



West Lothian Local Development Plan
Strategic Environmental Assessment
Environmental Report



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West Lothian
Council



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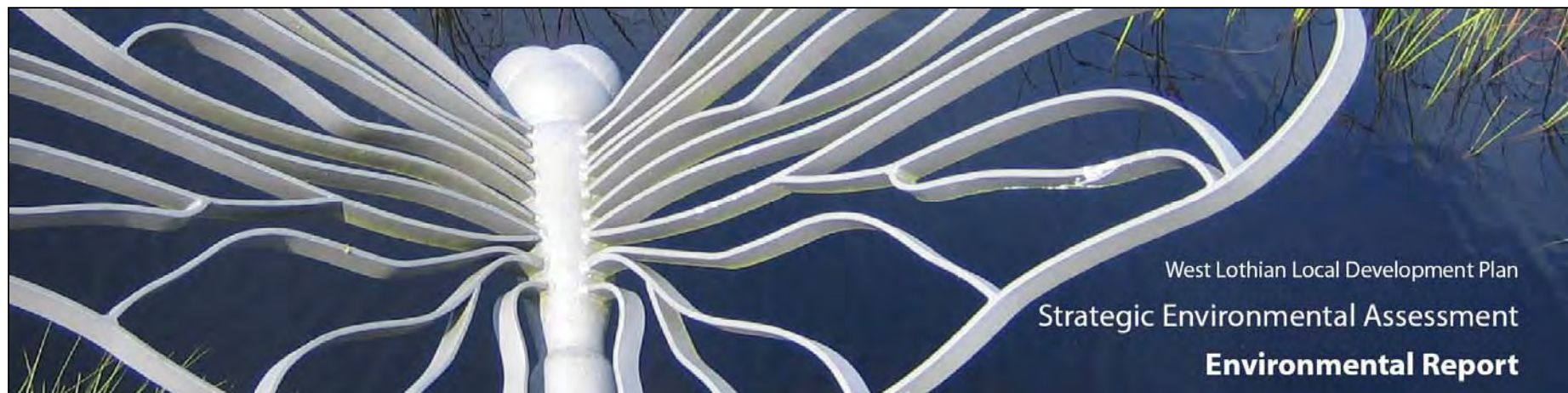
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1.0 Introduction

1.1.0 Purpose of this environmental report

- 1.1.1** West Lothian Council is required to establish a development strategy for the future development of West Lothian in the form of a Local Development Plan (LDP) to satisfy the requirements of the Town & Country Planning (Scotland) Act 1997, as amended by The Planning (Scotland) etc Act 2006. It will set out a short to medium term spatial planning strategy that broadly defines where development should be located, and how it should be delivered. This will replace the current adopted West Lothian Local Plan 2009 (WLLP 2009). There is a statutory requirement for the new WLLDP to accord with the terms of the first strategic development plan (SDP) for Edinburgh and South East Scotland which was approved by Scottish Ministers in June 2013 (SESplan).
- 1.1.2** The form and content of the LDP is prescribed by the aforementioned legislation and the first formal stage of the plan preparation process is the publication of a Main Issues Report (MIR). The WLLDP MIR sets out the key issues to be addressed by the WLLDP Proposed Plan (PP). It concentrates on the key changes since the WLLP 2009 was adopted and on significant proposals for future development; and it includes a preferred strategy, identifying where housing, economic and retail development should be located. Where reasonable and practicable, it also includes alternatives to the preferred strategy. It clearly sets out what would change from the currently adopted WLLP 2009. The MIR also identifies matters that it proposes to retain from this adopted WLLP.
- 1.1.3** The MIR is the main opportunity for those with an interest in the development and protection of the environment of West Lothian to have an input. The views and comments received will inform the preparation of the WLLDP PP.

- 1.1.4** The MIR provides the basis for undertaking the environmental assessment of the WLLDP, under the Environmental Assessment (Scotland) Act 2005 (EASA). The Act requires that any Plan, Programme or Strategy (PPS) prepared by West Lothian Council which is likely to have significant effects on the environment should go through a process of Strategic Environmental Assessment (SEA). This report (which is a key stage of the Strategic Environmental Assessment process) is called the Environmental Report (ER) and its primary purpose is to set out the likely significant environmental effects of implementing the strategy for development set out within the WLLDP PP.
- 1.1.5** Table 1 (below) summarises a series of requirements for SEA and indicates how they have been addressed in the SEA of the WLLDP.

Table 1 - SEA Directive requirements

Requirements	Response in SEA of West Lothian Local Development Plan
<ul style="list-style-type: none"> ◆ Outline of the PPS, key facts, main objectives of the strategy and relationship with other relevant plans ◆ Relevant aspects of the current state of the environment ◆ Existing environmental problems which are relevant to the plan ◆ Environmental protection objectives which are relevant to the strategy ◆ Plan alternatives, scoping in and out of SEA issues 	<p>Addressed within the Scoping Report (April 2012)</p>
<ul style="list-style-type: none"> ◆ Likely significant effects on the environment ◆ Measures to prevent, reduce and offset Significant adverse effects on the environment of implementing the plan ◆ Outline of the reasons for selecting alternatives considered ◆ Description of monitoring of the significant Environmental effects ◆ SEA targets and milestones 	<p>To be addressed within this Environmental Report</p>

- 1.1.6** SEA is a systematic and thorough process, which allows environmental considerations to be integrated into the MIR, as well as, inviting comments and representations on both the MIR and the ER from members of the public and stakeholders. SEA assesses and evaluates the likely significant impacts that the MIR will have on the environment. Dependent on the outcome of the assessment process, the SEA recommends mitigation and/or enhancement measures. This is to ensure that the PP is environmentally responsible and sustainable.

- 1.1.7** This is the first version of the ER to accompany the MIR for the WLLDP and its specific purpose is to:
- ◆ provide information on the WLLDP and its environmental assessment at the MIR stage;
 - ◆ Identify, describe and evaluate the likely significant environmental effects of the preferred approach to the issues in the MIR, including the development strategy, and any reasonable alternatives; and
 - ◆ provide an early and effective opportunity for the Consultation Authorities (Historic Scotland (HS); Scottish Environment Protection Agency (SEPA); and Scottish Natural Heritage (SNH)) and the public to offer views on it and the MIR.
- 1.1.8** The ER is a key consultation document and will be published alongside the MIR and Monitoring Statement (MS). It will be reviewed at the WLLDP PP stage, and subsequently should any changes be made to the PP arising from the Reporter’s findings following the Examination process, should this be required. The ER is published for public comment. Whenever there is a requirement to update the ER, there will be further opportunities to comment on such revised assessments. A post-adoption statement under EASA will also be prepared setting out the relationship between the ER and the WLLDP, and the influence of comments received during the public consultation stages.

Strategic Environmental Assessment (SEA) & Sustainable Development

- 1.1.9** The Strategic Environmental Assessment (SEA) aims to assist in promoting sustainable development through the integration of environmental objectives into the plan making process. Sustainable development is intended to enable a better quality of life without compromising the needs of future generations by balancing environmental, social and economic aspirations.

1. 2.0 Key facts about the West Lothian Local Development Plan

1.2.1 The key facts relating to the WLLDP are set out below:

Table 2 - Key facts

Name of Responsible Authority	West Lothian Council
Title of PPS	West Lothian Local Development Plan (WLLDP)
What prompted the PPS	Town and Country Planning (Scotland) Act 1997
Subject	Town and Country Planning
Period covered by PPS	Ten years from adoption of the WLLDP Proposed Plan (anticipated summer 2016)
Frequency of updates	At least every five years
Area covered by PPS	West Lothian Council local authority area
Purpose of PPS	Sets out a spatial land use strategy, being a detailed statement of the planning authority's policies and proposals for the development and use of land.
Contact	Development Planning County Buildings, High Street, Linlithgow EH49 7EZ (postal address only) Tel 01506-280000 E-mail wlldp@westlothian.gov.uk

Figure A - West Lothian Council Area/current Local Plan and proposed LDP boundaries



1.3.0 Environmental Assessment (SEA) activities to date

1.3.1 The process of environmental assessment of the WLLDP has been underway since the decision to commence work on preparing the WLLDP. Due to the relationship of the WLLDP with its higher level strategic development plan (SESplan) there has been related work undertaken on environmental assessment for a period of time prior to the WLLDP environmental assessment commencing, but this is not recorded below.

Table 3 - Environmental Assessment activities

Environmental Assessment/Action/Activity	When carried out	Notes
SESplan Environmental Report	November 2011	
WLC Corporate Plan	November 2010	Screening determination
WLC Housing Strategy	November 2011	Screening
WLC Community Plan & Strategic Outcome Agreement: "Achieving positive outcomes" 2013-2023	March 2013	Agreed with Scottish Government SEA Gateway not to progress.
Preparation of WL LDP Scoping Report for SEA	January – March 2012	
Submission of Scoping Report to Consultation Authorities (CA's)	April 2012	Matters raised in Consultation Authority responses to Scoping Report incorporated into SEA methodology and ER.
Following "Expressions of Interest" (EOI) sites submission by developers, agents & landowners, sites assessments undertaken.	Summer 2011 – Summer 2012	Sites assessment undertaken for all sites Submitted EOI's, not just the preferred and reasonable alternatives.
Local Landscape Designation Review via consultants	Landscape study: October 2012 – April 2013)	

Establish environmental baseline as part of preparation of Monitoring Statement	May - December 2013	Work undertaken as there has been no previous environmental baseline work carried out as there was no SEA of the previous adopted WLLP that was exempt from the process as its preparation begun before SEA legislation was in place.
Preparation of Strategic Flood Risk Assessment	Mid 2012 – Summer 2013	Developing methodology and undertaking assessment work based on Operational Services and SEPA guidance & input.
Commission transport accessibility modeling to support development sites assessment process	Autumn 2013 – January 2014	Analysis undertaken of accessibility of all potential development sites.
Notification to Scottish Ministers of intentions for consultation timescale	Summer 2014	As required by Environmental Assessment (Scotland) Act 2005, Section 15(3).
Submit Environmental Report (ER) to CAs	Summer 2014	
Publish ER in association with WLLDP MIR	Summer 2014	



2.0 Context

2.1.0 Outline and objectives of the West Lothian Local Development Plan

- 2.1.1 The process and timeframe for the preparation and adoption of the WLLDP and SEA is contained within the Council's first Development Plan Scheme, approved by West Lothian Council in March 2009. The first stage in this process is the preparation of the MIR, the ER and a Monitoring Statement.
- 2.1.2 Once adopted, the WLLDP will replace the current WLLP 2009. The policies and proposals which it contains will need to be consistent with the SESplan Strategic Development Plan (SDP). The WLLDP will include detailed policies and proposals which together will guide development and safeguard, and where appropriate encourage improvement to, the environment. The WLLDP will allocate land for development to meet needs for a period of 10 years after the adoption of the plan. This timeframe has been specified through the SDP, with the WLLDP required to allocate land for the period to 2024.
- 2.1.3 Much of the current WLLP 2009 remains relevant, and as such many of the policies will be carried forward into the WLLDP. However as a result of changes in focus at national and SDP level, there will be a change in emphasis in the WLLDP. For example the NPF2 national project for the delivery of the Central Scotland Green Network, which covers West Lothian, will provide an opportunity for the WLLDP to focus on protecting its current green infrastructure, but also on seeking ways to extend the benefits of green networks.

2.1.4 It is currently a Scottish Government expectation that LDPs are shorter, sharper documents, supported by more extensive use of diagrams and mapping material. Therefore the WLLDP will be presented in a different manner to the WLLP 2009. At this time the final form of the WLLDP has not been decided, but it will contain the full range of resource protection policies already included in the adopted WLLP 2009, updated where required, and this will provide measures to avoid or mitigate some of the negative environmental effects of the development requirements set out in the WLLDP.

2.2.0 Relationship with other plans, programmes and strategies (PPS's) and environmental objectives

2.2.1 The WLLDP will be a part of the statutory development plan. It must be consistent with other plans and strategies and statements of policy at a higher level. The WLLDP meshes with other statutory plans generated by, or through, the Council, such as the Community Plan, and is also the parent document to other policy statements such as Supplementary Guidance, see Figure 2 below.

2.2.2 At the highest level, the WLLDP must be consistent with central government advice and statements of planning policy or it must clearly state why it has sought to depart from such policy. These policies are contained in the National Planning Framework for Scotland 2 (NPF2), Circulars from the Scottish Government, Scottish Planning Policy (SPP), and associated Planning Advice Notes (PANs), together with the Zero Waste Plan. These documents are continually being updated and all current versions will be taken into account in the emerging WLLDP to ensure compliance and compatibility.

Integration with other plans, programmes and strategies

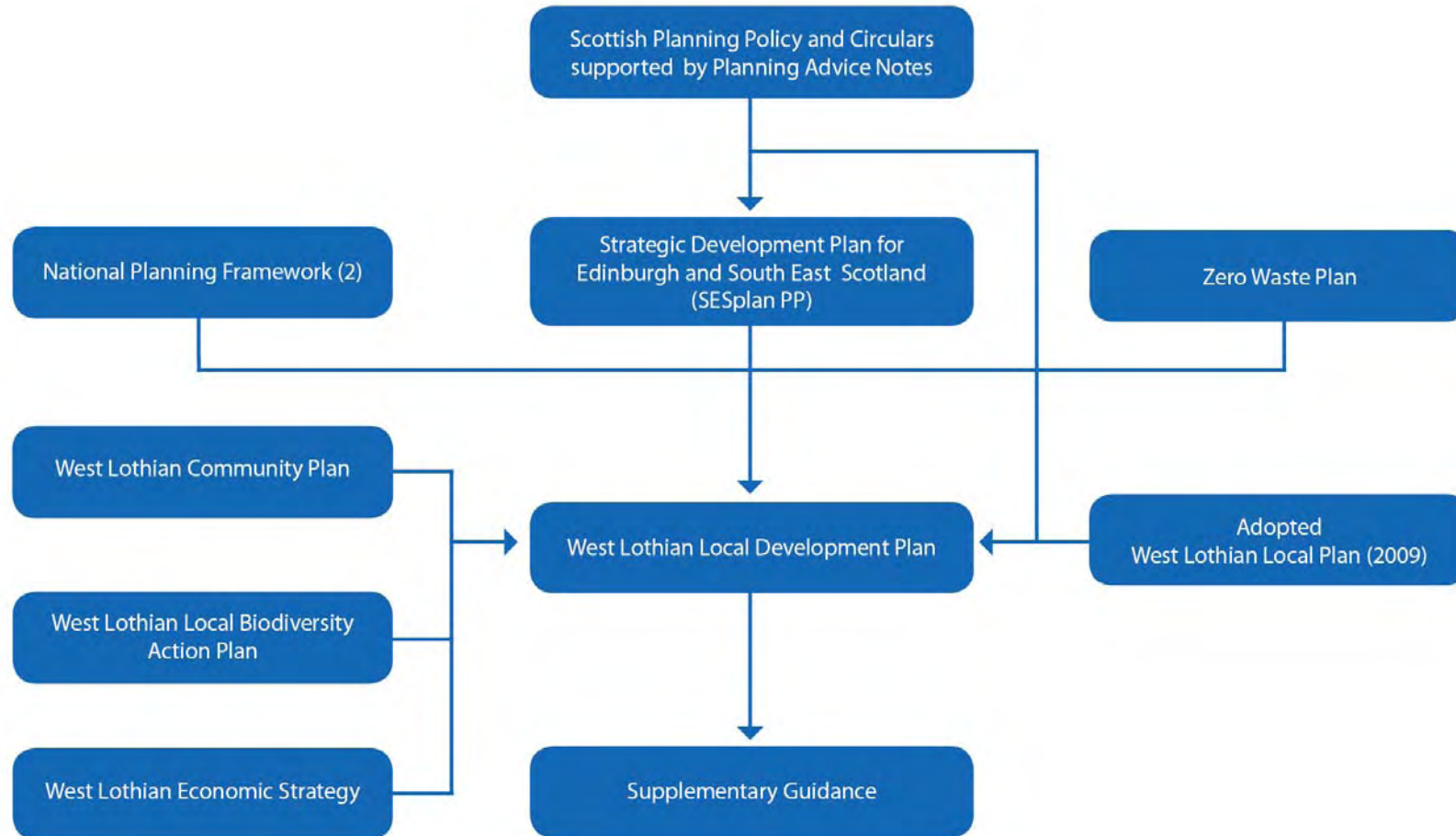
2.2.3 In addition to the SDP, there are a number of other strategies and programmes which inform the WLLDP and with which it needs to be integrated. These include:

- ◆ West Lothian Community Plan & Strategic Outcome Agreement: “Achieving positive outcomes”(2013 – 2023)
- ◆ West Lothian Local Housing Strategy (2012-17)
- ◆ Regional Transport Strategy (SEStran) (2006)
- ◆ West Lothian Local Transport Strategy (2000)
- ◆ Neighbouring authorities Local Development Plans (Various dates)
- ◆ West Lothian Local Bio-diversity Action Plan (2005)
- ◆ West Lothian Open Space Audit & Strategy and Sports Strategy: Interim Review (2010)
- ◆ Edinburgh & Lothians Forestry & Woodlands Strategy (2013)
- ◆ West Lothian Economic Development Framework/West Lothian Economic Strategy (2013)

2.2.4 Figure B below illustrates the inter-relationship of plans, but does not include all of the above plans, because it is intended to be a diagrammatic representation of the relationships, not a comprehensive picture of all the plans.

2.2.5 Neighbouring authorities also have development plans and these are taken into account to ensure cross-boundary integration of planning policies and proposals. As West Lothian is a partner in SESplan, with a shared responsibility for the delivery of the SDP, the local development plans of all of the SESplan authorities are of interest, particularly the City of Edinburgh Council where there is a coterminous boundary.

Figure B - Relationship of West Lothian Local Development Plan with other plans and strategies



2.3.0 Environmental Assessment (SEA) objectives for the West Lothian Local Development Plan

- 2.3.1** The environmental assessment process for SESplan appraised all relevant legislation and guidance and has been used to identify the full range of environmental requirements that the plan should take into account. Where there have been changes arising from new legislation or guidance, and where any such changes indicated a need to update the SEA objectives, modification has been undertaken.
- 2.3.2** The assessment also builds on previous work pursuant to the adoption of the WLLP, for which a SEA exemption was granted by Scottish Ministers in 2005. The exemption was given in recognition of the fact that work on the draft WLLP had commenced before the SEA legislation had been enacted. Thereafter, an Appropriate Assessment was undertaken of the WLLP to satisfy Scottish Natural Heritage (SNH) requirements relating to pre-adoption modifications of the plan. This was ultimately signed off by SNH in October 2008.
- 2.3.3** The environmental assessment requirements have also been reviewed to take full account of current priorities, taking account of other plans, programmes and strategies. These were included in the WLLDP Scoping Report and feedback was received from the Consultation Authorities. Their comments and the council's responses are detailed in Appendix 3.
- 2.3.4** In the period between scoping and undertaking the SEA, Scottish Government designated Historic Battlefields, and the protection of these designations was included as an additional 'Cultural Heritage' sub-objective. The objectives were adjusted to ensure they were applied appropriately to the assessment of the WLLDP aims, objectives, strategy, issues, policies and the preferred and reasonable alternative development sites.
- 2.3.5** The SEA objectives and sub-objectives are set out in the following table:

Table 4 - Environmental Assessment objectives for the WLLDP

SEA Topic	SEA Objective	SEA Sub-Objectives	Monitoring
AIR	<ul style="list-style-type: none"> ◆ To protect current air quality in West Lothian ◆ Provide opportunities for public transport use 	<ul style="list-style-type: none"> ◆ Maintain (and enhance) current levels of air quality ◆ Reduce the need to travel by car ◆ Provide greater opportunities for access to sustainable forms of transport ◆ Provide opportunities for access to sustainable forms of transport (such as rail / bus services or the NCN 75 & 76) 	<ul style="list-style-type: none"> ◆ Current air quality ◆ Average daily vehicle flows

SEA Topic	SEA Objective	SEA Sub-Objectives	Monitoring
BIO-DIVERSITY	<ul style="list-style-type: none"> ◆ To protect and enhance West Lothian's Bio-diversity, flora and fauna and habitats 	<ul style="list-style-type: none"> ◆ Protect/enhance international nature conservation areas ◆ Protect/enhance national/regional/local conservation areas ◆ Protect/enhance Ancient Woodland/local bio-diversity/geo-diversity sites ◆ Protect species/ habitats/ wildlife corridors of nature conservation importance ◆ enhance the emerging green network 	<ul style="list-style-type: none"> ◆ Internationally & nationally designated sites ◆ Ancient Woodland designations
CLIMATIC FACTORS	<ul style="list-style-type: none"> ◆ To reduce CO₂ emissions / greenhouse gases and reduce energy consumption in West Lothian 	<ul style="list-style-type: none"> ◆ Reduce CO₂ emissions ◆ Promote sustainable energy technologies ◆ Promote energy efficient locations/ buildings 	<ul style="list-style-type: none"> ◆ Current CO₂ emissions for domestic gas and electricity ◆ Wind energy sources ◆ West Lothian Wind farm and minor renewable energy developments database, maintained by WLC Development Planning
CULTURAL HERITAGE	<ul style="list-style-type: none"> ◆ To safeguard and enhance, where appropriate, the built and historic environment in West Lothian 	<ul style="list-style-type: none"> ◆ Protect/enhance listed buildings ◆ Protect /enhance scheduled ancient monuments ◆ Protect/enhance conservation areas/ historic urban form/ settlement pattern ◆ Protect/enhance historic gardens and designed Landscapes ◆ Protect non-designated historic sites 	<ul style="list-style-type: none"> ◆ Number of Listed Buildings ◆ Number of Scheduled Ancient Monuments ◆ Number of conservation areas ◆ Number of Designed Gardens and Landscapes
LANDSCAPE AND TOWNSCAPE	<ul style="list-style-type: none"> ◆ To protect and enhance the landscape and townscape of West Lothian 	<ul style="list-style-type: none"> ◆ Protect/enhance designated landscapes ◆ Protect character of the landscape ◆ Protect/enhance settlement townscapes ◆ Maintain/enhance quality/distribution/ availability of public open space ◆ Avoid settlement coalescence 	<ul style="list-style-type: none"> ◆ Number of Areas of Great Landscape Value ◆ Number of Country Parks, Neighbourhood & Local Parks ◆ Number of Conservation Areas and number of other designated sites
MATERIAL ASSETS	<ul style="list-style-type: none"> ◆ To promote the sustainable use of natural resources and ensure quality in new development in West Lothian 	<ul style="list-style-type: none"> ◆ Encourage waste minimization /recycling ◆ Promote the sustainable use of mineral resources ◆ Promote use of brownfield land ◆ Ensure quality in new development ◆ Improve approach to sustainable energy 	<ul style="list-style-type: none"> ◆ Current mineral resources available ◆ Current predominant land uses ◆ % of waste recycled ◆ Maintaining and increasing the number of recycling sites in West Lothian

SEA Topic	SEA Objective	SEA Sub-Objectives	Monitoring
POPULATION & HUMAN HEALTH	<ul style="list-style-type: none"> ◆ To improve the quality of life and human health for communities in West Lothian 	<ul style="list-style-type: none"> ◆ Provide affordable housing ◆ Improve access to employment services ◆ Provide access to green space/footpaths & cycle routes ◆ Safeguard against negative environmental impact 	<ul style="list-style-type: none"> ◆ Employment statistics/employment sites data ◆ Public transport provision and cycle networks ◆ % of affordable housing available ◆ Distances to services ◆ Distances to / extent of green network
SOIL	<ul style="list-style-type: none"> ◆ To protect the quality of soil in West Lothian 	<ul style="list-style-type: none"> ◆ Safeguard prime quality agricultural land and peatland from development ◆ Promote development on brownfield land ◆ Safeguard soil quality ◆ Reduce soil compaction 	<ul style="list-style-type: none"> ◆ Vacant & Derelict Land Survey ◆ Urban Capacity Study ◆ Records of local contaminated land
WATER	<ul style="list-style-type: none"> ◆ To protect the quality of water and prevent flooding in West Lothian 	<ul style="list-style-type: none"> ◆ Protect and enhance the quality of major waterbodies ◆ Prevent flooding ◆ Improve existing water/waste water infrastructure. 	<ul style="list-style-type: none"> ◆ Status of major water courses ◆ Location of flooding ◆ Existing water/waste water infrastructure



3.0 The Environment of West Lothian

3.1.0 Current State of the Environment and likely future of West Lothian with and without the West Lothian Local Development Plan

Introduction and Limitations

- 3.1.1** This section summarises the state of the environment and key environmental characteristics of West Lothian relevant to preparation of the WLLDP and how the WLLDP in turn may affect the environment. It also summarises the likely trends in environmental change if the WLLDP is not implemented.
- 3.1.2** There is a considerable amount of environmental information in different datasets underpinning this summary. It is not practical to attempt to reproduce these datasets or describe the environmental characteristics in detail because it would make this report too lengthy, unworkable and unreadable.
- 3.1.3** Similarly, it is not practical, or possible, to forecast every environmental change that may occur if the WLLDP is not implemented. This section identifies those changes that would be the more significant and likely in the event of non-implementation. Furthermore, the description of the environment and environmental changes is concentrated on those aspects of the environment that are most likely to be affected by the WLLDP, such as the natural and cultural heritages that are vulnerable to change by built development.

Population and Human Health

- 3.1.4** The 2011 Census indicates that the population of West Lothian is 175,118, an increase of 10% on the 2001 Census. This is the fourth highest rate of growth amongst the 32 local authorities in Scotland. The rate of increase in population over the period 1991 - 2011 was 21.4%. The population of West Lothian accounts for 3.3 per cent of the total population of Scotland. According to the General Register Office for Scotland's Population Projections for Scottish Areas (2010-based) the population of West Lothian should be 193,354 by 2025, making it one of the fastest growing areas in Scotland and representing an increase of 18,054 (10.3%) compared with the estimated population in 2011 of 175,300.
- 3.1.5** Scottish Government projections also indicate that the number of households in West Lothian will continue to increase, creating a requirement for additional housing and services, although the rate of increase is likely to be dependent on economic factors and the availability of mortgage finance and funding solutions for the necessary infrastructure to support development.
- 3.1.6** An analysis of demographic information for West Lothian indicates a rapidly growing and ageing population and an increase in the number of smaller households. According to GROs household data (2010), over the period to 2035, the number of households in West Lothian was expected to increase by 22,000, representing a growth of 30%. This gives West Lothian a higher average household size than the Scottish average but is not unexpected since a significant part of the increase will be generated from within West Lothian itself as families establish and grow. There is a continued trend towards a reduction in the average household size and household projections show that the largest increases in terms of household formation is for smaller households of 1 adult or 1 adult and 1 or more children but a reduction in 2 adults with 1 or more children households.

Table 5 – 2010-based household projections (Source: General Register Office for Scotland)

	2010	2015	2025	2035	Change			
					2010 to 2025		2010 to 2035	
					No	%	No	%
West Lothian	73,160	77,470	86,660	95,160	13,500	18.5	22,000	30.1
SESplan	553,180	589,910	662,390	732,680	179,500	19.7	179,500	32.4
Scotland	2,357,420	2,473,460	2,691,410	2,888,230	333,990	14.2	530,810	22.5

- 3.1.7** West Lothian comprises a number of small and medium sized towns, together with many villages and hamlets. It is characterised by multiple identities such as commuter 'suburbs' and former mining communities. The main settlements are the traditional towns of Armadale, Bathgate,

Broxburn, Linlithgow and Whitburn and the 'new town' of Livingston, which is now the largest settlement with a population of approximately 60,000 and the principal administrative centre of West Lothian. For many people, one of the key attractions of West Lothian is the ability to live within reasonable commuting distance to workplaces in Edinburgh and Glasgow, but live within smaller communities with strong local identities within easy reach of the surrounding countryside.

- 3.1.8** West Lothian is strategically located in the Central Belt of Scotland and is well served by a number of trunk road and rail links. It is also in close proximity to Edinburgh Airport and will therefore benefit from proposed longer term strategic development both there and in the City of Edinburgh. West Lothian's central location and excellent business and labour market connections make the area an important economic hub. 60% of Scotland's population live within a one-hour drive, making for easy access to customers and suppliers.
- 3.1.9** For the period 2008-2010, the life expectancy at birth of both males and females is above the national average with 76.2 for males (Scotland: 75.8) and marginally lower, 80 for females (Scotland: 80.4). However, there are disparities between different groups in West Lothian reflecting socio-economic make-up.
- 3.1.10** 'Place' is as important as 'people' in determining physical and mental health: amenities, quality of housing and public realm, incivilities, crime and fear of crime, and opportunities for social interaction. In relation to crime, West Lothian has consistently fewer crimes and offences per 10,000 population than in Edinburgh and Scotland as a whole. For the period 2012 to 2013, West Lothian had a 'Crime Index' rating of 88 compared with 122 for the City of Edinburgh and 100 for Scotland. (Source - Recorded Crime in Scotland Statistical Bulletin June 2013).
- 3.1.11** The Lothian Housing Needs and Market Study (2005) identified a total need for nearly 3,300 extra affordable homes across West Lothian. An update of the study undertaken in 2008 demonstrated a continuing need for affordable housing for at least the next 10 year period which it covered. Demand for affordable housing in West Lothian is also reflected in the Council's housing waiting list. At the beginning of March 2012, 8756 households were on the list. By April 2013 there were 9,030 households on the list, which represents a 3% increase
- 3.1.12** The first phase of the Council's own house building programme delivered approximately 248 new affordable homes between 2007 and 2010 at four sites across West Lothian. A second phase of the programme, at a cost of £45 million, will see another 545 houses developed over eight sites. This phase has progressed well with some 224 completions having been achieved by the end of March 2013.

Table 6 - New build Council housing since 2007

Phase 1	
Boghall, Bathgate	69
Dixon Terrace, Whitburn	48
Wester Inch, Bathgate	87
Peel House, Livingston	44
Total	248

Phase 2	
Ladeside Avenue, Blackburn	10
Uphall Infants School, Pumpherston	23
Ferrier Crescent, Armadale	19
Alderstone Road, Livingston	45
Dixon Terrace, Whitburn	116
Inveralmond, Livingston	92
Eliburn, Livingston	90
Littleboghead, Bathgate	150
Total	545

3.1.13 Preliminary sites for a next phase of new council housing, which account for just over 600 houses, have already been identified by the Council Executive at Wester Inch, Bathgate (80 homes), Kirkhill, Broxburn (230), Eastfield Recreation Ground, Fauldhouse (30), the former Lammermuir House and adjacent car parks at Owen Square, Livingston (80), Redhouse West, Blackburn (100), the old school and community centre in Pumpherston (15) and 18 at the former Broxburn School site. Sites for a further 500 houses have also been identified and these include locations in Armadale, Bathgate, East Calder, Philpstoun and Bridgend.

3.1.14 The WLLDP can help address these issues of affordable homes by, for example:

- ◆ allocating land for housing (including affordable) which provides for an increasing population whilst addressing 'place' and wider human health issues;
- ◆ securing adequate provision for healthcare and community facilities;
- ◆ securing improvements to the existing infrastructure, particularly roads and sewage/water provision; and including design policies, e.g. in relation to street design, active travel and designing out the fear of crime.

- 3.1.15** If the WLLDP was not prepared and implemented, there may be a shortfall in affordable and other housing provision and/or new housing may be built in inappropriate places. This is because, without the plan, developers would submit planning applications for housing wherever they were able to obtain the land for building at the most favourable terms commercially; and these may not be good locations from a planning/environmental perspective. If the Council rejected what it considered to be unacceptable housing proposals in the absence of an up to date local development plan, a developer would be likely to appeal against the refusal and may succeed in obtaining planning permission because the Reporters and Scottish Ministers would have to decide the acceptability of the proposals without the benefit of the Plan. This would represent an ad-hoc and piecemeal approach to realising housing. Adequate provision of healthcare and community facilities may not be provided in the right places, which could affect people, although it is difficult to forecast whether such effects would be likely to have significant effects on human health within the actual Plan area.
- 3.1.16** The effects of the WLLDP on the population and human health of the areas most likely to be affected by it have been assessed through the checklist for each potential development site allocation, reproduced in detail in Appendix 2 below.

Water

- 3.1.17** The water environment includes rivers, their valleys and catchments reservoirs, and groundwater resources. The key watercourse in West Lothian is the River Almond. It has numerous tributaries and flows from south west to north east, ending up within the boundary of the City of Edinburgh where it enters the Forth Estuary. The other important river is the Avon which forms the administrative boundary with Falkirk Council. The river valleys are important physical features and natural systems and have high visual amenity and rich habitats whilst also providing recreational opportunities.
- 3.1.18** There are 48 individual stretches of fresh water within West Lothian. Of this total river length, 3.1 % is classed as 'Bad', 53.1 % as 'Poor', 9.4% as 'Moderate' and 15.6 % as 'Good' or 'High Quality'. In 2013, 19% of water bodies in West Lothian were recorded as achieving good overall status.
- 3.1.19** In terms of groundwater, '66.7% is classed as 'Poor' and 33.3% as 'Good'.
- 3.1.20** A relatively small proportion of West Lothian's surface area (3.5%) (14.9 Km₂) falls within the 1:200 year flood risk zone, the zone set out in flood risk maps produced by SEPA to assist in WL LDP site allocation and development management decisions. Although the extent of the 1:200 year flood risk zone seems likely to increase as a consequence of climate change, no allowance for future climate change has been included in the current flood risk maps.
- 3.1.21** Whilst the WL LDP alone cannot remedy or prevent water pollution and flooding, it does have a role in directing development away from areas of flood risk, promoting Sustainable Urban Drainage Systems (SUDS), and in terms of its approach to minewater discharge treatment. Without it there would be an increased danger of development in areas of flood risk, and most likely a higher level of water pollution and/or inappropriate use of water resources.

3.1.22 The council has approved SPG, entitled *West Lothian Flood Risk and Drainage*. This guidance was adopted by the council on 8 April 2008. It sets out the requirements for the preparation and submission of Drainage Assessments and Flood Risk Assessments that will be required to accompany planning applications as well as referring to requirements for Sustainable Urban Drainage Systems (SUDs) within the West Lothian Council area including the requirements of SW, SEPA and SNH. This will be updated before the proposed plan stage to include reference to River Basin Management Plans and Flood Risk Plans to ensure full compliance with the Flood Risk Management (Scotland) Act 2009 to reflect full implementation of Act post Royal assent 16 June 2009.

3.1.23 The effects of the WLLDP on the water environment of the areas most likely to be affected by it have been assessed through the checklist for each potential development site allocation, reproduced in Appendix 2 below.

Air

3.1.24 Legislation sets out prescribed air quality objectives for target pollutants against which each local authority must assess air quality and identify areas where the air quality objectives are not likely to be met. Where air quality objectives are not likely to be met in areas where members of the public will be exposed, local authorities must put in place an Air Quality Management Area (AQMA).

3.1.25 The Air Quality (Scotland) Regulations 2000, as amended, lay down standards and objectives to be achieved by specified dates for seven priority pollutants. These are - Benzene, 1-3 Butadiene, Carbon Monoxide, Lead, Nitrogen Dioxide, Sulphur Dioxide and PM₁₀ (particulates matter with a diameter less than 10 microns).

3.1.26 A statutory Update and Screening Assessment (USA) is required every 3 years and is a more comprehensive review than is required by the intervening annual Progress Reports. The main results of the USA 2012 are:

- ◆ In common with other Scottish local authorities, levels of pollutants were generally better than 2010. However, at a number of specific areas air quality causes concern;
- ◆ There is one Air Quality Management Area in West Lothian at Broxburn, which was declared in March 2011;
- ◆ Measured PM₁₀ in the Broxburn AQMA continued to exceed the Air Quality Objective (AQO);
- ◆ Measured NO₂ in the Broxburn AQMA continued to exceed the AQO;
- ◆ A 'Further Assessment' is required to allow source apportionment for the Broxburn AQMA; and
- ◆ Action Planning for the Broxburn AQMA is being progressed.

3.1.27 The full report, available online at <http://www.westlothian.gov.uk/law-licensing/1101/airquality>, gives more detail of the standards, objectives, and measured pollution levels in West Lothian. The Scottish Government has accepted the report's conclusions, but has requested further information relating to the assessment of emissions from the railway line at Linlithgow.

Broxburn

- 3.1.28** Scottish Government grant funded consultants have completed the required 'Further Assessment' for the Broxburn AQMA. Total volume and queuing of traffic are identified as the principal issues. However, the high proportion of heavy vehicles at the junction of Greendykes Road and East Main Street is not believed to be the principal issue. Work will continue on this to inform the AQMA Action Planning process. An initial meeting of the 'core steering group' for action planning in relation to the Broxburn AQMA has taken place and further follow-up meetings are planned.

Linlithgow

- 3.1.29** Relocation of the Linlithgow air quality monitoring station to the area of highest concern was identified as necessary. This was highlighted in the Detailed Assessment completed in June 2011 and the subsequent appraisals of the report by the Scottish Government and SEPA. On 28 January 2013, planning consent was obtained for the relocation of the unit to the east end of Linlithgow High Street, as this area was identified as being of particular concern. Additional passive diffusion tubes have been installed in Linlithgow High Street from early 2012 to measure Nitrogen dioxide, following a recommendation from SEPA. Initial results indicate elevated levels of Nitrogen dioxide in areas of the High Street.

Newton

- 3.1.30** Following concerns raised by the local community during the development of the Forth Replacement Crossing Bill, contractual documentation obliged the successful bidder to provide air quality monitoring in Newton. Working in conjunction with the Forth Crossing Bridge Consortium (FCBC) has permitted the installation of a real time air quality monitoring cabinet within the village. The cabinet, installation and ongoing operational costs to 2016 are paid for by FCBC and 'live' data can be viewed at www.scottishairquality.co.uk.
- 3.1.31** Since installation in mid-2012, both Nitrogen dioxide and PM₁₀ (fine particulate) levels in Newton have climbed. This may be due to the high volume of lorry traffic associated with the bridge construction and the entrainment of fine particulates on the wheels of vehicles bringing material from Niddry Bing, Winchburgh. Monitoring is ongoing.
- 3.1.32** Screening will also be required for some future developments and activities within West Lothian. Examples include: any further open cast mining, changing traffic patterns and the development of the Core Development Areas of Armadale, Broxburn, Calderwood, West Livingston and Winchburgh. The increased population (and associated traffic) may have the potential to affect the pollution levels. If so, additional monitoring may be required with associated capital and revenue implications. The council's Environmental Health and Development Management services have worked closely together to identify specific types of activity/development which would require an air quality impact statement to be provided along with development proposals.
- 3.1.33** Traffic on all roads in West Lothian increased from 1,570 million vehicle kilometres per annum in 2001 to 1,717 in 2011, representing a 9.4% increase compared to 8.3% nationally. 2009 household survey records 73% travel to work or study by driving a car or van, 6% are passengers in cars, 6% use the bus, 8% walk, 1% travel by train, and 6% work from home

- 3.1.34** The WLLDP can have a beneficial impact in terms of air quality by securing separation between new industrial operations and residential/other sensitive areas, and in terms of the pollution generated by traffic through policies that encourage development in locations which are less car-reliant as well as facilitating cycleways, footpaths and improved public transport services. In the absence of the WLLDP, there would be no other quite so effective mechanism to ensure that new development would be concentrated in those locations better served by public transport. There would be less likelihood of mixed developments or other development patterns occurring that avoid the need to travel.
- 3.1.35** The effects of the WLLDP on the air quality of those areas most likely to be affected by it have been assessed through the checklist for each potential development site allocation, reproduced in Appendix 2 below.

Climatic Factors

- 3.1.36** Each of Scotland's 32 local authorities signed Scotland's Climate Change Declaration in early 2007. The Declaration is a public statement wherein local authorities acknowledge the reality and implications of climate change and their responsibility to respond effectively. The Declaration also welcomes the actions of the UK and Scottish Governments and the opportunities for local authorities to work in partnership with others in responding to climate change. The Climate Change (Scotland) Act 2009 has subsequently introduced legislation to reduce Scotland's greenhouse gases by at least 80 per cent by 2050 against the 1990 baseline. The 2011 Editions of the Building Standards Technical Handbooks, published on 1 May 2011, consolidated the Scottish Government's target setting for new buildings requiring delivery of a 30% reduction in CO₂ emissions.
- 3.1.37** The West Lothian Community Plan "*Towards 2020*" was published in December 2009 and was developed in partnership with Community Planning Partners and the communities of West Lothian. It sets out the strategic outcomes to be achieved over the next ten years. Carbon reduction underpins the aspiration to manage and balance the effects of an increasing population and social and geographical diversity. The plan has an indicator for 8.5 tonnes of CO₂ per capita emissions and it aspires to a 9.2% reduction in the level of emissions from the council's activities and services (transport fleet and business mileage, non-domestic buildings, street lighting, waste and water).
- 3.1.38** Currently West Lothian's emissions remain above the Scottish total (along with Falkirk, Clackmannanshire, Aberdeen City) and nine of the more rural and remote local authority areas. A new target for 2013/14 is proposed to meet the national total and then a longer term target to be lower than it. The latest figures from the Department of Energy and Climate Change (DECC) show the national total as 6.8 tonnes per capita for 2011/12 and West Lothian's total is 7.3. Estimated levels of CO₂ per capita for West Lothian and are set out in the table below.

Table 7 - Estimated levels of CO₂ per capita

	Year	Industry & Commerce (ktCO ₂)	Domestic (ktCO ₂)	Road Transport (ktCO ₂)	Grand Total (ktCO ₂)	Population (‘000s mid year estimate)	Per Capita Emissions (t)
West Lothian	2005	542.0	457.2	413.5	1,441.4	163.8	8.8
	2006	551.9	453.5	411.9	1,444.2	165.7	8.7
	2007	527.1	451.7	420.8	1,427.8	167.8	8.5
	2008	530.7	456.7	411.7	1,426.1	169.5	8.4
	2009	454.9	407.09	400.0	1,288.4	171.0	7.5
	2010	528.8	436.3	397.1	1,383.6	172.1	8.1
	2011	463.0	388.1	390.0	1,260.0	173.0	7.3

	Year	Industry & Commerce (ktCO ₂)	Domestic (ktCO ₂)	Road Transport (ktCO ₂)	Grand Total (ktCO ₂)	Population (‘000s mid year estimate)	Per Capita Emissions (t)
Scotland Total	2005	20,353.2	14,451.9	11,206.3	40,961.7	5,094.8	8.1
	2006	20,856.8	14,435.4	11,278.3	41,560.6	5,117.1	8.2
	2007	20,347.0	14,145.8	11,422.4	41,147.9	5,144.6	8.0
	2008	20,127.6	14,155.8	11,065.8	40,512.1	5,168.7	7.8
	2009	17,358.6	12,776.6	10,763.2	36,451.2	5,193.9	7.0
	2010	18,436.5	13,605.4	10,649.4	38,958.8	5,222.2	7.5
	2011	17,182.7	12,026.6	10,468.4	35,967.1	5,254.8	6.8

Source: Summary Local CO₂ emission estimates 2011, Department of Energy & Climate Change

Carbon Management Plan

3.1.39 West Lothian Council’s Carbon Management Plan, adopted by the council in 2009 and which will be subject to review in 2013/14, is the council’s main carbon reduction policy. The objective of the Carbon Management Plan is to ‘Reduce the carbon emissions from the council’s own activities and services and contribute to the organisation being able to lead other partner organisations and businesses within West Lothian to achieve

similar reductions.’ It contains an action plan of carbon reduction projects which aim to reduce the council’s overall carbon footprint. The Carbon Management Plan is the product of the council’s participation in the Carbon Trust’s Local Authority Carbon Management Programme. It is available on the council’s website at:

<http://www.westlothian.gov.uk/media/downloaddoc/1799514/Climatechange>

3.1.40 In addition to the Carbon Management Plan, the council published its Renewables Strategy in 2012. Developed as the outcome of an evidence based study to understand where renewable technologies may be implemented across the council’s assets, the Renewables Strategy can be found at:

<http://www.westlothian.gov.uk/media/downloaddoc/1799514/1842967/renewables>

3.1.41 The WLLDP can contribute to the avoidance of greenhouse gas emissions by planning the distribution of land uses in a way that reduces the need to travel and discourages the use of private motor vehicles. The WLLDP can further assist in avoiding travel and discouraging the use of private motor vehicles by encouraging economic development within West Lothian itself and sustaining and improving public transport and cycle routes and paths within and around West Lothian as well as to Edinburgh and elsewhere.

3.1.42 Through the adoption of policies relating to the siting and design of development, support for renewable energy developments and building-integrated low and zero carbon technologies, heat mapping processes, and safeguarding peatlands (locking up carbon), the WLLDP can help to reduce the need for energy, avoid that from non-renewable sources, and in turn avoid greenhouse gases.

3.1.43 In terms of adapting to the impacts of a changing climate, the main challenges for the WLLDP are those relating to changing precipitation and warmer temperatures. The WLLDP can help build environmental resilience through policies supporting bio-diversity, wildlife habitat protection, green networks, improved water catchment and flood prevention.

3.1.44 If the WLLDP was not implemented, new development would be expected to generate more private car-borne trips, higher energy consumption, less building-integrated low and zero carbon technology, and uncertainty in relation to renewable energy development and peatland protection. There would be less environmental resilience, including more development susceptible to flooding. The difference that implementation of the WLLDP would make in terms of climate change mitigation is more important when seen as a contribution to the cumulative effects of small reductions in the national consumption of energy from non-renewable sources.

3.1.45 The effects of the WLLDP on climatic factors in the areas most likely to be affected by have been assessed through the checklist for each potential development site allocation, reproduced in Appendix 2 below.

Soils

- 3.1.46** Soil is an important resource, particularly for agriculture and locking up greenhouse gases.
- 3.1.47** Approximately 38 % of the total area of West Lothian agricultural land is classed as grade, 2 or 3¹ under the Macaulay Land Classification system, i.e., prime quality, compared with only 6% of all farmland nationally. There is no Class 1 land in West Lothian. Class 2 and 3¹ land represents the main grades, particularly to the north and east of Livingston. The grades of land tend to increase from 3 to 6 up to the Pentland Hills and further west of Livingston.
- 3.1.48** Areas of peat soil, particularly important for their carbon content, are to be found on the periphery of West Lothian. The council own 200 acres of peatland at Easter Inch Moss, between Blackburn and Seafield and has recently submitted an application to SNH under its new Peatland Restoration Programme to dam the moss and increase the level of peat on the site.
- 3.1.49** The WLLDP will have a role in protecting prime agricultural land from development and encouraging it in other areas where this is possible. In the absence of the implementation of the WLLDP, it is possible that more prime quality agricultural land would be used than was necessary, in turn releasing additional quantities of greenhouse gases.
- 3.1.50** Some areas of West Lothian have a legacy of dereliction, degraded or contaminated land with polluted or degraded soils. It is to be expected that the WLLDP will prioritise the redevelopment of this previously developed “brownfield” land, along with derelict, unused or degraded land in preference to the use of “greenfield” land. In the absence of the WLLDP, it is likely that derelict, degraded and polluted or contaminated land would not be subject to remediation and redevelopment, or very much less land would be, because developers would have little or no incentive to address these issues and re-use this resource.
- 3.1.51** The Council already has approved SPG guidance on the issue of soil sustainability through a “*Policy for the management and after use of soils on development sites*”. Approved in May 2006, this guidance provides developers with best practice advice on how to ensure they do not misuse and poorly manage soils on development sites. It sets out a procedure for soil management, which will require either the submission of a soil sustainability plan with a planning application, or allow for appropriate conditions to be imposed on planning permissions.
- 3.1.52** The effects of the WLLDP on the soils of the areas most likely to be affected by it have been assessed through the checklist for each potential development site allocation, reproduced in detail in Appendix 2B.

Waste

3.1.53 Scotland's Zero Waste Plan sets out the Scottish Government's vision for a zero waste society. This vision describes a Scotland where **all** waste is seen as a resource; waste is minimised; valuable resources are not disposed of in landfills, and most waste is sorted, leaving only limited amounts to be treated. The result should be only 5% to landfill by 2025 within West Lothian.

Bio-diversity, Flora and Fauna, Geology and Geo-morphology

3.1.54 A principal asset of West Lothian is some of its area contains high quality natural environment and diverse range of species and habitats which are protected and conserved by a range of designations on an international and national scale. West Lothian has a diverse range of species and habitats, ranging from coastal habitats to farmland, urban and upland habitats, which need to be protected to avoid irreversible damage. Their importance and protection vary, with a number identified as priority habitats and species within the West Lothian Local Bio-diversity Action Plan 2005-09 (WLLBAP).

3.1.55 A review of the present assets West Lothian has indicates that the following types of habitat are of importance for the area. The LBAP prepared previously for the council area, confirms the important habitats as follows:

- ◆ Woodland and Scrub
- ◆ Grassland and Marsh
- ◆ Tall Herb and Fern
- ◆ Heathland
- ◆ Mires and Peatlands
- ◆ Swamp
- ◆ Open Water
- ◆ Coastland
- ◆ Rock and Spoil
- ◆ Miscellaneous (cultivated land)
- ◆ Ancient Woodland

3.1.56 There is one Ramsar site/Special Protection Areas (SPA) at the Forth Estuary and two Special Areas of Conservation (SAC) at Craigengar (Pentland Hills) and Blawhorn Moss, north of Blackridge. There are also 16 Sites of Special Scientific Interest (SSSI) and one National Nature Reserve at Blawhorn Moss.

3.1.57 In addition to these nationally and internationally important sites, West Lothian has one Local Nature Reserve (LNR) at Easter Inch Moss & Seafeld Law, a proposed LNR at Harperrig Reservoir in the north Pentlands, and approximately 130 proposed Local Bio-diversity sites (LBS) that will replace the current 29 Wildlife Sites. Some sites have more than one designation. These local designations are intended to protect sites and features that help to sustain the overall bio-diversity and geo-diversity of the area and help to link the statutorily protected sites. Many other features in the landscape are of importance for the migration, dispersal and genetic exchange of plant and animal species.

- 3.1.58** There are six Regionally Important Geological and geo-morphological sites located at Almondell (East Calder), Binny Craig (Ecclesmachan), Calder Wood (Mid Calder), East Kirkton Quarry (by Boghall), Petershill (Bathgate), and Witchcraigs (Bathgate Hills). These will be supplemented by approximately 50 proposed local geo-diversity sites (LGS) of significance.
- 3.1.59** It is expected that the WLLDP will seek to protect the natural heritage, including all of the tiers of designated sites, protected species, woodlands and features of the landscape of major importance for wildlife. If the WLLDP was not implemented, it is likely that sites and features of local, national and possibly international importance could be lost or damaged and the populations and/or distribution/range of protected and other important species may be adversely affected by development. However, international sites, and to a lesser extent SSSIs, are protected from the adverse effects of development by special legislative provisions that would apply in the absence of the WLLDP. Table 8 below shows the number of designated natural heritage sites within West Lothian.

Table follows on next page

Table 8 - Designated natural heritage sites in West Lothian

Designation	Ramsar Sites	Special Areas of Conservation	Special Protection Areas	Sites of Special Scientific Interest	Marine Consultation Areas	National Nature Reserves	Local Nature Reserves & Wildlife Sites
Number & Name of Sites	1	2	1	16	0	1	29
	Firth of Forth	Craigengar SAC (Pentland Hills)	Firth of Forth SPA	Blawhorn Moss near Blackridge		Blawhorn Moss, near Blackridge	Addiewell Ponds NT003626
		Blawhorn Moss SAC (Blackridge)		Calder Wood, Mid Calder			Almond Pools NT023663
				Carribber Glen, near Linlithgow			Almondell Country Park NT089689
				Cobbinshaw Moss, near Harburn			Balvormie Meadow NS997738
				Cobbinshaw Reservoir, near Harburn			Bangour Reservoir NT012719
				Craigengar, Pentland Hills			Barbauchlaw Glen NS924688
				East Kirkton Quarry, Bathgate			Bellsquarry Wood NT050652
				Firth of Forth			Cockleroy Wood NS984748
				Hermand Birchwood, West Calder			Colinshiel Wood NS950690
				Linhouse Valley, Murieston, Livingston			Crosswood Reservoir NT060575
				Linlithgow Loch, Linlithgow			Drumbeg Moss NS870683
				Lochcote Marsh, Torphichen			Easter Inch Moss NT003664

Designation	Ramsar Sites	Special Areas of Conservation	Special Protection Areas	Sites of Special Scientific Interest	Marine Consultation Areas	National Nature Reserves	Local Nature Reserves & Wildlife Sites
				Petershill, Bathgate			Easter Redburn Moss NS888675
				Philpstoun Muir			Faucheldean Bing NT084742
				Skolie Burn, Loganlea			Foulshiels Bing NS977635
				Tailend Moss, Bathgate			Harperrig Reservoir NT092610
							Lochcote Reservoir NS978737
							Longridge Moss NS956620
							Mains Burn NT033739
							Mosshouse Farm Moss NS882669
							Nether Longford Moss NS975611
							Pumpherstons Pond NT071692
							Raiziehill Moss NS874667
							Roman Camp Meadows NT071705
							Silvermines Quarry NS992713
							Skivo Quarry NT051640
							Swinabbey Moss NS970658

Designation	Ramsar Sites	Special Areas of Conservation	Special Protection Areas	Sites of Special Scientific Interest	Marine Consultation Areas	National Nature Reserves	Local Nature Reserves & Wildlife Sites
							Westcraigs Moss NS898683
							Whitrigg Bing
							Scottish Wildlife Trust Nature Reserve sites: <ul style="list-style-type: none"> ◆ Addiewell Bing, Addiewell ◆ Hermand Birchwood, West Calder ◆ Linhouse Valley ◆ Longridge Moss ◆ Petershill, Bathgate ◆ Tailend Moss, Bathgate

3.1.60 The effects of the WLLDP on the bio-diversity, fauna, flora and natural geo-morphological features of the areas most likely to be affected by it have been assessed through the checklist for each potential development site allocation, reproduced in detail in Appendix 2B.

Cultural Heritage and Material Assets

3.1.61 West Lothian’s towns and villages have many areas and individual buildings of special architectural or historic interest that contribute to the distinctive character of the urban and rural environment. There are 9 designated conservation areas of which one, Linlithgow - Palace and High Street is designated for grant-aid purposes by Historic Scotland as “outstanding”; they are Linlithgow - Upper Linlithgow & Union Canal, Bangour Village Hospital, Broxburn West Main Street, Kirknewton, Livingston Village, Mid Calder, Torphichen and Uphall. West Lothian has 437 buildings

registered with Historic Scotland as being listed for their architectural and/or historic and cultural significance, largely located within conservation areas. Of the listed buildings, 43 are Category A, 215 Category B and 179 Category C. There are 33 buildings on the register of listed buildings at risk (albeit that 2 are currently being renovated) and 4 Nationally Important Gardens and Designed Landscapes on the inventory compiled by Historic Scotland and Scottish Natural Heritage.

- 3.1.62** A variety of archaeological and other historic monuments are found throughout West Lothian including castles, churches, standing stones, remains of ancient settlements and fortifications and industrial archaeology. There are currently 53 Scheduled Ancient Monuments (SAMs) that mainly comprise prehistoric, domestic and defensive sites. This relatively high proportion of SAMs reflects the area's historical importance in the Lothians and Scotland. Also of note is the site of the Battle of Linlithgow Bridge (1526), now included in Historic Scotland's Inventory of Battlefields.
- 3.1.63** It is expected that the WLLDP will seek to protect all these assets. If it was not implemented, it is likely that local and potential nationally important archaeological resources could be lost or damaged; conservation areas and other historic sites may not be as well protected or enhanced; and listed buildings and other buildings of architectural or historic importance may be lost or damaged. However, SAMs and listed buildings are protected by law and these national regulatory controls would apply irrespective of the Plan.
- 3.1.64** Historical industrial activity has helped shape the landscapes and townscapes of West Lothian. In particular, the industrial activity throughout the area, notably mining related, has played a key role through the creation of settlements, transport infrastructure and residual spoil heaps / bings, particularly prominently around Broxburn, West Calder and Winchburgh.
- 3.1.65** The area has a mixture of historic settlements, settlements associated with industrial expansion during the 19th Century and the designation and expansion of Livingston new town in the post-war period from the early 1960's. Each of these types of settlement has a different townscape, with conservation areas designated within some villages and towns. Conservation Areas are areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance. The character and appearance of settlements can be appreciated through an understanding of their origins and historic development. This 'sense of place' makes an area of special historic or architectural interest. Throughout West Lothian there are several other areas of townscape that, although not designated as conservation areas, provide a historical, industrial and/or architectural value. These include miners' rows terraced rows at: Oakbank Cottages near West Calder, Winchburgh Rows, Roman Camp Cottages, and Beresford Rise at Dedridge in Livingston and at South Village, Pumpherston.
- 3.1.66** The council has also developed SPG for some of its historic areas to help improve the townscape of such areas including Armadale, Bathgate, Broxburn, Uphall and Whitburn. These Public Realm Design Frameworks will establish a clear framework for public realm investment and will be promoted within the Council as Supplementary Guidance.

Material Assets

- 3.1.67** The effects of the WLLDP on the material assets, including the cultural heritage of the areas most likely to be affected by it, have been assessed through the checklist for each potential development site allocation, reproduced in detail in Appendix 2 below.
- 3.1.68** The WLLDP will seek to protect key material assets such as silica sandstone reserves from sterilization. These reserves are understood to remain in situ to the west and south of the existing extraction facility at Levenseat Quarry south of Fauldhouse in the Gladsmuir Hills, as has been previously identified in the adopted WLLP. Where there are understood to be significant areas of opencast coal in the west of the county, the council will continue to uphold the opencast search areas in the WLLDP.

Landscape

- 3.1.69** In June 1992, the UK Government signed up to major international agreements on sustainability, bio-diversity and climate change. These continue to form the basis for government policy on the environment. Since then the environment has become a devolved issue for the Scottish Parliament, with separate primary legislation to enact European Directives and its own environmental programme of legislation and policy guidance. Conserving and protecting the countryside underpins much of the planning policy guidance and many of the advice notes and circulars issued by the Scottish Government. The principle of sustainability and environmental justice is integral to these documents.
- 3.1.70** The wide variety of soils and geological strata and features and the complex hydrology of West Lothian results in a varied land form and land cover. These include significant areas of arable farmland, lowland grasslands, improved and unimproved upland pastures, broadleaved woodland, coniferous plantations, peatlands and grass or heather moorland. The Lothians Landscape Character Assessment includes the whole of West Lothian and was completed on behalf of Scottish Natural Heritage in 1998. It identifies six landscape character types in West Lothian, with one of these being sub-divided into a smaller landscape character area. They are the Bathgate Hills/Avon Valley, Forth Shore, Airngarth Hill, Pentland Hills, Linthouse Water/Almond Valley, Blackridge Heights and the Almond Valley. It was reviewed in 2011 as part of a specialist consultancy study in relation to potential sites for wind turbines. Further landscape work was undertaken in 2012/13 in relation to a Local Landscape Designation Review (LLDR). This identified 24 Landscape Character Areas and proposed 5 candidate Special Landscape Areas (cSLA) that will be consulted upon as part of the WLLDP Main Issues Report process.
- 3.1.71** West Lothian has a broad and mixed landscape ranging from the coastal landscape at the north on the River Forth with high quality arable agricultural land around the urban settlements of Bathgate, Linlithgow and Livingston and other smaller settlements, to the Breich Valley and uplands and moorland of the Pentlands to the south. A number of areas within West Lothian have been identified as having a national and local landscape value with a range of designation such as Areas of Great Landscape Value (AGLV) and Areas of Special Landscape Control (AoSLC). These have been reviewed in the LLDR study referred to above.

- 3.1.72** The landscape of West Lothian has been shaped both by geological and industrial activity. The landscape is influenced by its coastal and estuarine location along the Firth of Forth. Inland, these landscapes are bordered by the Pentlands Hills range to the south. The extensive undeveloped rural areas of West Lothian are vital in sustaining the character and image of the area. Their quality, variety and management plays an important part in determining the nature of the countryside through the mosaic of land use, landscapes and habitats which extend from the Firth of Forth to the Pentland Hills.
- 3.1.73** Although West Lothian does not contain any National Scenic Areas, there are six Areas of Great Landscape Value which cover 15,100 hectares (37,300 acres) or 35% of West Lothian's total land area, the Pentland Hills Regional Park and 3 Country Parks.
- 3.1.74** West Lothian has a coastline of only 5.5 km, though the mud flats at Blackness are particularly important as a refuge and feeding ground for wading birds and wildfowl and form part of the Forth Estuary Special Protection Area. Climate change and predicted rises in sea level is a factor which, in time, will impact on the tidal areas and on the coastline. The Forth Estuary Forum consists of local authorities around the Forth, a wide partnership of statutory and voluntary bodies and the main land and estuarial users. The council supports the objectives of the forum which are to integrate the management of the coast and marine environment of the Firth of Forth.
- 3.1.75** The landscape character of West Lothian was initially reviewed by Scottish Natural Heritage (SNH) as part of a national programme of landscape assessment (1998). Scottish Natural Heritage and Historic Scotland have published guidance in 2005 to assist local authorities in future reviews of designated landscapes. The council has undertaken a review of Areas of Great Landscape Value which will help to inform the Main Issues Report and / or the Proposed Plan version of the LDP. Although the oldest scenic designation is Areas of Great Landscape Value (AGLV), it is only one of the many landscape or scenic designations identified by planning authorities in their development plans. The use, status, application and names of these designations are varied and inconsistent throughout Scotland.
- 3.1.76** The guidance allows local authorities to identify areas suitable for protection by a new local landscape designation, the Special Landscape Area (SLA). In West Lothian, this designation will replace the existing Areas of Great Landscape Value (AGLV) and Areas of Special Landscape Control (AoSLC). It will also replace Areas of Outstanding Landscape Quality (AOLQ where these exist) but there are no such designations in West Lothian. Following consultation and boundary definition, SLAs would be protected from inappropriate development to conserve their valued characteristics and qualities.
- 3.1.77** The West Lothian landscape is sensitive to a wide variety of changes, many of which are outwith the control of the planning system and over which the WLLDP can contribute little influence. However, other changes include pressures on the landscape that are, at least in part, subject to planning control, such as changes of use in rural areas; increasing pressure for built development, especially on the edges of expanding settlements, wind turbines and wind farm complexes; new or intensified recreational uses and poor design of development, especially where there is a failure to take account of local character and distinctiveness.

- 3.1.78** According to the Scottish Vacant and Derelict Land Survey 2012, there is 625 hectares of vacant and/or derelict land, in West Lothian, representing a 5% reduction since 2006. While this is to be welcomed and is marginally better than the comparable figures for Scotland which has seen a reduction of 3%, and Edinburgh City which has actually experienced an increase in the order of 5%, it is not as impressive as neighbouring Falkirk which managed an improvement of 33%.
- 3.1.79** It is expected that the WLLDP will encourage good design and a better fit in the landscape and townscape for new development, including high quality landscaping and policies relating to trees and hedgerows. If the WLLDP was not implemented, there would be likely to be a continuing erosion of landscape character and distinctiveness and more buildings and other structures appearing in the landscape that would detract from its character and quality. Areas of acknowledged landscape value and historic landscapes would be likely to be undervalued and their amenity and historic values diminished. Furthermore, the WLLDP is expected to be a key driver for the restoration of derelict and degraded land and, in the absence of the Plan, it is unlikely that many of these “brownfield” areas would be restored.
- 3.1.80** The effects of the WLLDP on the landscapes of the areas most likely to be affected by it have been assessed through the checklist for each development site potential allocation, reproduced in detail in Appendix 2B.

Interrelationship between these Factors

- 3.1.81** West Lothian has an increasing population with many development pressures associated with its proximity to Edinburgh, and, to a lesser extent, Glasgow. There is therefore a complex interrelationship between environmental factors, which in some circumstances can lead to conflict with development proposals and may also lead to conflict between differing environmental objectives.
- 3.1.82** However, the WLLDP is expected to have a wide range of policies of equal importance and for development to be in accordance with the WLLDP it will need to achieve a high degree of consistency with all the policies in the Plan. In that way any potential divergence between environmental policy objectives can be identified and considered in planning decisions.
- 3.1.83** If the WLLDP was not implemented, it is likely that decisions would be made on a more ad-hoc basis, environmental objectives may be seen as competing for priority, rather than being considered in an integrated way. Policies that have much longer term environmental benefits would be more likely to be overlooked, or less favoured, compared to the protection of locally valued, widely recognised or statutorily designated historical or landscape features.

3.2 Key environmental problems

3.2.1 The WLLDP SEA Scoping Report (2012) indicated that relevant environmental problems would be identified through analysis of baseline environmental information, professional judgement and input from the key agencies. Bearing in mind the baseline environmental information within the Monitoring Statement (and see Appendix 1), and the preceding analysis in Section 3.1 above, the following is a summary of the key environmental problems / issues which will be influenced by the WLLDP and whether the Plan is likely to aggravate, reduce or otherwise affect these problems / issues.

- Affordable housing - There is a lack of affordable housing which the policies of the WLLDP should partly mitigate.
- Water quality - Water bodies are generally of poor quality. Any further deterioration in water quality attributable to implementation of the WLLDP is expected to be mitigated by its policies. Better linkages between the “Blue Network” and “Green Network” are likely to lead to enhanced water quality.
- Climatic factors - Per capita CO₂ emissions in West Lothian require to be reduced in support of Climate Change (Scotland) Act targets. It is expected that the WLLDP development strategy and policies will seek to mitigate greenhouse gases and maintain environmental resilience in the face of climate change impacts.
- Landscape character - The West Lothian landscape is sensitive to development. It is expected that the development strategy and policies of the WLLDP will seek to minimise any adverse impact on landscape character and appearance.



4.0 Assessment of environmental effects and measures for the prevention, reduction and offsetting of significant adverse effects

4.1.0 Alternatives considered

- 4.1.1** The current WLLP 2009 sets out a framework for development that is required to meet the Edinburgh and the Lothians Structure Plan 2005-2015, but it also includes a policy framework of environmental controls and implementation requirements, to help mitigate the negative environmental impact of development. That policy framework remains relevant in the main. Therefore it is intended that the WLLDP will continue to provide this effective counter-balance to development. Where change is considered necessary, it is generally to satisfy changes in legislation or national policy and to accommodate development necessary to meet the requirements of the SDP.
- 4.1.2** The main changes that the WLLDP promotes arise from the need to meet the development requirements identified in the SDP, principally the identification of additional housing and employment land. However, in meeting these needs, the WLLDP has a responsibility to ensure that community needs are also met, and this raises issues relating to the provision of associated retail, infrastructure, recreational opportunities and community facilities.
- 4.1.3** The SDP has established a Spatial Strategy for the SESplan area which specifically includes the identification of thirteen Strategic Development Areas (SDAs) as the main focus for future growth. Somewhat uniquely, relative to the other SESplan local authorities, West Lothian is identified as a single SDA, which, theoretically, provides greater flexibility for the LDP to identify future development locations.

4.1.4 The SDP directs, in general terms, where and how much development should take place in the identified West Lothian SDA, and as such the requirements are set and must be implemented as defined (see Table 9 below).

Table 9 - SESplan proposed housing and economic land requirements for the WLLDP

West Lothian Strategic Development Area		
Housing Land Requirement 2009-2019	Housing Land Requirement 2019-2024	Economic Land (hectares)
500 houses	1,250 houses	123 ha

4.1.5 For environmental reasons / and or infrastructure reasons, not all parts of the West Lothian SDA can readily accommodate development and there is, therefore, a need to redefine the regional spatial strategy at a more local level. The WLLDP will establish where, within the SDA, the requirement is to be located. The SDA includes a number of settlements / communities and the WLLDP can allocate the SDA requirements across the communities where it is considered best meets overall objectives. The WLLDP MIR proposes the inclusion of additional aims and objectives relating to sustainable place-making, green networks and climate change, in recognition of Scottish Government’s priorities. By adhering to these priorities, it has become clear that there are limited opportunities if the WLLDP is to allocate the SDP requirement in full. The MIR has presented a preferred selection of sites to meet the SDP requirement. It has also set out details of a limited number of sites within the SDA which could be allocated as alternatives to one or more of the preferred sites within the SDA.

4.1.6 The MIR also presents limited alternative options and for implementation of housing in the countryside. These are addressed through the presentation of the issues, and the environmental assessment considers the environmental impact of these alternatives if the results are likely to be different to the preferred approach.

4.2.0 Assessment methods

Issues & Policies

4.2.1 The WLLDP assessment objectives were converted into environmental questions against which the MIR ‘issues’ (i.e. MIR question topics), and those policies which the MIR identifies as remaining in force in the WLLDP, could be tested – see Table 10 below. The assessment of the issues relating to the SDA was undertaken on completion of the individual development sites assessment referred to below.

Table 10 - Assessment of issues and policies: Environmental questions

Considering this MIR issue, will it be likely to significantly affect:

AIR	To protect and enhance current air quality
A 1	Air quality/CO ₂ emissions
A 2	Need to travel by car?
A 3	Opportunities for access to sustainable forms of transport?
BIO-DIVERSITY	To protect and enhance bio-diversity, flora, fauna and habitats
B 1	International nature conservation areas/sites?
B 2	Designated national/regional/local nature conservation sites/Ancient Woodlands/local bio-diversity and geo-diversity sites/species/habitats/wildlife corridors?
CLIMATIC FACTORS	To reduce greenhouse gases and reduce energy consumption
CL 1	The generation of renewable energy?
CL 2	The energy efficiency of buildings?
CULTURAL HERITAGE	To safeguard and enhance, where appropriate, the built and historic environment
CH 1	Listed buildings, Scheduled Ancient Monuments, Gardens and Designed Landscapes, Historic Battlefields or other non-designated historic sites?
CH 2	Conservation areas/historic urban form/settlement pattern?
LANDSCAPE & TOWNSCAPE	To protect and enhance the landscape and townscape
L 1	Designated landscapes?
L 2	Character or distinctiveness of the landscape?
L 3	Open space provision?
L 4	Settlement coalescence?
MATERIAL ASSETS	To promote the sustainable use of natural resources and ensure quality in new development
M 1	Waste minimisation?
M 2	Use of mineral resources?
M 3	Reuse of brownfield land?
M 4	The quality of the built environment?
POPULATION & HUMAN HEALTH	To improve the quality of life and human health for communities
P 1	Provision of affordable housing?
P 2	Provision of greenspace, footpaths and cycleways?
SOIL	To protect the quality of soil
S 1	Prime quality agricultural land and peatland?

WATER		To protect the quality of water and prevent flooding
W 1		Status of major water bodies? [refer River Basin Management Plan]
W 2		Extent of flood risk?

4.2.2 The assessment of the WLLDP issues and policies used the following assessment classification. At the MIR stage this means it has assessed the effects of the issues being subject of consultation, but also the policies which the MIR has identified as remaining principally unchanged. The results are presented in Appendix 1 below.

Table 11 - Issues and policies: Assessment method

Symbol	
✓	Likelihood of significant beneficial effect(s) – policy convergence with environmental objectives of the WLLDP.
/	Criterion not relevant, or likelihood of no significant, or only neutral, effect(s).
?	Uncertain or unpredictable effect(s) and/or some potential for policy divergence with environmental objectives in the WLLDP. High reliance on cross compliance in the application of the objective, or high reliance on more detailed assessment of specific proposals promoted by the policy.
x	Likelihood of significant adverse effect(s) and/ or likelihood of policy divergence with environmental objectives in the WLLDP.
N/A	Not assessed as part of the environmental assessment of this Plan for the reason stated in the comments column, e.g. because assessed at a higher or lower tier, or this Plan is simply referring to a proposal generated elsewhere or required to be safeguarded in this Plan.

4.2.3 A substantial number of the WLLP 2009 policies will remain and be incorporated into the WLLDP, although there may be some minor updating, and repackaging to emphasis the WLLDP priorities. The results of the exercise are set out in Appendix 1A.

4.2.4 It is emphasised that the environmental assessment concentrates on the significant effects likely to be generated by the WLLDP and relevant to planning control. It is not possible, or necessary, for the assessment to try to assess every conceivable effect. Whilst all the potential effects must at least be considered, it is only significant effects that need to be fully assessed and recorded, that is, effects that are significant - important - in the context of the development plan. Some detailed effects of a proposal may be significant to local people, and merit careful consideration at the planning application stage to see if the development should be permitted. However, these detailed effects cannot always be anticipated or assessed as part of the strategic environmental assessment of the whole plan, which necessarily must be more strategic and appropriate to the scale and nature of the Plan. Also, to be practical, the assessment can only consider likely effects that, reasonably, may be predicted.

Sites & development strategy

4.2.5 In a similar fashion to the assessment of the issues and policies, the WLLDP environmental assessment objectives were converted into assessment criteria to test the potential development sites - refer to Table 12 below. During the preparation period of the WLLDP, over 230 sites were submitted to the Council for consideration. As part of the “Expression of Interest” process, the assessment methodology was applied to all of these sites. In addition, approximately 200 allocated sites from the West Lothian Local Plan (2009) were also assessed as these are being rolled over into the new LDP as they have not received planning permission, nor has any development started on site.

4.2.6 The results of the assessment of those sites are included in Appendix 2B. The environmental assessment draws together this information for those sites in the SDA and the results are presented under the relevant issue.

Table 12 - Proposals/allocations assessment framework

Environmental Assessment Topic	Does the proposal / allocation:
AIR	Avoid AQMA areas/ avoid exacerbating air quality of AQMAs/ avoid areas which could become AQMAs?
	Have good proximity to jobs/ services (enabling access within walking distance)?
	Have good access to existing or proposed public transport services?

Environmental Assessment Topic	Does the proposal / allocation:
BIODIVERSITY	Avoid causing adverse direct or indirect significant effect on designated international nature conservation sites?
	Avoid causing adverse direct or indirect significant effect on statutory national/ regional/ Ancient Woodland/ local bio-diversity/ local geo-diversity sites?
	Avoid causing adverse direct or indirect significant effect impact on species/ habitats/ or makes a positive contribution to the emerging green network?
CLIMATIC FACTORS	Occupy a relatively efficient location in terms of energy consumption?
	Occupy a location at risk of increased flooding or instability due to climate change?
CULTURAL HERITAGE	Avoid adverse (or create positive) effects on listed buildings and/ or their settings?
	Avoid adverse (or create positive) impact on Scheduled Ancient Monuments and /or their settings?
	Avoid adverse (or create positive) impact on locally important archaeological sites?
	Avoid adverse (or create positive) effects on a Garden & Designed Landscape?
	Avoid adverse (or create positive) effects on conservation areas and/or other areas of architectural, historic or townscape interest (Historic Battlefield site), or historic urban form?
LANDSCAPE & TOWNSCAPE	Avoid Areas of Great Landscape Value / Areas of Special Landscape Control / Areas of Special Control?
	Avoid conspicuous locations that require extensive landscape treatment / structural planting?
	Avoid loss of/ adverse effects on public open space/ improve open space provision (quantity/ quality)?

Environmental Assessment Topic	Does the proposal / allocation:
MATERIAL ASSETS	Avoid loss of land important to avoidance of coalescence/ preservation of settlement identity?
	Safeguard mineral resources from sterilisation (within areas of search)?
	Minimise use of greenfield land?
POPULATION & HUMAN HEALTH	Avoid co-location of sensitive development with industrial facilities/ economic allocations?
SOIL	Avoid loss of prime quality agricultural land and peatland?
WATER	Maintain status of baseline water bodies?
	Minimise flood risk (on site/ elsewhere)?

Strategic flood risk assessment

- 4.2.7** The new Flood Risk Management Planning regime will result in the preparation of Local Flood Risk Management plans which will clarify the issues for West Lothian, but these are unlikely to be available until 2015. In their absence, and to allow the WLLDP to have proper regard to flood risk, the Council has prepared a Strategic Flood Risk Assessment (SFRA) and this is available as a separate Background Paper. To assist in this process, SEPA provided advice on all of the potential development sites which were subject of the site assessment process. This information, along with the SEPA Indicative River and Coastal Flood Map (Scotland), details of flood incidents and other data sources, provided the basis for the West Lothian SFRA.

Accessibility modeling

- 4.2.8** All of the EOI sites which were the subject of the sites assessment process, were also subject to accessibility transport modeling. The accessibility (in terms of 800m travel distance on foot and/or public transport) of the sites to several key services was tested. The services included: primary school; secondary school; regional shopping; local shopping/supermarket; regional health/ hospital and local health services (GP practices).

4.3.0 Assessment of the WLLDP MIR and alternatives

- 4.3.1** The WLLP was originally drafted in 1999, put on hold with the emergence of the E&LSP in 2001, before being finalised and placed on deposit in 2005. As the site assessment process and policies behind the local plan were drafted and consulted upon before the implementation of the Environment Assessment (Scotland) Act came into force in 2005, the West Lothian Local Plan gained exemption from Strategic Environmental Assessment.
- 4.3.2** The reasons accepted by Scottish Government were that the council had consulted widely in reaching the stage of the finalised Local Plan, including with such bodies as SNH, SEPA, and others listed in the SEA Regulations. Their comments had been valuable and influential in formulating and shaping the local plan from the outset. The local plan also took on board the environmental and sustainability principles that percolate through then extent NPPGs, SPPs and other directives and circulars. The council had undertaken for example, its own biodiversity study of major potential development sites and the eventual selection of the preferred sites was founded on strategic factors such as sustainable transport and landscape protection
- 4.3.3** It remains the view of West Lothian Council that the environmental assessment process is unlikely to be the overriding influence on the quality of the WLLDP, as the plan preparation, consultation and examination stages should ensure that the Plan takes full cognisance of the need for development as well as the need for the protection of the environment. The assessment of all potential development sites has been undertaken prior to the selection of sites to contribute to the development strategy, rather than simply assessing the impact of the selected sites. Table 13 (below) identifies the main criteria used in the site assessment exercise.

Table 13 - Criteria for development sites selection

CRITERIA	
A	Existing use (greenfield/brownfield)
B	Physical characteristics, i.e., slope and shape, altitude and exposure
C	Relationship to townscape and landscape fit and impact
D	Physical site constraints
E	Ground conditions and natural features
F	Trees
G	Bio-diversity; Landscape
H	Green Network connections
I	Accessibility, roads and parking
J	The water environment (including flood risk)
K	Other (including infrastructure constraints)

Assessment of the issues Vision, Aims & Objectives

4.3.4 The summary of the assessment of issues demonstrates that the impact of the approach taken in the MIR with respect to the vision, and the aims and objectives, on the environmental criteria is uncertain, as the changes that are likely to have an effect will arise from the development allocations and the policy provisions. Similarly the impact of the sustainable place-making principles is uncertain. However, they could lead to positive environmental effects but these will arise from the implementation of the development allocations and partially from the provisions included in masterplans and as planning conditions / developer agreements.

Development / Spatial Strategy

4.3.5 The spatial strategy builds on the direction for development set by the SDP which identifies one strategic development area (SDA) in West Lothian and is also largely influenced by the development strategy of the West Lothian Local Plan. However, for environmental reasons and/or infrastructure reasons not all parts of the West Lothian SDA can readily accommodate major development. There is therefore the need to refine the regional spatial strategy at the more local level.

4.3.6 Sustainability factors have been integral to determining the preferred spatial strategy, as well as individual decisions on the appropriate location for housing and economic development, where the aim is to:

- reduce the need to travel;
- prioritise sustainable transport modes;
- meet affordable housing needs;
- maximise the use of previously developed “brownfield” land; and
- conserve and enhance environmental resources.

4.3.7 The spatial strategy set out in this MIR therefore identifies four key growth areas, centred partly on the current core development areas which will be the focus of major development during the plan period. The four areas are:

- West Lothian (East),
- West Lothian (Central),
- West Lothian (West) and
- West Lothian (North).

- 4.3.8 West Lothian (East)** is focussed on the existing CDA allocations at Winchburgh and East Broxburn and re-affirms the council's commitment to support large scale growth in this part of West Lothian. A new motorway junction on the M9, and rail station, are planned at Winchburgh as part of the Winchburgh CDA proposals. Development has commenced at Winchburgh to deliver housing requirements. Both Broxburn and Winchburgh benefit from proximity to Edinburgh and the new Queensferry Bridge Crossing, which is scheduled to open in 2016.
- 4.3.9 West Lothian (Central)** is focussed on the sub-regional centre of Livingston and includes the nearby settlements of Dechmont and the former Bangour Village Hospital site, East Calder, Mid Calder, Pumpherston, Uphall Station (including Drumshoreland) and West Calder. It includes existing CDA allocations at Calderwood and West Livingston/Mossend as well as major housing allocations at Bangour and Drumshoreland, Pumpherston/Uphall Station.
- 4.3.10 West Lothian (West)** is focussed on the three largest traditional towns to the west of Livingston, namely Armadale, Bathgate, and Whitburn, together with the village of Blackridge. Major development allocations already exist at the Armadale CDA allocation, Wester Inch in Bathgate, and Heartlands at Whitburn. Accessibility in this part of the west of West Lothian is good with new rail stations at Armadale, Bathgate and Blackridge, and junctions 3a and 4 giving access to the M8 motorway. A third junction in this corridor Junction 4a, opened in September 2013.
- 4.3.11 West Lothian (North)** is focussed on Linlithgow, which in previous development plans has been designated an "area of restraint". Linlithgow continues to be a popular area to locate and benefits from a mainline rail station and partial motorway junction on the M9. New housing in this location will widen housing choice and also provide an opportunity to provide an element of affordable housing and other services to meet local needs. It would also encourage the provision of employment land that is currently lacking in the town and reinforces its dormitory status. There is a long standing aspiration for the motorway junction on the M9 at junction 3 to have two additional slip roads added, thus making it a four way junction and this could help reduce traffic flows along Linlithgow High Street at peak times where there is currently no alternative route.
- 4.3.12** The assessment of the spatial / development strategy as it relates to the **West Lothian (East)** part of the Strategic Development Area concludes that the preferred residential allocations are expected to benefit from improved public transport services associated with the committed Winchburgh & East Broxburn CDA, along with associated employment allocations, and will have good accessibility. The impact of development allocations on Union Canal scheduled monument needs to be minimised through master planning / landscape buffers, but this can provide opportunities for green network provision and linkages which can also provide for sustainable travel (cycle/ walking).
- 4.3.13** The assessment of the spatial / development strategy as it relates to the **West Lothian (Central)** part of the Strategic Development Area finds that the sites selected, will benefit from existing and improved public transport in association with the reopened Bathgate – Airdrie Line. Some sites, around the sub-regional centre of Livingston, pose a risk of coalescence and some will have a possible impact on wider views. Opportunities should be taken to implement green network and landscape proposals as mitigation. The impact of development allocations on Bangour Hospital needs to be minimised through master planning.

- 4.3.14** The assessment of the spatial / development strategy as it relates to the **West Lothian (West)** part of the Strategic Development Area finds that the sites selected, will benefit from existing and improved public transport in association with the reopened Bathgate – Airdrie and the new junction 4a on the M8. Some sites, in and around the traditional towns grouping, pose a risk of coalescence and some will have a possible impact on wider views. Opportunities should be taken to implement green network and landscape proposals in the intervening countryside belts as mitigation.
- 4.3.15** The assessment of the spatial / development strategy as it relates to the **West Lothian (North)** part of the Strategic Development Area finds that the sites selected will have an impact on greenfield land due to the lack of brownfield sites within Linlithgow. The preferred residential allocations are expected to benefit from improved M9 junction connection and associated public transport services and will have good accessibility. There is a possible impact on wider views and opportunities should be taken to implement green network and landscape proposals as mitigation.

Accessibility Modelling

- 4.3.16** All of the EOI sites considered in the assessment were included in the accessibility modelling work. Sites across the area have been included and this shows the following key findings (relating to preferred and reasonable alternative strategy sites).

Most of the transport interventions have already been identified in other plans and strategies such as the Forth Replacement Crossing Refreshed Public Transport Strategy, the Regional Transport Strategy, the proposed Strategic Development Plan (SDP) or the Strategic Transport Projects Review. Unlike the West Lothian Local Plan, the impact of any additional houses identified in the forthcoming LDP has not been modelled. Modelling has been undertaken for the proposed SDP however, further modelling will be required as the LDP progresses. The assessment of constraints and interventions required to support the 2,130+ additional housing units is based on the local knowledge and expertise of the council's Roads and Transportation Service; it is therefore likely that further transport modelling will be required to establish more accurately the impact of any development brought forward in the LDP. The time period for the interventions has been assumed to be up to 5 years for short term interventions, 5 to 10 years for medium term interventions and over 10 years for long term interventions.

Strategic Transport Corridors (i.e. trunk roads and main district distributor roads throughout West Lothian)	Constraints	Short term interventions	Medium term interventions	Long term interventions
M9	Newbridge (Junction 1). A8, A89, M9 slips and M9 link slips	Bus lanes/hard-shoulder running for buses on the approaches to Newbridge roundabout.	Park and ride sites at Winchburgh and Winchburgh rail station	Bus lanes/hard-shoulder running for buses on the M9
M8	Link volumes Capacity constraints at Junction 1 (Hermiston)	Park and ride at Heartlands, Whitburn at new junction 4a.		Bus lanes/hard-shoulder running for buses on the M8 junction 3 to Newbridge roundabout. Livingston Park and Ride adjacent to junction 3.
A89	Boghall Roundabout, Bathgate Kilpunt Roundabout, Broxburn Newbridge Roundabout	Kilpunt roundabout improvements part of the WLLP infrastructure requirements for the Broxburn CDA. Bus lanes on the approach from Newbridge commencing at Kilpunt, East Broxburn	Boghall roundabout improvements subject to further impact from developments. Delivery of park and ride site at Kilpunt.	
A71	Link volumes Lizzie Brice Roundabout Wilkieston A71/B7030 junction	Improved park and ride at Kirknewton Station. Calderwood CDA requirement to alleviate capacity issues. Calderwood CDA requirement to alleviate capacity issues	A71 supplementary planning guidance identifying medium term bus priority measures. Improved park and ride at West Calder rail station. Calderwood CDA requirement to provide west half of a northern Wilkieston bypass	A71 supplementary planning guidance identifying longer term bus priority measures. Further impact depends on preferred site strategy and will need to be included in modelling work.

Strategic Transport Corridors (i.e. trunk roads and main district distributor roads throughout West Lothian)	Constraints	Short term interventions	Medium term interventions	Long term interventions
A899	Deer Park Roundabout, Livingston Lizzie Brice Roundabout, Livingston Dechmont Roundabout, Livingston	Some peak hour congestion. Further impact depends on the preferred site strategy for the LDP and will need to be included in modelling work. Roundabouts require to be assessed as part of any transport assessment for developments that affect them.		
A801	"Missing link" across the Avon Gorge.		Identified in Strategic Transport Projects Review as Grangemouth Road & Rail access upgrade being promoted by Falkirk Council.	
A801	Link and corridor capacity from A706 to J4 M8. Junction capacity also relevant.	WLLP requirement phase 1 upgrade M8 to J4M8 distribution access.	WLLP requirement of phase 2 upgrade J4M8 distribution access to Pottishaw roundabout	
A706	Pottishaw Roundabout, Bathgate		Widening of approach lanes as part of the dualling of the A801 (see above) or through ongoing development at Southdale, Armadale.	
A705	Toll Rounadabout, Kirkton, Livingston A705 Simpson Parkway Junction, Livingston.	Junctions require to be assessed as part of any transport assessment for developments that affect them.	Gavieside CDA infrastructure to support sustainable development.	Any improvements would be dependent upon traffic impacts from future developments

Strategic Transport Corridors (i.e. trunk roads and main district distributor roads throughout West Lothian)	Constraints	Short term interventions	Medium term interventions	Long term interventions
Strategic Transport Cycling Facilities Long distance routes Local routes Recreational routes	Lack of complete route, local routes and connections	Study into developing sustainable cycle transport in WL including assessment of long-term cycle infrastructure – With rising costs some of the existing cycle infrastructure may reach capacity in the next 10-20 yrs.		
Continuous east – west connections	Existing gaps in network	Provision or completion of inter-urban routes in the A89, A71, A705 corridors		
North-south connections	Lack of safe and/or convenient routes		Construction of routes between Linlithgow and Broxburn/Livingston/Bathgate and onwards, e.g. Armadale to Whitburn and Blackburn to West Calder	
Urban networks	Lack of safe and convenient and safe urban cycle networks	Improvements to the Union Canal towpath and its access points in Linlithgow and Broxburn and Winchburgh require progression.	Apart from Livingston, there are very few dedicated cycle paths in the district. A network of paths linking residential area, schools, shopping areas and other main destinations need to be provided to encourage cycling. These need to link to the inter-urban routes mentioned above.	

Strategic Transport Corridors (i.e. trunk roads and main district distributor roads throughout West Lothian)	Constraints	Short term interventions	Medium term interventions	Long term interventions
Strategic Transport Corridors - rail	Constraints	Short term interventions	Medium term interventions	Long term interventions
Edinburgh to Glasgow Queen Street via Linlithgow	Lack of capacity at peak times Length of platforms	EGIP is underway to improve journey times and increase passenger capacity. Delivery of Winchburgh rail station to co-ordinate with EGIP works at Winchburgh tunnel.		
Edinburgh to Glasgow Central via Shotts	Kirknewton level crossing delays	Phased delivery of Kirknewton park and ride improvements. Network Rail has abandoned the plan for a new underbridge. Full barriers will be installed instead. The impact of the new measure on traffic is unknown at this point in time.	Phased delivery of Kirknewton park and ride improvements. Phased delivery of park and ride improvements at West Calder station.	Phased delivery of Kirknewton park and ride improvements. Phased delivery of park and ride improvements at West Calder station.
Public Transport				
North-south connections	Lack of frequent and convenient bus services, particularly at weekends and in the evening	Work with bus operators to identify viable services or provide more subsidised services.		

Source: West Lothian Council Roads and Transportation Service

Other Issues

- 4.3.17** The summary of the assessment of the other issues demonstrates that the approach to green networks will have significant positive environmental effects across a number of environmental assessment topics, e.g. air, biodiversity, landscape & townscape, population & human health, and water. This positive impact will also help to mitigate some of the negative effects of the development strategy and it should be noted that there is a close relationship between green networks and the strategy as delivering the green network will be dependent in part on the development arising from the strategy. On the whole, the approach to the built and natural heritage will have significant positive environmental effects on the environmental assessment topics of cultural heritage, landscape & townscape, and material assets. Affordable housing and housing amenity will have significant positive effects on material assets and population & human health.
- 4.3.18** Mineral working in general will affect the environment, potentially bio-diversity, cultural heritage, landscape, soils and water, but actual effects are unknown at this stage as there is uncertainty as to what parts of potential areas of search may be worked. Appropriate restoration and aftercare can result in environmental benefits.
- 4.3.19** As regards the approach to infrastructure and waste, the actual locations for infrastructure facilities are unknown, other than the council's waste disposal site at Deans, Livingston, and the effects are generally unspecified. There are however some positive effects, relating to sustainable transport, waste minimisation and provision of greenspace and active travel opportunities. Mitigation for any negative effects will be through the inclusion of biodiversity, landscape and other environmental criteria in policies, and through specifying green network requirements.
- 4.3.20** The scale of development arising from possible changes to rural housing policies is marginal, although the policy on "Lowland Crofting" is under review, and the environmental impact is similarly expected to be limited. Any development will seek appropriate biodiversity and landscape improvements.
- 4.3.21** The preferred approach to climate change will generally result in positive effects, for example in respect of air, biodiversity, energy efficiency of buildings and soils. The proposed approach to renewables has uncertain effects on the landscape, and may be assessed as having uncertain effects on the contribution towards generating renewable energy, due to the more restricted scale of policy support in the MIR.
- 4.3.22** Support for conservation areas, landscape designations (as amended for candidate Special Landscape Areas) and the newly designated Historic Battlefield at Linlithgow Bridge will generally have positive environmental effects.

Assessment of the Policies

- 4.3.23** The MIR includes the review of the WLLP 2009 policies. This identifies those policies that will remain (with or without changes). Where the changes may be more significant, these are generally discussed under the issues/question topics in the MIR, and are therefore assessed for environmental assessment purposes under the assessment of issues, with the results summarised above.
- 4.3.24** Table 14 below summarises the policy assessment. Appendix 1A provides the detailed policy assessment matrix testing each policy against the environmental assessment criteria. All the potential policies of the WLLDP are tested, not just those that are likely to be subject to changes.

Table 14 - Summary of the likely environmental effects of the policies to be included in the WLLDP

Environmental Topic	Policies with effects that are likely to be:			
	Beneficial	Uncertain	Adverse	No Effects
AIR	ENV 1-23, 25-28; HER2-14, 17-25; EMP1-12; HOU 1-11; TRAN 1-26, 31-34; TC11-15; COM 1-10; NWR 5, 8-18, 20-29; IMP 1-5, 9,14,15	IMP 16&17	ENV 24, 29&30, 31-34,35, 36-39; TRAN 27-30; NWR 1-4	All other policies
BIO-DIVERSITY	ENV 1-23, 25-30; EM1-6, 8-10; TRAN 7-15; COM2; NWR5; IMP 6-7, 14-15	<u>ENV 31-39</u> ; HOU 1-11; COM11-12; <u>NWR 1-4</u> ; 6-29 IMP 4-5, 13, 16-17	<u>ENV31-39</u> ; TRAN 17-30; <u>NWR1-4</u>	All other policies
CLIMATIC FACTORS	ENV1-5, 10-16, 19-23, 29-30; EMP1-12; HOU 1-11; TRAN1-26, 31-34; TC 1-15; NWR 20-24; IMP 4-8, 14-15	ENV 25-28, <u>31-34</u> , 35; NWR 6-19, 39; HER2-25; <u>HOU 1-11</u> ; <u>NWR 1-4</u> , 6-19	ENV7-9, <u>31-34</u> , 35, 36-39; HOU4-11; TRAN 27-31; <u>NWR1-4</u>	All other policies
CULTURAL HERITAGE	ENV 10-14, 17-18, 19-23, 25, 28, 29, 30; HER2-25; EM7; HOU1-11; TRAN1-5,7-10, 31-34; TC 1,7-15; COM1-31; NWR5-7,19-29; IMP9-12,14,15	ENV 15&15a, 31-34,35,36-39; TRAN11-13, 16; NWR 11-18; IMP16,17	IMP 13	All other policies

LANDSCAPE & TOWNSCAPE	<u>ENV 1-5, 7-15a, 17-23, 29-30</u> ; HER2-25; EM4; <u>HOU1,10</u> ; TRAN11-13, 17-26; COM1-6, 8,11-12; <u>NWR19, 20-29</u> ; IMP 1-3, 14, 15	<u>ENV1-5, 15&15a 29&30, 31-34,35,36-39</u> ; <u>HOU10, 11</u> ; TC1-15; COM 9,9a,10; <u>NWR 19, IMP6-8, 13</u>	TRAN 27-30, IMP13	All other policies
MATERIAL ASSETS	ENV1-6, 19-23; <u>HER2-25</u> ; EM1 -12; TRAN 11-13,17-24, 22-26; TC 1-15; COM 1-10, 13,15; <u>NWR1-29</u>	ENV 7-9 ,10-14, 15&15a, 16, <u>31-34, 35, 36-39</u> ; HER 2-25; HOU 1-2, 4-11; TRAN 27-34; COM 7, 11, 12; <u>NWR 1-29</u> ; IMP 13	<u>ENV 31-34, 35, 36-39</u>	All other policies
POPULATION & HUMAN HEALTH	ENV1-5, 15&15a, 16-23; HER 2-25; EM 1-6, 8-12; HOU1-11; TRAN 1-26, 31-34; TC1, 15; COM2, 9-1 13, 15; NWR 5, 8-29; IMP 15	ENV 7-9, 10-14, 31-39; TRAN 27-30; COM 1-6, 7, 8, 11, 12; NWR 1-4, 6-7; IMP 17		All other policies
SOIL	ENV 1-16, 19-23, 25-28, 29-30; EM 1-6, 8-12; HOU 1-11; NWR 5, 8-10 19-29; IMP 6-8, 14-15	COM 2, 9, 9a ,10; NWR 6, 6a, 7; IMP 16-17	ENV 31-34, 35, 36-39; TRAN 17-21, 22-26, 27-30; NWR 1-4	All other policies
WATER	ENV 1-23,29&30; IMP 4-8, 14-15	ENV 24, 31-39; EM 1-12; HOU 1-11; TRAN1-13, 16-34; TC 1-15; COM 1-10; <u>NWR 1-29</u> ; IMP 1-3, 16		All other policies

Note: Where a policy is underlined, this highlights that the effects have been classed as both beneficial and uncertain for the same environmental assessment topic. This can arise as the topics include a number of separate assessment questions, which can produce different assessment results.

- 4.3.25 The assessment of policies for this MIR addresses 180 policies, as well as 8 main issues. Approximately 20 policies are assessed as having potentially significant adverse effects, and this relates to development in the countryside, road schemes, housing allocations and mineral extraction policies.
- 4.3.26 The effects of many of the policies are uncertain and rely on cross-compliance with other policies. The uncertainties are related primarily to some of the environmental, housing, economic, retailing, transport, waste and mineral policies.

4.3.27 It should be noted that some of the policies have been assessed as having both beneficial and uncertain effects for the same environmental assessment topic. This has resulted due to each topic covering a number of environmental criteria, the assessment of which has generated a different result. The policies where this has arisen are highlighted in the table above.

Development site allocations - Preferred strategy

4.3.28 The development strategy for this WLLDP MIR includes a total of approximately 308 proposed allocated sites. All of the potential 226 development sites submitted for consideration under the “Expressions of Interest” stage were also subject to assessment and are included in this ER. Appendix 2B presents the results of the assessment. The summary of the results are set out in Table 15 below. As some of the SEA topics below include several assessment criteria, there is potential for sites to both meet criteria and to have a negative assessment for the same environmental topic. The table flags this up in the ‘mixed/ uncertain’ category.

Table 15 - Summary of the likely environmental effects of the development site allocations (results from Appendix 2B to be tabulated)

Environmental Topic	Sites meeting criteria	Sites with a negative assessment	Sites with mixed/uncertain effects	Comments
AIR	273	7	180	
BIO-DIVERSITY	329	0	136	
CLIMATIC FACTORS	257	59	147	
CULTURAL HERITAGE	412	0	45	
LANDSCAPE & TOWNSCAPE	199	9	264	
MATERIAL ASSETS	180	0	284	
POPULATION & HUMAN HEALTH	358	99	1	
SOIL	252	204	6	Greenfield sites release
WATER	382	11	14	

4.3.29 From the above assessment summary for the preferred selection of development sites, it is considered that some of the negative results can be resolved, either completely or in part, through the development process. Detailed layouts can accommodate preservation of cultural heritage features; and Flood Risk Assessments can identify the measures to avoid flood risk within a site and elsewhere. The WLLDP will require some sites to include significant structural landscaping and consider green network opportunities and new open space and this will address some of the landscape impact of developing the sites. It is noted that for some sites there are wider views, and therefore the landscape impact is more extensive and may be harder to overcome. However, the nature of the West Lothian landscape makes this difficult to completely avoid if the requirement for development land has to be met.

Development site allocations - Reasonable alternatives

4.3.30 This WLLDP MIR tests only 12 sites as reasonable alternatives to the preferred development strategy. As with the preferred sites it is concluded that although there are some negative results, some of these can be resolved, either completely or in part. The requirements identified in paragraph 4.3.25 above, relating to the resolution of issues for the preferred sites, are equally relevant to the reasonable alternative sites.

Table 16 - Summary of the likely environmental effects of the reasonable alternative development site allocations

Environmental Topic	Sites meeting criteria	Sites with a negative assessment	Sites with mixed/uncertain effects	Comments
AIR	5	1	7	
BIO-DIVERSITY	4	1	8	
CLIMATIC FACTORS	2	3	5	
CULTURAL HERITAGE	9	0	3	
LANDSCAPE & TOWNSCAPE	0	4	7	Site 29 effect village;31 entrance to village; 68 village allotments ;111 landscape impact
MATERIAL ASSETS	0	4	7	
POPULATION & HUMAN HEALTH	10	3	0	
SOIL	1	11	0	Numerous sites have impact on peat
WATER	7	1	4	

4.4.0 Assessment of the WLLDP MIR cumulative, synergistic and other Effects

- 4.4.1** The Environmental Assessment (Scotland) Act 2005, requires that short, medium and long-term; permanent and temporary; positive and negative; and secondary, cumulative and synergistic effects are included in the ER where reasonable to do so. In general the assessment undertaken and expressed in the sections above address the short, medium, long-term, permanent, positive and negative effects. The WLLDP has a timescale of 10 years from adoption, however in reality the delivery will be extended beyond this period. Some of the allocations will be developed promptly, whilst others, especially within the CDAs and due to the size of sites, delays in infrastructure delivery and the need for masterplanning, will take time to start, and then a lengthy period for development to deliver in full. It is therefore difficult to differentiate and assess the short, medium and long-term impacts. This Plan builds upon the allocations identified in the WLLP 2009, many of which are only now under construction, or in some cases not yet commenced. The regular and frequent updating of development plans means that there will be an ongoing issue whereby it will not be possible to separately identify short, medium and long-term impacts of any one Plan with each consecutive Plan overlaying on the previous one.
- 4.4.2** The assessment generally considers the permanent effects. It has not identified any issues that would be temporary only. However it is worth noting that for some of the negative effects identified, the WLLDP will require mitigation. For example, measures will be required to avoid flooding, green network proposals to compensate for the loss of open space, significant structural landscaping to minimise impact on landscape and townscape; these measures could be seen as having the effect of altering the negative impacts to that of a temporary nature.
- 4.4.3** Cumulative effects, in the context of this environmental assessment, are the effects that are increased in magnitude by successive additions. Synergistic effects are those where the combined effects are greater than the sum of the separate effects. As synergistic effects necessarily rely on cumulation, both of these effects can be considered together. Both positive and negative cumulative and synergistic effects should be considered.
- 4.4.4** The assessment method in respect of policies is confined to a general overview, by way of professional judgement, of the beneficial, uncertain and negative effects recorded in the matrix in Appendix 1 and summarised in Table 14. The method of assessment of the allocations, however, considers the combination of results in Appendix 2, and also takes into account the outstanding WLLP 2009 development allocations.

- 4.4.5** As identified previously, there is a significant degree of uncertainty in respect of many policies but it is difficult to draw any conclusions that these uncertainties could themselves generate cumulative or synergistic effects. However, it is relevant that the WLLDP will contain a wide range of environmental conservation and enhancement policies that are likely to have beneficial cumulative and synergistic effects on the environment of West Lothian. Environmental changes will be likely to give rise to improvements to landscape distinctiveness and potentially enhance bio-diversity and vice versa. The WLLDP MIR gives added scope for such interactions through its support of the green network policy/ proposals. These effects are, however, difficult to quantify, particularly at this early stage in their implementation across the council area.
- 4.4.6** The WLLDP development strategy directs development to the Strategic Development Area. The SDP and supporting supplementary guidance specifies the total requirement for housing and employment land. The requirements cannot be transferred between Strategic Development Areas, nor exported outwith West Lothian. The scale of development is such that there is potential for cumulative and synergistic effects of the development allocations. The cumulative and synergistic effects will be further extended when the allocations are added to committed, but not yet developed, sites.
- 4.4.7** Table 15 and Appendix 2B show that, across the Strategic Development Area, there would appear to be consistency of cumulative effects. The negative effect on soils (loss of prime agricultural land) and greenfield land is significant, and is unlikely to be resolved, as there are limited options available for brownfield/non-prime sites. Many of the sites will require a Flood Risk Assessment, which will address the issues of the individual site, but also impact beyond. A Strategic Flood Risk Assessment has been prepared on the WLLDP MIR strategy (available as a Background Paper) and this has allowed the cumulative impacts of development on flooding risk to be considered, within the scope of current knowledge and advice.
- 4.4.8** The assessment of the West Lothian Strategic Development Area notes that a number of sites could have landscape impact over wider views. Added to the effect of committed, but undeveloped sites within the SDAs there will have a potentially negative cumulative impacts on the landscape of this development area. The possibility of coalescence has been identified in a number of locations, at Calderwood and West Livingston/Gavieside. Most of these locations were previously identified in the WLLP 2009 and additional development will have a cumulative impact on settlement separation/community identity. The WLLDP will continue to include a policy to protect settlement boundaries but will promote visual separation provided by green network proposals to enable development of sustainable sites.
- 4.4.9** These cumulative and synergistic effects are to be expected where the Plan is required to identify large sites capable of accommodating significant amounts of development, following on from already significant development requirements arising from previous development plans. The effects cannot be avoided because the WLLDP must meet the SDP housing and employment land requirements. The effects can be mitigated, and the Plan will include appropriate provisions to do so.

4.5.0 Measures for the prevention, reduction and offsetting of significant adverse effects

- 4.5.1** The WLLDP MIR preferred strategy has been informed by the development site assessment exercise including landscape appraisal, strategic flood risk assessment, accessibility analysis, transport modelling, a review of local landscape designations, all measures utilised to 'prevent' significant adverse effects of the strategy where this has been possible.
- 4.5.2** Mitigation measures can be used as a means to prevent or reduce the potential adverse environmental effects that may arise from the implementation of the Plan. It is not considered possible to identify a list of specific measures in the Plan, however mitigation measures can be set out in other policies. The main mitigation measure of the WLLDP will be the application of all relevant policies. The Plan will retain the full range of resource protection policies as included in the WLLP 2009, subject to those identified in the MIR for removal or change. Even if the development policies or other sections of the Plan do not refer specifically to the environmental protection policies, these resource protection policies will nevertheless apply and will be used to mitigate the effects of development on the environment. These policies will avoid or reduce the potentially adverse effects of development on the landscape and visual impacts, bio-diversity, the built and historic environment, air, water, soils, material assets, and on people. Where the sites assessments have identified potentially negative or uncertain effects, the Plan can include specific requirements, for example, the need to prepare a Flood Risk Assessment, or a requirement to consult the council's Archaeology agent before detailed designs for development can be prepared and for a watching brief, partial or full excavation conditions placed on planning applications.



5.0 Monitoring

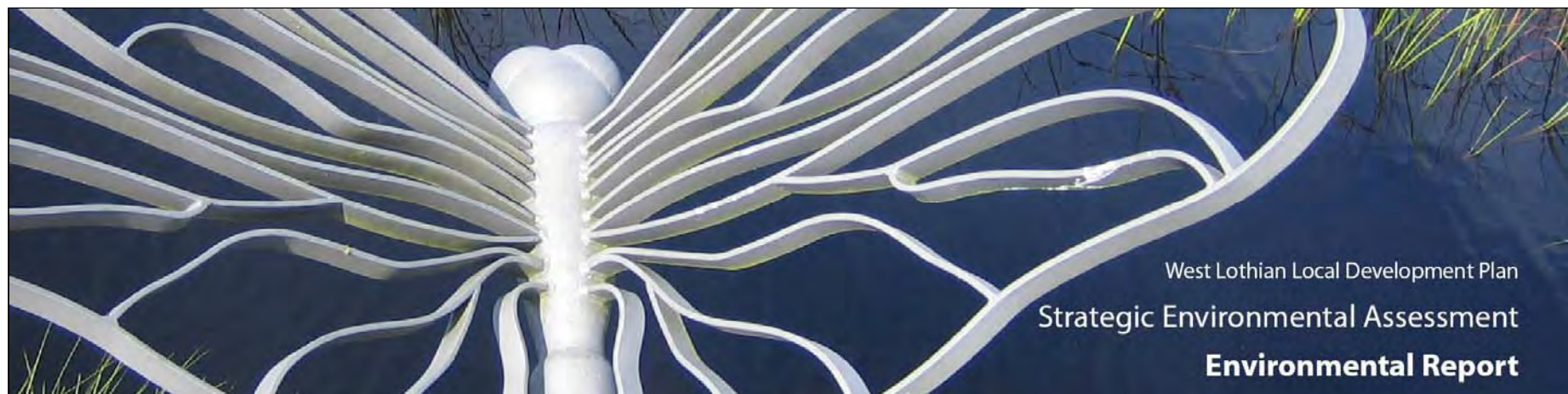
5.1.0 Measures for SEA monitoring of the WLLDP

- 5.1.1 To comply with section 19 of the Environmental Assessment (Scotland) Act 2005, and as set out in Schedule 3, the ER is required to include “a description of the measures envisaged concerning monitoring” of the significant environmental effects of the implementation of the Local Development Plan in order, amongst other things, to identify at an early stage unforeseen adverse effects, so that appropriate remedial action can be implemented.
- 5.1.2 As the Council was exempt from preparing an ER for the WLLP 2009 no major monitoring of environmental assets was undertaken, other than preparing the annual Monitoring Report for the overall plan.
- 5.1.3 Following the adoption of the WLLP 2009, the first monitoring report was published in 2010 and set out progress against a number of key indicators. The report also provided an overview of the demographics, housing, and retail, economic and environmental trends in the plan area.

5.1.4 It is proposed for monitoring of the significant environmental effects of the WLLDP to focus on key environmental effects. At this time it is difficult to estimate what might be significant. However, it is proposed that the following aspects of the implementation of the Plan are monitored:

- ◆ **Bio-diversity:** review how allocated and windfall sites address bio-diversity loss/mitigation/compensation;
- ◆ **Green Networks:** consider the contribution from allocated and windfall sites to providing components of the proposed green network;
- ◆ **Greenfield/Brownfield:** analyse the proportion of windfall development which is on greenfield or brownfield land;
- ◆ **Sustainable Urban Drainage Systems (SUDS):** analyse the implementation of SUDS through monitoring of the adoption of SUDS features. There is currently uncertainty as to the process of adoption, and only once this is clarified will it be possible to undertake monitoring;
- ◆ **Flooding:** it is suggested that, firstly monitoring is undertaken in respect of the number of properties within the indicative 1:200 year flood zone at the commencement of the Plan period, and 4/5 years later, on commencement of the Plan review; and secondly, that for all allocated and windfall sites where SEPA has recommended that a Flood Risk Assessment is undertaken, how the development process has accommodated the recommendations; and
- ◆ **Cultural Heritage:** analyse how the proposals for allocated and windfall sites have addressed features of cultural heritage interest, e.g. Scheduled Ancient Monuments, local archaeology, Historic Gardens and Designed Landscapes, including mitigation or compensation arrangements.

5.1.5 The proposed monitoring set out above will be looked at in more detail as the WLLDP process progresses and staff resources allow. It is likely that the monitoring of the majority of the above items will be carried out either annually or biennially, subject to resources. The views of the Consultation Authorities would be welcomed to ensure that the monitoring is relevant. Support in providing necessary information, particularly ecological, if not readily available to the Council, would also be welcomed.



6.0 Habitats Regulation Appraisal

6.1.0 Assessment of the Main Issues Report under the Habitats Directive and Regulations

- 6.1.1** The Conservation (Natural Habitats, & c.) Regulations 1994 require that certain plans which are likely to have a significant effect on a 'Natura 2000' site must be subject to an "Appropriate Assessment" by the plan-making authority. The process for determining whether an appropriate assessment is required, together with the appropriate assessment itself - where necessary - is known as 'Habitats Regulations Appraisal' (HRA). Natura 2000 is the Europe-wide network of protected sites developed under the European Commission Habitats Directive (Directive 92/43/EEC) and the Birds Directive (79/409/EEC)
- 6.1.2** Where an appropriate assessment is required, plan-making bodies may not usually adopt the plan unless, following that assessment, they can conclude that the plan would not adversely affect the integrity of any Natura 2000 site. Plan-making authorities must consult Scottish Natural Heritage (SNH) as part of any appropriate assessment. Circular 1/2009 "*Development Planning Appendix 1: The Habitats Regulations*" explains that the term 'Habitats Regulations Appraisal' is used to encompass both the 'screening' process for determining whether an 'appropriate assessment' is required, as well as any 'appropriate assessment' under regulation 85B(1). An 'appropriate assessment' under regulation 85B (1) is only required where the authority determines - through the 'screening process' - that the plan is likely to have a significant effect on a European site.
- 6.1.3** The Circular sets out the requirements for each of the main stages of a LDP, and these are:

Main Issues Report

- ◆ Screen to identify implications for European Sites and amend options where necessary.
- ◆ Continue to consider implications for European sites for preferred options.

Proposed Plan

- ◆ Prepare record of HRA to include screening (determination of likely significant effects) and, if necessary, appropriate assessment.

The screening process has been undertaken for the Main Issues Report and the following information provided to SNH.

6.1.4 In the WLLDP area, there is only one Ramsar site, which is also a Special Protection Area (SPA), covering the Firth of Forth. There are two Special Areas of Conservation (SAC) at Blawhorn Moss, near Blackridge and Craigengar in the Pentlands. It is therefore necessary to consider whether the Plan would be likely to have a significant effect on the interest features of the Firth of Forth, Blawhorn and Craigengar, taking account of their conservation objectives. The SPA/Ramsar sites are principally classified/listed for their internationally important bird populations. Both Blawhorn and Craigengar are designated for their raised bogs which is a priority habitat in the Directive.

6.1.5

The Finalised West Lothian Local Plan was approved in 2005 for formal comment and objection. It contained specific policies to protect Natura sites, policies that support these through the protection and enhancement of biodiversity and landscaping, and general environmental policies that address pollution, river catchment management and developer requirements. No specific proposals arise in the local plan that will occur within Natura sites. Proposals that might impact upon Special Areas of Conservation are countered by protective policies to safeguard the integrity of their conservation interests. It is recognised, however, that development within the catchment of the River Almond could generate water pollution that enters the Firth of Forth Special Protection Area (SPA) through the river system. To address this, comprehensive policies to address water quality and quantity arising from development sites have been introduced in line with the requirements of the Water Environment and Water Services (Scotland) Act 2003 and the Scottish Environment Protection Agency. The original proposal to safeguard a section of the strategic National Cycleway Route (NCR 76) created parallel to the coastline and boundary of the Forth Estuary SPA and Ramsar Site, within West Lothian, was assessed as creating a likely significance effect of neutral – negative.

6.1.6

SNH previously commented on the Statement of Compliance (for Article 6(3) of the Habitats Directive) in April 2008. The council considered these initial comments and revised the Appropriate Assessment (AA) to reflect these comments. The AA also included amendments made as part of the Local Plan pre-adoption modifications. In August 2008, SNH confirmed that were of the view that the Statement now assesses all policies and proposals which will have a likely significant effect on European sites and that the policies and proposals within the West Lothian Local Plan would not adversely effect the integrity of any European sites. SNH also noted that policies ENV 3, ENV 4 and ENV 6 had been modified to ensure that these policies are consistent with the Habitats Directive. These modifications have been assessed and SNH agreed with the conclusion that these policies are not likely to significantly effect qualifying interests of any European sites

6.1.7 Consequently, for the following reasons, the Council is inclined to conclude that the Local Development Plan, as currently anticipated, could not of itself give rise to any significant undermining of the sites' conservation objectives:

- ◆ Firstly, in implementing the currently proposed SDP, a Plan with which it must conform, the WLLDP's allocations will be restricted to the 'Strategic Development Area', which is in close proximity to the sites. Each development site is also being checked through the environmental assessment to ensure that it does not have any significant negative effect on such sites. It does not seem that these proposals could affect the habitats of the SPA birds directly, for example through land-take, or indirectly through such means as hydrological changes, or cause disturbance to the birds that may be significant for their conservation.
- ◆ Secondly, it is anticipated that policy ENV 3 of the current WLLP 2009 will be rolled forward to the WLLDP. Policy ENV 3 protect the sites from all development, allocated or not, in line with the requirements of the Directive and Regulations.

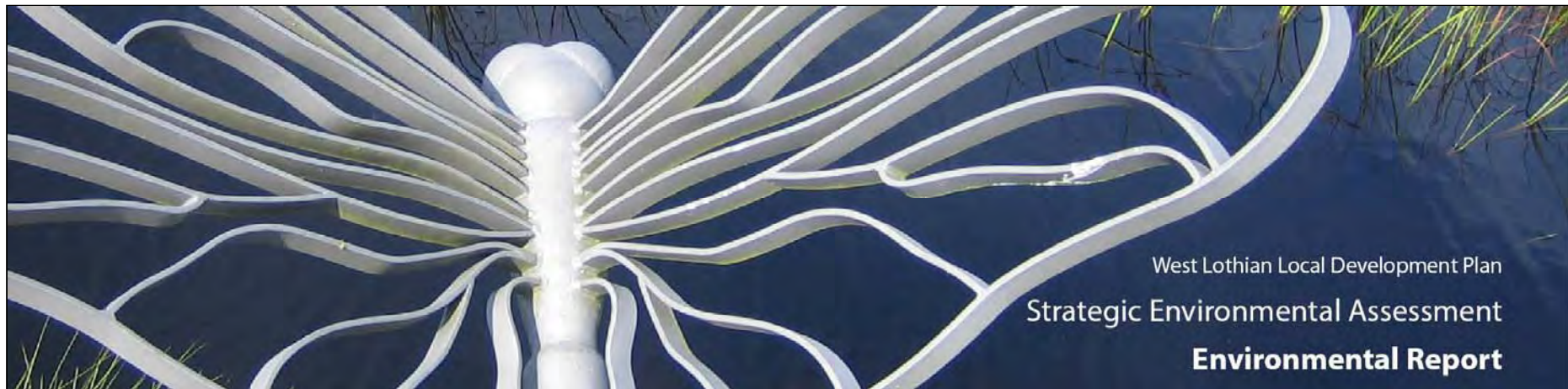
6.1.8

SNH responded to the above screening opinion by the Council, advising that in general, they agreed with the issues identified but pointed out the requirement for a Habitats Regulations Assessment (HRA) – a mandatory part of the process to assess potential effects on Natura sites. They suggested in order to achieve savings in time and resources, the early stages of SEA and HRA could be combined where appropriate. It is however important that the findings of both appraisals are documented separately and that the correct terminology for HRA is used.

6.1.9 SEPA has advised that they were generally content with the scope and level of detail proposed for the Environmental Report. They welcome the description of the context of the LDP and the development of the environmental objectives building of existing SEA work as they were of a view that it is important that the SEA of the LDP is able to incorporate matters which flow from higher level SEAs, particularly the SESplan SEA. They

pointed out this is of particular relevance where significant effects have been identified and where mitigation measures refer to lower level plans. The link between higher level SEAs and the SEA of the LDP will also provide opportunities to avoid duplication of work and focus the SEA.

6.1.10 Any changes to the WLLDP, arising either from the consultation on the MIR , or the supplementary guidance for the SDP will be subject of further screening, and if this identifies potentially adverse impacts on the West Lothian Natura 2000 sites, an appropriate assessment will be undertaken.



7.0 Next Steps

7.1.0 Programme for the West Lothian Local Development Plan and Environmental Assessment

7.1.1 The programme for the WLLDP and the associated environmental assessment is set out in the Development Plan Scheme for West Lothian No.6A March 2014. This identifies the next stages as follows:

Table 16 - Development Plan Scheme No' 6A

Anticipated Date	Action/milestone
Summer 2014	Consultation on WLLDP Main Issues Report and Environment Report (informed by Monitoring Statement, including Baseline Environmental Data)
Spring 2015	Publication of Proposed WLLDP, updated Environmental Report (along with Action Programme)
minimum 8 weeks	Formal representation period

Early 2016	Submission of Proposed WLLDP to Ministers together with Action Programme, Statement of Conformity with Participation Statement and Summary of Unresolved Representations
Within 12 months of WLLDP being published	Examination of Issues raised in unresolved representations by appointed Person
Autumn 2016	Adoption of WLLDP by Council following submission to Scottish Ministers
Autumn 2016	Notify SEA Consultation Authorities of WLLDP adoption and prepare Post-Adoption SEA Statement for submission to SEA Consultation Authorities
Winter 2016 & beyond	Refine SEA monitoring regime and undertake monitoring

7.2.0 Submitting comments on the Environmental Report

7.2.1 Comments can be submitted on this Environmental Report. The Public Engagement Exercise period for the WLLDP MIR is anticipated to run from **25 August to 17 October** and you can submit comments on the ER during that period also. Comments can be made online at:

♦ wlldp@westlothian.gov.uk

7.2.2 Comments can also be made in writing, and these should be addressed to:

♦ **Development Planning Team, Planning and Economic Development, County Buildings, High Street, Linlithgow EH49 7EZ.**

** Comments on the WLLDP MIR can similarly be made online or in writing, as above.*

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