

STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) OF THE WEST LOTHIAN LOCAL TRANSPORT STRATEGY

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1. INTRODUCTION

West Lothian's continuing economic, residential and business success means that improving our transport linkages and infrastructure is vital to the district's growing reputation.

It is for these reasons that West Lothian Council has been engaged in the development of a Sustainable Transport Strategy (STS) for the last 9 months. The STS has been seen as the prelude to the developing Local Transport Strategy (LTS). It has examined the transport patterns and issues within the district and provides the basis for a series of options for transport which will be assessed and packaged to provide a robust Local Transport Strategy.

LTSs are prepared by local transport authorities in Scotland to set out how they intend to deliver on national objectives at a local level, and provide an action plan for meeting local challenges and objectives for transport service delivery and maintenance of transport infrastructure. Although not a statutory document their importance and usefulness both at a local and regional level should not be overlooked. Evidence from south of the border highlights strengthening importance on transport plans in terms of central government / regional assembly funding. This theme is likely to be mimicked in Scotland in some form over the coming years.

In early 2005, the council realised that the introduction of the new Environmental Assessment (Programmes and Plans) Regulations meant that its emerging LTS would require a Strategic Environmental Assessment (SEA). Having committed to the SEA process the council volunteered its SEA (which has subsequently been accepted) for inclusion within the SEA *Pathfinder* project run by CoSLA and the Scottish Executive. This offer was accepted last autumn along with five other programmes and plans which vary from the Forestry Commission's forest strategy to Orkney Islands Council review of housing policy in the countryside.

The *Pathfinder* project aims to examine and promote best practice and guidance for SEAs in Scotland.

SEA has been defined (Scottish Executive, 2005a) as a process which:

- Integrates environmental decision making into plan/programme preparation and decision making;

- Improves plans and programmes and enhance environmental protection; and
- Increases public participation in environmental decision making.

This paper highlights the approach adopted by West Lothian Council in undertaking the SEA in parallel with the development of the LTS. In particular, it discusses important practical issues for SEAs of LTS (and other plans and programmes) and opportunities for good practice, by drawing on the experience from SEA of the West Lothian LTS to date.

2. REQUIREMENT FOR SEA

Until very recently, the requirement for SEA of relevant strategies in Scotland was established by the Environmental Assessment of Plans and Programmes (Scotland) Regulations 2004. This statutory instrument implemented the requirements of EU Directive 2001/42/EC *on the assessment of the effects of certain plans and programmes on the environment* (commonly known as the SEA Directive). Although the 2004 Regulations have now been replaced by the Act for plans and programmes started after 20 February 2006, the LTS is subject to SEA under the provisions of the 2004 Regulations.

It is worthy of note as an aside that the new primary legislation on SEA in Scotland does not limit the requirement for SEA to those plans and programmes only required by legislative, regulatory or administrative provision, but extends the scope to other plans, programmes (and strategies) which relate to matters of a public character. This is reflected in the breadth of the *Pathfinder* case studies.

3. BACKGROUND TO THE LOCAL TRANSPORT STRATEGY

3.1 Replacing the Current LTS

As noted in the introduction, West Lothian is the fastest growing council area in Scotland. Well positioned within the Central Belt the area continues to attract people who support both Glasgow and Edinburgh job markets. The current West Lothian Local Plan makes provision for over 24,000 new houses as required by the Edinburgh and Lothians structure plan, and approved by Scottish Ministers in 2004. In addition to housing there is also over 100ha of land for industrial / business development. The majority of this development is to be delivered through three Core Development Areas (CDAs) at Armadale, Livingston and the Almond Valley and Winchburgh/East Broxburn/Uphall.

The council's existing LTS, covering the period 2000 to 2005, therefore requires modernisation and updating to reflect the changing transportation, development and accessibility profile of the district. Although focussing on the three year period 2006 to 2009, it will also include policies and measures which have a longer time frame to reflect the period of the council's local plan. Work is now well underway on the new strategy.

3.2 The Sustainable Transport Study

The Council has undertaken a significant amount of preparatory work for the LTS through the development of its Sustainable Transport Study (STS) with support from WSP. The STS comprised the following stages:

- An examination of the demographic, economic and environmental status of the area;
- A detailed analysis of traffic and transportation issues including cross-boundary movements, internal district movements and specific transport problems;
- Policy review and development and prioritisation of transport objectives;
- Identification of a wide range of possible transport schemes to address the problems identified, and initial sifting of these measures against the study objectives;
- Packaging of schemes to be taken forward for further analysis in a number of alternative combinations; and
- Appraisal of alternative transport packages and assessment of their contribution to study objectives.

The STS identified and appraised a number of alternative packages of transportation schemes which were developed from the study to address existing pedestrian, cyclist, public transport and motorist issues within West Lothian. The appraisal was undertaken in accordance with the approach of Part 1 of the Scottish Transport Appraisal Guidance (STAG) and therefore took into account, inter alia, environmental issues.

Many of the alternatives developed and assessed in the STS are now being taken forward for further appraisal and preferred schemes and combinations will be presented in the final LTS (see Section 3.3). The SEA focuses on the environmental assessment of alternatives and the findings will be used to feed back into the final measures which are included in the strategy.

In addition, it is expected that the LTS will incorporate a range of other complementary transport measures, policies and responses to specific problems and opportunities such as proposals for maintenance of transport infrastructure, walking and cycling modes, road safety measures and other operational issues.

3.3 The New Strategy

The purpose of the LTS is to outline West Lothian Council's transport plans for the future in a local, regional and national context. The LTS addresses a wide range of transport and travel issues and aims to ensure that the future transport needs in the area are well mapped out.

The LTS process began last autumn with the preparation and publication of an Issues and Objectives Report (November 2005). This public consultation document set out a series of draft objectives for the LTS addressing economy,

environment, integration, accessibility and social inclusion, safety and maintenance. The report was issued for public consultation and responses received have now been analysed and amended to reflect consultation comments where appropriate.

LTS drafting is now underway by the council, drawing on the following strands of work:

- the strategic studies undertaken for the STS;
- stakeholder and public response on the LTS Issues and Objectives Report;
- relevant transport measures identified from other recent studies including the A71 Corridor Studies and the recently awarded study on the A89 Corridor;
- developing study work on the M9 (Linlithgow) corridor;
- emerging infrastructure improvements required through the West Lothian Local Plan;
- the Caledonian Express (Shotts Line service improvements) study;
- important national and regional transport commitments and proposals including the proposed Airdrie to Bathgate rail re-opening which crosses West Lothian and provides opportunities for integrated transport with local services at the proposed new rail stations; and
- bubbling issues such as road user charging, motorway bus lanes and the need for the new A801 Avon Gorge Crossing.

Transport and accessibility is of key strategic and local importance in West Lothian for the economy, communities and the environment. Whilst the LTS seeks to embrace and build upon national and regional transport and development proposals, its primary function (and its sphere of direct influence) is on local services and infrastructure in the control of the local authority. The LTS will therefore necessarily focus on these issues, whilst the broader objectives and policies in the strategy will set out the council's aspirations for regional and national integration. The council's involvement on the new SESTRAN regional transport partnership and on the Forth Estuary Transport Authority allows it to actively engage in key debates.

In undertaking the SEA for the LTS, it is important to establish at the outset that environmental effects will be assessed as a result of the LTS implementation. Whilst there is clearly the potential for environmental effects from the transport implications of development implied in the finalised Local Plan (for example from the significant new housing and growth potential in the three proposed CDAs), these are not the result of the transport strategy and can therefore only be considered in relation to the potential for cumulative effects between plans and strategies in the area.

4. APPROACH TO THE SEA

4.1 Environmental Baseline

The first stage in the SEA process involved deriving an appropriate baseline data set on the environmental conditions in West Lothian in as far as they are relevant to the level of detail and scope of influence of the LTS. A strategic approach was considered necessary as it was important to avoid the pitfall of expending too much time and resource in developing a baseline report which would be overly detailed for the level of appraisal required.

The scope of the baseline and the topics for the SEA were defined at an early stage through reference to the extent of the baseline environment and the requirements in Schedule 2 of the SEA Regulations for content of Environmental Reports. Table 4.1 indicates the breakdown of topics, criteria and key issues which were derived for the LTS SEA.

Table 4.1 SEA Topics

Environmental Topics	SEA Regulations Criteria	Key Baseline Environmental Issues
Air Quality and Noise	Air, Climatic Factors, Human Health	<ul style="list-style-type: none"> ■ Air Quality (concentrations of nitrogen dioxide (NO₂) and particulate matter (PM₁₀)) ■ Noise climate
Soils and Geology	Soil, Material Assets	<ul style="list-style-type: none"> ■ Designated Sites ■ Soil Resources
Aquatic Environment	Water, Climatic Factors	<ul style="list-style-type: none"> ■ Freshwater quality ■ Hydrological regime / channel characteristics ■ Flooding and flood risk
Climate Change	Climatic Factors	<ul style="list-style-type: none"> ■ Carbon dioxide (CO₂) emissions ■ Climate
Landscape and Townscape	Landscape	<ul style="list-style-type: none"> ■ Designated landscape areas ■ Landscape character
Biodiversity	Biodiversity, fauna and flora	<ul style="list-style-type: none"> ■ Ecological designations ■ Priority habitats and species ■ Habitat action plans
Cultural Heritage	Cultural Heritage	<ul style="list-style-type: none"> ■ Designated sites and buildings / structures
Human Health and Safety	Human Health	<ul style="list-style-type: none"> ■ Key health indicators ■ Transport safety
Population	Population	<ul style="list-style-type: none"> ■ Demographics

		<ul style="list-style-type: none"> ■ Accessibility
Material Assets	Material Assets	<ul style="list-style-type: none"> ■ Construction aggregates and waste ■ Fuel and energy consumption and efficiency ■ Transport infrastructure

It should be noted that the post-scoping workshop (section 4.2) that was held by the council did elaborate on this set of topics and assisted in developing a comprehensive picture of environmental conditions and issues in the district.

Environmental and land use data were gathered from the council, Historic Scotland, the Scottish Environment Protection Agency (SEPA), Scottish Natural Heritage (SNH) and a range of other stakeholders, as well as publicly available information sources. Information was sought wherever possible in digital and spatially representable format. Trend series were also requested to inform the analysis of environmental change. In common with other local authority areas, limited data were available on transport related noise, and on greenhouse gas emissions at the regional/local level. The assessment of transport measures will take account of these issues through analysis of traffic flow data as a proxy where possible.

The analysis was undertaken spatially wherever possible making extensive use of Geographic Information Systems (GIS) to assist in the interpretation and presentation of information.

Following initial collation and analysis of the data, internal workshops were convened where the project team brainstormed the issues and sensitivities which emerged from the baseline environmental information. The key issues and sensitivities for each environmental category were recorded using matrices. These were then presented and discussed at a workshop with external stakeholders (along with development of objectives) to create a degree of ownership in the SEA by external groups.

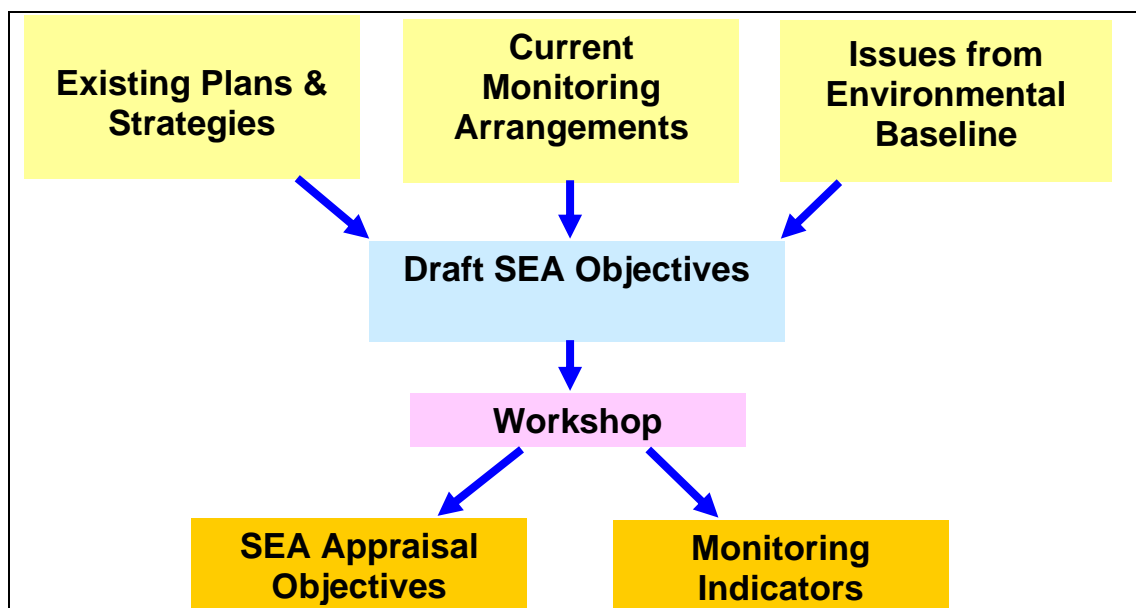
4.2 SEA Objectives

A range of potential objectives for the SEA were derived from a review of relevant strategies, plans and programmes. Although other plans (and legislation) were reviewed at the European, national, regional and local levels, the focus of effort was on regional and local policy since it was considered that these best reflected conditions and issues in West Lothian and such documents would also take account of prevailing national and international commitments and requirements. As with the development of baseline information, the approach adopted was a pragmatic one which sought to filter out unnecessary information (ie that which was overly detailed and/or related to aspects of the environment which would not be affected by transport plans) and to concentrate on issues relevant to the LTS and its SEA.

A long list of potential objectives was developed from this review, as well as through reference to generic objectives suggested in various guidance documents. The analysis of the baseline environment was also fed through into the development of objectives. The baseline issues and problems were therefore incorporated within the process of review and synthesis of environmental objectives and indicators, since they provided important information on the West Lothian-specific issues for the environmental resource and its protection.

Figure 4.1 illustrates the relationship between the environmental baseline analysis and the identification of SEA objectives.

Figure 4.1 Synthesis of SEA Objectives for LTS



A process of internal workshops was used to review the long list of objectives and indicators and to focus these to a workable draft framework for the environmental assessment. The objectives and indicators (and baseline issues) were then discussed with representatives from the council and other environmental stakeholders in a workshop in February 2006 which was convened specifically to agree the SEA framework.

Around 25 stakeholders attended the workshop. A wide range of interest groups attended including the National Farmers Union, Cyclists' Touring Club, British Horse Society, SNH and neighbouring local authorities.

Some of the key issues coming out of the workshop included:

- Density, scale and location of development;
- Reducing number of quiet roads;
- Recycling of construction material;
- Impact of increasing traffic in terms of noise and pollution;
- Salt contamination; and

- Design of new infrastructure to have landscape value and respect the natural and built landscape.

4.3 Scoping

Scoping for an SEA typically involves a preliminary environmental assessment of the plan under consideration together with presentation of information on the baseline environmental conditions, proposals for public consultation and an outline of the approach to the environmental assessment.

A Scoping Report was prepared for the LTS and submitted to the Scottish Executive's SEA Gateway in December 2005 for dissemination to the designated Consultation Authorities (Historic Scotland, SNH and SEPA). Formal responses were received from the Consultation Authorities in early 2006 which were generally positive and constructive though a range of detailed issues were raised. In response to these comments, further information was provided to the Authorities regarding the appraisal framework, baseline data (including data on cultural heritage, historic landscapes, groundwaters and ecological sites) and proposed approaches to assessing cumulative environmental effects. The consultation feedback from the Authorities has been used in the revision of the SEA framework and will be fed into the detailed environmental assessment process.

Being one of the first council plans to go through the Gateway process means that the council is not in a position to make any judgement on the process at this stage.

4.4 Environmental Assessment

At the time of writing this paper, the SEA team is about to embark on the detailed environmental assessment of the LTS. This process will involve close working between the SEA team and West Lothian's transportation team in order to integrate the assessment with the development of strategy, and the packaging of alternatives to the plan. This iterative approach will be crucial in achieving the desired objectives of SEA in relation to reducing environmental effects of strategy implementation in the longer term. Without this approach, SEA risks becoming a retrospective and "box ticking" exercise in the plan development process which is clearly not good practice.

The assessment will concentrate on the following aspects of the LTS:

- Strategy objectives;
- Strategy policies; and
- Packages of transport measures and schemes.

The appraisal will be undertaken based on the framework of objectives and indicators developed and tested at the workshop. A series of matrices have been prepared to guide the assessment and to allow for a tiered approach

such that, for example, LTS objectives can be appraised at a very strategic level, and increasingly detailed frameworks used for the appraisal of policies and specific actions and measures. It is proposed to adapt a 'worksheet' approach at the most detailed level whereby the environmental effects of the long list of potential transport schemes in the LTS can be tested on an individual basis.

In accordance with the Regulations, the level of detail of the SEA will be determined in large part by the detail available for the component parts of the LTS, particularly the location specific schemes and measures. The proposed SEA framework will also guide the level of environmental assessment to be undertaken, and provide a reporting mechanism at each stage of the process. It is intended that the completed worksheets and tables will be included in the Environmental Report (see Section 4.6).

It is important to recognise that the role of the SEA is not to undertake a detailed appraisal of projects within the Strategy but to identify the potential for significant environmental effects at an early stage for each alternative assessed and to feed these back into LTS development in order to reduce effects at source. Mitigation measures will then be developed for any residual effects predicted for the preferred Strategy.

4.5 Consultation

There has been a strong theme of consultation throughout the development of the LTS and the SEA to date. The key consultation activities undertaken, and those proposed are:

- Public and stakeholder consultation on the LTS Issues and objectives paper (November/December 2005);
- Initial contacts with data providers and stakeholders for baseline environmental information (October/November 2005);
- Consultation on the SEA Scoping Report with the Consultation Authorities (December 2005, follow ups in February 2006);
- Stakeholder workshop on SEA issues, objectives and indicators (February 2006);
- Targeted follow-up consultations with stakeholders in relation to environmental issues raised at workshop (March/April 2006);
- Public consultation on the draft LTS and Environmental Report (scheduled for summer 2006);
- Workshops on the draft LTS to be held with key transport, planning and environmental stakeholders during the public consultation stage (scheduled for summer 2006).

West Lothian has recognised the importance of seeking public and stakeholder input to the LTS process and the SEA to date has benefited significantly from consultation, particularly from the stakeholder workshop which allowed for an extensive exchange and discussion of ideas on the SEA, and which assisted WSP Environmental in refining the objectives and indicators for the appraisal framework. One of the key benefits for the council was the opportunity to seek stakeholder buy-in to the developing strategy.

4.6 Next Steps

The findings of the environmental assessment process (described in Section 4.4) will be presented in an Environmental Report (ER) which will be made available for public comment in parallel with the draft LTS, scheduled for this summer. The ER will present the final environmental baseline developed for the study, report the impact assessment matrices, describe the SEA process and its key stages and present agreed mitigation to reduce or offset predicted significant environmental effects of the Strategy and (importantly) the alternatives considered. The content will also reflect the requirements set out in Schedule 2 of the Regulations.

Following public consultation on the LTS and the ER, West Lothian Council will determine what changes may be required to the LTS. Further (or revised) environmental assessment may be required in response to changes to the Strategy. The ER and LTS will then be finalised in preparation for adoption by the Council and following adoption a statement will be issued to the Consultation Authorities setting out how the environmental assessment, and consultations have been taken into account in the LTS and proposed measures for monitoring of its implementation.

In recognition of the importance of SEA and the need to distribute best practice throughout all council services a SEA Steering Group has been established within the council. The group, chaired by the Director of Development and Environmental Services, is already benefitting from the work being undertaken on the LTS.

For example, the baseline data information collated for this strategy is currently being put on the council's intranet site to allow access by all service areas. Historic information is being digitised.

The development of a SEA library (intranet) has commenced which will be available to all service areas.

Guidance notes on SEA have been presented to the council's Corporate Management Team to raise their awareness.

The experiences gained through the LTS are also being reported back through the group.

SEA training sessions are currently being planned for colleagues to raise awareness.

5. ADOPTION OF BEST PRACTICE

The council's involvement in *Pathfinder* has meant that the council and WSP Environmental have focussed closely on the adoption of best practice throughout the SEA process. This has included closely following the trial SEA templates recently published (Scottish Executive, 2005a) as a model for reporting during the SEA process.

Relevant contemporary guidance on SEA has also been followed including on SEA of development plans (Scottish Executive, 2003), transport plans (DfT, 2004) and general SEA guidance (ODPM, 2005) (EC, 2004). More specific guidance on treatment of cumulative effects (Cooper, 2004) and climate change (EA, 2004) was also reviewed and incorporated as far as possible into the appraisal frameworks. Reference has also been made to pilot study feedback prepared by a small number of English local transport authorities (TRL, 2004a,b) on SEAs of Local Transport Plans.

Prior to the formal development of the LTS, extensive testing and appraisal of transport measures and options was undertaken on the STS in West Lothian. This included a Part 1 level appraisal following the Scottish Transport Appraisal Guidance (STAG) methodology. Although only a high level environmental appraisal is undertaken for Stage Part 1, the process demonstrates a proactive approach in identifying and appraising transport options, including evaluation of a series of possible alternative combinations of measures as indicative transport strategies.

There are clear synergies between the SEA process and STAG, particularly since STAG caters for a more strategic level of environmental assessment than traditional EIA of projects, and the approach advocated in STAG whereby environmental assessment is integrated with the development of the transport proposals. The purpose of both approaches is based on the premise that early consideration of environmental issues in the plan making process should help to reduce the environmental impacts of implementation of plans eg through the development of projects at a later stage. The SEA has drawn extensively on the work undertaken for the STS.

6. INTERIM COMMENTS/FINDINGS/CONCLUSIONS

From the work undertaken to date on the SEA of the West Lothian LTS, and from the authors' own experience from other projects, the following interim comments and findings can be drawn:

- Effective targeting of the baseline is important in ensuring that the level of detail is appropriate to the appraisal and that resources are not wasted in unnecessary collection and analysis of data.
- There is a diversity and increasing volume of guidance on SEA. Care is needed in filtering through this literature to ensure that the ER remains a focussed and understandable document and the temptation to over-

elaborate is avoided. Not all guidance being prepared is appropriate to SEAs in all circumstances and should not necessarily be viewed as “best practice”, particularly where overly detailed review and assessment processes are proposed.

- Adoption of the Scottish Executive’s trial templates in preparing the Scoping Report and Environmental Report has provided a useful tool although flexibility is needed in its adoption. Again, given the broad scope of SEAs for different plans and programmes, an overly prescriptive approach must be avoided.
- It is important in the generation and testing of options for the LTS that the alternatives developed are “reasonable”. Whilst the Regulations require consideration of alternatives, a pragmatic approach is required to ensure that the packages of measures developed and tested are realistic and contribute towards the ultimately defined package of measures within the preferred Strategy.
- During the SEA process of the West Lothian LTS it became clear that there will be environmental effects from the transport and traffic implications of the major development proposals in the Local Plan (particularly the Core Development Areas). Whilst these effects can be addressed to some extent through the cumulative assessment of the LTS and the Local Plan, they are clearly not the result of LTS implementation. These close links illustrate the desirability of considering the environmental effects of land use and transport plans in tandem.
- The project has demonstrated the importance of beginning the SEA early in the Strategy development process to allow time for an integrated approach which achieves the aims of SEA and follows best practice.
- Preliminary environmental assessment at the scoping stage of SEA can be difficult when there is limited detail on the strategy/plan available to the SEA team.
- There is significant value in stakeholder involvement in the process, both in developing and focusing the environmental baseline and appraisal framework, and as means of informing and engaging external parties in the process.
- The project will provide valuable experience to West Lothian Council as a learning process which will be used to reinforce ongoing training activities on SEA for internal staff.

Whilst the SEA of West Lothian’s LTS was still in progress at the time of writing, the work undertaken to date on the appraisal and the STS has provided sufficient material to present an interim paper.

The authors hope to develop this paper at the presentation to the conference in April.

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