible enhance the transport network for all users

- 3.4 The SEA objectives have also been selected to ensure that they cover the list of specific environmental topics required to be addressed by Schedule 2 of the SEA Regulations. Table 3.2 below highlights how each of the SEA topics are addressed by the SEA objectives for the LFRMS. It should however be noted that the SEA topic 'air' was however scoped out of the assessment due to the fact that the type of measures to be included in the LFRMS were considered to be unlikely to have a significant impact on air quality.



Table 3.2: SEA Topics and SEA Objectives

SEA Topic	SEA Objective
Biodiversity, Flora and Fauna	3, 4, 5 and 7
Human Health	1 and 8
Population	9 and 10
Soil	4 and 7
Water	1 and 3
Air	Scoped out of the SEA
Climatic Factors	2
Cultural Heritage	6
Landscape	5
Material Assets	10, 11 and 12

### Local Flood Risk Management Strategy Objectives

- 3.5 The LFRMS identifies the following objectives for managing local flood risk in Trafford:

Table 3.3: LFRMS Objectives

LFRMS Objective
<b>Economic</b>
To reduce local flood risk to existing businesses and other economic infrastructure.
To support the sustainable economic growth of the Borough, as part of the City Region, by ensuring that local flood risk is managed when planning new development and investment.
<b>Social</b>
To reduce local flood risk to existing homes and social infrastructure, particularly in areas of multiple deprivation.
To work with local communities in improving their resilience to flooding.
<b>Environmental</b>
To reduce local flood risk to existing environmental assets.
To enhance the landscape, townscape, biodiversity, geodiversity and cultural heritage of the Borough.

- 3.6 In order to ensure that the objectives of a plan or strategy are consistent with the principles of sustainable development, Stage B1 of the SEA process requires the objectives to be tested against the SEA framework in order to identify both potential synergies and inconsistencies. This enables conflicts and tensions between the objectives to be identified and necessary additions or amendments to be made.
- 3.7 The LFRMS objectives were therefore tested against the SEA objectives. The outcomes of this assessment are presented in Table 3.4 below. When testing compatibility the following scale was used:

✓	Broadly compatible	?	Requires further clarification
X	Potential conflict		Not relevant

Table 3.4: Testing the LFRMS Objectives against the SEA Objectives

SEA Objective	Minimise the probability and consequences of flooding	Minimise the probability and consequences of climate change	Maintain and where possible enhance the quality of water resources, water bodies and their environment	Maintain and where possible enhance biodiversity, geodiversity and soils	Protect and where possible enhance the landscape and green infrastructure	Protect and where possible enhance townscapes and cultural heritage	Ensure the efficient use of land	Protect and enhance the health and well-being of the population	Support the sustainable growth of the City Region	Minimise economic and social exclusion for all	Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth	Maintain and where possible enhance the transport network for all users
	1	2	3	4	5	6	7	8	9	10	11	12
<b>Local Flood Risk Management Strategy Objective</b>												
EC1: To reduce local flood risk to existing businesses and other economic infrastructure	✓	✓	✓	✓		✓	?	✓	✓	✓	✓	✓
EC2: To support the sustainable economic growth of the Borough, as part of the City Region, by ensuring that local flood risk is managed when planning new development and investment	✓	✓	✓	✓	✓		?	✓	✓	✓	✓	✓
S1: To reduce local flood risk to existing homes and social infrastructure, particularly in areas of multiple deprivation	✓	✓	✓	✓		✓	?	✓	✓	✓	✓	✓
S2: To work with local communities in improving their resilience to flooding	✓	✓				?		✓	?	✓	✓	✓
E1: To reduce local flood risk to existing environmental assets	✓	✓	✓	✓	✓	✓		✓			✓	
E2: To enhance the landscape, townscape, biodiversity, geodiversity and cultural heritage of the Borough	✓	✓	✓	✓	✓	✓	✓	✓			✓	

- 3.8 Overall the LFRMS objectives are considered to be largely compatible with the SEA objectives. In particular, the objectives that relate to reducing local flood risk to existing businesses and other economic infrastructure; supporting sustainable economic growth by ensuring that local flood risk is managed when planning new development and investment; and reducing local flood risk to existing homes and social infrastructure; are especially consistent with the SEA objectives. The SEA objectives of minimising the probability and consequences of flooding; minimising the probability and consequences of climate change; and protect existing and future economic and social infrastructure and assets; were compatible with each of the LFRMS objectives.
- 3.9 There were no instances where the LFRMS objectives were considered to conflict with a SEA objective. Nevertheless, there were a number of instances where the relationship between the two sets of objectives was uncertain. For instance, the LFRMS objective of working with local communities to improve their resilience to flooding would have an uncertain impact on the objective of protecting and enhancing townscapes as the impact would depend on the design and nature of the measures taken to improve flood resilience. Similarly, the compatibility of a number of objectives with the SEA objective of ensuring the efficient use of land is uncertain as the implementation of measures to reduce the level of flood risk to development may reduce overall development densities, and thereby increase the need to release further land for development.

#### 4. LOCAL FLOOD RISK MANAGEMENT STRATEGY – SUMMARY OF SIGNIFICANT EFFECTS

- 4.1 This section provides a summary of the results of the SEA of the LFRMS. Given that the Section 9 of the Flood and Water Management Act 2010 requires Trafford Council to produce a strategy for managing Local Flood Risk, the option of not producing a strategy was considered to be an unrealistic option and was therefore not assessed. Each of the proposed projects contained within the strategy was appraised against the twelve SEA objectives identified by the Scoping Report. In order to ensure that reasonable alternatives were also considered, an appraisal of the option of not including the project within the strategy was undertaken.
- 4.2 The appraisal of the projects utilised a matrix based upon the one identified in Appendix C of the Scoping Report. It applied the following scoring system for assessing the magnitude of the impact of projects on the SEA objective:

++	Significant positive impact	+	Positive impact
--	Significant negative impact	-	Negative impact
?	Unknown impact	0	Neutral impact

- 4.3 In accordance with Annex 1 of SEA Regulations, this appraisal also considered the timescale of impact, split by short term (0-5 years), medium term (5-10 years), and long-term (10 or more years). It also predicted the certainty of impact (in terms of high, medium and low); the scale of impact (which ranged from local to national); and the permanence of the impact. In addition, the appraisal has sought to identify key secondary, cumulative and/or synergistic impacts; and suggested options for mitigation.
- 4.4 When undertaking this appraisal the default level of certainty was considered to be medium. If it was considered that the impact of a policy on a particular objective was uncertain it was attributed a low level of certainty. Where the appraisal considered that a project could have a negative impact on a SEA objective it sought to identify potential measures that could help mitigate this impact.
- 4.5 A summary of the SEA of the LFRMS is presented below. The full appraisal matrices are available in the Appendix B.

##### **Project 1: Risk Assessment of Trafford's other Ordinary Watercourses**

- 4.6 The appraisal considered two potential options in relation to this project. The first was to undertake a risk assessment of Trafford's open and culverted watercourses (apart from the Manchester Ship Canal and Bridgewater Canal). The second option was to not do this work.
- 4.7 Current understanding of the flood risk associated with Trafford's Ordinary Watercourses, apart from the Manchester Ship Canal and Bridgewater Canal, is very limited. Engaging specialist consultants to provide a risk assessment of Trafford's open and culverted

watercourses therefore has the potential to have a positive impact on a range of objectives. In particular, undertaking this work would improve understanding of the flood risk associated with these ordinary watercourses by providing data on the level and nature of the flood hazard posed by these watercourses and by providing an assessment of the susceptibility of culverts to flooding. It could therefore enable more informed decision-making in relation to new development and highlight the need for improved inspection and maintenance of particular watercourses. As such, the appraisal concluded that this project has the potential to have a major positive impact on the objectives of minimising the probability and consequences of flooding and minimising the consequences of climate change.

- 4.8 By ensuring that informed decisions are made about future investment and that new development is directed away from areas that are at an unacceptable risk of flooding, undertaking this study could also have some positive effect on the objectives that relate to the health and well-being of the population; and the sustainable growth of the City Region. Other objectives that this project could have a positive impact on include those that relate to enhancing the quality of water resources and protecting economic and social infrastructure. The appraisal concluded that undertaking this study would not have a negative or uncertain impact on any of the SEA Objectives.
- 4.9 By contrast, not undertaking this study would not improve current knowledge and is more likely to hinder the production of accurate flood risk assessments and result in less informed decision-making in relation to new development and investment. As a result, the appraisal considered that this option would have the potential to have a negative impact on the objectives that relate to the probability and consequences of flooding; the consequences of climate change; the health and well-being of the population; the sustainable growth of the City Region; and protecting economic and social infrastructure.

#### **Project 2: Bridgewater Canal Study**

- 4.10 The Level 2 Strategic Flood Risk Assessment (SFRA) provides an assessment on the level of flood risk associated with overtopping and/or the breaching of embankments at the Bridgewater Canal. An alternative study produced by HR Wallingford has however indicated that the level of risk could be much lower than that set out in the SFRA but this study has not been independently assessed. The appraisal considered two potential options in relation to this project. The first was to engage external advisors to provide a technical appraisal of the HR Wallingford study of the Bridgewater Canal to inform the Council's final view on this evidence base document. The second option was to not commission this piece of work.
- 4.11 Engaging external advisors to provide a technical appraisal of the HR Wallingford study of the Bridgewater Canal would therefore ensure that there is a greater level of certainty over the level and nature of flood risk associated with the Bridgewater Canal. As a result, it could help minimise the consequences of flooding by enabling more informed decision-making in relation to new development and investment. The appraisal therefore concluded that the

proposed project could have a significant positive impact on the objectives of minimising the consequences of flooding and minimising the consequences of climate change.

- 4.12 By supporting the implementation of measures to reduce flood risk and also inform planning and investment decisions to ensure that future development is not at an unacceptable risk of flooding, the appraisal considered that the proposed project could also have a positive impact on the objectives that relate to health and well-being; the sustainable growth of the City Region; and the protection of economic and social infrastructure. There are a number of designated heritage assets located in close proximity to the Bridgewater Canal, including the grade II listed Brindley's Weir in Pomona, aqueducts over Hawthorn Road and the River Mersey in Stretford, Brooklands station, Linotype office block and canal warehouse in Altrincham and the Barton upon Irwell Conservation Area. The Bridgewater Canal also makes a significant contribution to the townscape in certain parts of the Borough. By increasing understanding of the level and nature of flood risk associated with the Bridgewater Canal, the proposed project could support measures to reduce the level of flood risk to these designated heritage assets and townscapes and could therefore have a positive impact on the objective that relates to cultural heritage.
- 4.13 The level of certainty over the impact on each of the above objectives is however only low as the project only seeks to independently verify the findings of the HR Wallingford study and does not, in itself, seek to implement measures to address any flood risk associated with the Bridgewater Canal. The proposed project is unlikely to have a negative or uncertain impact on any of the SEA Objectives.
- 4.14 By contrast, not undertaking this project would mean that there is less certainty over the level of flood risk associated with the Bridgewater Canal. This option is therefore more likely to hinder the production of accurate flood risk assessments and result in less informed decision-making in relation to new development and investment. As a result, the appraisal concluded that this option would have the potential to have a negative impact on the objectives that relate to the probability and consequences of flooding; the consequences of climate change; the health and well-being of the population; cultural heritage; the sustainable growth of the City Region; and protecting economic and social infrastructure.

### **Project 3: Warning and Informing Local Communities**

- 4.15 The appraisal considered two potential options in relation to this project. The first was to work with AGMA on warning and informing local communities on flood risk and improving their resilience to flooding. This will include establishing a dedicated Warning and Informing Steering Group, either within Trafford or across the ten AGMA authorities, and establishing relevant targets and priorities. The second option was to not undertake this work.
- 4.16 By warning and informing local communities on flood risk and improving their resilience to flooding, the proposed project could significantly reduce the impacts of flooding and climate change on local communities. As a result, the appraisal concluded that the project could have

a major positive effect on the objectives of minimising the consequences of flooding and minimising the consequences of climate change. Given that flooding can have a significant impact on the health and well-being of local residents, the implementation of measures to improve the resilience of local communities to flooding could also have some positive effect on the objective of protecting and enhancing the health and well-being of the population. In addition, improving the resilience of local communities to flooding should help protect local assets, services and amenities from flooding and, as such, could have a positive impact on the objective that relates to protecting economic and social infrastructure.

- 4.17 The appraisal indicated that the proposed project is unlikely to have a negative impact on any of the SEA Objectives. Improving the resilience of local communities to flooding could reduce the impacts of flooding on heritage assets and townscapes. Nevertheless, the implementation of certain flood resilience measures could potentially detract from townscapes and the setting of heritage assets. As such, the appraisal concluded that the project would have an uncertain impact on the objective of protecting townscapes and cultural heritage.
- 4.18 The alternative option of not working with local communities to improve their resilience to flooding would have the potential to have a negative impact on a number of objectives. Specifically, the appraisal indicated that this alternative option could have a negative effect on the objectives that relate to minimising the consequences of flooding; minimising the consequences of climate change; protecting townscapes and cultural heritage; protecting health and well-being; and protecting economic and social infrastructure.

#### **Project 4: Green Infrastructure Opportunity Areas**

- 4.19 The appraisal considered two potential options in relation to this project. The first was to develop a package of green infrastructure schemes which will include a range of measures such as woodland planting, creation of flood storage areas, new wildlife habitats and enhancement of open space. The alternative option considered was to not develop this package of measures.
- 4.20 The appraisal concluded that developing and implementing the package of green infrastructure schemes has the potential to have a positive impact on a wide range of objectives. In particular, it concluded that the proposed project could have a major positive impact on the objective of minimising the probability and consequences of flooding by, for example, reducing rates of surface water run-off and providing areas of flood storage. It could also have a major positive effect on the objective of minimising the probability and consequences of climate change by reducing flood risk, increasing the provision of shade and shelter that moderates higher summer temperatures and by supporting the sequestration of carbon dioxide from the atmosphere.
- 4.21 The appraisal considered that developing and implementing a package of green infrastructure schemes could also have a major positive effect on the objective of protecting and enhancing landscape and green infrastructure, and by resulting in the creation of new habitats could

also have a major positive impact on the objective that relates to biodiversity. Other objectives that the proposed project could have a positive impact on include those that relate to cultural heritage and townscapes; health and well-being; and economic and social infrastructure. The level of certainty over the impact on each of the above objectives is however only low as the implementation mechanism and the costs/sources of funding for the green infrastructure schemes are presently unknown. The proposed project is unlikely to have a negative or uncertain impact on any of the SEA Objectives.

- 4.22 By contrast, not developing this package of measures would not support new woodland planting and the creation of flood storage areas and new wildlife habitats. It would not however result in the loss of areas of green infrastructure and these areas are generally already protected by the Trafford Local Plan. As such, the appraisal concluded that this option would be unlikely to have a significant impact on any of the objectives.

#### **Project 5: Embedding Relevant Local Flood Risk Management Measures in the Trafford Local Plan**

- 4.23 The appraisal considered two potential options in relation to this project. The first was to ensure that relevant measures, including the protection and improvement of watercourse corridors, are referred to in the emerging Land Allocations Plan, and shown on the Policies Map. The second option was to not embed these measures in the emerging Local Plan.
- 4.24 Embedding local flood risk management measures in the emerging Local Plan should ensure that measures are taken to minimise the likelihood and impacts of flooding. The appraisal therefore considered that the proposed project could have a major positive impact on the objectives of minimising the probability and consequences of flooding and minimising the probability and consequences of climate change. A key aim of the project is to ensure that the emerging Land Allocations Plan refers to relevant measures to protect and improve watercourse corridors. The project should therefore support the implementation of measures to enhance the quality of water resources. As such, it could have a major positive impact on the objective that relates to maintaining and enhancing the quality of water resources and water bodies.
- 4.25 Other objectives that the proposed project could have a positive impact on include those that relate to biodiversity; landscape and green infrastructure; cultural heritage and townscapes; health and well-being; and economic and social infrastructure. The level of certainty over the impact on each of the above objectives is however only low as national planning guidance and the Local Plan: Core Strategy already includes a range of measures to manage flood risk and protect watercourse corridors and other environmental assets. The proposed project is unlikely to have a negative or uncertain impact on any of the SEA Objectives.
- 4.26 By contrast, not embedding local flood risk management measures in the emerging Local Plan would not support the implementation of measures to reduce local flood risk. It would not however prevent these measures from being implemented and the Local Plan: Core Strategy



already contains policies which seek to control development in areas at risk of flooding and which require development to incorporate flood mitigation and management measures. As such, the appraisal considered that this option would be unlikely to have a significant impact on any of the objectives.

#### **Project 6: Implementation of AGMA Investigations Policy**

- 4.27 The appraisal considered two potential options in relation to this project. The first was to implement AGMA's Investigations Policy to ensure flooding incidents are investigated and appropriate supporting evidence obtained in order to improve understanding of flood risk and flood risk management. An appraisal was also undertaken of the 'do nothing' option of not developing this package of measures.
- 4.28 At present there is only a basic recording system for flooding incidents in the Borough and a comprehensive investigation is not undertaken. Implementing AGMA's Investigations Policy would ensure that certain flooding incidents are investigated more thoroughly and that appropriate supporting evidence is collected in order to improve understanding of flood risk and flood risk management. This may include the identification of flow paths and sources and would support the implementation of measures to reduce future flood risk. It would also inform planning and investment decisions to ensure that future development is not at an unacceptable risk of flooding. As a result, the appraisal concluded that the proposed project could reduce the impacts of flooding and thereby have a significant positive impact on the objectives of minimising the consequences of flooding and minimising the consequences of climate change; and some positive effect on the objective of maintaining and enhancing the quality of water resources.
- 4.29 By supporting the implementation of measures to reduce flood risk and also inform planning and investment decisions to ensure that future development is not at an unacceptable risk of flooding, the appraisal considered that the proposed project could also have a positive impact on the objectives that relate to health and well-being; and protecting economic and social infrastructure. The appraisal indicated that the proposed project is unlikely to have a negative or uncertain impact on any of the SEA Objectives.
- 4.30 By contrast, not undertaking this project would mean that there would continue to be only a basic recording of flooding incidents. This would not improve current knowledge about flood risk and increases the likelihood of measures not being implemented to reduce flood risk. As a result, the appraisal considered that this option would have the potential to have a negative impact on the objectives that relate to the probability and consequences of flooding; the consequences of climate change; water quality; the health and well-being of the population; and protecting economic and social infrastructure.

## **Project 7: Audit of Surface Water Management in the Council's Estate**

- 4.31 The appraisal considered two potential options in relation to this project. The first was to review current surface water management arrangements for the Council's estate to assess the scope for introducing more sustainable and efficient forms of drainage. The alternative option of not undertaking this review was also appraised.
- 4.32 The Level 2 Strategic Flood Risk Assessment identifies certain locations within Trafford which are particularly sensitive to an increase in the rate of surface water runoff and defines parts of the Borough as Critical Drainage Areas. The Greater Manchester Surface Water Management Plan also indicates that parts of Trafford are susceptible to surface water flooding.
- 4.33 The appraisal therefore concluded that reviewing current surface water management arrangements for Council buildings, car parks, highways, greenspaces and other assets, and assessing the scope for introducing more sustainable and efficient forms of drainage has the potential to have a positive impact on a number of objectives. In particular, assessing the scope for introducing more sustainable and efficient forms of drainage would support the implementation of measures to minimise/control surface water run-off and associated flooding. The appraisal therefore concluded that the proposed project has the potential to have a major positive impact on the objectives of minimising the probability and consequences of flooding and minimising the probability and consequences of climate change. The option would also support measures to reduce surface water run-off on the highway network which could have a positive impact on the efficient operation of the highway network and therefore have a positive effect on the objective of enhancing the transport network for all users. Other objectives that the proposed project could have a positive impact on include those that relate to water quality; health and well-being; and protecting economic and social infrastructure.
- 4.34 By contrast, not undertaking this review of surface water management arrangements is unlikely to support the implementation of measures to minimise/control surface water run-off. As such, the appraisal considered that this alternative option has the potential to have some negative impact on the objectives that relate to flooding; climate change; health and well-being; and economic and social infrastructure.

### **Data Limitations / Technical Difficulties**

- 4.35 The SEA Directive requires the identification of any difficulties encountered; these may include technical deficiencies or lack of knowledge.
- 4.36 During the appraisal of the draft LFRMS, there were a number of instances where it was difficult to reach a judgement on the likely effect of particular projects due to there being a lack of information on how and where actions would be carried out. In particular, the implementation mechanism and the costs/sources of funding for several of the measures is

not clear and, as a result, it is difficult to estimate the nature of impacts and when they are likely to occur.

- 4.37 A number of data limitations were also encountered during the process. For instance, whilst both the SFRA and Surface Water Management Plan have indicated that parts of the Borough are susceptible to surface water flooding, there is no specific evidence which indicates that surface water run-off from the Council's estate is a major contributor to this flood risk. As such, it is difficult to predict the impacts of the project that relates to the audit of surface water management in the Council's estate.

### **Secondary, Cumulative and Synergistic Effects**

- 4.38 Annex I of the SEA Directive requires that the assessment of effects include secondary, cumulative and synergistic effects.
- 4.39 A wide range of positive secondary, cumulative and synergistic effects have been identified and are documented in the appraisal matrices that are appended to this document. Some of the key secondary, cumulative and synergistic effects include:
- Each of the proposed projects could have a positive impact on the objective that relates to minimising the probability and consequences of flooding which would have a positive secondary impact on the quality of life of local residents that are presently at risk of flooding.
  - A number of the proposed projects, including the risk assessment of ordinary watercourses and the package of green infrastructure opportunity areas, could have a positive impact on water quality which has the potential to have associated secondary impacts on the biodiversity value of watercourses and other water bodies.
  - The project which seeks to embed relevant local flood risk management measures in the Trafford Local Plan could support the protection and improvement of watercourse corridors which has the potential to have positive secondary impacts on perceptions of the Borough.
  - A number of projects would support the sustainable growth of the City Region and would therefore have the potential to have secondary impacts on social and economic exclusion and deprivation.
  - The implementation of the AGMA flood investigations policy could be an important ancillary action to support the implementation of flood resilience measures. The project could therefore combine cumulatively and synergistically to strengthen the impacts of the LFRMS on reducing flood risk, minimising the impacts of climate change and protecting the health and well-being of the local population.
  - Several of the proposed projects could combine cumulatively to strengthen the impact of the LFRMS on reducing flood risk, minimising the impacts of climate change and protecting the health and well-being of the local population.

### **Difference the Process has Made**

- 4.40 The SEA process concluded that the LFRMS has the potential to deliver a wide range of environmental benefits. Specifically, it has highlighted that each of the proposed projects has the potential to have a major positive effect on the objectives that relate to minimising the probability and consequences of flooding and minimising the probability and consequences of climate change; and some positive impact on the objective of protecting and enhancing the health and well-being of the population.
- 4.41 The SEA has informed the decision about the inclusion of schemes in the LFRMS. In particular, it has indicated that none of the projects are likely to have a negative impact on any of the SEA objectives and has demonstrated that implementing the proposed projects would have a more positive impact on the SEA objectives than the alternative option of not including the project within the strategy.
- 4.42 The SEA has however highlighted that the proposed project which seeks to improve the resilience of local communities to flooding would have an uncertain impact that relates to protecting townscapes and cultural heritage. This is due to the fact that although the proposed project could reduce the impacts of flooding on heritage assets and townscapes, the implementation of certain flood resilience measures could potentially detract from townscapes and the setting of heritage assets. As such, the proposed project would have an uncertain impact on the objective of protecting townscapes and cultural heritage. The SEA has therefore highlighted that it will be important to consider the impact of flood resilience measures on townscapes and cultural heritage when implementing this project.

## 5. MONITORING

- 5.1 There is a statutory requirement under the SEA Directive to monitor the significant environmental impacts of implementing the LFRMS. Specifically, the SEA Directive stipulates that *“member states shall monitor the significant environmental effects of the implementation of plans and programmes...in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action”* (Article 10.1). In addition to helping to identify unforeseen environmental problems, monitoring also provides important feedback on the success of the strategy and progress towards achieving its objectives. It can also be used to compile baseline information for future revisions of the strategy, and provide information for the SEA of other plans or strategies.
- 5.2 Monitoring is based on relevant objectives, indicators and targets. Table 5.1 contains suggested indicators for monitoring the effects of implementing the LFRMS against each of the SEA objectives. This table also indicates the LFRMS objective/project that the indicators will help to monitor the achievement of. To achieve efficiencies and ensure a consistent approach to monitoring, a number of the proposed indicators are based on those that are monitored to assess the sustainability effects of implementing other plans and strategies prepared by the Council (in particular the Local Plan: Core Strategy) as these objectives are considered to be relevant to the LFRMS.
- 5.3 The monitoring of the environmental effects of implementing the LFRMS will be undertaken by Trafford Council and a report published as necessary. This monitoring will utilise data collated for the Council’s Annual Monitoring Report together with information provided by other agencies. If any adverse effects are identified during the monitoring of the LFRMS it is recommended that a review of the strategy should follow.

SEA Objective	Indicators	LFRMS Objective / Project
1. Minimise the probability and consequences of flooding	<ol style="list-style-type: none"> <li>1. Number of new developments incorporating SUDS</li> <li>2. Number of planning applications approved that were objected to by the Environment Agency on flood risk grounds.</li> <li>3. Number of properties (residential, commercial, industrial, etc.) at significant risk of flooding.</li> <li>4. Number of properties (residential, commercial, industrial, etc.) granted planning permission in flood risk areas.</li> </ol>	<p>LFRMS Objectives: EC1, EC2, S1, S2, E1, E2</p> <p>LFRMS Projects: 1, 2, 3, 4, 5, 6, 7</p>
2. Minimise the probability and consequences of climate change	<ol style="list-style-type: none"> <li>1. Number of properties (residential, commercial, industrial, etc.) at significant risk of flooding.</li> <li>2. Number of properties (residential, commercial, industrial, etc.) granted planning permission in flood risk areas.</li> </ol>	<p>LFRMS Objectives: EC1, EC2, S1, S2, E1, E2</p> <p>LFRMS Projects: 1, 2, 3, 4, 5, 6, 7</p>
3. Maintain and where possible enhance the quality of water resources, water bodies and their environment	<ol style="list-style-type: none"> <li>1. The percentage of river and canal length assessed as good biological quality.</li> <li>2. The percentage of river and canal length assessed as good chemical quality.</li> </ol>	<p>LFRMS Objectives: E1, E2</p> <p>LFRMS Projects: 1, 4, 5, 6, 7</p>
4. Maintain and where possible enhance biodiversity, geodiversity and soils	<ol style="list-style-type: none"> <li>1. Condition of SSSIs in areas known to be in an area at risk of flooding.</li> <li>2. Condition of SBIs in areas known to be in an area at risk of flooding.</li> </ol>	<p>LFRMS Objectives: E1, E2</p> <p>LFRMS Projects: 1, 2, 4, 5, 6, 7</p>
5. Protect and where possible enhance the landscape and green infrastructure	<ol style="list-style-type: none"> <li>1. Number of new developments incorporating SUDS</li> </ol>	<p>LFRMS Objectives: E1, E2</p> <p>LFRMS Projects: 4, 5</p>
6. Protect and where possible enhance townscapes and cultural heritage	<ol style="list-style-type: none"> <li>1. Number of listed buildings at risk of flooding events.</li> <li>2. Number of listed buildings deemed at risk due to a flood event.</li> <li>3. Number of flood defences / strategies implemented to protect designated heritage assets since the LFRMS was published.</li> <li>4. Number of conservation areas at risk of flooding.</li> <li>5. Number of registered historic parks and gardens at risk of flooding.</li> </ol>	<p>LFRMS Objectives: S1, S2, E2</p> <p>LFRMS Projects: 2, 5</p>
7. Ensure the efficient use of land	<ol style="list-style-type: none"> <li>1. Number of planning applications approved that were objected to by the Environment Agency on flood risk grounds.</li> <li>2. Number of properties (residential, commercial, industrial, etc.) granted planning permission in flood risk areas</li> </ol>	<p>LFRMS Objectives: E2</p>

8. Protect and enhance the health and well-being of the population	<ol style="list-style-type: none"> <li>1. Number of approved planning applications for residential development that were objected to by the Environment Agency on flood risk grounds.</li> <li>2. Number of dwellings at a significant risk of flooding.</li> <li>3. Number of additional properties with flood resilience measures installed since the LFRMS was published.</li> </ol>	<p>LFRMS Objectives: EC2, S1, S2</p> <p>LFRMS Projects: 1, 2, 3, 4, 5, 6, 7</p>
9. Support the sustainable growth of the City Region	<ol style="list-style-type: none"> <li>1. Number of properties (residential, commercial, industrial, etc.) at significant risk of flooding.</li> </ol>	<p>LFRMS Objectives: EC1, EC2, S1, S2, E1, E2</p> <p>LFRMS Projects: 1, 2, 3, 5, 7</p>
10. Minimise economic and social exclusion for all	<ol style="list-style-type: none"> <li>1. Number of properties (residential, commercial, industrial, etc.) at significant risk of flooding.</li> </ol>	<p>LFRMS Objectives: EC1, EC2, S1, S2</p> <p>LFRMS Projects: 1, 2, 5, 7</p>
11. Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth	<ol style="list-style-type: none"> <li>2. Number of properties (residential, commercial, industrial, etc.) at significant risk of flooding.</li> </ol>	<p>LFRMS Objectives: EC1, EC2, S1, S2</p> <p>LFRMS Projects: 1, 2, 3, 4, 5, 6, 7</p>
12. Maintain and where possible enhance the transport network for all users	<ol style="list-style-type: none"> <li>1. Number and severity of flood incidents leading to disruption or damage to the transport infrastructure.</li> </ol>	<p>LFRMS Objectives: EC1, EC2</p> <p>LFRMS Projects: 6, 7</p>

## 6. CONCLUSION

- 6.1 Urban Vision Partnership Ltd was commissioned by Trafford Council to undertake a SEA of their LFRMS. The appraisal work has been informed by national guidance, best practice and the methodology proposed by the Council in their Scoping Report.
- 6.2 Each of the proposed projects contained within the strategy was appraised against the twelve SEA objectives identified by the Scoping Report. In order to ensure that reasonable alternatives were also considered, an appraisal of the option of not including the project within the strategy was undertaken.
- 6.3 The appraisal considered the nature of the impact of these projects on the SEA objectives. In accordance with Annex 1 of SEA Regulations, this appraisal also considered the timescale of impact, split by short term (0-5 years), medium term (5-10 years), and long-term (10 or more years). In addition, it predicted the certainty of impact (in terms of high, medium and low); the scale of impact (which ranged from local to national); and the permanence of the impact. In addition, the appraisal has sought to identify key secondary, cumulative and/or synergistic impacts; and suggested options for mitigation.
- 6.4 The SEA process concluded that the LFRMS has the potential to deliver a wide range of environmental benefits. Specifically, it has highlighted that each of the proposed projects has the potential to have a major positive effect on the objectives that relate to minimising the probability and consequences of flooding and minimising the probability and consequences of climate change; and some positive impact on the objective of protecting and enhancing the health and well-being of the population.
- 6.5 The SEA has also indicated that none of the projects are likely to have a negative impact on any of the SEA objectives and has demonstrated that implementing the proposed projects would have a more positive impact on the SEA objectives than the alternative option of not including the project within the strategy.
- 6.6 The SEA has however highlighted that the proposed project which seeks to improve the resilience of local communities to flooding would have an uncertain impact that relates to protecting townscapes and cultural heritage. This is due to the fact that although the proposed project could reduce the impacts of flooding on heritage assets and townscapes, the implementation of certain flood resilience measures could potentially detract from townscapes and the setting of heritage assets. As such, the proposed project would have an uncertain impact on the objective of protecting townscapes and cultural heritage. The SEA has therefore highlighted that it will be important to consider the impact of flood resilience measures on townscapes and cultural heritage when implementing this project.



# **Appendix A**

## **Comments Received on the Draft SEA Scoping Report**

Organisation	Summary of Comment	Response
English Heritage	The Scoping Report should quantify the designated cultural heritage assets.	The number of designated heritage assets is listed in Annex B and a cross-reference to this has been included within the review of key environmental issues.
English Heritage	The scoping report should acknowledge the much greater number of known heritage assets of national, regional or local importance that are registered with the Historic Environment Records held by the Greater Manchester local authority.	The review of key environmental issues has been amended to acknowledge this.
English Heritage	Certain types of cultural assets are particularly at risk from flooding and flood risk management, these include historic and prehistoric water management structures and sites or buildings that are located adjacent to water bodies for functional reasons.	The review of key environmental issues has been amended to acknowledge this.
English Heritage	Current and former peatlands in Greater Manchester are known to contain nationally important evidence of human activities, past environments and habitats, and past climate conditions. Strategies concerned with rewetting such sites often impact on the preservation conditions of this cultural heritage evidence. Often, a win-win situation can arise from well thought out management strategies. The SEA can facilitate this by suggesting joint assessment of natural and cultural heritage management for specific wetland sites.	The review of key environmental issues has been amended to acknowledge this.
Environment Agency	We are satisfied with the proposals and the draft SEA Objectives	Comment noted – no amendments required.
Natural England	The Scoping Report complies with the statutory requirements set out in European Directive 2001/42/EC and The Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA Regulations).	Comment noted – no amendments required.
Natural England	The most up to date regulation regarding the requirement for an Appropriate Assessment is Regulation 61 of the Habitat and Species Regulations 2010 as opposed to Regulation 48(1) of the Conservation (Natural Habitats, &C) (Amendment) (England and Wales) Regulations 2006.	References to Regulation 48(1) of the Conservation (Natural Habitats, &C) (Amendment) (England and Wales) Regulations 2006 have been updated.
Natural England	The Scoping Report refers to European sites as including Special Areas of Conservation (SAC) and Special Protection Areas (SPA). Ramsar sites should be afforded the same level of protection as SPAs or SACs and there should not be any difference between the way that European and Ramsar sites are treated in project management and decision making. Whilst most Ramsar sites are also SPAs and can often be SACs, interest features can differ between the designations.	The Scoping Report has been amended to acknowledge that Ramsar sites have the same level of protection as SPAs or SACs.

Natural England	<p>The Scoping Report suggests the use of a standard matrix approach to undertake the appraisal should help to match the Plan to the SEA objectives. The following stages should be considered as part of Developing and refining alternatives and assessing effects: developing strategic alternatives; predicting the effects of the strategy including alternatives; evaluating the effects of the strategy including alternatives; mitigating adverse affects; and proposing measures to monitor the environmental effects.</p> <p>The use of indicators will monitor the success of the SEA objectives. They will help assess the impacts of the Plan and its actions as well as provide an indication of the level of sustainability achieved by the Plan and will provide an indication of the need for further enhancement or mitigation measures within the Plan.</p>	Comment noted – no amendments required.
Natural England	The review of Plans and Programmes should include reference to Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000	The review of Plans and Programmes has been updated to include these Acts.
The Canal and River Trust	The canal network should be referred to in the Infrastructure and Material Assets section of the report.	The review of key environmental issues has been amended to acknowledge this.
The Canal and River Trust	The objective ‘Protect and where possible enhance townscapes and cultural heritage’ should be reworded to ‘Protect and where possible enhance townscapes, cultural and industrial heritage’.	It is considered that ‘Industrial Heritage’ is implicitly addressed by the existing term ‘Cultural Heritage’. As such, no amendments are required.

## **Appendix B**

# **Appraisal of the Local Flood Risk Management Strategy Projects**

**Project: Risk assessment of Trafford's other ordinary watercourses**

Option 1 – Engage specialist consultants to provide a risk assessment of Trafford's open and culverted watercourses (apart from the Manchester Ship Canal and Bridgewater Canal).

Option 2 – Do not commission this piece of work.

SEA Objective	Option	SEA Score	Justification	Timescale	Permanence	Certainty	Scale
1. Minimise the probability and consequences of flooding	1	++	Current understanding of the flood risk associated with Trafford's Ordinary Watercourses, apart from the Manchester Ship Canal and Bridgewater Canal, is very limited. Option 1 would improve understanding of the level and nature of flood risk associated with these ordinary watercourses by providing data on the flood hazard posed by these watercourses and an assessment of the susceptibility of culverts to flooding. The option should therefore help minimise the consequences of flooding by enabling more informed decision-making in relation to new development and by highlighting the need for improved inspection and maintenance of particular watercourses. Option 1 could therefore have a major positive impact on the objective.	Medium term	Permanent	Low	More than local
	2	-	By contrast, Option 2 would not improve current knowledge and is more likely to hinder the production of accurate flood risk assessments and result in less informed decision-making in relation to new development and investment. This option could therefore have a negative impact on the objective.	Medium term	Permanent	Low	More than local
2. Minimise the probability and consequences of climate change	1	++	Current understanding of the level of flood risk posed by Trafford's Ordinary Watercourses, apart from the Manchester Ship Canal and Bridgewater Canal, is very limited. Option 1 would improve understanding of the level and nature of flood risk associated with Trafford's ordinary watercourses. Given that climate change is expected to exacerbate the risk of flooding, this option should therefore help minimise the consequences of climate change by enabling more informed decision-making in relation to new development and	Long term	Permanent	Low	More than local

	2	-	investment. Option 1 could therefore have a major positive impact on the objective.  By contrast, Option 2 would not improve current knowledge and could therefore hinder the production of accurate flood risk assessments and result in less informed decision-making in relation to new development and investment. This option could therefore have a negative impact on the objective.	Long term	Permanent	Low	More than local
3. Maintain and where possible enhance the quality of water resources, water bodies and their environment	1	+	Option 1 could highlight the need for improved inspection and maintenance of particular watercourses. It could therefore reduce the incidence of flooding which has the potential to have an adverse impact on water quality. Option 1 could therefore have a positive effect on the objective. By contrast, Option 2 would not support the implementation of these measures. This option would therefore be unlikely to enhance water quality but it would also be unlikely to result in a deterioration in the quality of water resources. As such, Option 2 is unlikely to have any significant impact on the objective.	Medium term	Permanent	Low	More than local
	2	0		N/A	N/A	N/A	N/A
4. Maintain and where possible enhance biodiversity, geodiversity and soils	1	0	Both options are unlikely to have a direct impact on biodiversity, geodiversity and soils. As such, neither option is likely to have a significant impact on the objective. It is however recognised that there is the potential for Option 1 to have some secondary impacts on the objective as obtaining a more detailed understanding of the level and nature of flood risk associated with other ordinary watercourses could support the implementation of measures to reduce the incidence of flooding which can have some secondary impacts on water quality and the biodiversity value of watercourses. It is however recognised that measures to reduce flood risk can however sometimes have an adverse impact on biodiversity and, as a result, there is only a limited level of certainty about these secondary impacts.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
5. Protect and where possible enhance the landscape and green infrastructure	1	0	Neither of the options is likely to have a significant impact on landscapes and green infrastructure. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
6. Protect and where	1	0	Neither of the options is likely to have a significant impact on	N/A	N/A	N/A	N/A

possible enhance townscapes and cultural heritage	2	0	townscapes and cultural heritage. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
7. Ensure the efficient use of land	1	0	Neither of the options is likely to have a significant impact on the efficient use of land. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
8. Protect and enhance the health and well-being of the population	1	+	Current understanding of the flood risk associated with Trafford's Ordinary Watercourses, apart from the Manchester Ship Canal and Bridgewater Canal, is very limited. Obtaining a more detailed understanding of the flood risk associated with these other ordinary watercourses could help protect the well-being of the population by ensuring that new development is not directed to areas that are at an unacceptable risk of flooding. Option 1 could therefore have a positive impact on the objective. Conversely, by not improving current knowledge, Option 2 could result in less informed decision-making in relation to new development and could therefore have a negative impact on the objective.	Medium term	Permanent	Low	More than local
	2	-		Medium term	Permanent	Low	More than local
9. Support the sustainable growth of the City Region	1	+	Obtaining a more detailed understanding of the level and nature of flood risk associated with other ordinary watercourses could support the sustainable growth of the City Region by ensuring that informed decisions are made about future investment and should also ensure that new development is not directed to areas that are at an unacceptable risk of flooding. Option 1 could therefore have some positive impact on the objective. Conversely, by not seeking to improve current knowledge, Option 2 could result in less informed decision-making in relation to new development and investment. Option 2 could therefore have a negative impact on the objective.	Medium term	Permanent	Low	More than local
	2	-		Medium term	Permanent	Low	More than local
10. Minimise economic and social exclusion for all	1	0	Both options are unlikely to have a direct impact on economic or social exclusion. As such, neither option is likely to have a significant impact on the objective. It is however recognised that there is the potential for the options to have some indirect impact on the objective as obtaining a more detailed understanding of the level and nature of flood risk associated with other ordinary watercourses could support the sustainable growth of the City Region and have a secondary impact on economic and social exclusion.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A

11. Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth	1	+	Option 1 could result in the identification of watercourses that are susceptible to flooding (such as culverts that are liable to blockage) and therefore highlight the need for improved inspection and maintenance of particular watercourses. Option 1 could therefore support the protection of existing and future economic and social infrastructure and could have a positive impact on the objective.	Medium term	Permanent	Low	More than local
	2	-	By contrast, Option 2 would have the potential to have some negative impact on this objective as it could result in the sections of watercourses that are susceptible to flooding not being identified.	Medium term	Permanent	Low	More than local
12. Maintain and where possible enhance the transport network for all users	1	0	Neither of the options is likely to have a significant impact on transport infrastructure and would not result in the enhancement of the transport network. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
<b>Overall Summary</b>							
<p>Current understanding of the flood risk associated with Trafford’s Ordinary Watercourses, apart from the Manchester Ship Canal and Bridgewater Canal, is very limited. Engaging specialist consultants to provide a risk assessment of Trafford’s open and culverted watercourses therefore has the potential to have a positive impact on a range of objectives. In particular, undertaking this work would improve understanding of the flood risk associated with these ordinary watercourses by providing data on the level and nature of the flood hazard posed by these watercourses and by providing an assessment of the susceptibility of culverts to flooding. It could therefore enable more informed decision-making in relation to new development and highlight the need for improved inspection and maintenance of particular watercourses. As such, this project has the potential to have a major positive impact on the objectives of minimising the probability and consequences of flooding and minimising the consequences of climate change.</p> <p>By ensuring that informed decisions are made about future investment and that new development is directed away from areas that are at an unacceptable risk of flooding, undertaking this study could also have some positive effect on the objectives that relate to the health and well-being of the population; and the sustainable growth of the City Region. Other objectives that this project could have a positive impact on include those that relate to enhancing the quality of water resources and protecting economic and social infrastructure. The certainty of each of these impacts is however considered to be low given that the extent of the flood risk associated with the other ordinary watercourses is unknown. In addition, the project seeks to increase understanding of the level of flood risk associated with these watercourses but does not, in itself, seek to implement measures to address this risk.</p> <p>Undertaking this study would not have a negative or uncertain impact on any of the SEA Objectives.</p> <p>By contrast, not undertaking this study would not improve current knowledge and is more likely to hinder the production of accurate flood risk assessments and result in less informed decision-making in relation to new development and investment. As a result, this option would have the potential to have a negative impact on the objectives that relate to the probability and consequences of flooding; the consequences of climate change; the health and well-being of the population; the sustainable growth of the City Region; and protecting economic and social infrastructure.</p>							



#### Secondary, Cumulative and Synergistic Effects

Both options have the potential to have a number of indirect impacts. In particular, by impacting on flood risk and the health and well-being of the population, both options could have secondary impacts on quality of life. Both of the options also have the potential to have some secondary impacts on economic and social exclusion. In addition, as engaging specialist consultants to provide a risk assessment of Trafford's open and culverted watercourses could have a positive impact on water quality it could also have some positive secondary impacts on biodiversity. The proposed project could combine cumulatively with other projects to strengthen the impact of the LFRMS on reducing flood risk, minimising the impacts of climate change and protecting the health and well-being of the local population.

#### Mitigation

Engaging specialist consultants to provide a risk assessment of Trafford's open and culverted watercourses would not have a negative or uncertain impact on any of the SEA Objectives. As such, no mitigation measures are recommended for this option. Option 2 would however have the potential to have a negative impact on a number of objectives. In each of these instances, it is considered that these adverse impacts could be mitigated by undertaking the risk assessment.

**Project: Bridgewater Canal Study**

Option 1 – Engage external advisors to provide a technical appraisal of the HR Wallingford study of the Bridgewater Canal to inform the Council’s final view on this evidence base document.

Option 2 – Do not commission this piece of work.

SEA Objective	Option	SEA Score	Justification	Timescale	Permanence	Certainty	Scale
1. Minimise the probability and consequences of flooding	1	++	The Level 2 Strategic Flood Risk Assessment (SFRA) provides an assessment on the level of flood risk associated with overtopping and/or the breaching of embankments at the Bridgewater Canal. An alternative study produced by HR Wallingford has however indicated that the level of risk could be much lower than that set out in the SFRA. Undertaking an independent assessment of this HR Wallingford study would ensure that there is a greater level of certainty over the level and nature of flood risk associated with the Bridgewater Canal. It could therefore help minimise the consequences of flooding by enabling more informed decision-making in relation to new development and investment.	Medium term	Permanent	Low	Local
	2	-	By contrast, Option 2 would not improve current knowledge and is more likely to hinder the production of accurate flood risk assessments and result in less informed decision-making in relation to new development and investment. This option could therefore have a negative impact on the objective.	Medium term	Permanent	Low	Local
2. Minimise the probability and consequences of climate change	1	++	Undertaking a technical appraisal of the HR Wallingford study would ensure that there is a greater level of certainty over the level and nature of flood risk associated with the Bridgewater Canal. Given that climate change is expected to exacerbate the risk of flooding, this option could help minimise the consequences of climate change by enabling more informed decision-making in relation to new development and investment. Option 1 could therefore have a major positive impact on the objective.	Long term	Permanent	Low	Local
	2	-	By contrast, Option 2 does not seek to improve current knowledge	Long term	Permanent	Low	Local

			and is therefore more likely to hinder the production of accurate flood risk assessments and result in less informed decision-making in relation to new development and investment. This option could therefore have a negative impact on the objective.				
3. Maintain and where possible enhance the quality of water resources, water bodies and their environment	1	0	Both options are unlikely to have a direct impact on the water quality. As such, neither option is likely to have a significant impact on the objective. It is however recognised that there is the potential for the options to have some secondary impacts on the objective as obtaining a more detailed understanding of the level and nature of flood risk associated with the Bridgewater Canal could support the implementation of measures to reduce the incidence of flooding which can have some secondary impacts on water quality.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
4. Maintain and where possible enhance biodiversity, geodiversity and soils	1	0	Both options are unlikely to have a direct impact on biodiversity, geodiversity and soils. As such, neither option is likely to have a significant impact on the objective. It is however recognised that there is the potential for the options to have some secondary impacts on the objective as obtaining a more detailed understanding of the level and nature of flood risk associated with the Bridgewater Canal could support the implementation of measures to reduce the incidence of flooding which can have some secondary impacts on water quality and the biodiversity value of watercourses. It is however recognised that measures to reduce flood risk can however sometimes have an adverse impact on biodiversity and, as a result, there is only a limited level of certainty about these secondary impacts.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
5. Protect and where possible enhance the landscape and green infrastructure	1	0	Neither of the options is likely to have a significant impact on landscapes and green infrastructure. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
6. Protect and where possible enhance townscapes and cultural heritage	1	+	There are a number of designated heritage assets located in close proximity to the Bridgewater Canal, including the grade II listed Brindley's Weir in Pomona, aqueducts over Hawthorn Road and the River Mersey in Stretford, Brooklands station, Linotype office block and canal warehouse in Altrincham and the Barton upon Irwell Conservation Area. The Bridgewater Canal also makes a significant	Medium term	Permanent	Low	Local

	2	-	contribution to the townscape in certain parts of the Borough. By increasing understanding of the level and nature of flood risk associated with the Bridgewater Canal, Option 1 could support measures to reduce the level of flood risk to these designated heritage assets and townscapes. As such, this option could have a positive impact on the objective. By contrast, Option 2 does not seek to improve current knowledge and is therefore more likely to have a negative impact on the objective.	Medium term	Permanent	Low	Local
7. Ensure the efficient use of land	1	0	Neither of the options is likely to have a significant impact on the efficient use of land. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
8. Protect and enhance the health and well-being of the population	1	+	Flooding can have a significant impact on the health and well-being of the population. The Level 2 SFRA identified that the Bridgewater Canal is a potential source of flood risk, mainly from overtopping as a result of floodwaters from the River Medlock entering the canal. The SFRA also identified breach and overtopping hazard zones for the canal. Obtaining a more detailed understanding of the level and nature of flood risk associated with the Bridgewater Canal could result in more informed decisions about the implementation of measures to reduce the level of risk to existing properties. It could also ensure that the potential risk of flooding from the Bridgewater Canal is taken into account when planning new development. Option 1 could therefore have a positive impact on the objective and, by contrast, Option 2 has the potential to have some negative impact on the objective.	Medium term	Permanent	Low	Local
	2	-		Medium term	Permanent	Low	Local
9. Support the sustainable growth of the City Region	1	+	The Level 2 Strategic Flood Risk Assessment (SFRA) provides an assessment on the level of flood risk associated with overtopping and/or the breaching of embankments at the Bridgewater Canal. An alternative study produced by HR Wallingford has however indicated that the level of risk could be much lower than that set out in the SFRA. Unlike the Manchester Ship Canal, which has been subject to detailed modelling, the HR Wallingford modelling of actual risk from the Bridgewater Canal remains to be verified and endorsed by the Council. Option 1 could therefore support the sustainable growth of the City Region by ensuring that informed decisions are made about future investment and that new development is directed away from	Medium term	Permanent	Low	Local
	2	-		Medium term	Permanent	Low	Local

			areas at risk of flooding from the Bridgewater Canal. Option 1 could therefore have some positive impact on the objective. Conversely, by not seeking to verify current knowledge, Option 2 could result in less informed decision-making in relation to new development and investment. Option 2 could therefore have a negative impact on the objective.				
10. Minimise economic and social exclusion for all	1	0	Both options are unlikely to have a direct impact on economic or social exclusion. As such, neither option is likely to have a significant impact on the objective. It is however recognised that there is the potential for the options to have some indirect impact on the objective as obtaining a more detailed understanding of the level and nature of flood risk associated with the Bridgewater Canal could support the sustainable growth of the City Region and have a secondary impact on economic and social exclusion.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
11. Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth	1	+	The Level 2 SFRA identified that overtopping and/or the breaching of embankments at the Bridgewater Canal could be a source of flood risk for certain areas adjoining the canal. Option 1 would improve understanding of the level and nature of the risk posed by flooding from the Bridgewater Canal and could therefore result in more informed decision-making about new development. It could also highlight areas where investment in flood protection measures should be prioritised in order to reduce the level of risk to existing infrastructure. Option 1 could therefore support the protection of existing and future economic and social infrastructure and have a positive impact on the objective.  By contrast, Option 2 would have the potential to have some negative impact on this objective as it would mean there is less certainty over which sections of the Bridgewater Canal are susceptible to breach or at risk of overtopping.	Medium term	Permanent	Low	Local
	2	-		Medium term	Permanent	Low	Local
12. Maintain and where possible enhance the transport network for all users	1	0	Neither of the options is likely to have a significant impact on transport infrastructure and would not result in the enhancement of the transport network. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
<b>Overall Summary</b>							

The Level 2 Strategic Flood Risk Assessment (SFRA) provides an assessment on the level of flood risk associated with overtopping and/or the breaching of embankments at the Bridgewater Canal. An alternative study produced by HR Wallingford has however indicated that the level of risk could be much lower than that set out in the SFRA but this study has not been independently assessed. Engaging external advisors to provide a technical appraisal of the HR Wallingford study of the Bridgewater Canal would therefore ensure that there is a greater level of certainty over the level and nature of flood risk associated with the Bridgewater Canal. As a result, it could help minimise the consequences of flooding by enabling more informed decision-making in relation to new development and investment. The proposed project could therefore have a significant positive impact on the objectives of minimising the consequences of flooding and minimising the consequences of climate change.

By supporting the implementation of measures to reduce flood risk and also inform planning and investment decisions to ensure that future development is not at an unacceptable risk of flooding, the proposed project could also have a positive impact on the objectives that relate to health and well-being; the sustainable growth of the City Region; and the protection of economic and social infrastructure. There are a number of designated heritage assets located in close proximity to the Bridgewater Canal, including the grade II listed Brindley's Weir in Pomona, aqueducts over Hawthorn Road and the River Mersey in Stretford, Brooklands station, Linotype office block and canal warehouse in Altrincham and the Barton upon Irwell Conservation Area. The Bridgewater Canal also makes a significant contribution to the townscape in certain parts of the Borough. By increasing understanding of the level and nature of flood risk associated with the Bridgewater Canal, the proposed project could support measures to reduce the level of flood risk to these designated heritage assets and townscapes and could therefore have a positive impact on the objective that relates to cultural heritage.

The level of certainty over the impact on each of the above objectives is however only low as the project only seeks to independently verify the findings of the HR Wallingford study and does not, in itself, seek to implement measures to address any flood risk associated with the Bridgewater Canal.

By contrast, not undertaking this project would mean that there is less certainty over the level of flood risk associated with the Bridgewater Canal. This option is therefore more likely to hinder the production of accurate flood risk assessments and result in less informed decision-making in relation to new development and investment. As a result, this option would have the potential to have a negative impact on the objectives that relate to the probability and consequences of flooding; the consequences of climate change; the health and well-being of the population; cultural heritage; the sustainable growth of the City Region; and protecting economic and social infrastructure.

#### Secondary, Cumulative and Synergistic Effects

Both options have the potential to have a number of indirect impacts. In particular, by impacting on flood risk and the health and well-being of the population, both options could have secondary impacts on quality of life. Both of the options also have the potential to have some secondary impacts on economic and social exclusion. The proposed project could combine cumulatively with other projects to strengthen the impact of the LFRMS on reducing flood risk, minimising the impacts of climate change and protecting the health and well-being of the local population.

#### Mitigation

Engaging external advisors to provide a technical appraisal of the HR Wallingford study of the Bridgewater Canal would not have a negative or uncertain impact on any of the SEA Objectives. As such, no mitigation measures are recommended for this option. Option 2 would however have the potential to have a negative impact on a number of objectives. In each of these instances, it is considered that these adverse impacts could be mitigated by undertaking this technical appraisal.

### Project: Warning and Informing Local Communities

Option 1 – Work with AGMA on warning and informing local communities on flood risk and improving their resilience to flooding. This will include establishing a dedicated Warning and Informing Steering Group, either within Trafford or across the ten AGMA authorities, and establishing relevant targets and priorities.

Option 2 – Do not undertake this work.

SEA Objective	Option	SEA Score	Justification	Timescale	Permanence	Certainty	Scale
1. Minimise the probability and consequences of flooding	1	++	Informing local communities on flood risk and improving their resilience to flooding could reduce the impacts of flooding on these communities. As such, whilst Option 1 would not reduce the probability of flooding, it could make a significant contribution to minimising the consequences of flooding. The option could therefore have a major positive impact on the objective.	Long term	Permanent	Medium	More than local
	2	-	By contrast, Option 2 would not support the implementation of measures to improve the resilience of local communities to flood risk. This option could therefore have a negative impact on the objective of minimising the consequences of flooding.	Long term	Permanent	Medium	More than local
2. Minimise the probability and consequences of climate change	1	++	Informing local communities on flood risk and improving their resilience to flooding could reduce the impacts of flooding on these communities. Given that climate change is expected to exacerbate the risk of flooding, Option 1 could therefore make a significant contribution to minimising the consequences of climate change. The option could therefore have a major positive impact on the objective.	Long term	Permanent	Medium	More than local
	2	-	By contrast, Option 2 would not support the implementation of measures to improve the resilience of local communities to flood risk. This option could therefore have a negative impact on the objective of minimising the consequences of flooding.	Long term	Permanent	Medium	More than local
3. Maintain and where possible enhance the quality of water	1	0	Neither of the options is likely to have a significant impact on the quality of water resources, water bodies and their environment. As such, both options are unlikely to have a significant impact on the	N/A	N/A	N/A	N/A

resources, water bodies and their environment	2	0	objective.	N/A	N/A	N/A	N/A
4. Maintain and where possible enhance biodiversity, geodiversity and soils	1	0	Neither of the options is likely to have a significant impact on biodiversity, geodiversity and soils. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
5. Protect and where possible enhance the landscape and green infrastructure	1	0	Neither of the options is likely to have a significant impact on landscape character or green infrastructure. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
6. Protect and where possible enhance townscapes and cultural heritage	1	?	Informing local communities on flood risk and improving their resilience to flooding could reduce the impacts of flooding on these communities and on the heritage assets and townscapes within them. Nevertheless, it is recognised that the implementation of certain flood resilience measures could detract from townscapes and the setting of heritage assets. As such, Option 1 would have an uncertain impact on the objective.	Long term	Permanent	Low	More than local
	2	-	Option 2 could result in measures to reduce the impacts of flooding on heritage assets and townscapes not being implemented. As a result, this option has the potential to have some negative impact on the objective.	Long term	Permanent	Low	More than local
7. Ensure the efficient use of land	1	0	Neither of the options is likely to have a significant impact on the efficient use of land. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
8. Protect and enhance the health and well-being of the population	1	+	Flooding can have a significant impact on the health and well-being of the population. Improving the resilience of local communities to flood risk should ensure that flooding has less impact on the health and well-being of members of the community and, as such, Option 1 could have a positive impact on the objective. By contrast, Option 2 would not support the implementation of measures to improve the resilience of local communities to flooding and therefore has the potential to have a negative impact on the objective.	Long term	Permanent	Medium	More than local
	2	-		Long term	Permanent	Medium	More than local



9. Support the sustainable growth of the City Region	1	0	Neither of the options is likely to have a significant impact on the sustainable growth of the City Region. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
10. Minimise economic and social exclusion for all	1	0	Neither of the options is likely to have a significant impact on economic and social exclusion. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
11. Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth	1	+	Improving the resilience of local communities to flooding should protect existing economic and social infrastructure and reduce the impact of flooding on local assets, services and amenities. Option 1 therefore has the potential to have a positive impact on the objective.	Long term	Permanent	Medium	More than local
	2	-	By contrast, Option 2 would not support the implementation of measures to improve the resilience of local assets, services and amenities to flooding. This option could therefore have some negative impact on the objective of protecting social and economic infrastructure.	Long term	Permanent	Medium	More than local
12. Maintain and where possible enhance the transport network for all users	1	0	Neither of the options is likely to have a significant impact on transport infrastructure and would not result in the enhancement of the transport network. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
<b>Overall Summary</b>							
<p>The proposed project seeks to work with AGMA on warning and informing local communities on flood risk and improving their resilience to flooding. The proposed project could therefore significantly reduce the impacts of flooding and climate change on local communities. As a result, the project could have a major positive effect on the objectives of minimising the consequences of flooding and minimising the consequences of climate change. Given that flooding can have a significant impact on the health and well-being of local residents, the implementation of measures to improve the resilience of local communities to flooding could also have some positive effect on the objective of protecting and enhancing the health and well-being of the population. In addition, improving the resilience of local communities to flooding should help protect local assets, services and amenities from flooding and, as such, could have a positive impact on the objective that relates to protecting economic and social infrastructure.</p> <p>The proposed project is unlikely to have a negative impact on any of the SEA Objectives. Improving the resilience of local communities to flooding could reduce the impacts of flooding on heritage assets and townscapes. Nevertheless, the implementation of certain flood resilience measures could potentially detract from townscapes and the setting of heritage assets. As such, the proposed project would have an uncertain impact on the objective of protecting townscapes and cultural heritage.</p>							

The alternative option of not working with local communities to improve their resilience to flooding would have the potential to have a negative impact on a number of objectives. Specifically, the alternative option could have a negative effect on the objectives that relate to minimising the consequences of flooding; minimising the consequences of climate change; protecting townscapes and cultural heritage; protecting health and well-being; and protecting economic and social infrastructure.

#### Secondary, Cumulative and Synergistic Effects

Both options have the potential to have a number of indirect impacts. In particular, by impacting on flood risk and the health and well-being of the population, both options could have secondary impacts on quality of life. Both of the options could also have a direct impact on the objective of protecting townscapes and cultural heritage which has the potential to result in secondary impacts on sense of place and perceptions of the Borough. In association with the project that seeks to obtain a better understanding of local flood risk, the proposed project could have cumulative and synergistic impacts on reducing the impacts of flooding.

#### Mitigation

The proposed project would not have a negative impact on any of the SEA Objectives. Its impact on the objective of protecting townscapes and cultural heritage is however uncertain and it will be important to assess the impact of any flood resilience measures that are implemented on the setting of designated heritage assets and the character of townscapes. Option 2 would have the potential to have a negative impact on a number of objectives. In each of these instances, it is considered that these adverse impacts could be mitigated by undertaking the proposed project.

### Project: Green Infrastructure Opportunity Areas

Option 1 – Develop a package of green infrastructure schemes which will include a range of measures such as woodland planting, creation of flood storage areas, new wildlife habitats and enhancement of open space.

Option 2 – Do not develop this package of measures.

SEA Objective	Option	SEA Score	Justification	Timescale	Permanence	Certainty	Scale
1. Minimise the probability and consequences of flooding	1	++	Option 1 would support the implementation of a range of green infrastructure schemes that could help minimise the probability and consequences of flooding by, for example, reducing rates of surface water run-off and providing areas of flood storage. The option could therefore have a major positive impact on the objective. By contrast Option 2 would not support the implementation of these measures. This option would not however result in the loss of areas of green infrastructure and these areas are generally protected by the Trafford Local Plan. As such, Option 2 would be unlikely to have any significant impact on the probability and consequences of flooding.	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
2. Minimise the probability and consequences of climate change	1	++	Option 1 would support the implementation of a range of green infrastructure schemes that could help minimise the probability and consequences of flooding by, for example, reducing rates of surface water run-off and providing areas of flood storage. Given that climate change is expected to exacerbate the risk of flooding, this option could have a major positive impact on the objective. Option 1 would also support the provision of areas of shade and greenspace that could help moderate the higher summer temperatures expected as a result of climate change. In addition, woodland planting and other green infrastructure could help reduce the probability of climate change by resulting in the sequestration of carbon dioxide from the atmosphere.	Long term	Permanent	Low	Borough wide
	2	0		Option 2 would not support the implementation of these measures. It would not however result in the loss of areas of green infrastructure and these areas are generally protected by the Trafford Local Plan. As such, Option 2 would be unlikely to have any significant impact on the probability and consequences of climate change.	N/A	N/A	N/A

3. Maintain and where possible enhance the quality of water resources, water bodies and their environment	1	+	Option 1 would support the implementation of a range of measures that could reduce surface water run-off and associated flooding including sewer flooding. As such, the option should reduce the incidence of flooding that has an adverse impact on water quality. Option 1 could therefore have a positive effect on the objective. Option 2 would not support the implementation of these measures and would be unlikely to have a significant impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
4. Maintain and where possible enhance biodiversity, geodiversity and soils	1	++	Option 1 would support the delivery of a range of green infrastructure schemes, including woodland planting and the creation of new wildlife habitats. The option therefore has the potential to maintain and enhance biodiversity and, as a result, could have a major positive impact on the objective. Option 2 would not support the creation of new habitats and would be unlikely to have any significant direct impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
5. Protect and where possible enhance the landscape and green infrastructure	1	++	Option 1 would support the delivery of a range of green infrastructure schemes, including woodland planting, flood storage areas, the creation of new wildlife habitats and the enhancement of open space. As such, it could have a major positive impact on the objective. By contrast, Option 2 would not support the delivery of these schemes and would therefore be unlikely to have any significant direct impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
6. Protect and where possible enhance townscapes and cultural heritage	1	+	Option 1 would support the delivery of a range of green infrastructure schemes. Some of these schemes have the potential to enhance the setting of designated heritage assets and improve the character of townscapes. Accordingly, Option 1 could have some positive impact on the objective. By contrast, Option 2 would not support the delivery of these schemes and would therefore be unlikely to have any significant direct impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
7. Ensure the efficient use of land	1	0	Neither of the options is likely to have a significant impact on the efficient use of land. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A

8. Protect and enhance the health and well-being of the population	1	+	Option 1 would support the delivery of a range of green infrastructure schemes, including the enhancement of areas of open space. Consequently, the policy could support participation in informal sport and recreation and, as a result, have a positive impact on the physical and mental health and well-being. In addition, woodland planting and other green infrastructure could have a positive impact on air quality by removing pollutants from the atmosphere which could have a positive secondary impact on health, particularly amongst those who suffer from respiratory illnesses. Option 2 would not support the enhancement of open space or woodland planting and is therefore unlikely to have any significant direct impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
9. Support the sustainable growth of the City Region	1	0	Neither of the options is likely to have a significant impact on sustainable economic growth. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
10. Minimise economic and social exclusion for all	1	0	Neither of the options is likely to have a significant impact on economic or social exclusion. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
11. Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth	1	+	Option 1 would support the support the implementation of a range of measures, such as the creation of flood storage areas, which could reduce surface water run-off and associated flooding. It could therefore help to protect existing and future economic and social infrastructure and have some positive impact on the objective.  By contrast, Option 2 would not support the implementation of these measures and would not therefore help to ensure that economic and social infrastructure is protected from flooding. This option would not however result in the loss of areas of green infrastructure and these areas are generally protected by the Trafford Local Plan. As such, Option 2 would be unlikely to have any significant impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
12. Maintain and where possible enhance the transport network for all users	1	0	Neither of the options is likely to have a significant impact on transport infrastructure and would not result in the enhancement of the transport network. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A

## Overall Summary

The proposed project seeks to develop and implement a package of green infrastructure schemes which will include a range of measures such as woodland planting, creation of flood storage areas, new wildlife habitats and enhancement of open space. The implementation of these measures could have a positive impact on a wide range of objectives. In particular, it could have a major positive impact on the objective of minimising the probability and consequences of flooding by, for example, reducing rates of surface water run-off and providing areas of flood storage. It could also have a major positive effect on the objective of minimising the probability and consequences of climate change by reducing flood risk, increasing the provision of shade and shelter that moderates higher summer temperatures and by supporting the sequestration of carbon dioxide from the atmosphere.

Developing and implementing a package of green infrastructure schemes could also have a major positive effect on the objective of protecting and enhancing landscape and green infrastructure, and by resulting in the creation of new habitats could also have a major positive impact on the objective that relates to biodiversity. Other objectives that the proposed project could have a positive impact on include those that relate to cultural heritage and townscapes; health and well-being; and economic and social infrastructure. The level of certainty over the impact on each of the above objectives is however only low as the implementation mechanism and the costs/sources of funding for the green infrastructure schemes are presently unknown. The proposed project is unlikely to have a negative or uncertain impact on any of the SEA Objectives.

By contrast, not developing this package of measures would not support new woodland planting and the creation of flood storage areas and new wildlife habitats. It would not however result in the loss of areas of green infrastructure and these areas are generally already protected by the Trafford Local Plan. As such, this option would be unlikely to have a significant impact on any of the objectives.

### Secondary, Cumulative and Synergistic Effects

Developing and implementing a package of green infrastructure schemes could have a number of indirect impacts. In particular, implementing these schemes could reduce flood risk and have a positive impact on the health and well-being of the population, both of which could have secondary impacts on quality of life. The delivery of new green infrastructure could also enhance townscapes and landscape and, as a result, has the potential to have positive secondary impacts on perceptions of the Borough. The proposed project could also have a positive impact on water quality which could have associated secondary impacts on the biodiversity value of watercourses and other water bodies. The proposed project could combine cumulatively with other projects to strengthen the impact of the LFRMS on reducing flood risk, minimising the impacts of climate change and protecting the health and well-being of the local population.

### Mitigation

Neither option would have a negative or uncertain impact on any of the SEA Objectives. As such, no mitigation measures are recommended.

**Project: Embedding relevant local flood risk management measures in the Trafford Local Plan**

Option 1 – Ensure relevant measures, including the protection and improvement of watercourse corridors, are referred to in the emerging Land Allocations Plan, and shown on the Policies Map.

Option 2 – Do not refer to these measures in the Land Allocations Plan or on the Policies Map.

SEA Objective	Option	SEA Score	Justification	Timescale	Permanence	Certainty	Scale
1. Minimise the probability and consequences of flooding	1	++	Embedding local flood risk management measures in the emerging Local Plan should ensure that measures are taken to minimise the likelihood and consequences of flooding and could have a major positive impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0	Option 2 would not support the implementation of these measures. This option would not however prevent these measures from being implemented and the Local Plan: Core Strategy already contains policies which seek to control development in areas at risk of flooding and which require development to incorporate flood mitigation and management measures. As such, Option 2 would be unlikely to have any significant impact on the probability and consequences of flooding.	N/A	N/A	N/A	N/A
2. Minimise the probability and consequences of climate change	1	++	Climate change is expected to exacerbate the risk of flooding. Embedding local flood risk management measures in the emerging Local Plan should ensure that measures are taken to minimise the consequences of climate change and could have a major positive impact on the objective.	Long term	Permanent	Low	Borough wide
	2	0	Option 2 would not support the implementation of these measures. This option would not however prevent these measures from being implemented and the Local Plan: Core Strategy already contains policies which seek to control development in areas at risk of flooding and which require development to incorporate flood mitigation and management measures. As such, Option 2 would be unlikely to have any significant impact on the probability and consequences of climate change.	N/A	N/A	N/A	N/A

3. Maintain and where possible enhance the quality of water resources, water bodies and their environment	1	++	A key aim of the project is to ensure that the emerging Land Allocations Plan refers to relevant measures to protect and improve watercourse corridors. The project should therefore support the implementation of measures to enhance the quality of water resources. As such, it could have a major positive impact on the objective. Not embedding these issues in the Local Plan is likely to mean that these measures will not be implemented. However, this option is unlikely to result in a deterioration in the quality of water resources and is unlikely to have any significant impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
4. Maintain and where possible enhance biodiversity, geodiversity and soils	1	+	The protection and improvement of watercourse corridors has the potential to help maintain and enhance the biodiversity value of these watercourses. As a result, the project could have a positive impact on the element of the objective that relates to biodiversity.	Medium term	Permanent	Low	Borough wide
	2	0	Not embedding these issues in the Local Plan may reduce the likelihood of measures being implemented to improve watercourse corridors. However, this option is unlikely to have a negative impact on the biodiversity value of watercourses and is unlikely to have any significant impact on the objective.	N/A	N/A	N/A	N/A
5. Protect and where possible enhance the landscape and green infrastructure	1	+	Watercourse corridors can make a significant contribution to the Borough's green infrastructure network and landscape character. Accordingly, by seeking to ensure that the emerging Land Allocations Plan refers to relevant measures to protect and improve watercourse corridors, the project has the potential to have some positive impact on the objective. Not embedding these issues in the Local Plan (Option 2) reduces the likelihood of there being enhancements to watercourse corridors. It is however unlikely to have a negative impact on the value of these watercourses and is therefore unlikely to have a significant impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
6. Protect and where possible enhance townscapes and cultural heritage	1	+	Watercourse corridors can make a significant contribution to the townscape character and the setting of listed buildings. Accordingly, by seeking to ensure that the emerging Land Allocations Plan refers to relevant measures to protect and improve watercourse corridors, the	Medium term	Permanent	Low	Borough wide



	2	0	project has the potential to have some positive impact on the objective. Not embedding these issues in the Local Plan (Option 2) reduces the likelihood of there being enhancements to watercourse corridors. It is however unlikely to have a negative impact on these watercourse corridors and is therefore unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
7. Ensure the efficient use of land	1	0	Neither of the options is likely to have a significant impact on the efficient use of land. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
8. Protect and enhance the health and well-being of the population	1	+	<p>Flooding can have a significant impact on properties and the health and well-being of the population. Embedding local flood risk management measures in the emerging Local Plan should ensure that measures are taken to reduce flood risk and could therefore have a positive impact on health and well-being.</p> <p>Option 2 would not support the implementation of these measures. This option would not however prevent these measures from being implemented and the Local Plan: Core Strategy already contains policies which seek to control development in areas at risk of flooding and which require development to incorporate flood mitigation and management measures. As such, Option 2 would be unlikely to have any significant impact on the objective.</p>	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
9. Support the sustainable growth of the City Region	1	0	Neither of the options is likely to have a significant impact on sustainable economic growth. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
10. Minimise economic and social exclusion for all	1	0	Neither of the options is likely to have a significant impact on economic or social exclusion. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A

11. Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth	1	+	Embedding local flood risk management measures in the emerging Local Plan should ensure that measures are taken to reduce flood risk. This could help protect economic and social infrastructure from flooding and therefore has the potential to have a positive impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0	Option 2 would not support the implementation of these measures. It would not however prevent these measures from being implemented and the Local Plan: Core Strategy already contains policies which seek to control development in areas at risk of flooding and which require development to incorporate flood mitigation and management measures. As such, Option 2 would be unlikely to have any significant impact on the objective.	N/A	N/A	N/A	N/A
12. Maintain and where possible enhance the transport network for all users	1	0	Neither of the options is likely to have a significant impact on transport infrastructure and would not result in the enhancement of the transport network. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
<b>Overall Summary</b>							
<p>Embedding local flood risk management measures in the emerging Local Plan should ensure that measures are taken to minimise the likelihood and impacts of flooding. The proposed project could therefore have a major positive impact on the objectives of minimising the probability and consequences of flooding and minimising the probability and consequences of climate change. A key aim of the project is to ensure that the emerging Land Allocations Plan refers to relevant measures to protect and improve watercourse corridors. The project should therefore support the implementation of measures to enhance the quality of water resources. As such, it could have a major positive impact on the objective that relates to maintaining and enhancing the quality of water resources and water bodies.</p> <p>Other objectives that the proposed project could have a positive impact on include those that relate to biodiversity; landscape and green infrastructure; cultural heritage and townscapes; health and well-being; and economic and social infrastructure. The level of certainty over the impact on each of the above objectives is however only low as national planning guidance and the Local Plan: Core Strategy already includes a range of measures to manage flood risk and protect watercourse corridors and other environmental assets. The proposed project is unlikely to have a negative or uncertain impact on any of the SEA Objectives.</p> <p>By contrast, not embedding local flood risk management measures in the emerging Local Plan would not support the implementation of measures to reduce local flood risk. It would not however prevent these measures from being implemented and the Local Plan: Core Strategy already contains policies which seek to control development in areas at risk of flooding and which require development to incorporate flood mitigation and management measures. As such, this option would be unlikely to have a significant impact on any of the objectives.</p> <p><u>Secondary, Cumulative and Synergistic Effects</u></p> <p>Embedding local flood risk management measures in the Local Plan could have a number of indirect impacts. In particular, it could reduce flood risk and have a positive</p>							

impact on the health and well-being of the population, both of which could have secondary impacts on quality of life. The protection and improvement of watercourse corridors could have positive secondary impacts on perceptions of the Borough.

Mitigation

Neither option would have a negative or uncertain impact on any of the SEA Objectives. As such, no mitigation measures are recommended.

**Project: Implementation of AGMA Investigations Policy**

Option 1 – Implement AGMA’s Investigations Policy to ensure flooding incidents are investigated and appropriate supporting evidence obtained in order to improve understanding of flood risk and flood risk management.

Option 2 – Do not implement the investigations policy.

SEA Objective	Option	SEA Score	Justification	Timescale	Permanence	Certainty	Scale
1. Minimise the probability and consequences of flooding	1	++	At present there is only a basic recording system for flooding incidents in the Borough and a comprehensive investigation is not undertaken. Option 1 would ensure that certain flooding incidents are investigated more thoroughly and that appropriate supporting evidence collected in order to improve understanding of flood risk and flood risk management. This may include the identification of flow paths and sources and would support the implementation of measures to reduce future flood risk. It would also inform planning and investment decisions to ensure that future development is not at an unacceptable risk of flooding. As a result, Option 1 could have a major positive impact on the objective.	Long term	Permanent	Low	Borough wide
	2	-	By contrast, Option 2 would mean that there would continue to be only a basic recording of flooding incidents and it would not therefore improve current knowledge about flood risk. Consequently, the option could hinder the production of accurate flood risk assessments and result in less informed decision-making in relation to new development and investment. This option could therefore have a negative impact on the objective.	Long term	Permanent	Low	Borough wide
2. Minimise the probability and consequences of climate change	1	++	At present there is only a basic recording system for flooding incidents. Climate change is expected to exacerbate the risk of flooding. Option 1 would ensure that certain flooding incidents are investigated more thoroughly and would improve understanding of flood risk. This could support the implementation of measures to reduce flood risk. It would also inform planning and investment decisions to ensure that future development is not at an unacceptable risk of flooding. As a result, Option 1 could have a major positive impact on the objective.	Long term	Permanent	Low	Borough wide
	2	-		Long term	Permanent	Low	Borough wide

			By contrast, Option 2 would mean that there would continue to be only a basic recording of flooding incidents and it would not therefore improve current knowledge about flood risk. Consequently, the option could hinder the production of accurate flood risk assessments and result in less informed decision-making in relation to new development and investment. This option could therefore have a negative impact on the objective.				
3. Maintain and where possible enhance the quality of water resources, water bodies and their environment	1	+	Option 1 would improve understanding of flood risk and could potentially support the implementation of measures to reduce flood risk. As such, the option could reduce the incidence of flooding that has an adverse impact on water quality. Option 1 could therefore have a positive effect on the objective. Option 2 would not improve understanding of existing flood risk and is therefore likely to hinder efforts to reduce the risk of flooding and the associated impacts on water quality. As such, this option would have the potential to have some negative impact on the objective.	Long term	Permanent	Low	Borough wide
	2	-		Long term	Permanent	Low	Borough wide
4. Maintain and where possible enhance biodiversity, geodiversity and soils	1	0	Both options are unlikely to have a direct impact on biodiversity, geodiversity and soils. As such, neither option is likely to have a significant impact on the objective. It is however recognised that there is the potential for the options to have some secondary impacts on the objective as the implementation of any measures to reduce flood risk could improve water quality which would have secondary impacts on the biodiversity value of watercourses. It is however recognised that measures to reduce flood risk can however sometimes have an adverse impact on biodiversity and, as a result, there is only a limited level of certainty about these secondary impacts.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
5. Protect and where possible enhance the landscape and green infrastructure	1	0	Neither of the options is likely to have a significant impact on green infrastructure or landscapes. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
6. Protect and where possible enhance townscapes and cultural heritage	1	0	Neither of the options is likely to have a significant impact on cultural heritage or townscapes. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
7. Ensure the efficient	1	0	Neither of the options is likely to have a significant impact on the	N/A	N/A	N/A	N/A

use of land	2	0	efficient use of land. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
8. Protect and enhance the health and well-being of the population	1	+	Flooding can have a significant impact on properties and the health and well-being of the population. Option 1 would ensure that flooding incidents are investigated in order to improve understanding of flood risk. This would support the implementation of measures to reduce flood risk and also inform planning and investment decisions to ensure that future development is not at an unacceptable risk of flooding. As a result, Option 1 could have some positive impact on the objective. By contrast, not undertaking this review would mean that there would continue to be only a basic recording of flooding incidents. This would not improve current knowledge about flood risk and increases the likelihood of measures not being implemented to reduce flood risk. Accordingly, Option 2 has the potential to have some negative impact on the objective.	Long term	Permanent	Low	Borough wide
	2	-		Long term	Permanent	Low	Borough wide
9. Support the sustainable growth of the City Region	1	0	Neither of the options is likely to have a significant impact on sustainable economic growth. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
10. Minimise economic and social exclusion for all	1	0	Neither of the options is likely to have a significant impact on economic or social exclusion. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
11. Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth	1	+	Option 1 could support the identification of sources of flood risk and flow paths. It could therefore support the implementation of measures to protect existing economic and social infrastructure and would help to ensure that the level and nature of risk is fully taken into account when making decisions about the location of new infrastructure. The project therefore has the potential to have a positive impact on the objective.  By contrast, Option 2 would not improve existing knowledge of flood risk. Therefore, this option would not help to ensure that economic and social infrastructure is protected from flooding and has the potential to have some negative impact on the objective.	Long term	Permanent	Low	Borough wide
	2	-		Long term	Permanent	Low	Borough wide

12. Maintain and where possible enhance the transport network for all users	1	0	Neither of the options is likely to have a significant impact on transport infrastructure and would not result in the enhancement of the transport network. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A

### Overall Summary

At present there is only a basic recording system for flooding incidents in the Borough and a comprehensive investigation is not undertaken. Implementing AGMA's Investigations Policy would ensure that certain flooding incidents are investigated more thoroughly and that appropriate supporting evidence is collected in order to improve understanding of flood risk and flood risk management. This may include the identification of flow paths and sources and would support the implementation of measures to reduce future flood risk. It would also inform planning and investment decisions to ensure that future development is not at an unacceptable risk of flooding. As a result, the proposed project could reduce the impacts of flooding and thereby have a significant positive impact on the objectives of minimising the consequences of flooding and minimising the consequences of climate change; and some positive effect on the objective of maintaining and enhancing the quality of water resources.

By supporting the implementation of measures to reduce flood risk and also inform planning and investment decisions to ensure that future development is not at an unacceptable risk of flooding, the proposed project could also have a positive impact on the objectives that relate to health and well-being; and protecting economic and social infrastructure. The level of certainty over the impact on each of the above objectives is however only low as the project only seeks to implement the investigations policy and does not, in itself, seek to implement measures to address this risk. The proposed project is unlikely to have a negative or uncertain impact on any of the SEA Objectives.

By contrast, not undertaking this project would mean that there would continue to be only a basic recording of flooding incidents. This would not improve current knowledge about flood risk and increases the likelihood of measures not being implemented to reduce flood risk. As a result, this option would have the potential to have a negative impact on the objectives that relate to the probability and consequences of flooding; the consequences of climate change; water quality; the health and well-being of the population; and protecting economic and social infrastructure.

#### Secondary, Cumulative and Synergistic Effects

Both options have the potential to have a number of indirect impacts. In particular, implementing the project could have implications for managing flood risk and may also impact on the health and well-being of the population. Both options could therefore have secondary impacts on quality of life. In addition, as both options could have an impact on water quality they could also have associated secondary impacts on the biodiversity value of watercourses and other water bodies. Investigating local flooding issues and identifying significant features can be seen as an important ancillary action to encourage the implementation of flood resilience measures. These actions are therefore likely to combine cumulatively and synergistically to strengthen the impacts of the LFRMS on reducing flood risk, minimising the impacts of climate change and protecting the health and well-being of the local population.

#### Mitigation

Implementing AGMA's Investigations Policy to ensure flooding incidents are investigated would not have a negative or uncertain impact on any of the SEA Objectives. As such, no mitigation measures are recommended for this option. Option 2 would however have the potential to have a negative impact on a number of objectives. In each of these instances, it is considered that these adverse impacts could be mitigated by implementing AGMA's Investigations Policy.

**Project: Audit of surface water management in the Council's estate**

Option 1 – Review current surface water management arrangements for Council buildings, car parks, highways, greenspaces and other assets, and assess the scope for introducing more sustainable and efficient forms of drainage.

Option 2 – Do not undertake this review.

SEA Objective	Option	SEA Score	Justification	Timescale	Permanence	Certainty	Scale
1. Minimise the probability and consequences of flooding	1	++	Both the Strategic Flood Risk Assessment (SFRA) and Greater Manchester Surface Water Management Plan (SWMP) have identified that parts of Trafford are susceptible to surface water flooding. Option 1 would assess the scope for introducing more sustainable and efficient forms of drainage on the Council's estate and would therefore support the implementation of measures to minimise/control surface water run-off. As such, it could help to minimise the probability of flooding and could have a major positive impact on the objective. By contrast Option 2 would not support the implementation of these measures and could therefore have a negative impact on the minimising the probability of flooding.	Medium term	Permanent	Low	Borough wide
	2	-		Medium term	Permanent	Low	Borough wide
2. Minimise the probability and consequences of climate change	1	++	Both the SFRA and the SWMP have identified that parts of Trafford are susceptible to surface water flooding. Option 1 would assess the scope for introducing more sustainable and efficient forms of drainage on the Council's estate and would therefore support the implementation of measures to minimise/control surface water run-off. Given that climate change is expected to exacerbate the risk of flooding and, in particular, is expected to increase the occurrence of high intensity rainfall events, Option 1 could have a major positive impact on the objective of reducing the consequences of climate change. By contrast Option 2 would not support the implementation of these measures and could therefore have a negative impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	-		Medium term	Permanent	Low	Borough wide
3. Maintain and where possible enhance the quality of water resources, water bodies and their	1	+	Option 1 would support the implementation of a range of measures that could reduce surface water run-off and associated flooding, including sewer flooding. As such, the option should reduce the incidence of flooding that has an adverse impact on water quality. Option 1 could therefore have a positive effect on the objective. Option	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A



environment			2 would not support the implementation of these measures and would be unlikely to have a significant impact on the objective.				
4. Maintain and where possible enhance biodiversity, geodiversity and soils	1	0	Both options are unlikely to have a direct impact on biodiversity, geodiversity and soils. As such, neither option is likely to have a significant impact on the objective. It is however recognised that there is the potential for the options to have some secondary impacts on the objective as the implementation of any measures to reduce surface water run-off could improve water quality which would have secondary impacts on the biodiversity value of watercourses. It is however recognised that measures to reduce flood risk can however sometimes have an adverse impact on biodiversity and, as a result, there is only a limited level of certainty about these secondary impacts.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
5. Protect and where possible enhance the landscape and green infrastructure	1	0	Neither of the options is likely to have a significant impact on landscapes and green infrastructure. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
6. Protect and where possible enhance townscapes and cultural heritage	1	0	Neither of the options is likely to have a significant impact on townscapes and cultural heritage. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
7. Ensure the efficient use of land	1	0	Neither of the options is likely to have a significant impact on the efficient use of land. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
8. Protect and enhance the health and well-being of the population	1	+	Flooding can have a significant impact on the health and well-being of the population. Option 1 would assess the scope for introducing more sustainable and efficient forms of drainage on the Council's estate and would therefore support the implementation of measures to minimise/control surface water run-off. As such, the option could have a positive impact on health and well being and a positive effect on the objective. By contrast, Option 2 increases the likelihood that measures to reduce surface water run-off will not be implemented. Accordingly, Option 2 has the potential to have some negative impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	-		Medium term	Permanent	Low	Borough wide

9. Support the sustainable growth of the City Region	1	0	Neither of the options is likely to have a significant impact on sustainable economic growth. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
10. Minimise economic and social exclusion for all	1	0	Neither of the options is likely to have a significant impact on economic or social exclusion. As such, both options are unlikely to have a significant impact on the objective.	N/A	N/A	N/A	N/A
	2	0		N/A	N/A	N/A	N/A
11. Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth	1	+	Option 1 would support the support the implementation of measures to reduce and control surface water run-off and associated flooding. It could therefore help to protect existing and future economic and social infrastructure and have some positive impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	-	By contrast, Option 2 would not support the implementation of these measures. Therefore, this option would not help to ensure that economic and social infrastructure is protected from flooding and has the potential to have some negative impact on the objective.	Medium term	Permanent	Low	Borough wide
12. Maintain and where possible enhance the transport network for all users	1	+	Option 1 would support the implementation of measures to reduce surface water run-off on the highway network which could have some positive impact on the objective by supporting the efficient operation of the highway network. Option 2 would be unlikely to have any significant direct impact on the objective.	Medium term	Permanent	Low	Borough wide
	2	0		N/A	N/A	N/A	N/A
<b>Overall Summary</b>							
<p>The Level 2 Strategic Flood Risk Assessment identifies certain locations within Trafford which are particularly sensitive to an increase in the rate of surface water runoff and defines parts of the Borough as Critical Drainage Areas. The Greater Manchester Surface Water Management Plan also indicates that parts of Trafford are susceptible to surface water flooding.</p> <p>Reviewing current surface water management arrangements for Council buildings, car parks, highways, greenspaces and other assets, and assessing the scope for introducing more sustainable and efficient forms of drainage therefore has the potential to have a positive impact on a number of objectives. In particular, assessing the scope for introducing more sustainable and efficient forms of drainage would support the implementation of measures to minimise/control surface water run-off and associated flooding. The proposed project therefore has the potential to have a major positive impact on the objectives of minimising the probability and consequences of flooding and minimising the probability and consequences of climate change. The option would also support measures to reduce surface water run-off on the highway network which could have a positive impact on the efficient operation of the highway network and therefore have a positive effect on the objective of enhancing the transport network for all users. Other objectives that the project could have a positive impact on include those that relate to water quality; health and well-being; and protecting economic and social infrastructure.</p>							

By contrast, not undertaking this review of surface water management arrangements is unlikely to support the implementation of measures to minimise/control surface water run-off. As such, this alternative option has the potential to have some negative impact on the objectives that relate to flooding; climate change; health and well-being; and economic and social infrastructure.

Nevertheless, whilst both the SFRA and SWMP have indicated that parts of the Borough are susceptible to surface water flooding there is no specific evidence which indicates that surface water run-off from the Council's estate is a major contributor to this flood risk. In addition, the proposed project only seeks to assess the scope for introducing more sustainable and efficient forms of drainage and does not, in itself, seek to implement these measures. As such, there is only a low level of certainty about the impacts of both options on these objectives.

#### Secondary, Cumulative and Synergistic Effects

Both options have the potential to have a number of indirect impacts. In particular, implementing the project could have implications for managing flood risk and may also impact on the health and well-being of the population. Both options could therefore have secondary impacts on quality of life. In addition, as undertaking the review of surface water management arrangements could have a positive impact on water quality, it could also have an associated secondary impact on the biodiversity value of watercourses and other water bodies. The proposed project could combine cumulatively with other projects to strengthen the impact of the LFRMS on reducing flood risk, minimising the impacts of climate change and protecting the health and well-being of the local population.

#### Mitigation

Reviewing the current surface water management arrangements for the Council's estate to assess the scope for introducing more sustainable and efficient forms of drainage would not have a negative or uncertain impact on any of the SEA Objectives. As such, no mitigation measures are recommended for this option. Option 2 would however have the potential to have a negative impact on a number of objectives. In each of these instances, it is considered that these adverse impacts could be mitigated by undertaking the review of the current surface water management arrangements.