

## SEA Environmental Report: PART 1

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## SEA Environmental Report: PART 2

An SEA Scoping  
Report is attached  
for:

Active Travel Strategy

The Responsible  
Authority is:

East Dunbartonshire Council

## SEA Environmental Report: PART 3

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Date

20<sup>th</sup> August 2015

# STRATEGIC ENVIRONMENTAL ASSESSMENT: ENVIRONMENTAL REPORT

## Active Travel Strategy



sustainable thriving achieving

**East Dunbartonshire Council**

[www.eastdunbarton.gov.uk](http://www.eastdunbarton.gov.uk)

## Active Travel Strategy

The Active Travel Strategy (ATS) is intended to provide a Framework and evidence base for investment into the active travel network to ensure that projects deliver benefits on multiple policy alternatives and demonstrate value for money in the delivery of projects. The Strategy will ensure that the selection of active travel projects is supported by robust analysis of gaps and issues in the region and ensure a coordinated approach to delivering the active travel projects.

The strategic framework of the Strategy has been fully assessed including all reasonable alternatives in order to incorporate environmental considerations throughout the Strategy. This assessment includes the strategic alternatives to delivering the outcomes of the Strategy, ambition, aims and an action plan. In each case the SEA preferred options were identified in order to inform the decision making process and provide the policy-makers with the best practicable environmental option.

The process of SEA is a systematic method for considering the likely environmental effects of this future Strategy. It aims to:

- integrate environmental factors into the Plan preparation and decision-making
- improve the Plan and enhance environmental protection
- increase public participation in decision making
- facilitate the openness and transparency of decision-making

## SEA Key Stages

The key SEA stages in the preparation of the Culture, Leisure and Sport Strategy are:

### Scoping

This is the process by which details for the Environmental Report are determined. Through the Scoping Report the level of detail and the consultation period were determined for the Environmental Report. For the Culture, leisure and Sport Strategy, the Scoping Report was produced and the consultation was undertaken with the appropriate Consultation Authorities: Scottish Natural Heritage, Historic Scotland and the Scottish Environmental Protection Agency.

### Environmental Assessment

The Environmental Report documents the environmental assessment of the Culture, Leisure and Sport Strategy. Through assessing the Strategy as it is written, it allows the plan-makers to refine the Strategy in order to avoid or mitigate the negative environmental impacts and to further enhance the positive environmental impacts.

### Post-Adoption Statement

The Post-Adoption Statement demonstrates how the findings of the SEA have been taken into account in the adopted Plan. In accordance with the Environmental Assessment (Scotland) Act 2005, the Post-Adoption Statement will demonstrate:

- The integration of environmental considerations into the Strategy
- How the findings of the Environmental Report have been taken into account
- How opinions expressed, from both the Community and Consultation Authorities during the consultation of the Environmental Report have been taken into account
- The reasons for choosing the Strategy as adopted in light of other reasonable alternatives
- The measures to be taken to monitor the significant effects of the implementation of the Strategy

The purpose of Strategic Environmental Assessment is to inform the development process for the Active Travel Strategy in order to reduce, avoid or mitigate any potential adverse environmental impacts and further enhance any potential positive impacts. This Environmental Report presents the results of the Strategic Environmental Assessment (SEA) for the Active Travel Strategy. It also establishes a monitoring framework and measures to mitigate any adverse impacts that may occur as a result of the strategic document.

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## Section 1: Policy Context

### 1.1. Key Facts

Section 1: Key Facts	
Responsible Authority	East Dunbartonshire Council
Title of PPS	Active Travel Strategy
Purpose of PPS	<p>The purpose of the Active Travel Strategy is to:</p> <ul style="list-style-type: none"> <li>➤ Produce a Strategy for increasing participation in Active Travel in East Dunbartonshire spanning 5 years which will complement and deliver on transport objectives and interventions within the current Local Transport Strategy and feed into LTS2.</li> <li>➤ To set out an action plan for active travel in East Dunbartonshire outlining a range of coordinated projects which deliver multiple benefits and value for money for the region. This action programme of interventions and approaches should be derived from a robust evidence base and should include comprehensive maps of walking and cycling networks in the region.</li> <li>➤ Deliver a comprehensive strategy document for East Dunbartonshire within a national and regional context that will set out how active travel for commuting, leisure and tourism purposes will be facilitated.</li> <li>➤ Establishes East Dunbartonshire's vision for active travel in the region and sets challenging but realistic targets for participation in active travel based on rigorous review of evidence. Clearly outlines what success looks like.</li> <li>➤ Produce a strategy that is consistent with the Council, Government and transport bodies' (SPT, Sustrans) objectives and guidance for active travel.</li> <li>➤ Deliver a Monitoring Plan that determines baseline levels of walking and cycling and reports on changes in participation rates of active travel.</li> </ul>
What prompted the PPS (e.g. legislative, regulatory or administrative provision)	<p>Administrative provision: The framework of an Active Travel Strategy would integrate and deliver actions set out through the adopted Local Transport Strategy 2013-17, with particular reference to:</p> <ul style="list-style-type: none"> <li>➤ Development and implementation of a Cycling Strategy.</li> <li>➤ Identify opportunities and develop the active travel network across East Dunbartonshire and incorporating existing local, regional and national routes, which will be undertaken in line with high environmental and design standards.</li> <li>➤ Undertake an audit of active travel routes and existing infrastructure across East Dunbartonshire through a technical appraisal.</li> <li>➤ Identify and develop the appropriate infrastructure such as improved off road surfacing, routing and on road/junction priority</li> </ul>

	measures to encourage cycling in rural areas of east Dunbartonshire.			
<b>Subject</b> (e.g. transport)	Active travel provision, availability and enhancement.			
<b>Period covered by PPS</b>	2015-2020			
<b>Frequency of updates</b>	Reviewed and monitored annually until a replacement strategy is progressed.			
<b>Area covered by PPS</b> (e.g. geographical area – it is good practice to attach a map)	The geographical area of East Dunbartonshire Council plus Mugdock Country Park (geographically contained within Stirling Council but managed by EDC), and potential linkages, where appropriate, to surrounding Council areas namely: Glasgow, West Dunbartonshire, Stirling and North Lanarkshire.			
<b>Summary of nature/ Content of the PPS</b>	<p>The Active Travel Strategy is intended to:</p> <ul style="list-style-type: none"> <li>➤ Provide a framework and evidence base for investment in Active Travel</li> <li>➤ Ensure projects deliver benefits on multiple policy objectives (active travel increase leading to improved access to the green network (including parks and urban green space) and town centres, better health, reduced congestion, better air quality, reduced social inequality, economic development, growth of active travel tourism, increasing East Dunbartonshire's attractiveness as an active destination etc.) and demonstrates value for money in delivery of projects</li> <li>➤ Ensure that the selection of active travel projects is supported by robust analysis of gaps and issues in the region.</li> <li>➤ Ensure a coordinated approach to delivery of active travel projects</li> </ul> <p>It is proposed that the structure of the Active Travel Strategy will include:</p> <ul style="list-style-type: none"> <li>➤ Background Information</li> <li>➤ Strategic Context.</li> <li>➤ Strategy Aims and Objectives.</li> <li>➤ Partners and Consultations.</li> <li>➤ Establishing the Vision.</li> <li>➤ Active Travel Network Review, leading to <ul style="list-style-type: none"> <li>- an action plan;</li> <li>- walking and cycling infrastructure, including a local cycle network, plan;</li> <li>- behaviour change, promotional and training activities;</li> <li>- and a monitoring framework.</li> </ul> </li> </ul>			
<b>Are there any proposed PPS objectives?</b>	<b>Yes</b>		<b>No</b>	



Copy of objectives attached	Yes		No	
Date	20 <sup>th</sup> August 2015			

## 1.2. Relationship with other Plans, Programmes and Strategies

*This section shows how other plans, programmes and strategies influence, and are influenced by the Active Travel Strategy.*

- 1.2.1. There are a number of other strategies and plans internationally, nationally, regionally and locally that the Active Travel Strategy (ATS) needs to be integrated with. These include:

### International

- Kyoto Protocol (1997)
- Gothenburg Protocol (1999)
- Johannesburg Declaration (2002)

### European

- Strategic Plan for Biodiversity 2011-2020
- EU Birds Directive
- EU Habitats Directive
- EU Water Framework Directive
- EU 2020 Biodiversity Strategy

### National

- UK Post-2010 Biodiversity Framework
- Nature Conservation (Scotland) Act 2004
- Scottish Forestry Strategy (2006)
- Scottish Planning Policy
- National Planning Framework 3
- Scottish Biodiversity Strategy (Scotland's Biodiversity: It's in Your Hands (2004) and The 2020 Challenge for Scotland's Biodiversity (2013)
- Let's Make Scotland More Active: A Strategy for Physical Activity 2003
- Let's Get Scotland Walking – A National Walking Strategy
- Active Travel, Active Scotland: Our Journey to a Sustainable Future 2012
- A Long Term Vision for Active Travel in Scotland 2030 (2014)
- Cycling Action Plan for Scotland

### Regional

- Glasgow and Clyde Valley Strategic Development Plan
- Antonine Wall Management Plan 2014-2019

### Local

- East Dunbartonshire Single Outcome Agreement

- East Dunbartonshire Local Plan 2 and emerging Local Development Plan
- East Dunbartonshire Open Space Strategy 2015-2020
- East Dunbartonshire Green Network Strategy (emerging)
- East Dunbartonshire Local Biodiversity Action Plan (emerging)
- East Dunbartonshire Core Path Plan
- East Dunbartonshire Local Transport Strategy

**1.2.2.** Cross-boundary effects with neighbouring authorities will be considered, through the integration of the ATS as well as the consideration of plans and strategies produced by the neighbouring authorities. This will be particularly important in relation to Mugdock Country Park, which lies within the Stirling Council area. It may be necessary to work with other neighbouring local authorities in the development of actions that result in strategic, regional and local impacts with potential cross-boundary effects. However it is not expected that the ATS will require consideration of transboundary effects with neighbouring EU Member States.

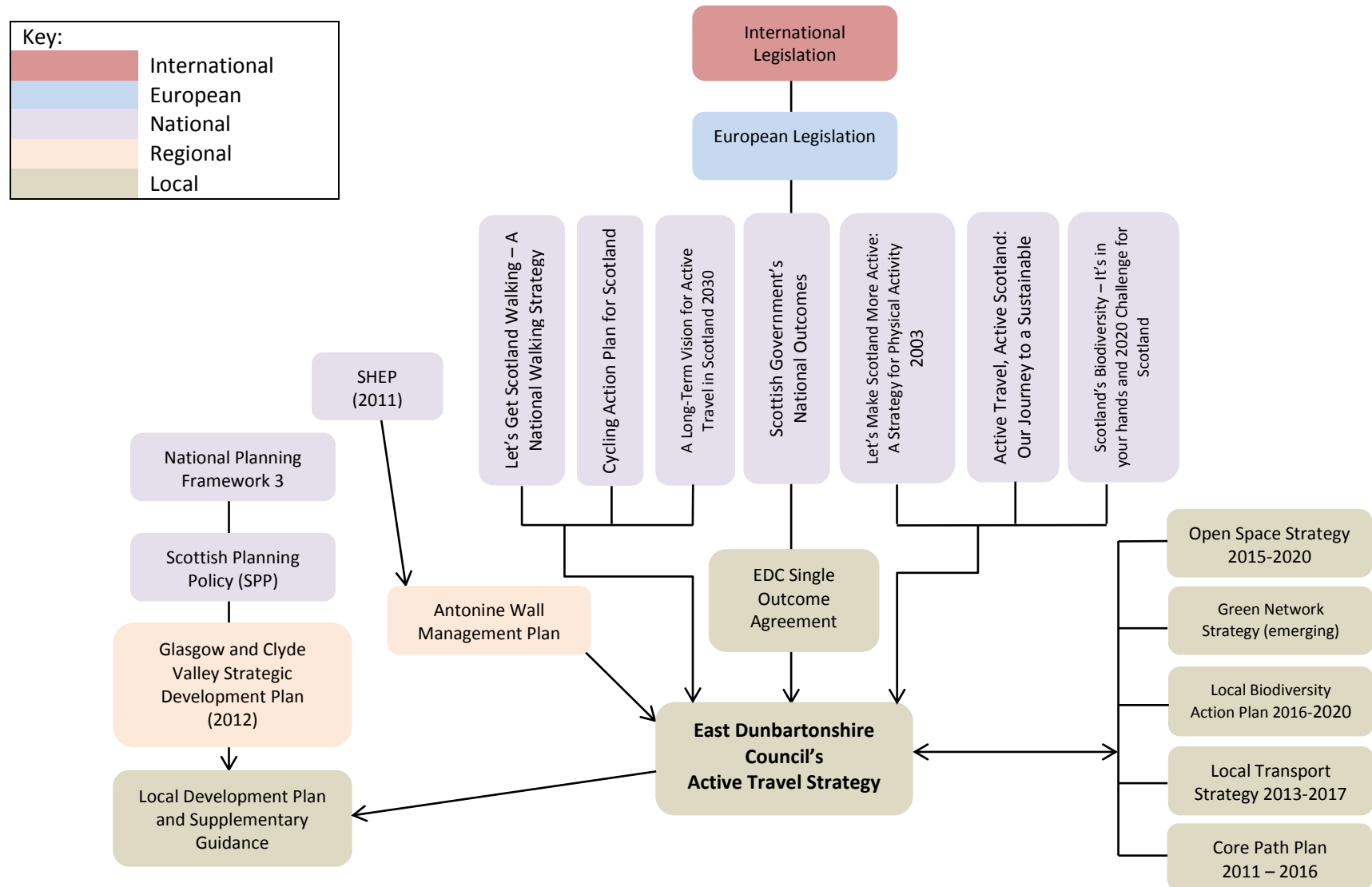
**1.2.3.** **Appendix 1** lists key legislation, plans, programmes, policies and strategies that influence or are influenced by the ATS. This list includes documents that refer to international, european community, and national environmental objectives; regional and local objectives. Their content, where appropriate, has been used to inform the environmental objectives for the SEA of the Strategy.

## **1.3. Environmental Protection Objectives**

**1.3.1.** The environmental objectives that are contained within International, European, UK and Scottish legislation, as well as national guidance, which are considered to be of the greatest relevance to the ATS, will be taken into account when preparing the Strategy. These are set out in **Appendix A**.

**Figure 1: Interrelationship of the Active Travel Strategy with Other Plans, Programmes and Strategies**

*This is a diagrammatic representation and as such does not include every one of the plans listed. The template below is useful for demonstrating such relationships.*



## Section 2: Environmental Context

### 2.1 Baseline Environmental Data

2.1.1. **Table 1** below summarises the main baseline environmental features, assets and the environmental implications for the preparation and development of the ATS. The table also contains the SEA objectives used to assess the Strategy and further sub-criteria used within the assessment tables.

**Table 1: Environmental Baseline Data**

Environmental Factor	Summary of baseline Environmental Data	Environmental Implications for the Active Travel Strategy	Sources of baseline Data	Proposed SEA Objectives
Population and Human Health	<p>East Dunbartonshire has a total population of 105,860 (2013); a decrease in population of approximately 3% since 2001. Population Projections forecast this trend to continue during the period between 2010 and 2035 with a reduction of 9.8% expected.</p> <p>East Dunbartonshire has a decreasing and ageing population. This is highlighted through the population projections in 2010 that by 2035 East Dunbartonshire's population will be 94,343 with a large increase in the 75+ age group and a projected decline of 22.8% of the under 16 age group in comparison to the 2010 population statistics. The number of people aged over 65 years old is forecast to increase by 11,000 people between 2010 and 2035.</p> <p>Areas of Hillhead and Lennoxton are within the top 15% most deprived SIMD data zones in Scotland.</p> <p>Generally the health of the residents of East Dunbartonshire is good with nearly 73% of the residents being generally healthy, in comparison to the average of Scotland (68%) according to the 2001 census. The level of residents found to be in general health status of 'not good' within East Dunbartonshire and Scotland was 8% and 10% respectively.</p>	<p>East Dunbartonshire hosts various areas within the top 15% of deprived areas in Scotland and is showing an increase in non-economically active population and older people.</p> <p>The ATS will present opportunities for communities in East Dunbartonshire to become involved in projects related to the active travel network. This can result in improved quality of environment and will have a potentially positive impact on their wellbeing.</p> <p>By raising awareness of the active travel network, the ATS will provide an opportunity for health and wellbeing to be improved through the upgrading and enhancements of the areas active travel network, improving sustainable access and links for local residents, visitors and workers throughout East Dunbartonshire.</p> <p>There is scope to improve the</p>	<p>General Register Office for Scotland</p> <p>Census 2001 – for health data</p> <p>Census 2011 data</p> <p>National Records of Scotland, October 2014</p> <p>Scottish Government</p> <p>Scottish Government SIMD data for East Dunbartonshire Council</p> <p>Scottish Neighbourhood Statistics</p> <p>NOMIS (Economically active population &amp; Average weekly wage)</p> <p>Scottish Household Survey (walking/ cycling to work) 2012/13</p> <p>Glasgow Centre for Population Health 2011.</p>	To improve human health and community wellbeing

<p>Population and Human Health (continued)</p>	<p>In terms of walking and cycling to work in 2012/13, East Dunbartonshire had low rates of walking (5.1%) when compared with the Scottish national average (13.2%). Walking to work rates in East Dunbartonshire represent the 2<sup>nd</sup> lowest rates in Scotland against all other Council areas. There are similarly low levels of cycling to the Scottish national average (2.3%).</p> <p>The percentage of economically active people living in East Dunbartonshire has decreased over recent years; however, this percentage is still higher than both the Scottish and British national averages.</p>	<p>number of people partaking in walking and cycling through active encouragement of the natural environment and outdoor activities. This includes potential improvements to access both within the EDC boundary and to other neighbouring authorities.</p> <p>Enhancements to promote cycling and core path routes in East Dunbartonshire will potentially lead to supplementary positive outcomes in reducing car travel.</p> <p>The associated conflicts between the rights for public access to the environment as part of improvements to the active travel network and potential biodiversity impacts will need to be considered.</p> <p>Enhancing the active travel networks will improve connectivity for those residing in urban and rural areas.</p>	<p>(Briefing Paper 28)</p>	
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Cultural Heritage	<p>East Dunbartonshire has: -</p> <ul style="list-style-type: none"> <li>➤ 1 UNESCO World Heritage Site; Antonine Wall. A buffer zone has been identified around the Wall to help protect its setting. This is set out within the Antonine Wall Management Plan 2014-19 which was developed by Historic Scotland in partnership with East Dunbartonshire Council, Falkirk Council, North Lanarkshire Council, West Dunbartonshire Council and Glasgow Council.</li> <li>➤ 43 Scheduled Monuments. In particular the Forth &amp; Clyde Canal is made up of a series of Scheduled Monuments.</li> <li>➤ 181 Listed Building, including five bridges, five mileposts, one horse trough and Milngavie Railway Station. The Luggie Water Aqueduct and Bridge, Kirkintilloch, is Category A.</li> <li>➤ 15 Conservation Areas (4 of which are designated as outstanding)</li> <li>➤ 21 Townscape Protection Areas</li> <li>➤ 3 sites recommended as having the potential for meeting national inventory standards as Gardens and Designed Landscapes. 30 such sites have also been identified as having local value.</li> <li>➤ A number of registered Buildings at Risk:</li> </ul>	<p>Listed Buildings and Conservation Areas contribute to the character of the streets in East Dunbartonshire. Through appropriate management and enhancement, where necessary, the character of these assets can be further promoted.</p> <p>The varied and rich historic built and natural environment in East Dunbartonshire should be a vital consideration for the ATS.</p> <p>The ATS should consider the role and impacts of the active travel network to the setting and value of the Antonine Wall as well as consider how improvements to the active travel network will impact on its value.</p> <p>The requirements to protect Forth and Clyde Canal, as a main water body, a Scheduled Ancient Monument and a route corridor, will be influential to the ATS.</p> <p>The ATS should consider how it can integrate the different historical and natural environment as part of the wider travel network in East Dunbartonshire.</p>	<p>Historic Scotland</p> <p>Sites and Monuments Record (SMR)</p> <p>East Dunbartonshire Council</p> <p>United Nations Educational, Scientific and Cultural Organisation – World Heritage Site Designation</p> <p>Scottish Natural Heritage</p> <p>Scottish Canals Heritage Strategy 2013-38</p>	<p>To protect, conserve and, where appropriate, enhance the historic environment</p>
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Cultural Heritage (continued)	<p><b>Baldernock</b></p> <ul style="list-style-type: none"> <li>➤ Outbuilding</li> </ul> <p><b>Bearsden</b></p> <ul style="list-style-type: none"> <li>➤ Colquhouns of Garscadden Burial Enclosure</li> </ul> <p><b>Bishopbriggs</b></p> <ul style="list-style-type: none"> <li>➤ Cawder House Stables</li> <li>➤ Huntershill House</li> </ul> <p><b>Cadder</b></p> <ul style="list-style-type: none"> <li>➤ Cadder Smithy</li> </ul> <p><b>Kirkintilloch</b></p> <ul style="list-style-type: none"> <li>➤ Broomhill Hospital, Outbuildings, Lodge and Cottages</li> <li>➤ Old Aisle Cemetery Gatelodge</li> <li>➤ 18A West High Street</li> <li>➤ Former Kirkintilloch Town Hall</li> </ul> <p><b>Lenzie</b></p> <ul style="list-style-type: none"> <li>➤ Woodilee Hospital Administration Block</li> </ul> <p><b>Lennoxtown</b></p> <ul style="list-style-type: none"> <li>➤ Lennox Castle</li> <li>➤ High Kirk of Campsie</li> </ul>			
Biodiversity, Flora and Fauna	<p>East Dunbartonshire has: -</p> <ul style="list-style-type: none"> <li>➤ 6 Sites of Special Scientific Interest (SSSI)</li> <li>➤ 2 Regional Scenic Areas</li> <li>➤ 66 Local Nature Conservation Sites</li> </ul>	Biodiversity, Flora and Fauna are important considerations for the ATS. The implementation of the ATS will have a direct influence on species and habitats throughout East Dunbartonshire through active travel network	<p>Dunbartonshire Biodiversity Action Plan</p> <p>Scottish Natural Heritage</p> <p>East Dunbartonshire Council</p>	To protect, enhance, create and, where necessary, restore biodiversity and encourage habitat connectivity



<p>Biodiversity, Flora and Fauna (continued)</p>	<p>(LNCS)</p> <ul style="list-style-type: none"> <li>➤ There are networks of Local Nature Conservation Sites (LNCS) in East Dunbartonshire. There are 80 LNCS designated for their biodiversity value. These include the Forth &amp; Clyde Canal, The John Muir &amp; Thomas Muir Way from Kirkintilloch to Clachan of Campsie, the Main Line Railway and disused railway lines such as Balmore to Torrance to Kirkintilloch.</li> <li>➤ Important Wildlife Corridors will be reviewed 2015/2016 so these designations along with LNCS are subject to alteration.</li> <li>➤ 485 Tree Preservation Orders (1 other in Bearsden currently pending)</li> <li>➤ 3 Local Nature Reserves (LNR) which include Merkland LNR, Lenzie Moss LNR and Kilmardinny Loch.</li> </ul> <p>There are a number of Protected Species identified in East Dunbartonshire (including those with former Species Action Plans, priority species and lesser priority species). This includes a number of European Protected Species such as Otters, Badgers and Water Vole.</p> <p>Several Invasive Non-Native Species (INNS) have been identified in East Dunbartonshire such as Japanese Knotweed.</p> <p>The local habitats in East Dunbartonshire that</p>	<p>improvements and enhancements. The impacts on of such improvements will need to be assessed and impacts avoided, reduced or mitigated where necessary. This will be particularly significant to those the species and habitats that are priorities, vulnerable and/or protected.</p> <p>The different needs for green hubs, green corridors, green links or green stepping stones should be considered and potentially addressed through the ATS.</p> <p>Native species should be considered in order to enhance natural resources that are specific to the local area.</p> <p>The variety of biodiversity, flora and fauna in East Dunbartonshire contributes to its scenic value. This possesses a valued interest for economic benefits in terms of increased tourism to the area.</p> <p>Woodland resources in East Dunbartonshire have the potential to be integrated with opportunities in the ATS to enhance the active travel network.</p> <p>It is important that native woodland is managed and protected.</p>	<p>Native Woodland Survey of Scotland report for East Dunbartonshire, October 2010</p> <p>East Dunbartonshire Council Local Development Plan Main Issues Report, 2013</p>	
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<p>Biodiversity, Flora and Fauna (continued)</p>	<p>have been prioritised under the previous iteration of the LBAP are:</p> <ul style="list-style-type: none"> <li>➤ Urban</li> <li>➤ Rural</li> <li>➤ Woodland</li> <li>➤ Wetland</li> </ul> <p>Woodland in East Dunbartonshire:</p> <ul style="list-style-type: none"> <li>➤ Native woodland in East Dunbartonshire comprises 22.1% of the total woodland area (4.8% of the total land area).</li> <li>➤ 95ha of woodland is present on ancient woodlands, which makes up 34% of native woodland</li> <li>➤ The main native woodland types in East Dunbartonshire are lowland mixed deciduous woodland (34%), wet woodland (25%) and upland birchwoods (21%).</li> </ul>			
<p>Soil and Geology</p>	<p>Despite three quarters of the land in East Dunbartonshire being utilised for agricultural processes, the district has a small percentage (5%) of prime agricultural soil.</p> <p>Currently East Dunbartonshire has not designated any areas of land as contaminated land as defined in the Environmental Protection Act 1990. However, a list of potential contaminated sites has been created based on previous land use. On this list 626 potentially contaminated sites (to varying degrees of contamination) have been identified.</p> <p>There are currently 25 sites of Vacant and</p>	<p>The quality and level of soil in East Dunbartonshire will need to be considered as part of the ATS to ensure that opportunities to increase active travel and access to the natural environment does not result in soil exposure to elements, causing erosion and potential soil acidification.</p> <p>Disturbance to peatland can result in the release of carbon into the atmosphere. Enhancements to the active travel network should consider the location of peatland in order to reduce this risk.</p>	<p>East Dunbartonshire Council</p> <p>EDC Local Plan 2</p> <p>EDC Local Development Plan</p> <p>Scottish Vacant and Derelict Land Register 2013</p> <p>James Hutton Institute</p> <p>Scottish Natural Heritage</p> <p>British Geological Survey</p> <p>UKRIGS (Regionally)</p>	<p>To protect and, where appropriate, use high quality and sensitive soils in a sustainable manner and conserve recognised geodiversity assets</p>

<p>Soil and Geology (continued)</p>	<p>Derelict Land within East Dunbartonshire with a total area of 62 hectares. These and other Brownfield land locations within East Dunbartonshire may have potentially contaminated land, depending on their historic uses.</p> <p>East Dunbartonshire also has 1 RIGS (Regionally Important Geological or Geomorphological Site) at Clachan of Campsie. It also has 34 sites designated as Local Nature Conservation Sites for their geodiversity value.</p> <p>A number of different sites in East Dunbartonshire have been identified as having varying levels of soil carbon richness and peatland including the Campsie Fells and the Kilpatrick Hills.</p>		<p>Important Geological or Geomorphological Site)</p> <p>SNH Information Notice No.38 – Identification of carbon-rich soil mapping units (2012) – Scotland’s Soils</p>	
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<p>Landscape</p>	<p>East Dunbartonshire’s landscape is diverse in terms of character and land uses. The district is characterised by five main types of landscape character: Drumlin Foothills; Rolling Farmland; Broad Valley Lowland; Rugged Moorland Hills; and urban areas.</p> <p>The topography of East Dunbartonshire is generally low lying, undulating land with the exception of two of the Local Landscape Areas; the Campsie Fells and the Kilpatrick Hills to the North and West of the district respectively.</p> <p>East Dunbartonshire has a total of 973.46</p>	<p>The ATS will consider possibilities that could potentially improve and / or fragment habitat connectivity in East Dunbartonshire, resulting in potential positive / negative effects to landscape setting and visual amenity.</p> <p>Any significant actions discussed to deliver the ATS will need to consider any natural and historical designations within East Dunbartonshire in order to prevent negative effects to the landscape.</p>	<p>EDC Local Plan 2</p> <p>British Geological Survey</p> <p>UKRIGS (Regionally Important Geological or Geomorphological Site)</p> <p>Glasgow &amp; Clyde Valley Landscape Character Assessment, 1999</p>	<p>To protect, enhance and, where appropriate, restore landscape character, local distinctiveness and scenic value</p>
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<p>Landscape (continued)</p>	<p>hectares of urban open space; the greatest proportion of which is classified as semi-natural greenspace and Regional Greenspace.</p> <p>The green belt is defined in the Development Plan and covers the entire area of East Dunbartonshire, with the exception of the upland and urban areas; its objectives include maintaining the character and distinctiveness of the area's settlements.</p> <p>There is a number of Local Landscape Areas (LLA) within the East Dunbartonshire Council boundary area including the Campsie Fells and Kilpatrick Hills. All of the LLA are shown on the maps within the Environmental Report.</p>	<p>There is scope to integrate opportunities related to the active travel routes and access to, from and through such assets as the Campsie Fells and the Kilpatrick Hills.</p> <p>East Dunbartonshire has a strong local distinctiveness that has the potential to be impacted without the interventions of the ATS to improve and enhance the active travel network throughout the area.</p> <p>Although an active travel network will improve community accessibility to the natural environment, it should consider the effect of this on the green belt through appropriate mitigation and management.</p> <p>There is potential for the ATS to connect local, East Dunbartonshire Council wide and regional networks across the landscape of East Dunbartonshire. The scale of each of these should be considered.</p> <p>The different landscape typologies, including LLA designations, will need to be considered as part of the consideration of enhancement and improvement opportunities within the ATS.</p>		
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<p>Water Quality</p>	<p>The main watercourses within East Dunbartonshire are the River Kelvin, Glazert Water, Allander Water, Luggie Water, Forth and Clyde Canal and Bothlin Burn. East Dunbartonshire also has two reservoirs in Milngavie and a number of other small dams in various locations throughout East Dunbartonshire, which are of significant value to the surrounding area.</p> <p>From the 2009-2015 River Basin Management Plan cycle, East Dunbartonshire had:</p> <ul style="list-style-type: none"> <li>➤ 5.52 km of good quality watercourses</li> <li>➤ 33.82 km of watercourses with good ecological potential</li> <li>➤ 16.01 km of moderate quality watercourses</li> <li>➤ 19.88 km of watercourses with moderate ecological potential</li> <li>➤ 48.19 km of watercourses with poor ecological potential</li> <li>➤ 17.32 km of poor quality watercourses</li> <li>➤ 28.31 km of watercourses with bad ecological potential</li> </ul> <p>All groundwater resources were also assessed in 2008 and found to be of good ecological status.</p>	<p>The water in East Dunbartonshire is a vital resource. The management and control we have over this resource has major implications on a number of factors, including, water quality, biodiversity and human health. These are important considerations for the ATS.</p> <p>The impact of increased footfall across various different networks should be considered in order to prevent a decline in water quality. This is particularly vital to main waterbodies in East Dunbartonshire such as the Forth and Clyde Canal and the River Kelvin.</p> <p>Enhancements to the active travel networks in close proximity to river networks have the potential to deliver improvements to water quality and morphology, with added benefits of creating new or improved habitats.</p> <p>The requirements of the Water Framework Directive should be taken into account.</p> <p>In terms of biodiversity, the ATS should consider impacts to wetland quality.</p>	<p>SEPA – RBMP Data</p> <p>East Dunbartonshire Council</p> <p>Dunbartonshire Biodiversity Action Plan</p>	<p>To prevent deterioration and, where possible, enhance the ecological status of water bodies</p>
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Water Quality (continued)	*Flooding is discussed in <i>Climatic Factors</i>			
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Air Quality	<p>Emissions from transport has been identified as the main contributor of NO<sub>2</sub> and PM10 (particulates) pollution, specifically, in East Dunbartonshire. Domestic emissions are the main contributor of CO<sub>2</sub> emissions.</p> <p>The busiest routes that are of concern in relation to air quality within East Dunbartonshire are the A803 and B812 in Bishopbriggs; the A81 through Milngavie; and the A809 and A739 through Bearsden.</p> <p>There are currently two Air Quality Management Areas (AQMA) declared within East Dunbartonshire, Bishopbriggs (2005) and Bearsden Cross (2011), both of which were declared an AQMA after several years of exceeding national NO<sub>2</sub> and PM10 objective levels.</p> <p>Whilst traffic levels across the Council area have been shown to be decreasing since 2009 from 125,356 (per 1000 vehicle miles) to 118,830 (per 1000 vehicle miles) in 2013, which can be attributable to a number of factors including the promotion of sustainable travel and influencing economic factors, levels still remain relatively high.</p> <p>Of the number of people in East Dunbartonshire who are of an economically-</p>	<p>Contributing factors that can lead to increased emissions and result in air pollution, include, transport (both private and public) and developments which generate traffic flows and general movement to and from areas.</p> <p>The ATS has the opportunity to increase active travel in East Dunbartonshire. This will help to reduce traffic emissions, which will be particularly important in AQMAs.</p> <p>There are possible transboundary effects of air pollution to neighbouring Local Authorities such as Glasgow, West Dunbartonshire, North Lanarkshire and Stirling that should be taken into account in the development of the ATS.</p> <p>The ATS will demonstrate capabilities for linking active travel routes within the Council boundary and between East Dunbartonshire and other local authorities which can encourage cycling and walking to work or</p>	<p>East Dunbartonshire Council</p> <p>National Air Emissions Inventory</p> <p>Scottish Government</p> <p>DEFRA</p> <p>Scottish Transport Bus and Coach Statistics No. 32, 2013</p> <p>Local Transport Strategy 2013 – 2017</p> <p>Scottish Census 2011</p> <p>Department for Transport-Traffic Counts</p>	To prevent deterioration and, where possible, enhance air quality
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<p>Air Quality (continued)</p>	<p>active age:</p> <ul style="list-style-type: none"> <li>➤ 6,454 people (9.5%) work or study at home</li> <li>➤ 12,422 people (18.25%) use public transport (train, underground, metro, light rail, tram, bus, minibus or coach) to access work or place of study of distances of 5km to 30km+</li> <li>➤ 26,884 people (39.5%) drive a car or van to access work or place of study of distances of 5km to 30km+</li> <li>➤ 18,156 people (26.7%) access work or place of study by other means of transport of distances of 5km to 30km+</li> </ul> <p>The number of people travelling to work by car or van is approximately 4% more than those in the rest of Scotland. Many people living in East Dunbartonshire travel to their workplace in neighbouring authorities such as Glasgow.</p>	<p>their place of study.</p>		
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<p>Climatic Factors</p>	<p>A significant source of carbon dioxide in East Dunbartonshire is attributable to vehicular transport emissions, which contributes towards climate change, although the largest proportion of CO<sub>2</sub> emissions is attributable to domestic emissions.</p> <p>Travel:</p> <ul style="list-style-type: none"> <li>➤ The level of public transport access varies across the area. Kirkintilloch is served by bus services that provide access to towns and villages in East Dunbartonshire and</li> </ul>	<p>There are many areas within East Dunbartonshire that are currently within Flood Risk Areas. Climate change is resulting in an increase of flash flooding events in Scotland which is having an adverse effect on habitats, biodiversity, flora and fauna as well as an impact on leisure and recreational activities.</p> <p>Enhancing the active travel network may be achieved through</p>	<p>Scottish Government</p> <p>SEPA</p> <p>East Dunbartonshire Council</p> <p>UK Climate Impacts Programme</p> <p>Online Handbook of Climate Trends across Scotland 2006 (as updated) (SNIFFER)</p>	<p>To contribute towards the reduction of Scottish greenhouse gas outputs in line with Government targets</p> <p>To reduce overall flood risk by ensuring new development is not at flood risk and it doesn't add to the risk elsewhere. For areas already at flood risk secure management measures</p>
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<p>Climatic Factors (continued)</p>	<p>adjacent local authorities such as Glasgow. However, there are areas that do not have services that are frequent or operate out-with peak travel periods and daytime hours.</p> <ul style="list-style-type: none"> <li>➤ Although rail patronage has increased by approximately 10% from the period 2012/13 to 2013/14, accessibility to such services means there is a significant reliance on car-based travel in the area.</li> <li>➤ The number of bus passenger journeys in Strathclyde and South West Scotland has decreased since 2007/08 to 2012/13, which equates to a decrease of 21%. The total distance travelled by buses 2007/08 to 2012/13 decreased by 17%. This can be attributable to a reduction in the number of services that operate or alterations to routes. This trend is reflected in trends across Scotland which has seen a decrease in 4% in bus and coach journeys between 2012 and 2013.</li> <li>➤ Traffic levels have decreased during recent years from the particularly high volumes experienced during the mid-2000s. This may be a result of the economic downturn.</li> <li>➤ In 2013, 86% of households in East Dunbartonshire had access to at least 1 car.</li> <li>➤ Glasgow is a key attraction for both employment and high education opportunities for the population of East Dunbartonshire which increases the need for travel.</li> <li>➤ See <i>Air Quality</i> for number of people who travel by car or van to access their place of work or study.</li> </ul>	<p>improved planting, landscaping along routes and protection of existing habitats. This can be beneficial in terms of adaptation to flooding.</p> <p>Increased active travel and accessibility of networks in East Dunbartonshire will encourage people to travel sustainability and cut down on vehicle usage and related emissions which will contribute to climate change adaptation.</p> <p>In developing opportunities for the enhancement of the active travel network, areas of flooding particularly along rivers, will need to be considered for mitigation, management and viability.</p>	<p>Guidance)</p> <p>Scottish Household Survey 2013 (access to cars per household)</p> <p>Office of Rail Regulation (rail patronage by region, 2013/14)</p> <p>Scottish Transport Bus and Coach Statistics No. 32, 2013</p> <p>SEPA Flood map</p> <p>Scotland's Climate Change Declaration 2013-14 Report (SSN; Keep Scotland Beautiful; EDC)</p> <p>'Local and Regional CO2 Emissions Estimates for 2005-2012', Department of Energy and Climate Change</p>	
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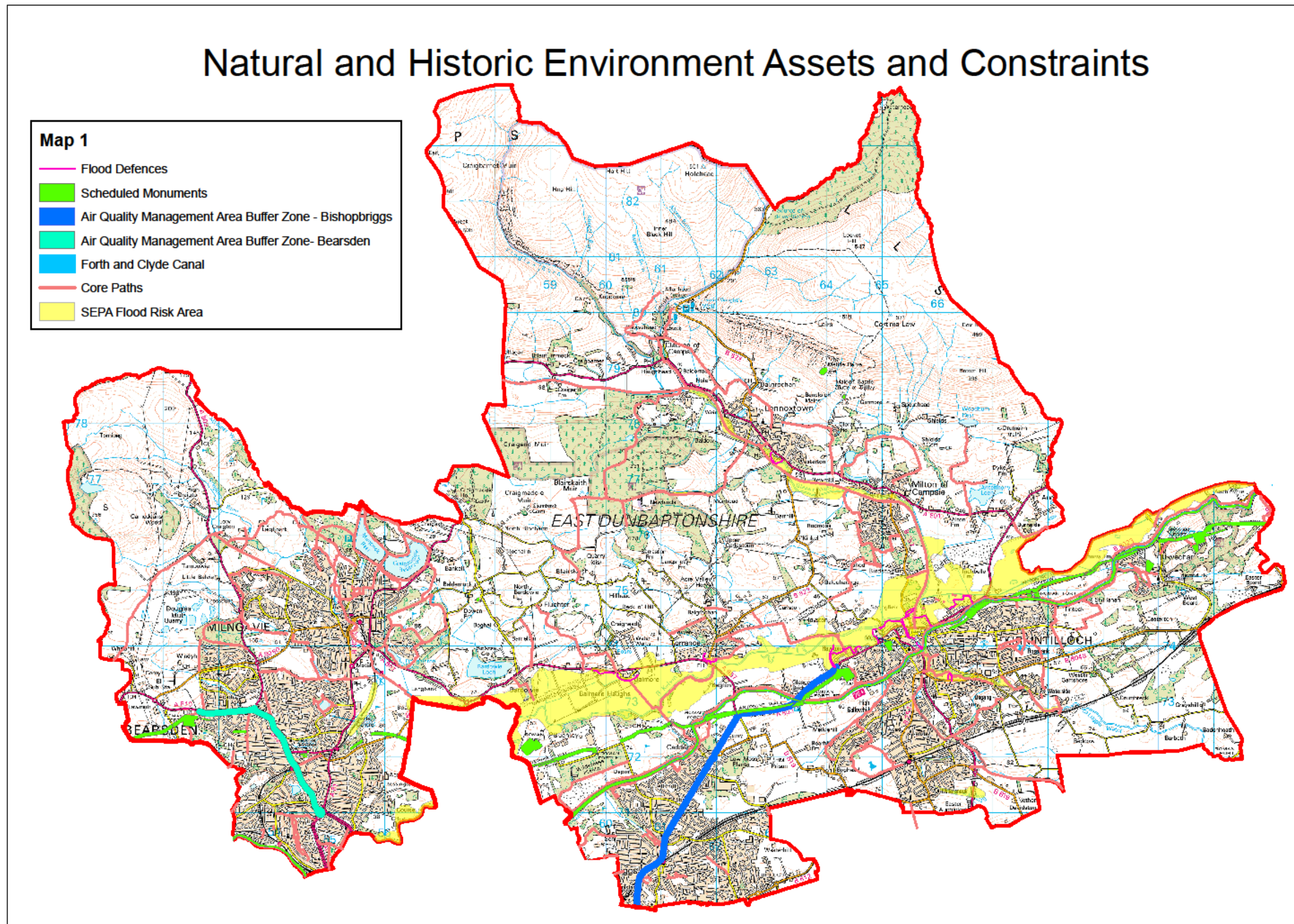
Climatic Factors (continued)	<p>CO2 emissions associated with the expenditure of energy from industrial/commercial (including agriculture) and domestic buildings accounts for 142.7 ktCO2 and 271.6 ktCO2 respectively in 2012. Such energy use has a significant impact on air quality.</p> <p>Flooding has been an issue in the Kelvin Valley for many years with the most recent flood events occurring in 1994 and 2005. The main areas of concern for potential flooding are the River Kelvin and its tributaries – the Allander, Glazert and Luggie Waters.</p> <p>East Dunbartonshire only has one operating landfill (Inchbelle Quarry, Kirkintilloch) but is only used for the disposal of inert materials, mainly construction materials. All household and commercial municipal waste is transferred to landfills in North Lanarkshire. Therefore, there is minimal methane produced from landfill within East Dunbartonshire to impact on climate change.</p>			
Material Assets	<p>East Dunbartonshire is supplied by various levels of transport infrastructure, through well serviced rail networks, bus routes encompassing the whole district and the various road networks that link settlements within East Dunbartonshire together with providing routes out with the district.</p> <p>There are 54km of A class roads, 47 km of B class roads and 34km of C class roads. This</p>	<p>The ATS will explicitly encourage the enhancement active travel routes with connections to the wider natural and historic environment throughout East Dunbartonshire.</p> <p>Where the active travel network encourages more access to the wider environment, either by Core</p>	<p>Scottish Government</p> <p>East Dunbartonshire Council</p> <p>Transport Scotland</p> <p>SPT</p> <p>Local Development Plan for large scale development</p>	<p>To promote the sustainable use of community assets and natural resources in East Dunbartonshire</p>

<p>Material Assets (continued)</p>	<p>amounts to 27% of the road network. There are 369 km of unclassified roads.</p> <p>East Dunbartonshire has a network of Core Paths and public open spaces which provide opportunities for recreation. Some of these also provide active travel routes from residential areas to services and businesses.</p> <p>Studies into housing requirements have indicated that East Dunbartonshire has one of the highest net needs for affordable housing, compared to other Scottish Local Authorities. The Local Plan and emerging Local Development Plan identifies the location of new development proposals with potential for changes to transport infrastructure/routes.</p> <p>There are 99 Right of Way paths in East Dunbartonshire of the highest classification. There are also 82 'other' Rights of Way which are classified as paths that have seized use, have been partially built on or overgrown.</p> <p>East Dunbartonshire has 8 'Scotways' Heritage Paths and 2 other Heritage Paths have been designated by East Dunbartonshire Council.</p> <p>Through the East Dunbartonshire Council area, there are a number of different cycleways including traffic-free routes, both off and on the National Cycle Network, and on-road routes that are not on the National Cycle Network. Many of these routes are regional/cross-boundary and provide links to Loch Lomond, Glasgow, Stirling and Edinburgh.</p>	<p>Path Networks, Rights of Way or cycleways, consideration should be given to the effects on all types of land including for example, the urban built environment, rural communities and agricultural land.</p> <p>Natural resources in East Dunbartonshire should be used sustainability and at a limited rate to reduce pressures on biodiversity and resources. Use of such resources has the potential to negatively impact on biodiversity, either by reducing the assets or restricting resources that will help manage biodiversity.</p> <p>The local open spaces identified in the Open Space Strategy will need to be taken into account within the ATS.</p> <p>The ATS will demonstrate links with the Local Development Plan, LDP Supplementary Guidance and Local Transport Strategy. Each should be considered in the production of the other.</p> <p>With the emerging Local Development Plan for East Dunbartonshire being implemented, there is likely to be an increase in developments (economic and housing over the life of the Plan. The impact of this for access and the wider active</p>	<p>proposals.</p> <p>Scottish Rights of Way and Access Society</p> <p>East Dunbartonshire Council Transport and Access Officer</p> <p>Sustrans</p>	
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Material Assets (continued)		travel network should be taken into account as well as guide developments.		
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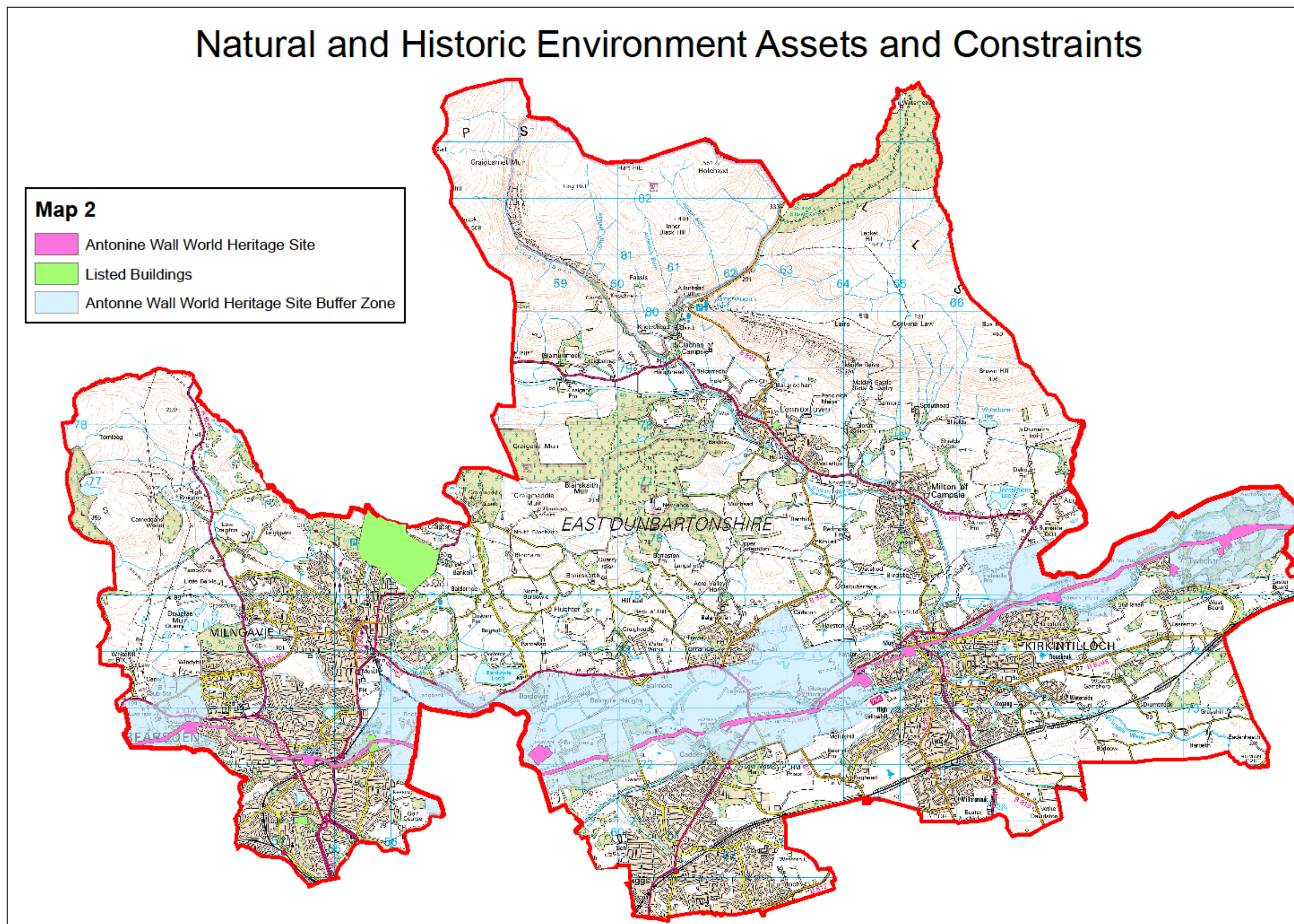


Figure 2: Map 1 of Natural and Historic Environment Assets and Constraints





**Figure 3: Map 2 of Natural and Historic Environment Assets and Constraints**





# Natural and Historic Environment Assets and Constraints

## Natural and Historic Environment Assets and Constraints

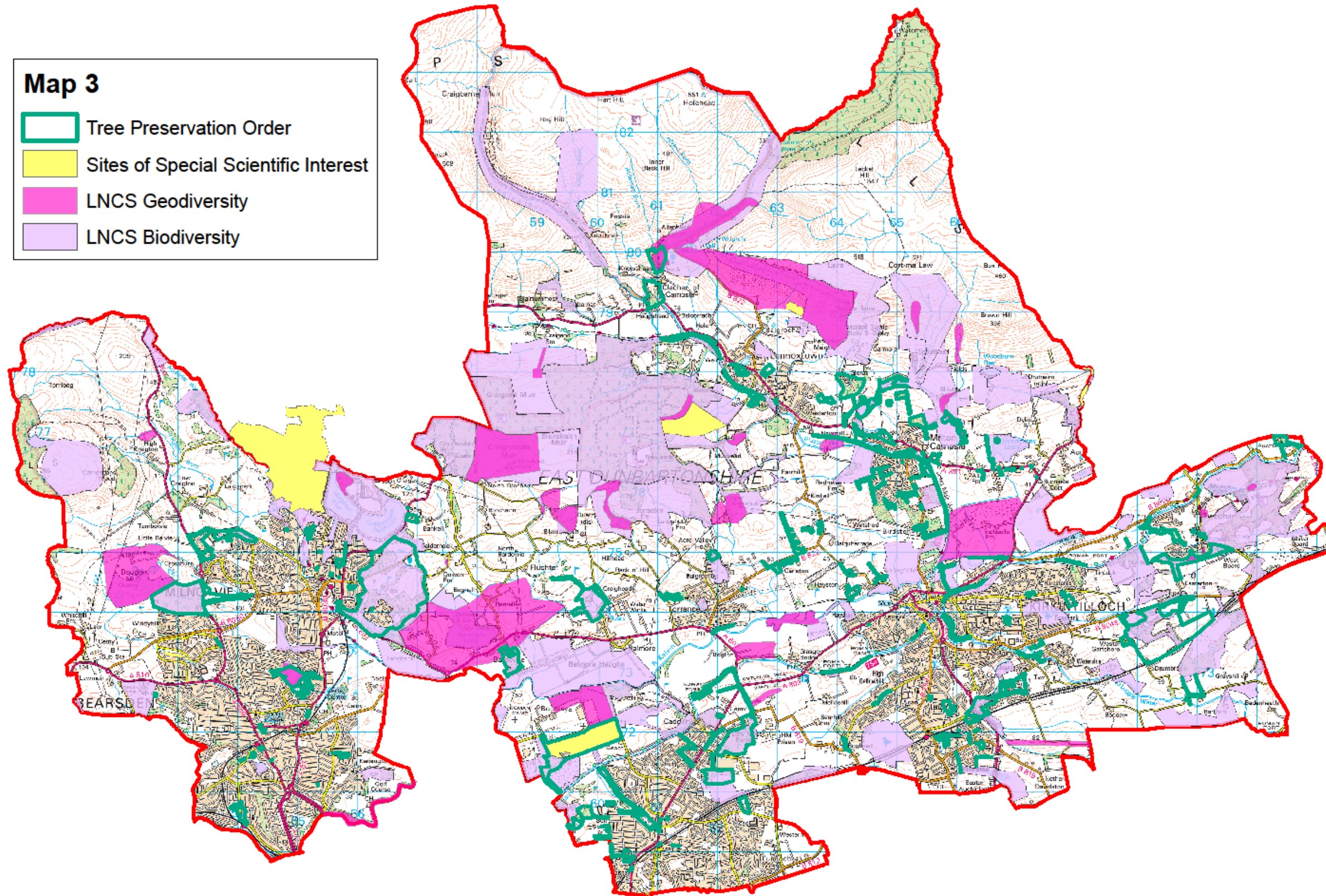




Figure 5: Map 4 of Natural and Historic Environment Assets and Constraints

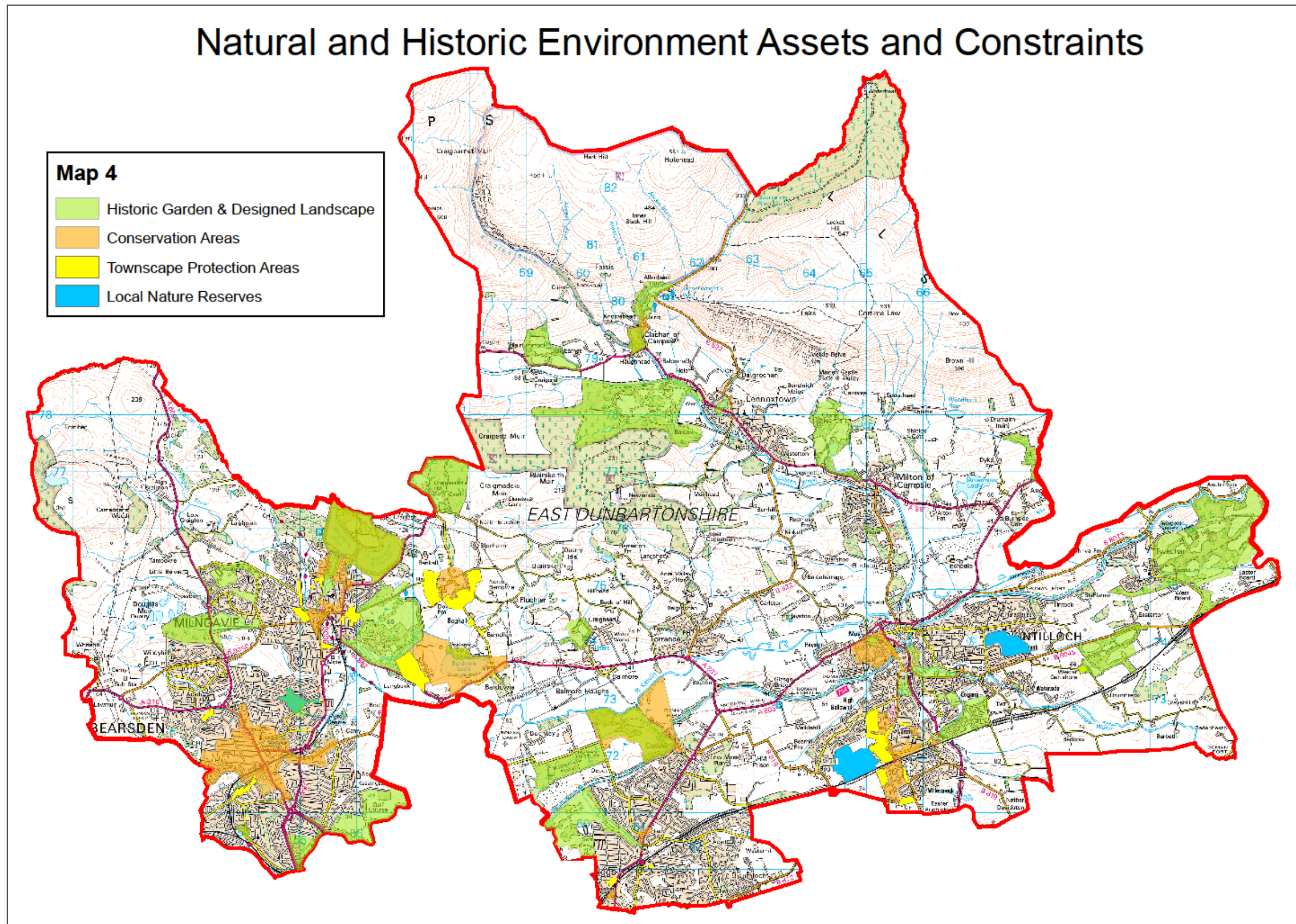
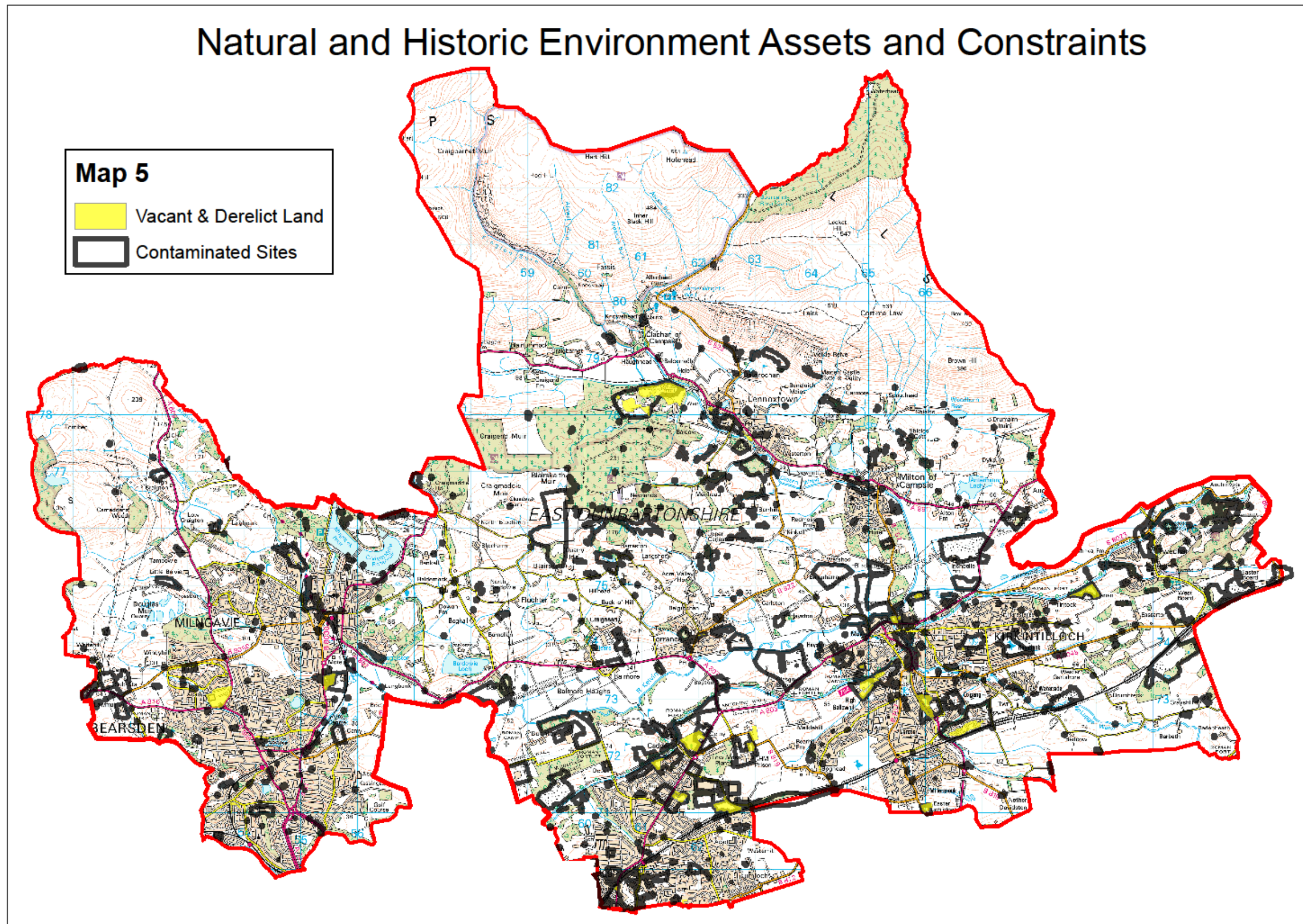




Figure 6: Map 5 of Natural and Historic Environment Assets and Constraints





## 2.2 Environmental Issues<sup>1</sup> for the Active Travel Strategy

**2.2.1** The Environmental Report will identify the current environmental issues and problems that affect East Dunbartonshire, utilising the information that has been identified through an analysis of the baseline environmental data and potential implications, which are contained within section 2.2 of this Report. When undertaking the assessment of the Strategy, the Council will be able to predict whether the identified environmental problems and issues will worsen, stabilise or improve through the implementation of the Strategy. The main environmental issues and problems facing East Dunbartonshire which are relevant to the Active Travel Strategy are outlined in **Table 2** below.

**Table 2: Environmental Issues Relevant to the Active Travel Strategy**

SEA Topic	Relevant Environmental Issues
Population and Human Health	Eight datazones within East Dunbartonshire fall into the top 25% most deprived areas in Scotland; these are located in Hillhead, Lennoxton, Auchinairn and Milngavie. In particular, some areas in Hillhead remain within the 5% most deprived areas in Scotland according to the Scottish Index of Multiple Deprivation.
	With areas of deprivation in East Dunbartonshire and an increasingly ageing population, there is a significant reliance on public transport and access to primary facilities such as town centres, retail parks, healthcare and leisure. To reduce this need and pressure, there is significant evidence that enhancement and promotion of green and active travel networks can be integrated with interventions and provide further health benefits to deprived or vulnerable members of the community.
	Conflicts may arise between increasing public access within East Dunbartonshire and the need to conserve the natural environment. This will be a vital consideration for the ATS to address and prevent such conflicts.
	Current use and awareness of East Dunbartonshire's active travel network has scope to be improved. Increasing the awareness, understanding of the role of the active travel alternatives amongst the population of East Dunbartonshire, as well as how local communities can gain benefits from accessing local and regional facilities using the network alongside the upgrade of the network should be a significant factor for consideration in the ATS. This should include the promotion of the active travel network for educational purposes in partnership with local schools.
	Encouraging the involvement of the community in projects linked to the enhancement of East Dunbartonshire's active travel network has the potential to further benefit health and wellbeing. This is likely to improve the appreciation of the environment as well as achieve the renewal of run down areas, particularly those in urban contexts, and increase economic value and investment to the area. There is scope for this to be promoted through the ATS.
Cultural Heritage	There are a number of cultural heritage assets in East Dunbartonshire including the Antonine Wall (UNESCO World Heritage Site) and the Forth and Clyde Canal which require protection and management.

<sup>1</sup> The term "environmental issues" is the name collectively given to air, water, soil, biodiversity, climatic factors, landscape, material assets, population and human health as well as cultural heritage (including architectural and archaeological heritage) in the EU Directive 2001/42/EC. In practice they are referred to as "SEA topics".

	East Dunbartonshire has a varied and valued natural and historic cultural heritage. In the development of the ATS, the opportunities that will be identified should address how they can contribute to enhancing and protecting the historic environment.
	East Dunbartonshire is host to tourist attractors across the whole of the council-wide area such as the Antonine Wall Heritage Site, the Campsie Fells, West Highland Way and Mugdock Country Park. The ATS is likely to improve access to these assets. However, increased footfall to the main attractors has the potential to result in both positive impacts, such as stimulating the local economy, and negative impacts, such as path erosion and the degradation of sites/buildings and their setting.
<b>Biodiversity, Flora and Fauna</b>	East Dunbartonshire has a wide range of designated and non-designated sites, including those of ecological importance and protected species. This is seen through a number of Local Nature Conservation Sites and Important Wildlife Corridors, Tree Preservation Orders and Local Nature Reserves. East Dunbartonshire also has 6 Sites of Special Scientific Interest (SSSI). The management and protection of these assets is essential through the ATS.
	Invasive Non-Native Species in East Dunbartonshire have been identified in East Dunbartonshire. Their location and management should be recognised within the Strategy.
	There are a number of protected species and habitats within East Dunbartonshire which will need to be considered as part of the ATS. The ATS offers the scope to ensure that benefits for biodiversity are considered as a vital part of the wider active travel network in East Dunbartonshire and will play a contributing role for continued enhancement and protection of such species to avoid any loss. These concerns should be considered alongside the LBAP and emerging Green Network Strategy.
	Habitat connectivity within East Dunbartonshire is fragmented. In particular, river and canal corridors are, to varying extents, below their potential in terms of habitat connectivity as a result of confinement and the presence of Invasive Non-Native Species. There is scope to reduce habitat fragmentation through improvements to access routes across the council area, with additional benefits anticipated in relation to biodiversity.
<b>Soil and Geology</b>	There are several sites in East Dunbartonshire that have been identified as peatland. Any action as part of the Strategy that may result in the disturbance of such sites for the release of carbon should be avoided. This includes conflicts between the active travel access network and peatland protection.
	There is scope within the ATS to consider the role of enhanced biodiversity in managing ecosystem services including carbon storage, drainage and to alleviate flooding.
	There are 36 sites identified as being geologically diverse, of which 34 have been assigned as Local Geodiversity Sites (LGS). The area also hosts 1 RIGS (Regionally Important Geological or Geomorphological Site) and 1 SSSI of geological importance. The ATS should consider these designations in the development of the opportunities and actions within the Strategy to ensure their protection and enhancement where possible.
<b>Landscape</b>	East Dunbartonshire has varying degree of landscapes including the green belt, the Campsie Fells/Kilpatrick Hills and agricultural land. Ensuring that the landscapes are well-connected throughout East Dunbartonshire is a vital consideration for the ATS.
	East Dunbartonshire has a number of Local Landscape Areas with high/moderate scenic value as well as varied landscape character and setting across the Council area, including the Campsie Fells and Kilpatrick Hills. The ATS should take into account the specific landscape features to ensure that there are no specific conflicts these areas and access issues, and are sensitive to, the local landscape and retain East Dunbartonshire's local distinctiveness.

	The cumulative effects of projects that will enhance or extend the active travel network that may be established through the Strategy should be accounted for at a local, EDC-wide and regional level.
Water Quality	There are a number of good/moderate quality watercourses in East Dunbartonshire including the Forth and Clyde Canal which is also a Scheduled Monument. These assets require protection to which the ATS can contribute to in order to reduce, prevent or offset any adverse impacts to water quality.
	There are a number of sites within East Dunbartonshire's landscape which are classified as wetland. Wetlands provide vital habitats for a number of species and ecosystem services but their quality is under pressure from external influences such as flooding, developments and access. The Strategy should account for this priority habitat in the development of its action plan as well as consider its role in reducing pressures on this resource to maintain a high level of water quality.
Air Quality	Unacceptably high levels of air pollution can be harmful to the environment and human health. East Dunbartonshire currently has two designated Air Quality Management Areas (Bishopbriggs and Bearsden Cross). These are managed through Air Quality Management Plans and the emerging Air Quality Strategy, the requirements of which should be taken into account within the ATS.
	Changes to air quality can have a significant impact on ecosystem services, which can affect biodiversity value and environmental assets.
Climatic Factors	Domestic emissions account for the largest proportion of carbon dioxide in East Dunbartonshire, although emissions from transport account for the largest proportion of NO <sub>2</sub> and PM <sub>10</sub> emissions. This contributes to the effects of climate change which include changing temperatures and rainfall patterns, and increased incidences of extreme weather events. Where appropriate, the actions proposed as part of the ATS should consider its role in mitigating or adapting to the effects of climate change.
	Climate change has a direct link to flood risk. The SEPA Flood Risk Map has identified several locations within the East Dunbartonshire Council area which could have a significant impact on habitats and the value of East Dunbartonshire's environment.
Material Assets	As a result of the spatial strategy of the impending Local Development Plan there is potential for a rise in developments in East Dunbartonshire over the life of the Plan. New developments are likely to require infrastructure improvements which have the potential to result in further fragmentation of habitats and requirements for access routes which should be accounted for within the ATS.
	It is important that natural resources in East Dunbartonshire are managed sustainably.
	There are currently a series of Core Path Networks, Rights of Way and open spaces in East Dunbartonshire which create recreational opportunities, promote active travel and provide a sense of community. The opportunities that will be identified through the Strategy should consider its role in enhancing existing networks (including green infrastructure opportunities) as well as integrating with the wider green network across the council area. The sites identified in the Open Space Strategy and opportunities and improvements noted within the emerging Green Network Strategy should also be taken into consideration within the ATS.
	There is currently a lack of good quality active travel routes and options across the Council area which link certain towns, villages and community areas. Specific areas which could be improved, and additional active travel infrastructure provided include: <ul style="list-style-type: none"> <li>➤ Bishopbriggs to Lenzie</li> <li>➤ Bearsden/Milngavie to Kirkintilloch/Lenzie</li> <li>➤ Torrance to Kirkintilloch</li> <li>➤ Bearsden and Milngavie (local)</li> </ul>

	The current active travel network has a limited amount of on-road active travel provision. Additional provision of such improvements has the potential to significantly increase the active travel participation throughout East Dunbartonshire.
	Integration of our active travel network with public transport will be an essential part of the ATS. Improving the link between these forms of transport has the potential to significantly increase active travel participation by integrating with other sustainable travel options such as train or bus, subsequently reducing car journeys and associated emissions levels throughout East Dunbartonshire.

## 2.3 Evolution of the Environmental Baseline without the Active Travel Strategy

- 2.3.1 As part of the SEA process, it is important to assess the likely impact on the environment if the ATS was not implemented.
- 2.3.2 The ATS will set out a framework for increasing participation in Active Travel in East Dunbartonshire spanning 5 years which will complement and deliver on transport objectives and interventions within the current Local Transport Strategy and feed into LTS2. The strategy will also produce an action plan for active travel in East Dunbartonshire outlining a range of coordinated projects which deliver multiple benefits and value for money for the region. This action programme of interventions and approaches will be derived from a robust evidence base and will include comprehensive maps of walking and cycling networks in the region.
- 2.3.3 As this is the first Active Travel Strategy for East Dunbartonshire it is important that it is implemented with the purpose of taking into account the role of accessibility in the management and enhancement of the active travel network.
- 2.3.4 In the absence of the emerging ATS, it is likely the following would occur:
- Failure to link projects on the ground with national, regional and local outcomes, including environmental considerations.
  - Failure to demonstrate the cumulative and long-term positive impact active travel has on a number of indicators such as: health and wellbeing, modal shift, air quality, reduced congestion, increased economic competitiveness, increased attractiveness of the walking environment and perception of improved safety.
  - Gaps in the local active travel network remain unaddressed and potential opportunities not being maximised.
  - Obvious connections (easy wins) in the active travel network being overlooked.
  - Selection of projects not informed by robust evidence base and clear rationale based on objective led process.
- 2.3.5 The ATS will be an important vehicle in achieving the overarching vision of East Dunbartonshire's Single Outcome Agreement, which includes commitments relating to health inequalities and economic regeneration. Environmental protection is intrinsically linked to these agendas, and measures such as promoting healthy lifestyles and encouraging leisure related economic activity will contribute towards physical, social and financial wellbeing.

#### 2.3.6 The following bullet points set out in more detail the likely implications:

- **Biodiversity:** Uncoordinated promotion of access to our natural assets and random delivery of developments to the active travel network could result in adverse effects on biodiversity and vulnerable species and habitats.
- **Landscape:** Improving walking and cycling networks and will require enhancement of the existing urban and rural environments to make the choice to walk or cycle for travel purposes more attractive. The ATS is likely to include interventions which will as a by-product of enhancing the active travel network, improve local landscapes. Another benefit as a result of the ATS is the promotion of settlement connectivity in East Dunbartonshire away from the road network. This is likely to reduce the need to build new roads which would remove previously greenbelt/open space assets. Without the ATS, the active travel network of local paths is likely to suffer from lack of maintenance or enhancement which would contribute to perceptions of poor local landscape quality.
- **Cultural Heritage:** Uncoordinated promotion of access to our historic environmental assets could result in degradation of East Dunbartonshire's built heritage and inadvertently harm the area's cultural offer and heritage.
- **Air Quality & Climatic Factors:** An uncoordinated approach to increasing participation in active travel could result in an increase of car journeys and subsequently add to existing traffic congestion throughout the area and greenhouse gas emissions. Modal shift away from private cars is a major contributor to improved air quality in urban areas, failure to provide a coordinated framework for delivering measures that facilitate this modal shift would result in increased risk of air quality remaining an unacceptably poor level or worsening. Transport emissions from private cars on average equate to approximately 25% of CO2 emissions. Active Travel is a major approach to reducing private car journeys and subsequently reducing the CO2 generated by the transport sector.
- **Water:** Although protection of water quality as a result of development would be controlled through other legislation, the cumulative effects of increased unplanned development without a corresponding provision for active travel would likely increase car use which through increased emissions could have adverse effects on hydrological environments and drainage requirements as part of infrastructure improvements.
- **Population & Human Health:** Failure to deliver a coordinated approach to facilitating increased proportion of journeys taken by active means carries significant health risks for our population in the future. In order to increase activity levels, provision for active travel to increase the quantity of people walking and cycling for everyday and leisure journeys should be delivered via a clear framework. Failure to provide this coordinated approach it is unlikely adequate investment will be made to the active travel network and levels of participation will stagnate. This would represent a risk to aggregate health levels as a result of inactivity, contributing to already rising obesity levels and corresponding health risks.

- Soil & Material Assets: The ATS would present, and have a direct influence, on opportunities to further promote the sustainable use of materials and contribute to improvements to the varying walking and cycling path networks in East Dunbartonshire. This would reduce the need for further road building which could have adverse effects on soil and material assets through losing greenspace. Without the influence of the ATS, these opportunities are less likely to be identified and the benefits to the relevant material assets will be minimal.

## Section 3: Assessment of Environmental Effects

### 3.1 Assessment Framework

- 3.1.1 There are a number of key assessment stages that have been identified for the SEA of the ATS. Each of these stages required a tailored assessment method as detailed below:

**Table 3: Assessment Framework**

Assessment Area	Assessment Method
Ambition	The SEA assessment questions and indicators will be used to establish whether the strategic approach in order to deliver the Ambition of the ATS is compliant with the proposed SEA objectives including the consideration of reasonable alternatives.
Aims	The aims of the Strategy, and alternatives to them, will be tested against the proposed SEA objectives for alignment and compliance. The outcomes of this assessment guided the refinement of the Strategy objectives throughout their development.
Actions	The Actions and all reasonable alternative options were assessed against the SEA assessment questions, including those which are site-specific and / or area-wide.
Cumulative and Synergistic Impacts	Using the assessments of options outlined in the Active Travel Strategy and with the use of GIS mapping, where appropriate, the cumulative effects of the Strategy have been tested. Any impacts for neighbouring authorities have also been considered as part of the assessment process.

### 3.2 Assessment Methodology

- 3.2.1 The SEA legislation requires the environmental effects of ‘reasonable alternatives’ to the strategic document to be identified, described and assessed.
- 3.2.2 The East Dunbartonshire Active Travel Strategy has been assessed against the list of environmental issues set out in Schedule 3 of the Environmental Assessment (Scotland) Act 2005.
- 3.2.3 The SEA Directive requires environmental assessments to consider the environmental objectives established at International, European Community and national levels that are relevant to the strategic document. During the Scoping stage of SEA, it was determined that all environmental issues have the potential to be significantly impacted by the ATS. The Consultation Authorities were in agreement with this level of scope, as expressed in their views following the consultation at the Scoping stage.

3.2.4 East Dunbartonshire Council has adopted a set of SEA Objectives for the environmental issues that were scoped into the assessment, shown in [Table 4](#), which were derived from other legislation and Strategies ([Appendix A](#)).

**Table 4: SEA Objectives**

Environmental Factor (Annex 1 of EC Directive)	SEA Objective
Population and Human Health	To improve human health and community wellbeing.
Cultural Heritage	To protect, conserve and where appropriate enhance the historic environment.
Biodiversity, Flora and Fauna	To protect, enhance, create and where necessary restore biodiversity and encourage habitat connectivity.
Soil and Geology	To protect and, where appropriate, use high quality and sensitive soils in a sustainable manner and conserve recognised geodiversity assets.
Landscape	To protect, enhance and, where appropriate, restore landscape character, local distinctiveness and scenic value.
Water Quality	To prevent deterioration and, where possible, enhance the ecological status of water bodies.
Air Quality	To prevent deterioration and, where possible, enhance air quality
Climatic Factors	To contribute towards the reduction of Scottish greenhouse gas outputs in line with Government targets.
	To reduce overall flood risk by ensuring new development is not at flood risk and it doesn't add to the risk elsewhere. For areas already at flood risk secure management measures.
Material Assets	To promote the sustainable use of community assets and natural resources in East Dunbartonshire.

### 3.3 Alternatives

3.3.1 Through administrative provision, the framework of an Active Travel Strategy would integrate and deliver actions set out through the adopted Local Transport Strategy 2013-17. Four reasonable alternatives were identified in terms of how the Strategy could be delivered, implemented and the proposed outcomes achieved. An Options Assessment was initially



undertaken by the Councils Sustainability Policy Team in order to highlight the benefits and risks of each Option and to determine the preferred approach the required outcomes of the Strategy.

**3.3.2** The alternative strategic options assessed include:

- A stand-alone Active Travel Strategy
- Integrating the Active Travel Strategy with the emerging Green Network Strategy
- Addressing EDC's active travel network through individual plans, programmes or strategies
- Ensuring there is adequate provision for active travel in the next iteration of the Local Transport Strategy (LTS2)

**3.3.3** Reasonable alternatives within the Strategy have been considered, assessed against the SEA objectives / criteria and SEA preferred options identified. Reasonable alternatives have been identified in terms of the ambition, aims and the actions which form the Active Travel Strategy.

**3.3.4** The options that have been generated through the preparation of the Strategy take account of stakeholder consultations and research on the content of the Strategy, the current environmental baseline, relevant policy and strategy documents and are intended to represent approaches which are realistic, deliverable, consistent with other aspects of the Strategy, and consistent with higher-level plans, policies and strategies. The assessment of these options and consultation responses has influenced the options taken forward within the Strategy.

## **3.4 Assessment Findings**

**3.4.1** An environmental assessment has been undertaken for each identified Strategy alternative and has been assessed against the SEA Objectives and set criteria, based on their predicted impact on the current environmental baseline. The assessment has been conducted using professional judgement and GIS analysis where appropriate.

**3.4.2** The environmental assessments have been recorded in the form of a matrix identifying the environmental performance of each alternative against the SEA objectives and criteria. The environmental effects have been recorded according to their nature (positive, neutral, unknown or no significant effect). The significance of these effects are determined using a combination of the magnitude of the impact and the importance or sensitivity of the receiving environment. A full justification of each assessment is provided in the matrix.

**3.4.3** The cumulative impact of each options proposed in the delivery of the ATS has also been carried out and was an important addition into the overall assessment process in order to identify the overall environmental effects of the Strategy once implemented.

**3.4.4** Recommendations have been made where necessary so that environmental considerations are incorporated into the ATS. The assessments also seek to enhance the environmental benefits of the ATS and accordingly suggest recommendations to further enhance or protect the environment relevant to each of the environmental factors.

- 3.4.5 In cases where the assessed SEA Preferred Option has not been carried forward into the Strategy as a Preferred Option the detailed non-environmental reasoning and justification has been expanded upon with the assessment summary.

### 3.5 Assessment: Strategic Direction

- 3.5.1 The SEA legislation requires the environmental effects of 'reasonable alternatives' to the strategy to be identified, described and assessed. The following alternatives were considered as part of the SEA of the Active Travel Strategy.

**Table 5: Alternatives: Strategic Directions**

Alternatives Approaches	Strategic Direction: Outline and Implications
A stand-alone Active Travel Strategy	Having a stand-alone strategy focussed completely on increasing the proportion of everyday journeys undertaken by active means, (walking or cycling), is the approach most likely to effectively deliver this change. While the stand-alone strategy will take cognisance of other strategies under development and ensure coordination, holding consultation exercises focussed on active travel is more likely to attract informed and relevant stakeholders and generate useful comments and responses. This approach is also more likely to gain input from local interest groups with good local network knowledge, in some cases perhaps superior local knowledge to council staff. An action plan that is focussed on generating options which are aimed specifically at increasing active journeys will provide a framework for selection of relevant projects that will facilitate active travel in the region. This action plan will undoubtedly have other benefits for other areas and objectives more relevant to other strategies, e.g. Provision of off road cycle routes may create increased access opportunities for the green network and open spaces with benefits for habitat creation and subsequent biodiversity gains. The findings and opportunities identified through this Strategy will be integrated and recognised in the emerging Green Network Strategy within the opportunities mapping.
Integrating the Active Travel Strategy with the emerging Green Network Strategy	This strategic alternative requires East Dunbartonshire Council and partners to develop a wide ranging Strategy focussed on the enhancement of access to the green network and urban environment by active means across the whole of the East Dunbartonshire Council area, including notable assets such as Mugdock Country Park and links with neighbouring authorities such as Stirling, North Lanarkshire, Glasgow and West Dunbartonshire. This approach to the Strategy will present opportunities to focus on both of the main components of the green network; biodiversity and access while still ensuring provision for active travel connections to trip attractors such as: rail stations, bus hubs, town centres and other attractions. This will give a more extensive scope to the development of a stand-

	alone Green Network Strategy or Active Travel Strategy and potentially wider benefits across the whole of the Council-wide area.
Addressing EDC's active travel network through other plans, programmes, policies and strategies	It may be possible to include provision for active travel within other access or open space strategies such as the Local Biodiversity Action Plan (LBAP) for East Dunbartonshire which is currently in the development stage, and as such, there is scope to include issues related to the improvement of East Dunbartonshire's green network and active travel network within each of these strategic actions. However, this approach to enhancing the active travel network will limit the scope for integration between the two factors, and different strands of the combined approach may lose focus.
Ensuring there is adequate provision for active travel in the next iteration of the Local Transport Strategy	The current LTS, in terms of interventions, is currently split into three sections one of which is active travel. Consequently, actions pertaining to enhancement of the active travel network and behavioural change are encompassed within this section. Whilst it may be useful to have a separate, focused ATS, it may be possible to integrate active travel and enhance relevant sections into the next LTS and thus ensure greater integration between active travel and other forms of sustainable transport to allow for effective interchanges between the two (e.g. where journey distances are too long for active travel) .

Assessment Table Key			
++	Major Positive	✓	SEA Preferred Option
+	Minor Positive		
0	Neutral	✓	ATS Preferred Alternative Option
X	No Significant Effect		
-	Minor Negative		
--	Major Negative		
?	Uncertain		

**Table 6: Assessment of the Strategic Direction and Alternatives for the Active Travel Strategy**

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
<p>Strategic Direction Alternative 1 A stand-alone Active Travel Strategy</p> <p>✓</p>	++	+/-	++	?/-	++	?/-	++	++	++	<p>✓</p>
<p><b>Assessment Commentary:</b></p> <p>Significant positive effects are anticipated through this strategic alternative on population and human health. These effects are predominantly through the promotion and increased provision of the active travel network which will have resulting benefits with regards to the health and wellbeing of residents, workers and visitors to East Dunbartonshire.</p> <p>Significant positive effects in relation to biodiversity; landscape; air quality; and climatic factors are anticipated through various elements of this strategic alternative, including:</p> <ul style="list-style-type: none"> <li>- Increased provision of off road cycle routes which will also enhance and link with green network, open spaces and recreational opportunities which can benefit habitat connectivity and creation.</li> <li>- Enhancement of settlement setting, scenic value and local distinctiveness through the review, upgrade and creation of new active travel routes connecting communities and facilities throughout East Dunbartonshire.</li> <li>- A reduction in congestion levels through promotion of viable sustainable alternatives to road and car based reliance.</li> <li>- Potential improvements in air quality particularly in the vicinity to the areas existing AQMAs in Bishopbriggs and Bearsden.</li> </ul> <p>Through increased active travel provision, sustainable access to East Dunbartonshire's historic environment will</p>										

	<p>result in a positive impact on the areas cultural heritage. However this impact will be limited and in certain cases may result in adverse impacts in relation to increased visitor numbers to such sensitive and valuable areas through potential degradation of historic environment assets and their setting.</p> <p>Impacts on the soil and water resources in East Dunbartonshire through the implementation of this alternative are uncertain at this stage, although there is potential for adverse impacts on soil quality, loss of peatland areas, drainage and pollutants entering the water system with the construction and integration of new or updated active travel routes throughout East Dunbartonshire.</p> <p>Through coordinated maintenance, monitoring and enhancement of the active travel the positive impact on material assets is likely to be significant. Active travel infrastructure connections to trip attractors such as rail stations, bus hubs, town centres and between communities will also be a main focus of this strategic alternative and provide a significant positive impact in relation to material assets.</p>									
Strategic Direction Alternative 2 Integrating the Active Travel Strategy with the emerging Green network Strategy	++	+/-	++	?/-	++	?/-	++	++	++	
<p><b>Assessment Commentary:</b></p> <p>The assessment of this strategic alternative is very similar to that of Alternative 1 (above) and the production of a stand-alone Active Travel Strategy. Through this strategic direction it is also anticipated that the environmental factors likely to result in significant environmental effects are:</p> <ul style="list-style-type: none"><li>- Population and Human Health</li><li>- Biodiversity, Flora and Fauna</li><li>- Landscape</li><li>- Air Quality</li><li>- Climatic Factors</li><li>- Material Assets</li></ul> <p>This strategic alternative will have a split focus between the identification, creation and protection of green network opportunities and the active travel network. With conflicting priorities between the two district strategy subject areas there is potential for a joint Strategy to limit the scope of each of the two aspects instead of complementing and integrating findings as is proposed within Alternative 1 above.</p>										
Strategic Direction Alternative 3 Addressing EDC’s active travel network through other plans, programmes, policies and strategies	+	0/-	0/-	?/-	+	?/-	+	+	0/-	
<p><b>Assessment Commentary:</b></p> <p>Through this alternative approach, the positive impacts are likely to be reduced in relation health, community wellbeing, landscape air quality and climatic factors. This is predominantly due to the fact that there will be no direct focus or coordinated approach to the provision or improvement of active travel infrastructure.</p> <p>With no single coordinated approach to active travel provision the anticipated effect in relation to cultural</p>										

	<p>heritage, biodiversity and material assets are likely to be overall neutral. However, with an uncoordinated or managed approach to the overall provision and monitoring of the active travel network adverse effects such as:</p> <ul style="list-style-type: none"><li>- Path erosion and the degradation of cultural heritage sites/buildings and their setting and designated sites for their biodiversity value are also likely.</li><li>- A lack of connection and improvement between the active travel network, existing public transport network and local communities.</li><li>- A lack of maintenance and required infrastructure improvements together with the loss of enhancement opportunities.</li></ul> <p>Impacts on the soil and water resources in East Dunbartonshire through the implementation of this alternative are uncertain at this stage, although with an uncoordinated approach there is potential for adverse cumulative impacts on soil quality, loss of peatland areas, drainage and pollutants entering the water system with the construction and integration of new or updated active travel routes throughout East Dunbartonshire.</p>										
<p>Alternative 4 Ensuring there is adequate provision for active travel in the next iteration of the Local Transport Strategy</p>	<table><tr><td>++</td><td>+/-</td><td>+</td><td>?/-</td><td>+</td><td>?/-</td><td>++</td><td>++</td><td>++</td></tr></table> <p><b>Assessment Commentary:</b></p> <p>Significant positive effects are anticipated through this strategic alternative in relation to community health and wellbeing, air quality, climatic factors and material assets. These effects are predominantly through:</p> <ul style="list-style-type: none"><li>- The promotion and increased provision of the active travel network which will have resulting benefits with regards to the health and wellbeing of residents, workers and visitors to East Dunbartonshire.</li><li>- A modal shift away from car based journeys and travel resulting in benefits relating to air quality improvements and reductions in congestion levels with a particular importance in the vicinity of existing AQMAs in Bishopbriggs and Bearsden.</li><li>- Monitoring, maintenance and enhancement of the active travel infrastructure and linkages with the public transport network.</li></ul> <p>Through this strategic alternative the anticipated positive effects on cultural heritage, biodiversity and landscape are likely to be reduced in comparison to Alternatives 1 and 2. Within the next iteration of the LTS there is likely to be conflicting priorities between road based transport interventions, public transport and active travel alternatives which could potentially limit the scope of the active travel agenda. In addition to this, the scope to review, retain and enhance local community distinctiveness and protect and enhance habitat connectivity could also be limited through this strategic direction. Through the next iteration of the LTS increased active travel provision and sustainable access to East Dunbartonshire’s historic environment will result in a positive impact on the areas cultural heritage. However this impact will be limited and in certain cases may result in adverse impacts in relation to increased visitor numbers to such sensitive and valuable areas through potential degradation of historic environment assets and their setting.</p> <p>Impacts on the soil and water resources in East Dunbartonshire through the implementation of this alternative are uncertain at this stage, although through this approach there is potential for adverse cumulative impacts on</p>	++	+/-	+	?/-	+	?/-	++	++	++	
++	+/-	+	?/-	+	?/-	++	++	++			

	soil quality, loss of peatland areas, drainage and pollutants entering the water system with the construction and integration of new or updated active travel routes throughout East Dunbartonshire.	
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- 3.5.2 The Strategic Direction for implementing a stand-alone Active Travel Strategy was considered the SEA and Strategy Preferred Option due to the significant positive impacts on the relevant environmental factors noted above; a complete focus of this Strategy on promoting, increasing and improving active travel throughout East Dunbartonshire; and the linkages between the stand-alone Active Travel Strategy and emerging Green Network Strategy (GNS) in terms of integrating the finding of the ATS within the GNS, while also retaining the different strategic focusses and required outcomes.

## 3.6 Assessment: Ambition

- 3.6.1 The Ambition and 'reasonable alternatives' have been identified, described and assessed. The full assessments of all reasonable alternatives including assessment commentary, mitigation and SEA suggested alterations are contained within [Appendix B. Table 7](#) outlines the various options identified, the SEA assessment ratings and the SEA and ATS Preferred Options.

Assessment Table Key			
++	Major Positive	✓	SEA Preferred Option
+	Minor Positive		
0	Neutral	✓	ATS Preferred Alternative Option
X	No Significant Effect		
-	Minor Negative		
--	Major Negative		
?	Uncertain		

**Table 7: Assessment of the Ambition and Alternatives for the Active Travel Strategy**

SEA Environmental Factors 	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	Preferred Option
Proposed Ambition 1	+	?	?	?	?	?	+	+	+/?	
East Dunbartonshire is a walking and cycling friendly area.										
Proposed Ambition 2	++	+/?	+/?	+/?	++	+/?	++	++	++	 
East Dunbartonshire is a place where walking and cycling for everyday journeys is a convenient, viable, safe and attractive choice for residents, commuters and visitors.										
Proposed Ambition 3	0/-	0	0	X	0	X	-	-	0	
East Dunbartonshire is a place where on-road cycling and footway walking adjacent to roads is permitted where it is safe to do so and supplements road based transport.										

**3.6.2** The SEA and ATS preferred option, illustrated above with SEA mitigation incorporated, was considered to be overall significantly positive in nature. Through this ambition the Strategy will seek to provide an area where active travel is an attractive and natural choice for all and not an inferior alternative to car based journeys and use of the road network. Significant positive impacts are anticipated through increased public participation and physical activity levels, enabling sustainable access to open spaces, leisure and recreational opportunities and essential facilities.

**3.6.3** Implementation of the SEA and Strategy preferred ambition is likely to result in multiple benefits in relation to the natural and historic environment with a particular emphasis on significant improvements on air quality levels, reductions in traffic congestion and resultant carbon emissions and material asset in the form of new and enhanced active travel infrastructure. In line with East Dunbartonshire's Local Transport Strategy, this ambition will contribute towards a modal shift away from car based journeys and will promote and enhance active travel alternatives throughout East Dunbartonshire.

**3.6.4** Through the integration of the SEA suggested alteration into the preferred option, the positive and uncertain effects that are anticipated in relation to all environmental factors, in particular population, human health and community wellbeing are likely to be further enhanced. This will be particularly evident in terms of social inclusion and the ambition of the ATS



to provide active travel infrastructure and options which a natural choice which meets the needs of all residents, workers and visitors to East Dunbartonshire.

### 3.7 Assessment: Aims

3.7.1 An environmental assessment has been undertaken for the ATS aims and reasonable alternatives against the SEA objectives. The environmental assessments have been recorded in the form of a matrix identifying the environmental performance of the alternative objectives. The full assessment tables including re-assessments incorporating SEA recommendations, reasonable alternatives and SEA assessment commentary are provided within [Appendix B](#).




3.7.2 Recommendations have been made where necessary so that greater environmental considerations are incorporated into the ATS. The assessment of the aims and reasonable alternatives identified the need to:





- Provide further protection and consideration regarding environmental impacts.
- Expand the scope of the ATS in a sustainable manner to improve and increase participation in active travel infrastructure opportunities throughout East Dunbartonshire.
- Incorporate high standards when considering the environment and design of new or upgrading active travel infrastructure.

3.7.3 The SEA Preferred Option for each of the aims is illustrated below ([Table 8](#)) along with its assessment rating regarding the scoped environmental factors. Each of the SEA Preferred Options in relation to the Strategy aims has also been integrated into the Strategy as the ATS Preferred Option which highlights the influence and success of the SEA process through the integration of environmental considerations fully throughout the Strategy development.

Assessment Table Key			
++	Major Positive	✓	SEA Preferred Option
+	Minor Positive		
0	Neutral	✓	ATS Preferred Alternative Option
X	No Significant Effect		
-	Minor Negative		
--	Major Negative		
?	Uncertain		

### Table 8: Assessment of Aims and Alternatives for the Active Travel Strategy

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity, Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets	ATS Preferred Alternative Option
 Proposed Aim 1 Alternative 1	+	?	?	?	?	?	+	+	?	
<b>Proposed Aim:</b> Increase the number of walking and cycling journeys in East Dunbartonshire.										
<b>SEA Suggested Alteration:</b> Mitigation in the form of an alteration to the proposed aim has the potential to benefit the overall ambition from an environmental perspective. “Facilitate an increase in the proportion of everyday journeys made by walking and cycling for commuting and leisure purposes in East Dunbartonshire.”										
 Proposed Aim 1 Alternative 2	++	?/+	?/+	?/+	?/+	?/+	++	++	?/+	
<b>Proposed Aim:</b> Facilitate an increase in the proportion of everyday journeys made by walking and cycling in East Dunbartonshire.										
Proposed Aim 2 Alternative 1	++	+/-	+/-	?/-	+	?/-	++	++	+/-	
<b>Proposed Aim:</b> Deliver new active travel routes and infrastructure.										
<b>SEA Suggested Alteration:</b> Mitigation in the form of an alteration to the proposed aim has the potential to benefit the overall ambition from an environmental perspective. “Deliver a more connected network of active travel routes and infrastructure incorporating high environmental and design standards.”										
Proposed Aim 2 Alternative 2	++	++	++	?/+	++	?/+	++	++	++	
<b>Proposed Aim:</b>										

	Deliver a more connected network of active travel routes and infrastructure incorporating high environmental and design standards.									
Proposed Aim 2 Alternative 3	+	0	0	0	0	0	0/+	0/+	+	
	Proposed Aim: Maintain the existing active travel network and infrastructure.									
Proposed Aim 3 Alternative 1	+	X	X	X	X	X	+	+	?	
	Proposed Aim: Promote cycling and walking in East Dunbartonshire.									
Proposed Aim 3 Alternative 2 	++	X	X	X	X	X	++	++	+	
	Proposed Aim: Facilitate delivery of behavioural change, through activities such as training and promotion of active travel.									
Proposed Aim 3 Alternative 3	+	X	X	X	X	X	+	X	X	
	Proposed Aim: Provide group led walking and cycling sessions.									

## 3.8 Assessment: Actions

- 3.8.1 An environmental assessment has been undertaken for each of the ATS Actions and all reasonable alternatives against the SEA objectives and criteria, based on their predicted impact on the current environmental baseline. Mitigation measures have also been recommended where necessary and recorded within the assessment commentary section.
- 3.8.2 During the development of the action plan, 12 of the actions were identified as requiring additional feasibility or exploratory studies to determine the required infrastructure improvements and the most appropriate locations. Until such

time as the intended exploration or feasibility studies have been carried out for these actions there is an insufficient level of detailed information available at this stage to carry out an appropriate assessment. In order to ensure that potential environmental implications are taken into consideration the actions have incorporated the identification of likely environmental impacts or implications as part of the study process.

**3.8.3** **Table 9** summarises each of the individual assessments carried out for each of the preferred actions carried through into the ATS, highlighting the main environmental implications. The full assessments, all relevant mitigation measures and the reasonable alternatives can be found in **Appendix C**.

Assessment Table Key			
++	Major Positive	✓	SEA Preferred Option
+	Minor Positive		
0	Neutral	✓	ATS Preferred Alternative Option
X	No Significant Effect		
-	Minor Negative		
--	Major Negative		
?	Uncertain		

### Table 9: Summary Assessments of the Actions for the Active Travel Strategy

SEA Environmental Factors	Population & Human Health	Cultural Heritage	Biodiversity , Flora & Fauna	Soil & Geology	Landscape	Water Quality	Air Quality	Climatic Factors	Material Assets
<div> <div>→</div> <div> <p>Action 1.3</p> <p>Twechar Towpath and Crossing Improvements</p> </div> </div>	++	+/-	+/-	?/-	X	?/-	++	++	++
<p><b>Summary:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Population and Human Health, Air Quality, Climatic Factors and Material Assets</b> – This action will improve and encourage safe active travel through Twechar and along the Forth and Clyde Canal for improved access to the wider environment. This will represent a modal shift in transport to active travel, reducing emissions and improving air quality.</li> <li>➤ <b>Cultural Heritage and Biodiversity, Flora and Fauna</b> - This action will encourage access to the historical and natural environment including the Antonine Wall, as well as potential negative impacts from increased access resulting in direct disturbance to designated/protected sites of importance e.g. LNCS.</li> <li>➤ <b>Water Quality and Soil Geology</b> – Uncertain effects at this stage with potential negative impacts from increased access and infrastructure changes resulting in soil erosion and compaction, and drainage issues</li> </ul>									

	and temporary run off in nearby watercourses.								
<b>Action 1.7</b>  <b>Bishopbriggs Relief Road (BRR)/Westerhill Road – Active Travel Corridor</b>	++	X	--	--	X	X	++	++/-	++
	<b>Summary:</b> <ul style="list-style-type: none"> <li>➤ <b>Population and Human Health, Air Quality, Climatic Factors and Material Assets</b> - Significant positive effects as this action will improve connectivity between settlements as well as promote active travel between the Strathkelvin Retail Park and developments. It will promote active travel for leisure journeys and commuting into Glasgow and encourage a modal shift in transport to a safe off-route active travel alternative, reducing emissions and improving air quality particularly in Bishopbriggs' AQMA.</li> <li>➤ <b>Biodiversity, Flora and Fauna and Soil and Geology</b> - Westerhill Road is located near to Low Moss and High Moss Plantation, both of which are designated as LNCS for biodiversity and woodland and have peatland (lowland raised bog). Active travel has the potential to disturb habitats and species as well as result in the release of carbon into the atmosphere and cause soil erosion.</li> </ul>								
<b>Action 1.8</b>  <b>Torrance to Birdston via the River Kelvin Railway Path</b>	++	-	++/-	-	+/-	-	++	+/-	++
	<b>Summary:</b> <ul style="list-style-type: none"> <li>➤ <b>Population and Human Health, Biodiversity Flora and Fauna and Material Assets</b> - This action is likely to improve connectivity, allowing people to have direct access to the wider environment, including the Campsie Fells, and towns such as Kirkintilloch and present a more sustainable active travel network for the local community of Torrance and Birdston with potential health benefits. The action will also help to improve habitat connectivity between Torrance and Birdston within the wider environment and have a positive impact and direct link to the wider green network within East Dunbartonshire.</li> <li>➤ <b>Soil and Geology and Biodiversity, Flora and Fauna</b> – Negative impacts due to potential increased footfall along the Railway Path which has the potential to result in soil erosion and disturbance of important/protected species and habitats, especially as there are various LNCS for biodiversity and geodiversity in the area.</li> <li>➤ <b>Air Quality, Climatic Factors and Material Assets</b> - Potential to improve air quality and reduce emissions through a modal shift in transport as this action will upgrade provision to encourage active travel and connections the wider green network and core paths in East Dunbartonshire with positive effects to.</li> <li>➤ <b>Cultural Heritage</b> – The Railway Path is partially in line with the Antonine Wall and Buffer Zone which will potentially have an adverse impact on its setting and historic value.</li> <li>➤ <b>Landscape</b> – Although this action will help to reduce fragmentation and connectivity between Torrance, Birdston and the north of Kirkintilloch, the Railway Path is set within a Special Landscape Area and green belt. The value and character may be negatively impacted.</li> </ul>								

	➤ <b>Water Quality and Climatic Factors</b> – Infrastructure improvements and increased footfall will potentially impact on drainage as well as increase the flood risk in the area from the River Kelvin and Red Burn with impacts to nearby settlements.								
<p><b>Action 1.9</b></p> <p><b>Kirkintilloch Town Centre Masterplan</b></p>	++	?/-	X	X	X	X	+	+	+
<p><b>Summary:</b></p> <p>➤ <b>Population and Human Health, Air Quality and Climatic Factors</b> –This action will increase provision for active travel and participation levels in active travel within Kirkintilloch town centre with a change to a more sustainable travel network while also enhancing the public realm to create a more pleasant environment. This is likely to reduce traffic levels in the town centre which could generate positive benefits on levels of safety, air quality, noise reduction, congestion, reduction in carbon emissions and a more pleasant environment.</p> <p>➤ <b>Cultural Heritage</b> – There are potential negative impacts to the value and character of historic environmental assets such as the Antonine Wall and Buffer Zone, 17 listed buildings and Conservation Area as a result of active travel improvements and increased access.</p>									
<p><b>Action 1.10</b></p> <p><b>Kirkintilloch/Lenzie to Bishopbriggs off-road active travel route</b></p>	++	?/-	--/+	--	+/-	X	++	++	++/-
<p><b>Summary:</b></p> <p>➤ <b>Population and Human Health, Air Quality, Climatic Factors and Material Assets</b> – This action will improve connectivity between Bishopbriggs and Kirkintilloch/Lenzie through the promotion of active travel for residents, visitors and commuters. This will allow people to access the wider environment and contribute to a modal shift in transport to a more sustainable network, contributing to a reduction in air quality in the AQMA in Bishopbriggs and emissions. However, upgrades to and new infrastructure will be needed.</p> <p>➤ <b>Biodiversity, Flora and Fauna and Soil and Geology</b> – Negative impacts resulting in the potential removal of vegetation/sensitive soils including disturbance and adverse effects to the value of nearby LNCS and LNR at Lenzie Moss. There are also potential impacts where there are peatland/carbon rich soils present.</p> <p>➤ <b>Cultural Heritage and Landscape</b> – Potential negative impacts to the setting of the green belt and degradation of the conservation area and Townscape Protection Area in Lenzie. However, there is some potential to improve habitat connectivity.</p>									
<p><b>Action 1.13</b></p> <p><b>East Dunbartonshire Loop (Circular Route)</b></p>	++	?/- -	?/- -/+	?/- -	?/-	?/- -	+	+/-	++
<p><b>Summary:</b></p> <p>➤ <b>Population and Human Health, Air Quality, Climatic Factors and Material Assets</b> – This action will improve and encourage safe off-road active travel throughout East Dunbartonshire with improved access to the wider environment including attractors such as Mugdock Country Park, the Campsie Fells and town centre services. This will represent a modal shift in transport to active travel, reducing emissions and improving air</p>									

	<p>quality. However, improvements to infrastructure have the potential to have a negative impact on flood risk areas around the Forth and Clyde Canal and Glazert Water.</p> <p>➤ <b>Cultural Heritage, Biodiversity, Flora and Fauna, Soil and Geology, Landscape and Water Quality</b> – The Loop has the potential to improve access to the wider natural and historic environment, although there are potential adverse impacts to the setting and value of historically designated sites e.g. the Antonine Wall, Gardens and Designed Landscapes and Conservation Areas, sensitive/protected species and habitats e.g. LNCS, SSSI and LNR, Local Landscape Areas and green belt e.g. the Campsie Fells and sensitive soils e.g. lowland raised bog peatland at Low Moss. There are also predicted negative impacts for water quality from drainage issues resulting from increased footfall along routes and changes to infrastructure.</p>								
<p><b>Action 1.14</b></p> <p>Improve access by active travel to green network assets/open spaces</p>	++	?/-/+	?/-/+	?/- -	?/-	?/-	++	++/-	+/-
	<p><b>Summary:</b></p> <p>➤ <b>Population and Human Health, Air Quality, Climatic Factors and Material Assets</b> – This action will improve accessibility to the wider environment with health benefits in terms of increased active pursuits, enjoyment of the environment and community wellbeing. This is likely to promote the use of local open spaces by addressing access issues and encouraging active travel. This is likely to facilitate a shift from existing transport infrastructure to a more sustainable network as well as a reduction in poor air quality and emissions from transport.</p> <p>➤ <b>Cultural Heritage, Biodiversity, Flora and Fauna, Soil and Geology, Landscape and Water Quality</b> – This action has the potential to improve access to the wider natural and historic environment including open spaces, although there are potential adverse impacts to the setting and value of historically designated sites, sensitive/protected species and habitats, Local Landscape Areas and green belt and sensitive soils e.g. lowland raised bog peatland at Low Moss. There are also predicted negative impacts for water quality from drainage issues resulting from increased footfall along routes and changes to infrastructure with secondary impacts for flooding in SEPA Flood Risk Areas.</p>								
<p><b>Action 1.15</b></p> <p>Cycling in EDC parks</p>	++	+	+	X	X	X	+	+	+
	<p><b>Summary:</b></p> <p>This action will provide new additions to the active travel networks for cyclists and provide enhanced connections to open spaces, town centres, public transport interchanges and other attractions. This option facilitates increased active travel journeys, as well as encourages connections to other Core Paths in East Dunbartonshire while increasing the active travel access to the areas natural and historic environment designated network for leisure and recreational purposes.</p>								
	++	X	X	X	X	X	++	+	X

<p><b>Action 1.16</b></p> <p><b>Secure cycle storage at rail stations and town centres</b></p>	<p><b>Summary:</b></p> <p>This action will encourage active travel by providing safe cycle provision and storage at town centres and rail stations. This will also encourage commuting to work or further education as people will be able to connect to train services, particularly for longer journeys. This will have a positive influence on improving air quality, reducing congestion and carbon emissions, along with a more sustainable transport network.</p>								
<p><b>Action 1.20</b></p> <p><b>Signage Review</b></p>	+	X	X	X	X	X	+	+	+
	<p><b>Summary:</b></p> <p>This action will increase awareness and promotion of the active travel network throughout East Dunbartonshire and the potential for increased active travel participation as a realistic alternative to vehicular based travel for commuting and leisure journeys.</p>								
<p><b>Action 1.21</b></p> <p><b>Maintenance Review</b></p>	++	+/-	+/-	?/-	X	?/-	++	++	++
	<p><b>Summary:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Population and Human Health, Air Quality, Climatic Factors and Material Assets</b> – This action will ensure that poor routes are brought up to a safe and usable standard which will encourage active travel and enable people to connect to the wider environment, services, amenities and transport links for a shift away from vehicular based travel.</li> <li>➤ <b>Cultural Heritage, Biodiversity, Flora and Fauna, Soil and Geology and Water Quality</b> – Although this action will help to connect people to the wider natural and historic environment, this has the potential to adversely affect natural and historic designated sites in East Dunbartonshire as well as result in soil erosion and damage and drainage issues as a result of increased active travel and upgrades to routes.</li> </ul>								
<p><b>Action 1.22</b></p> <p><b>Crossing Improvements</b></p>	+	X	X	X	X	X	+	+	+
	<p><b>Summary:</b></p> <p>This action will remove physical barriers and provide appropriate crossing for access to a safe, secure and attractive active travel network and access to town centres and services. This will increase active travel participation and contribute towards a modal shift to more sustainable means of transport and network to, from and throughout the area.</p>								
<p><b>Action 2.1</b></p> <p><b>Ensure all Primary and Secondary Schools provide School Travel Plans or Active Travel Co-ordinator</b></p>	++	X	X	X	X	X	++	++	+
	<p><b>Summary:</b></p> <p>Positive impacts are anticipated from encouraging pupils and parents to access school services and facilities using the existing active travel network as well as facilitate more active journeys and promote more sustainable forms of transport infrastructure, with benefits including reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of school facilities (with a particular emphasis on the existing</p>								



	AQMA's in Bearsden and Bishopbriggs).								
<b>Action 2.2</b>  Continuation and expanding of Primary Schools in EDC delivering Bikeability Scotland Level 2 Cycle Training	++	X	X	X	X	X	++	++	+
	<b>Summary:</b> As above.								
<b>Action 2.3</b>  Encourage Primary and Secondary Schools in East Dunbartonshire to achieve the 'Cycle Friendly School Award'/ support an active travel champion	++	X	X	X	X	X	++	++	+
	<b>Summary:</b> As above.								
<b>Action 2.4</b>  Educate the School Community on Active Travel by incorporating into the School Curriculum	++	X	X	X	X	X	++	++	+
	<b>Summary:</b> As above. In addition to this, by raising the awareness of active travel through education it is hoped that active travel participation levels outwith school commutes will be utilised for leisure and recreational purposes.								
<b>Action 2.5</b>  Encourage participation in national events such as Walk to School Week	++	X	X	X	X	X	+	+	+
	<b>Summary:</b> As above.								
	?/++	X	X	X	X	X	?/++	?/++	?/++

<p><b>Action 2.8</b></p> <p>Provide major employers in East Dunbartonshire with relevant information to assist with developing Workplace Travel Plans or appointing an Active Travel Co-ordinator / Champion</p>	<p><b>Summary:</b></p> <p>Although the effects are uncertain at this stage, positive impacts are anticipated through encouragement to staff to access/commute to workplaces using the existing active travel network and promoting links with public transport interchanges. This action is likely to increase the number of active travel journeys and induce long term positive behavioural change, promoting more sustainable forms of transport infrastructure and particularly during peak times reducing congestion levels, carbon emissions and potentially improving air quality in the vicinity of workplaces in town centre locations (with a particular emphasis on the existing AQMA's in Bearsden and Bishopbriggs). The existing Council Travel Plan will be a positive example for businesses to replicate.</p>								
<p><b>Action 2.9</b></p> <p>Promote Cycle Friendly Employer Status for EDC employers</p>	<p>?/+ +</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>?/+ +</p>	<p>?/+ +</p>	<p>?/+ +</p>
	<p><b>Summary:</b></p> <p>The impacts are uncertain at this stage until agreements are confirmed with employers to undertake such measures and accept assistance. However, positive impacts are anticipated through the increased promotion of cycling within EDC private organisations, an increase in active travel journeys promoting more sustainable forms of transport infrastructure, a reduction in carbon emissions and potentially improving local air quality. This action could also has the potential to contribute to long terms behavioural change without organisations having to dedicate significant resources to the process.</p>								
<p><b>Action 2.10</b></p> <p>Assist employers to support/designate an Active Travel Ambassador or a Workplace Cycling Instructor</p>	<p>?/+ +</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>?/+ +</p>	<p>?/+ +</p>	<p>?/+</p>
	<p><b>Summary:</b></p> <p>The impacts are uncertain at this stage until agreements are confirmed with employers to undertake such measures and accept assistance. However, positive impacts are anticipated through the increased promotion of cycling within EDC private organisations, an increase in active travel journeys promoting more sustainable forms of transport infrastructure, a reduction in carbon emissions and potentially improving local air quality. This action could also has the potential to contribute to long terms behavioural change without organisations having to dedicate significant resources to the process.</p>								
<p><b>Action 2.11</b></p> <p>Promote adult and commuter cycle training to businesses</p>	<p>?/+ +</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>?/+ +</p>	<p>?/+ +</p>	<p>?/+ +</p>
	<p><b>Summary:</b></p> <p>This approach points employers in the direction of on how to provide or advice on cycle training for less experienced cyclists. This assistance could lead to employers delivering training to employees which should have a beneficial effect on the number of active travel journeys. Providing this assistance is also likely to induce long term positive behavioural change if take up was high with potential benefits for improving local air quality and reducing emissions. However this approach places the initiative with employers and therefore the effects are uncertain at this stage.</p>								

<p>Action 2.12</p> <p>Promote dedicated workplace active challenges to local employers</p>	<b>++</b>	X	X	X	X	X	<b>+</b>	<b>+</b>	<b>+</b>
<p>Action 2.13</p> <p>Encourage/assist businesses to send employees on cycle ride leader course</p>	<b>?/+</b>	X	X	X	X	X	<b>?/+</b>	<b>?/+</b>	<b>?/+</b>
<p>Action 2.14</p> <p>Create and promote dedicated Active Travel section on EDC website</p>	<b>+</b>	X	X	X	X	X	<b>+</b>	<b>+</b>	<b>+</b>
<p>Action 2.15</p> <p>Continue 'Healthy Habits' programme across East Dunbartonshire</p>	<b>++</b>	X	X	X	X	X	<b>++</b>	<b>++</b>	<b>++</b>

**Summary:**  
Positive impacts are anticipated through the promotion of active travel challenges, the active travel network and provide education on active travel alternatives for more sustainable travel. This action is likely to increase the number of active travel journeys and induce positive long term behavioural change through promotion of the active travel network, with benefits to local air quality and reducing carbon emissions.

**Summary:**  
Positive impacts are anticipated through encouragement of businesses to send employers on cycle training and leadership courses promoting professional cycle training into EDC organisations to encourage staff to access/commute to workplaces using the existing active travel network promoting links with public transport interchanges. This action is likely to increase the number of active travel journeys and induce positive behavioural change. This approach has the potential to reduce vehicular-related carbon emissions and improve air quality locally.

**Summary:**  
Additional promotion and awareness raising of the active travel network will result in benefits for **Population and Human Health, Air Quality, Climatic Factors and Material Assets** including:

- Increased participation levels of the active travel network with resultant physical activity, health and community wellbeing benefits.
- The potential contribution towards modal shift away from car based travel, with the potential to improve air quality levels and a reduction in carbon emissions levels.
- The promotion of change towards more sustainable forms of transport infrastructure and encouraged use of the active travel network.

**Summary:**

- **Population and Human Health** – Significant positive effects due to increased participation in physical activity levels resulting from increased use of the active travel network through the promotion and encouragement to use active travel alternatives to access local amenities and services with additional health and community wellbeing benefits.
- **Air Quality, Climatic Factors and Material Assets** – Significant positive effects due to the potential contribution towards modal shift away from car based travel, with the potential to improve air quality levels



- **Cultural Heritage and Biodiversity, Flora & Fauna** – Positive impacts are likely through increased and improved provision of active travel access to natural and historic environmental assets. There is also potential for adverse impacts to the value and setting of sensitive and vulnerable protected/designated sites of importance through maintenance.
- **Soil and Geology and Water Quality** – Potential adverse impacts particularly in relation to maintenance and resurfacing of the network which could have multiple impacts including soil damage/erosion, land contamination and soil compaction from heavy machinery as well as temporary discharges, run off or drainage issues if necessary works are carried out in close proximity to watercourses.

**3.8.4** In cases where the assessed SEA Preferred Option has not been carried forward into the Strategy as a Preferred Option the detailed non-environmental reasoning and justification has been expanded upon with the assessment commentary or further information provided below.

- **Action 1.22 Alternative 2** – The assessment of this option predicted that there is potential for significant positive impacts for Population and Human Health due to the identification of new locations for suitable crossings which has the potential to benefit a greater number of people and will improve the safety for active travel along busy routes. However, this option was not taken forward into the Active Travel Strategy due to limitations with funding and Alternative 1 was deemed to be a more economical option to meet the aims of the Strategy.
- **Actions 2.8, 2.9, 2.10, 2.11 and 2.13 Alternative 2** – The assessment of each of these options highlighted alternative 2 as the SEA preferred option due to their positive impact on the provision of a dedicated officer for Active Travel Planning/Cycling provision as well as training and awareness opportunities. It was predicted that this would drive forward and provide a specific focus on the required behavioural change towards more sustainable forms of transport infrastructure. The provision a dedicated post and training is also likely to increase the uptake or participation levels in private organisations throughout East Dunbartonshire. However, the alternative options for these 5 actions were not taken forward into the Active Travel Strategy due to predicted limitations in participation with behavioural change actions within private organisations as well as funding restrictions.

## **3.9 Cumulative Impacts**

**3.9.1** An environmental assessment has been undertaken for each identified Strategy alternative and has been assessed against the SEA Objectives and set criteria, based on their predicted impact on the current environmental baseline. The assessment has been conducted using professional judgement and GIS spatial analysis where appropriate.

**3.9.2** The cumulative environmental effects are assessed once each action assessment is completed. Cumulative effects arise, for instance where several developments or actions have insignificant impacts, but when combined result in a significant

environmental effect. The significance of these effects relates to the same matrix point scale as used for the individual assessments. A summary of the justification is provided below on the predicted cumulative effects for each of the environmental factors used to assess the Active Travel Strategy.

- 3.9.3 It should be noted that, with the implementation of the proposed mitigation measures suggested in each of the individual actions assessments ([Appendix C](#)), the effects for each of the environmental factors are likely to be neutralised and other effects could potentially become more positive in nature.
- 3.9.4 The cumulative impact on [Population and Human Health](#) is considered to be overall major positive for the Strategy. The positive nature of the actions on this SEA criteria are due to a number of factors including:
- Enhanced community wellbeing and promotion of healthy lifestyles through improved provision to encourage active travel and improved access to outdoor recreation opportunities, the wider countryside and cultural heritage sites.
  - Improved provision of education and awareness raising opportunities and facilities, particular for the younger generation and businesses in East Dunbartonshire.
  - The active support for physical activity levels and community health improvements throughout East Dunbartonshire.
  - An increase in active travel participation for both leisure journeys as well as for commuting, including linkages between the active travel network and public transport infrastructure. For example, action 1.16 will provide safe cycle storage in all town centres and train stations which will encourage longer distance journeys including for access to workplaces in neighbouring local authority areas.
- 3.9.5 The overall cumulative environmental impact on [Cultural Heritage](#) was seen to be potentially significantly negative in nature for the Strategy. The actions promote improved accessibility to East Dunbartonshire's wider environment, including sites of historical or cultural interest. However, several of the actions for Twechar, Kirkintilloch, Bishopbriggs, Torrance and Bearsden, for example 1.3, 1.7, 1.8, 1.9, 1.10 and 1.16, as well as improvements to the East Dunbartonshire Loop (1.13), will require upgrades or changes to existing or new infrastructure in sites that are in the line of the Antonine Wall World Heritage Site and Buffer Zone as well as the Forth and Clyde Canal Scheduled Monument, near Conservation/Townscape Protection Areas and in the vicinity of a Garden and Designed Landscape. Implementation of these actions has the potential to detract from the value and character of these assets without the implementation of appropriate mitigation as suggested.
- 3.9.6 The overall cumulative environmental impact on [Biodiversity, Flora and Fauna](#) was seen to be significant negative in nature for the Strategy. These impacts are predominantly due to the impact of the ATS actions resulting in effects including:

- East Dunbartonshire has a range of designated natural assets including Local Nature Conservation Sites, Local Nature Reserves and SSSI. In particular, actions 1.7, 1.10 and 1.13 have the potential to result in the disturbance to LNCS valued for their high biodiversity and geodiversity value including Kilmardinny Loch LNR near Milngavie and Low/High Moss LNCS in Bishopbriggs. Improvements to existing routes or the creation of new active travel routes have the potential to result in disturbance to protected and designated sites of biodiversity importance.
- Potential temporary and long-term removal of habitats and vegetation.

3.1.6. The overall cumulative environmental impact on **Soil and Geology** was seen to be significantly negative for the Strategy. The negative nature of the actions on this SEA criteria are due to a number of factors including:

- The impact of increased footfall from walking and cycling along routes resulting in soil degradation.
- Of the 12 'Improving active travel through the delivery of infrastructure' that were subject to assessment 1.3, 1.7, 1.8, 1.10, 1.13, 1.14 and 1.21 would result in the upgrade of existing infrastructure or the creation of new active travel routes. This is likely to require varying levels of construction or maintenance which could result in soil erosion and compaction from the impact of using heavy machinery.
- Each of the actions that focus on infrastructure changes has the potential to be in the vicinity of peatland and/or carbon rich soils. It is suggested that surveys should be carried out to determine the presence of this soil type as the release of carbon from these stores has the potential to have adverse effects to the wider area.

3.1.7. The overall cumulative environmental impact on **Landscape** was seen to be insignificant for the Strategy. Although some of the individual assessments such as 1.8, 1.10, 1.13 and 1.14 highlighted a potential negative impact on the landscape due to changes in landscape character and encroachment of the green belt, the impact of these for the whole of East Dunbartonshire are not deemed to be significant.

3.1.8. The overall cumulative environmental impact on **Water Quality** was seen to be minor negative in nature for the Strategy. The negative nature of the actions on this SEA criteria are due to a number of factors including the impact of maintenance of existing routes and crossings and potential upgrades and construction work that may be required such as resurfacing. There will be potential drainage issues as well as temporary discharge and run off of pollutants into nearby watercourses. This effect will potentially have a negative impact on the quality of the Forth and Clyde Canal of which several of the actions and infrastructure improvements will be near to including 1.3, 1.8, 1.13, 1.14 and 1.21.

3.1.9. The overall cumulative environmental impact on **Air Quality and Climatic Factors** are seen to be significant positive for the Strategy. The positive nature of the actions on this SEA criteria are due to a number of factors including:

- A modal shift away from vehicular based travel through the promotion of active travel alternatives which in turn will contribute to a reduction in air pollution and carbon emission levels.
- Several of the 'Behavioural change' actions will raise awareness of and promote the use of more sustainable forms of transport infrastructure for schools and workplaces in East Dunbartonshire with potential long-term benefits.

- Although there are potential minor negative impacts predicted for the individual assessments for actions 1.8, 1.13 and 1.14 in terms of impacts to Flood Risk Areas through increased footfall or infrastructure changes, the effects of these are not likely to be cumulative in nature, especially where the proposed mitigation measures are put in place.

3.1.10. The overall cumulative impacts on **Material Assets** are seen to be significant positive for the Strategy. The positive nature of the actions on this SEA criteria are due to a number of factors including:

- The improvement and encouragement of safe use of existing core paths and active travel routes in East Dunbartonshire.
- Promoting positive changes to the current transport infrastructure which is primarily car-based to a more sustainable network that encourages active travel.
- Enhancing an understanding within schools and workplaces in East Dunbartonshire in support of active travel and a change in behaviour from vehicle journeys to work/school to cycling and walking.



## 3.10 Influence of SEA on the Active Travel Strategy

- 3.10.1 Through each of the assessments for the Strategic Direction, Ambition, Aims and Actions of the Active Travel Strategy, there have been notable examples of the positive influence of SEA on the Active Travel Strategy whereby the SEA Preferred Options and SEA suggested alterations have been incorporated into the Strategy, for example:
- **Strategic Direction** – The SEA preferred option taken forward as the approach for delivery the ATS.
  - **Ambition** – The SEA preferred option for the ambition was taken forward into the ATS.
  - **Aims** – For Aim 2, the SEA suggested alterations regarding the wording were taken into account and incorporated into the Strategy. The SEA preferred option for Aim 2 and 3 were also taken forward into the ATS.
  - **Actions** – The majority of SEA preferred options for each of the actions were incorporated into the ATS with the exception of the 6 actions mention in 2.8.4 (see section for justification).
- 3.10.2. Actions 1.1, 1.2, 1.4, 1.5, 1.6, 1.8, 1.10, 1.11, 1.12, 1.15, 1.19, 2.6, and 2.7 were not assessed as part of the Environmental Report as it was deemed that there was an insufficient level of detailed information available at this stage to carry out an appropriate assessment. To account for this, a statement has been included in the Active Travel Strategy indicating that the integration of environmental consideration and assessments of the actions will be determined by additional feasibility or exploratory studies on a case by case basis, including assessments of any potential adverse effects on biodiversity and habitats.
- 3.10.3. Mitigation measures have also been identified in order to avoid adverse impacts, reduce their significance or enhance neutral or positive impacts identified. Mitigation has been integrated in different forms including suggested alterations and construction or project level mitigation for the delivery of infrastructure improvements. A detailed list of mitigation measures can be found in the assessment matrix in [Appendix C](#). Examples of mitigation incorporated into the assessments to inform the Strategy are shown in [Table 10](#).

**Table 10: Examples of mitigation incorporated into the assessments**

Environmental Factor	Mitigation
Cultural Heritage	Minimise and monitor any ground disturbance and incorporate design measures in order for required infrastructure improvements and maintenance to be carried out in a sensitive and sustainable manner to avoid or minimise any impacts on the historic environmental assets or their setting.
Biodiversity, Flora and Fauna	<ul style="list-style-type: none"><li>- Ensure that removal of topsoil, trees and vegetation is minimal</li><li>- Potential Protected Species Surveys, Licences or mitigation if considered necessary to avoid adverse impacts particularly in sensitive areas</li><li>- Control and treatment of surface runoff</li></ul>
Soil and Geology	Implement soil erosion prevention measures outlined in good practice guidance

## Water Quality

- Control and treatment of surface runoff
- Adoption of best practices to avoid pollution of watercourses

# Section 4: Mitigation Measures and Monitoring

## 4.1 Mitigation Measures

- 4.1.1 Schedule 3 paragraph 7 of the Environmental Assessment (Scotland) Act 2005 require that the Environmental Report includes the measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse effects on the environment of implementing the Active Travel Strategy.
- 4.1.2 Mitigation measures have been proposed and incorporated into each element of the Strategy framework in order to avoid, reduce, mitigate or offset any potential adverse environmental impacts and enhance any neutral or positive environmental impacts identified. The mitigation measures incorporate all environmental factors which were scoped into the assessment and will be the responsibility of East Dunbartonshire Council to implement in conjunction with key agencies and stakeholders. Mitigation measures for each of the proposed Strategy Actions can be reviewed within [Appendix C](#).

## 4.2 Monitoring

- 4.2.1 Through Section 19 of the Environmental Assessment (Scotland) Act 2005, East Dunbartonshire Council is required to monitor significant environmental effects of the implementation of the Active Travel Strategy. The monitoring should be implemented as to enable the identification of any unforeseen adverse effects at an early stage to allow the appropriate remedial action to be implemented.
- 4.2.2 The specific measures that are to be taken to monitor the significant environmental effects of the implementation of the ATS will form part of the Post-Adoption Statement prepared as soon as reasonably practicable after the adoption of the Strategy in accordance with Section 18 of the Act. It is envisaged that the following indicators will be included within the monitoring framework:

**Table 11: SEA Monitoring Programme for the Active Travel Strategy**

SEA Category	Indicators	Data Source
Population, Human Health	Changes in the deprivation levels in 20% SIMD areas?	SCROL
	% increase in overall walking and cycling rates in east Dunbartonshire?	EDC
	Number of people in East Dunbartonshire using active travel methods (walking /cycling) to access their place of work/study and for recreation in neighbouring authority boundaries.	EDC
	Number of people in East Dunbartonshire using active travel methods to access their place of work/study and	EDC

	for recreation in East Dunbartonshire	
	<p>Cultural and Behavioural shift towards active travel modes, and furthermore towards sustainable transport.</p> <ul style="list-style-type: none"> <li>- Rail and Bus patronage figures</li> <li>- Cycle stands and secure parking installations</li> <li>- Number of Children and Adults trained in Bikeability Levels 1-3.</li> </ul>	EDC / Transport Scotland / SPT / Bus Operators
Cultural Heritage	Number of cultural heritage assets in or near the vicinity of projects or proposals within the ATS	EDC / Historic Scotland
	% change in visitor numbers to East Dunbartonshire's cultural heritage assets?	
	Number of people who access heritage sites using active travel alternatives.	
Biodiversity, Flora and Fauna	Reported damage to protected sites (International, National, Regional and Local)?	EDC / SNH
	Number of developments incorporating access to the areas green network?	
	Ecosystem specific indicators, such as area of woodland habitats improved/changes?	
	Loss/expansion/enhancement of woodland/forestry in East Dunbartonshire?	
	Reported damage / loss in relation to protected species?	
	Number of new active travel networks created as a result of the ATS in close proximity to designated or protected sites.	
	% of new developments linking active and sustainable transport alternatives with the development area?	
Soil and Geology	Area of potentially contaminated land altered by actions set out within the ATS	SNH
	% of peatland improved or lost through active travel network improvements.	
Landscape	Number of habitat network or connectivity improved or created as a result of the ATS.	SNH
	ATS actions linked with the Core Path Plan, Local Transport Strategy and emerging Green network Strategy.	EDC
	Number of active travel actions at a cross-boundary level.	EDC
Water Quality	Changes to the classification of water bodies in line with the requirements of the Water Framework Directive.	SEPA
	Changes to drainage and capacity levels, particularly in relation to active travel improvements and enhancements which are undertaken.	EDC / SEPA

Air Quality	Emissions levels in East Dunbartonshire- % change (NO <sub>2</sub> and PM10 levels are measured continuously within East Dunbartonshire. There are 4 monitoring stations in Bishopbriggs, Kirkintilloch, Bearsden and Milngavie. There are also 43 sites with monitoring tubes for NO <sub>2</sub> around the EDC area)	SEPA
	Number of AQMA in East Dunbartonshire / Ensure no new AQMA sites are declared.	EDC & Scottish Government Air Quality Data
Climatic Factors	Greenhouse gas output trends in East Dunbartonshire.	SEPA
	Changes in the extent to flooding, particularly in areas where active travel improvements and enhancements are undertaken (SEPA Flood Mapping)	SEPA
Material Assets	% of population which utilise the Core Path networks (change)	EDC
	Monitoring of corridors where active travel routes have been provided to determine an impact to traffic levels.	EDC
	Number of new paths to/from public transport interchanges and amount of cycle parking installed at key public transport interchanges?	EDC
	Number of active travel related considerations incorporated into the development proposals and projects.	EDC

## Section 5: Statutory Consultation and SEA Timetable

### 5.1 Statutory Consultation

- 5.1.1 The statutory consultation for the Environmental Report and corresponding Active Travel Strategy is:

**Wednesday 26<sup>th</sup> August 2015 – Wednesday 7<sup>th</sup> October 2015**

- 5.1.2 Responses to the SEA and Strategy should be submitted through email or post to the following addresses:

Email: [development.plan@eastdunbarton.gov.uk](mailto:development.plan@eastdunbarton.gov.uk)

Land Planning Policy  
Development and Regeneration  
East Dunbartonshire Council  
Southbank House  
Strathkelvin Place  
Kirkintilloch  
G66 1XQ

### 5.2 SEA Timetable

- 5.2.1 It is anticipated that the SEA process will align with the Strategy preparation stages. **Table 12** below illustrates this alignment and provides the anticipated timescales for each.

**Table 12: SEA Timescale & Milestones**

Plan Preparation Stages	SEA Stages	Anticipated Timescale & Consultation Period, if required
Preliminary Assessment and Survey / Research work	Scoping Report <ul style="list-style-type: none"><li>➤ Collate and forecast baseline environmental information</li><li>➤ Adopt environmental objectives and criteria</li></ul>	<ul style="list-style-type: none"><li>➤ Research and Develop Scoping Report – May/June 2015</li><li>➤ Scoping Report submission 12<sup>th</sup> June 2015</li><li>➤ Consultation with CA's - 5 week period</li></ul>
Prepare Draft CLS Strategy	Environmental Assessment <ul style="list-style-type: none"><li>➤ Assess the framework of the</li><li>➤ Assess all reasonable alternatives to the Strategy</li><li>➤ Prepare the Draft</li></ul>	<ul style="list-style-type: none"><li>➤ Draft Environmental Report alongside the preparation of the ATS</li><li>➤ Responses from the Consultation Authorities at the</li></ul>

	Environmental Report	<p>Scoping stage will be taken into account</p> <ul style="list-style-type: none"> <li>➤ Drafting will be between July and August 2015</li> <li>➤ Finalisation of the Environmental Report and Strategy in August 2015</li> </ul>
Publish & Consult on Draft CLS Strategy	Publish & Consult on Draft Environmental Report	Consultation with the public and CA's – 26 <sup>th</sup> August 2015 – 7 <sup>th</sup> October 2015.
Adopt CLS Strategy	Publish Post-Adoption Statement along with the adopted Finalised Draft PPS	Adoption of the ATS and publication of the Post-Adoption Statement – Early 2016
Monitor & Review	Monitor and Review	Ongoing / Annual review