Strategic Environmental Assessment of the Renfrewshire Local Transport Strategy
Environmental Report

Renfrewshire Council
January 2007

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1 Non-Technical Summary

1.1 The Renfrewshire Local Transport Strategy

The purpose of the Renfrewshire Local Transport Strategy (LTS) is to set out the Council's Aims and Actions for managing, maintaining and developing the transport network in the area. The Aims and Actions contained in the document provide the basis for bid applications for the funding of transport related projects and initiatives.

1.2 Strategic Environmental Assessment (SEA)

This Environmental Report presents the findings of a Strategic Environmental Assessment (SEA) of the Renfrewshire LTS. Faber Maunsell was commissioned by Renfrewshire Council to carry out the SEA and to produce this Environmental Report.

The purpose of SEA is to integrate environmental considerations within the LTS and this is done in two key ways. Firstly, SEA allows the potential environmental impacts of the draft LTS to be predicted and, where appropriate, these predictions can be used to inform the development of the final LTS. Secondly, in setting out the predicted environmental impacts in this publicly available Environmental Report, the public and other stakeholders can comment on the LTS and its potential impacts.

1.3 The SEA Process

Prior to the assessment of impacts, a Scoping Report was produced which set out the proposed method and level of detail for the SEA. This was submitted to the Scottish Executive and allowed Historic Scotland, Scottish Natural Heritage (SNH) and the Scottish Environment Protection Agency (SEPA) to provide comments and recommendations. The Scoping Report also set out relevant environmental problems, key aspects of the current state of the environment and relationships with other plans and programmes.

1.4 Consideration of Alternatives to the LTS

In the development of the draft LTS, a number of different approaches were considered. Key features of each of these four 'alternatives' are set out in Table 1.1 below.

These alternatives were appraised to determine the most appropriate approach. An appraisal was carried out using the Scottish Transport Appraisal Guidance (STAG) which analysed the likely effects of each alternative on the environment, safety, economy, integration and accessibility/social exclusion.

Based on the outcome of the STAG appraisal a preferred option was developed. The results of STAG indicated that in order to best meet the objectives of the LTS the preferred option should include elements of Options 1 and 3 and also be supplemented by measures to address essential car based travel and freight transport.

A package of transport measures was identified as the preferred option and taken forward to be subjected to more detailed environmental assessment as part of the SEA.

Table 1.1 Renfrewshire LTS Alternatives

Alternative / Option	Key Features
1. Integrated Transport	▪ High level funding for public transport development and integration to improve public transport facilities and reduce congestion ▪ New developments only on the basis of sustainability and operational Green Travel Plans
2. Car Based	▪ Road capacity improvements to minimise congestion ▪ Predict and provide for increased traffic volumes ▪ Parking availability at journey's end ▪ Decline in provision of and space available for public transport
3. Public Transport Only	▪ Additional bus facilities would improve bus journey times and reliability thus improving the attractiveness of the bus services ▪ High costs involved in public transport schemes therefore additional funding would be essential ▪ Regulation of certain routes would be required or Bus Partnerships implemented ▪ Creation of a central public transport interchange area would increase attractiveness, improve integration and encourage public transport use. ▪ Timetable and fares information has to be co-ordinated, accurate and up to date. This has huge service implications and could be costly
4. Do Minimum	▪ Road capacity improvements to minimise congestion ▪ Predict and provide for increased traffic volumes ▪ Parking availability at journey's end

1.5 The Findings of the SEA

The Aims and Actions of the LTS were assessed on their likely environmental impacts. The majority of Aims and Actions are predicted to have positive or neutral effects. Significant negative impacts tend to result from Actions which promote the development of major infrastructure such as new or upgraded roads.

Mitigation measures were developed to avoid, reduce or offset predicted negative impacts and these were taken into account in the assessment. In spite of these measures, there is the potential for some environmental impacts to remains. Key impacts and their causes are summarised below.

1.5.1 Biodiversity

Positive effects on biodiversity are predicted due to Aims and Actions which promote biodiversity in the maintenance of the transport network and support the Local Biodiversity Action Plan.

In some areas of the LTS, it has not been possible to determine whether effects on biodiversity will occur due to uncertainty regarding whether major infrastructure projects will be developed. Actions within the LTS to study the M8 and A737 corridors could lead to major road upgrades, which could therefore have significant negative effects. It is also possible that these studies could lead to no further action; therefore effects on biodiversity would not occur.

The promotion of major infrastructure, in particular the Renfrew North Development Road, Fastlink and the Paisley South Cycle Link, has the potential to result in negative effects on sites which are protected by European legislation – the Inner Clyde and Black Cart Special Protection Areas. To determine the likely significance of effects on these sites, it will be necessary for the Council to carry out more detailed assessments, as required by the Conservation (Natural Habitats & c) Regulations 1994.

When considered alone, the effect on biodiversity of creating a new or upgraded footway/cycleway, in the majority of cases, is relatively minor. However, when all cycleways and footways proposed in the LTS are taken into account, the cumulative effects on habitats and wildlife corridors are more significant. Effective implementation of mitigation measures is required to limit these effects.

1.5.2 Landscape Character and Visual Amenity

Negative impacts on landscape character or visual amenity are generally caused by Actions which promote the construction of major new or upgraded infrastructure. This infrastructure includes the Renfrew North Development Road, Fastlink and new road infrastructure associated with the Bishopton ROF site to the M8. In Paisley, impacts are likely due to the upgrading of Underwood Road, construction of a new bus interchange at Old Sneddon Street and a bridge replacement.

In some cases, the likely impacts of the LTS are not yet clear due to current uncertainty regarding whether some projects will be developed. These include studies into the M8 and A737 corridors, and 'considering improved Park and Ride' facilities in Johnstone. If these projects are progressed, significant negative impacts are likely.

There is the potential for negative cumulative effects from the provision/upgrading of small-scale infrastructure, such as footways and cycle ways. Whilst individual developments may have minor effects, when all developments across Renfrewshire are taken into account, the overall effect has the potential to be significant. This is currently uncertain as it is dependent on the scale of these developments, details of which are not currently known.

1.5.3 Cultural Heritage

Significant negative effects on the historic environment are predicted due to the construction of new or upgraded transport infrastructure. There is the potential for effects on listed buildings, historic features or archaeology. For major transport projects, (such as the Renfrew North Development Road and Fastlink) it will be necessary for more detailed assessments to be carried out and for detailed mitigation proposals to be developed.

Potential impacts have been identified from specific projects promoted through the strategy. These include the potential for enlargement of the Park & Ride car park and upgrading of a weight restricted bridge in Lochwinnoch (a Conservation Area). The upgrading of Paisley Gilmour Street railway station, a Category B Listed Building, also has the potential for significant negative effects.

1.5.4 Local Air Quality

Overall, the Aims and Actions of the LTS are predicted to have positive effects on local air quality. The promotion of a number of new and upgraded walking and cycling routes, as well as proposed improvements to public transport services and infrastructure, is aimed at encouraging alternatives to private car use.

The Renfrew North Development Road is aimed at reducing congestion in Renfrew centre and should therefore improve local air quality in this location. This will also negatively affect air quality in the location of the new road. This new road also has the potential to encourage traffic growth, with negative long-term impacts on air quality.

An Air Quality Management Area (AQMA) is designated at Central Road in Paisley due to existing poor air quality. A number of Actions have been included in the LTS to address this problem area. These are predicted to have positive effects on the AQMA, however due to uncertain outcomes it is not possible to determine whether these would result in the removal of the AQMA designation.

1.5.5 Climate Factors

Impacts on Renfrewshire's greenhouse gas emissions are predicted to be positive overall. The promotion of walking, cycling and public transport are aimed at encouraging alternatives to car use. The promotion of the Renfrew North Development Road is however likely to encourage private car use and therefore contribute to increased emissions.

Studies into the M8 and A737 corridors may or may not result in road upgrades. An increase in road capacity, and vehicle movements, is likely to increase CO2 emissions.

1.5.6 Water Quality

There is the potential for the LTS to result in negative effects on water quality. This is most likely through Aims and Actions which promote the construction of infrastructure. It is an obligation that such activities adhere to legislation to ensure that water quality is not significantly affected. It is therefore assumed that legislative requirements will be adhered to and overall impacts on water quality are therefore not predicted to be significant.

1.5.7 Land and Material Assets

There is the potential for negative impacts on land and material assets. This is most likely to result through land take due to the construction of major transport infrastructure. In addition materials will be utilised in construction activities and waste will be generated. Construction also provides the opportunity for waste materials to be recycled.

Due to the relatively minor extent of proposed infrastructure, overall impacts on material assets are not predicted to be significant. It should be noted that if major projects result from studies into the M8 and A737, effects may be more significant.

1.5.8 Access to the Natural and Historic Environment

Significant positive effects on access to the natural and historic environment are predicted due to proposals to develop and upgrade walking and cycling routes. Public transport improvements should also contribute to this positive impact.

1.5.9 Human Health

The overall impacts of the LTS on human health are predicted to be positive. This is due to measures to improve local air quality and the encouragement of physical activity through walking and cycling. In addition, road safety improvements are predicted.

1.5.10 Social Exclusion

Impacts on social exclusion are predicted to be positive. This is due to improved accessibility through Actions to promote public transport, walking and cycling and increased connectivity between settlements and facilities.

1.6 Mitigation

In order to prevent, minimise or offset the significant adverse effects that the LTS is predicted to have on the environment, Renfrewshire Council have committed to implementing a number of mitigation measures. In particular, the mitigation measures attempt to avoid impacts on protected sites, species and buildings/features.

1.7 Monitoring and Adoption

This report sets out a proposed framework for monitoring the environmental impacts of the Strategy. Following adoption of the final LTS, a Post-Adoption SEA Statement will be produced and will set out the finalised monitoring framework.

1.8 Consultation

The LTS is available to view at
http://www.renfrewshire.gov.uk/ilwwcm/publishing.nsf/Content/pt-as-RenfrewshireDraftLocalTransportStrategy

Comments on this Environmental Report can be sent to the address below until 23rd February 2007.

Director of Planning & Transport
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Cotton Street
PAISLEY
PA1 1LL

Comments can also be sent by fax to 0141 842 5040 or submitted by email to pt@renfrewshire.gov.uk. A copy of this document and the draft Local Transport Strategy are also available on this site.

2 Introduction

2.1 SEA and the Purpose of this Environmental Report

As part of the preparation of the Renfrewshire Local Transport Strategy (LTS), Renfrewshire Council commissioned Faber Maunsell to carry out a Strategic Environmental Assessment (SEA) of the strategy. Strategic Environmental Assessment (SEA) is a systematic method for considering the likely environmental effects of plans, programmes and strategies. SEA aims to:

- integrate environmental decision making into plan/programme/strategy preparation and decision making;
- improve plans and programmes and enhance environmental protection;
- increase public participation in environmental decision making; and
- facilitate openness and transparency in decision making.

SEA is required under the Environmental Assessment (Scotland) Act 2005[1], also known as the 'SEA Act'. The key SEA stages provided for in the Act are:

Scoping	Deciding on the scope and level of detail of the Environmental Report, and the consultation period for the report - this is done in consultation with Scottish Natural Heritage, the Scottish Ministers (Historic Scotland) and the Scottish Environment Protection Agency.
Environmental Report	Publishing an Environmental Report on the plan or programme and its environmental effects, and consulting on that report
Adoption	Providing information on: the adopted plan/programme/strategy; how consultation comments have been taken into account; how the findings of the SEA have been taken into account and; methods for monitoring the significant environmental effects of the implementation of the plan/programme/strategy
Monitoring	Monitoring significant environmental effects in such a manner so as to also enable the Responsible Authority to identify any unforeseen adverse effects at an early stage and undertake appropriate remedial action. .

The purpose of this Environmental Report is to:

- provide information on Renfrewshire Council's LTS and the SEA process;
- identify, describe and evaluate the likely significant effects of the LTS and reasonable alternatives; and
- provide an early and effective opportunity for the Consultation Authorities and the public to offer views on any aspect of this Environmental Report.

The Environmental Report has been prepared following the Scottish Executive's draft SEA Toolkit (September 2006).

[1] http://www.opsi.gov.uk/legislation/scotland/acts2005/20050015.htm

2.2 SEA Activities to date

Table 2.2 summarises the SEA activities undertaken so far and identifies where further information can be obtained relating to each stage. The remaining stages of SEA are described in Chapter 6 Next Steps.

Table 2.2 SEA Activities to date

SEA Action	When Carried Out	Notes
Scoping the consultation periods and the level of detail to be included in this Environmental Report	August – September 2006	Scoping Report received by SEA Gateway on 13th October 2006
Outline and objectives of the Renfrewshire LTS determined	September 2006	See Section 3.2
Relationship with other strategies, plans, programmes and environmental objectives established	August 2006	Findings presented in Appendix A
Environmental baseline situation identified	August - October 2006	Findings presented in Scoping Report, updated version contained within Appendix B of this Environmental Report
Environmental problems identified	August 2006	Scoping Report outlined Environmental Problems. Detailed findings are contained within Section 3.5 of this Environmental Report
Alternatives appraised	September – October 2006	Alternatives appraised by Faber Maunsell as part of a separate commission. Findings of this appraisal are summarised in Section 4.2
SEA methods established	September – October 2006	Method included within the Scoping Report. Methodology is summarised in Section 4.3 of this Environmental Report, and presented in greater detail in Appendix D
Environmental impacts identified and mitigation proposed	October-December 2006	Details of predicted impacts, including cumulative and synergistic impacts, plus mitigation measures are presented in Section 4.7 of this Environmental Report.
Monitoring proposed	December 2006	Monitoring proposals are set out in Section 5 of this Environmental Report.
- Consultation timescales for Consultation Authorities and public	12th January-23rd February 2007	6 week consultation period agreed by Consultation Authorities at Scoping

3 The Renfrewshire Local Transport Strategy & Context

3.1 Introduction

This section outlines the purpose, objectives, content and timescale of the Renfrewshire LTS and sets out the context for the SEA. It summarises the relationship with other plans, programmes and strategies and provides a summary of the baseline environment. Existing environmental problems/issues are identified and the SEA objectives used to appraise the LTS are presented. The key facts relating to the Renfrewshire LTS are set out in Table 2.1 below.

Table 2.1 Key Facts Relating to the Renfrewshire LTS

Name of Responsible Authority	Renfrewshire Council
Title of Strategy	Renfrewshire Local Transport Strategy 2006
What Prompted the Strategy	Update of A Local Transport Strategy for Renfrewshire 2000, following Scotland's Transport Future white paper June 2004 and Guidance on Local Transport Strategies February 2005.
Strategy Subject	Transport
Period Covered	20 year vision, to be reviewed in 5 years
Frequency of Updates	Every 5 years
Strategy Area	Renfrewshire Council Boundary
Strategy Purpose	To set out the actions that Renfrewshire Council intends to implement to achieve their key objectives. Actions will relate to managing, developing and maintaining the transport networks, marketing and to bring about behavioural change.
Contact Point	Elaine Barrie Assistant Principal Transportation Officer Planning & Transport Department Renfrewshire Council South Building Cotton Street PAISLEY PA1 1LL 0141 842 5032 elaine.barrie@renfrewshire.gov.uk

3.2 Outline and Objectives of the LTS

Renfrewshire Council's current Local Transport Strategy was published in 2000 and sets out the Council's aims, actions and targets for tackling transport issues. In line with guidance from the Scottish Executive, the Council has reviewed this strategy and has published the draft Renfrewshire Local Transport Strategy 2006.

As well as setting out the Council's intentions for transport, the updated strategy will provide the policy basis for new and existing infrastructure. The vision for the updated LTS is as follows:

> '*The vision for Renfrewshire is that people can improve their health and travel to where they want to get to within a set timescale using all modes*

including walking, cycling, public transport or their car for essential trips; business can operate effectively and efficiently creating prosperity and job opportunities; visitors are attracted to enjoy the tourism facilities; and all this is accommodated without compromising our future environment and at best value to the Council.'

The LTS will set out the aims and objectives of the Council in terms of an integrated approach to transportation over the next 10 to 20 years and will inform investment decisions for the next 5 years. It will set out the priorities to key stakeholders, partners and funding providers regarding the direction the council's transportation Aims and Actions will be taken in. It will also highlight where the LTS complements and supports other strategies aimed at achieving common goals.

The developing LTS has helped to inform the West of Scotland Regional Transport Strategy (RTS); currently being developed by Strathclyde Partnership for Transport (SPT). Similarly, initiatives within the RTS have implications for the LTS. The LTS seeks to deliver the objectives of the National Transport Strategy at a local level.

3.2.1 LTS Objectives

To achieve the vision stated above, Renfrewshire Council and the LTS have five key objectives:

- Regenerate the local economy wherever possible
- Extend opportunities for all by:
  - Combating poverty and promoting equality including supporting behavioural change
  - Encouraging healthier lifestyles
  - Encouraging a choice of transport options
  - Improving access for all, including the mobility impaired
- Ensure a healthy and sustainable environment
- Improve community safety and security, both real and perceived, and increase connectivity between settlements and services
- Encourage integration of services and an integrated approach by public bodies whilst achieving best value.

3.2.2 LTS Structure and Contents

In summary the LTS includes;

- An introduction to the LTS setting out the document structure and outlining the wider context of the LTS in relation to other local, regional and national strategies;
- Background information setting out current transport-related statistics relevant to Renfrewshire;
- A review and summary of what the previous LTS, published in 2000, has achieved;
- A review of the consultation undertaken to inform the preparation of the LTS;
- A description of the vision of the LTS and its objectives;
- Renfrewshire-wide strategic Aims and Actions, and spatial aims and actions intended to help achieve the vision;
- A description of the Scottish Transport Appraisal Guidance (STAG) that has been used to appraise the strategic options;
- Targets and indicators to measure the performance of the LTS;
- A description of how the LTS will be funded and delivered; and
- A commitment to produce an annual monitoring report so that the Council may assess progress and re-consider the Strategy as necessary.

In total the Renfrewshire LTS contains 22 Aims and over 120 Actions. These have been divided into Renfrewshire-wide Strategic Aims and Actions and Spatial Aims and Actions that focus on particular towns or villages within Renfrewshire. The table below summarises both sets of Aims and Actions.

Table 3.1 Summary of LTS Aims and Actions

Policy Area	LTS Aims	LTS Actions
Renfrewshire-wide Strategic Aims and Actions		
Strategic Road & Rail Connections	The Council seeks to resolve traffic congestion on the M8 and A737 and rail capacity at peak periods such that economic growth is supported without constraints imposed by transport.	7 actions aimed at easing congestion on the M8 and A737 without restricting economic growth, including partnering with the Scottish Executive (SE), Transport Scotland (TS), Strathclyde Partnership for Transport (SPT) and Glasgow Airport in studies of the M8 corridor, liaising with SE, TS, SPT and North Ayrshire Council to establish traffic projections and actions for the A737 corridor and seeking funding from SPT for the Renfrew North Development road.
Network Maintenance	The Council will maintain roads, bridges, street lighting and furniture to a standard that ensures public safety and the most cost effective combination of structural repairs and cyclic maintenance.	6 actions outlining the Council's approach to network maintenance including the finalisation of database describing the condition and location of all infrastructure and a description of how carriageway/footpaths requiring resurfacing will be prioritised.
Demand Management	The Council will continue to develop strategies for travel planning and parking which reduce the growth of trips by private car and achieve a shift to walking, cycling, public transport and car sharing, thus having a positive input on our environment.	11 actions aiming to promote changes in travel behaviour including the continued funding of a full-time Travel Planning Officer, development of school and Council travel plans, partnership working with major employers to promote sustainable travel plans and continued liaison with SPT with regards to the provision of bus services in Renfrewshire.
Road & Community Safety	The Council will continue to target accident reduction through education and awareness raising for drivers and pedestrians, introduce engineering measures to reduce risk and support Police enforcement with particular emphasis on achieving compliance with speed limits.	8 actions that seek to target accident reduction through the extension of community road safety initiatives, development of a strategy for driver behavioural change, continued promotion of road safety in Renfrewshire schools and tackling of road safety problems on rural roads.
Walking & Cycling Strategy	The council will continue to promote and encourage increased cycling and walking for commuter, leisure and business trips in order to improve the health of our citizens and improve the environment through reduced car usage.	13 actions aimed at promoting walking and cycling including implementation of the Paisley South Side Strategic/ Walking/Cycling route, investment in improvement of walking routes where this supports the "Safer Routes to Schools" programme, development of a strategy facilitating walking and cycling as an alternative to short to medium length trips within Renfrewshire, formation of a partnership with SUSTRANS to develop leisure opportunities for walking and cycling and support for the Council's

Policy Area	LTS Aims	LTS Actions
		Access Strategy.
Road Network Performance	The Council will strive to achieve the most efficient operation of the road network to minimise delays for road users, particularly for public transport, subject to constraints imposed by road safety, physical limits on the network and the need for repairs.	6 actions intended to improve the efficiency of the road network including maintain a database of all signal controlled junctions, evaluation of the potential to upgrade traffic signal controlled junctions around Paisley such that they are incorporated within a real time reactive computer control system which maximises signal efficiency and the coordination of Council roadworks with works being undertaken on the A737 and M8 so as to minimise disruption.
Biodiversity	The Council will manage green elements and natural habitats of the transport network in a manner which encourages biodiversity and supports the Local Biodiversity Action Plan.	10 actions that seek to encourage biodiversity and support the Local Biodiversity Action Plan including timing of works to minimise disruption to nesting birds and/or bats, replacement of removed trees and the recognition of walking and cycling links as corridors of biodiversity and animal movement.
Spatial Aims and Actions		
Paisley	The Council will develop transport actions for Paisley which support and complement the wider economic regeneration strategy, improve accessibility, particularly for cycling, walking and public transport, minimise congestion around the ring road and enhance the street environment.	9 actions including a review of the current traffic management system in the town centre, the undertaking of studies in walking and cycling accessibility to the town centre, preparation of a long term parking strategy and completion of studies into a Bus Quality Partnership covering central Paisley, specifically to address air quality problems in Central Road.
Renfrew	Redress the balance in access demands for the town in order to reverse economic decline whilst providing linkages between the town centre and Renfrew riverside, as well as creating a more attractive and safe environment for Renfrew residents and visitors.	6 actions including the introduction of 'gateway' traffic management measures to raise awareness of drivers that they are entering an area where vehicle speeds should be reduced, implementation of 'streetscape' projects in Hairst Street and High Street, bid for funding from the Regional Transport Partnership for a feasibility study and subsequently for construction of the Northern Development Road to relieve town centre congestion and investigate, in partnership with SPT the feasibility of a fastlink bus/LRT service along the River Clyde.
Johnstone	Seek to support the shopping and commercial role of the town through transportation actions which ensure accessibility, sufficient parking and a safe and pleasant environment.	5 actions including addressing parking problems at the rail station Park & Ride, the undertaking of parking studies and improvement in the performance of traffic signals by introducing a computer controlled system that responds

Policy Area	LTS Aims	LTS Actions
		dynamically to traffic flows and
Erskine	Support the town centre redevelopment, strengthen public transport links, address speeding on urban roads and ensure accessibility by walking and cycling modes to improve connectivity to jobs both within and outwith Erskine.	5 actions including a study into speeding problems, improvements to links to the existing walking/cycling network and investigations into the provision of a Bus Park & Ride and potential bus routes.
Linwood	Increase connectivity to assist with access to employment, services and leisure pursuits by means other than the private car and enhance road safety in the town centre.	5 actions comprising improvements to the pedestrian access to the Phoenix Retail Park, provision of safe pedestrian and cycle routes to new secondary school, improved linkages to the national cycling network, an investigation into options for improved bus services and development of a strategy to reduce vehicle speeds within the town centre.
Houston and Crosslee	Agree a strategy to manage traffic in Houston centre, reduce vehicle speeds and the severance effect of the B790. Improve linkage to adjacent communities by walking, cycling and public transport.	4 actions including an investigation into options to reduce the severance effect of the B790, preparation of a traffic management plan in Houston village centre and in partnership with SPT an investigation into options for improved bus services.
Bishopton	Ensure the redevelopment of the ROF site is associated with appropriate upgrades to infrastructure which contribute positively to the existing community and improve links to main employment centres.	5 actions including expansion of the car park at the rail station, development of proposals to reduce traffic speeds on the A8, granting of permission to the provision of a direct connection to the M8 in relation to the redevelopment of the former Royal Ordnance Factory site and in partnership with SPT an investigation into options for improved bus services.
Elderslie	Reduce the severance and safety concerns associated with Main Road and improve accessibility to community facilities and shops.	3 actions including in partnership with SUSTRANS, the identification of a long term solution to the on road section of the cycle route, development of an Action Plan for Main Road to reduce speeds and preparation of a long term parking strategy for the village.
Bridge of Weir	Enhance the village centre through reducing traffic speeds and creating entrance features to improve the village environment and improve connectivity by public transport, walking and cycling to Johnstone and Paisley.	4 actions comprising implementation of a town centre action plan to address traffic and transportation issues in the village, improvements to pedestrian links with Johnstone, the provision of links to the cycling network and an investigation in partnership with SPT to improve public transport linkages, particularly during the evening.
Kilbarchan	Improve connectivity by public transport and manage parking in a manner sympathetic to the historical	2 actions comprising preparation of a proposal for parking control where appropriate and in partnership with SPT an investigation into options for improved

Policy Area	LTS Aims	LTS Actions
	and conservation nature of the village.	bus services.
Loch Winnoch	The Council will seek to accommodate the expansion of housing and increasing car ownership such that access and safety in the village is not compromised and that the town continues to be attractive for tourism and leisure purposes.	3 actions encompassing upgrading the weight restricted bridge to allow unrestricted access, an investigation into the enlargement of the rail station Park & Ride car park and preparation of a traffic management plan to address parking and road safety.
Langbank	Seek to improve public transport, walking and cycling connectivity for Langbank to increase access to services and jobs.	5 actions including an examination of the A8 layout and requesting that the Scottish Executive give consideration to the access needs of the village, liaising with the RTP to investigate bus routes to and through the village and linking the village with the existing walking/cycle network.
Inchinnan	Enhance walking and cycling in and around the village, public transport connectivity in the evening and address road safety at the main access on the A8.	3 actions encompassing the development of proposals to improve access to the village from the A8, an investigation in partnership with SPT into options for improved evening bus services and improvements to walking and cycling routes, in particular those linked to Inchinnan Industrial Estate.
Howwood	Reduce traffic speeds through the village to improve road safety and the environment, enhance bus services in the evening and provide a direct link to the national cycle route.	3 actions including preparation of a route management study, provision of a direct link to the national cycle route and an investigation into improved evening bus services in conjunction with SPT.
Brookfield	Reduce traffic speed in the A761 and improve connectivity in order that the villagers can more easily access facilities such as health, food and leisure pursuits without having to rely on the private car.	3 actions comprising the implementation of a reduced 30mph speed limit on the A761 where it runs through the village, provision of walking and cycling connections to Linwood and Johnstone and a study into enhanced public transport provision in partnership with SPT.

3.3 Relationship with Other Plans, Programmes, Strategies and Environmental Objectives

The Environmental Assessment (Scotland) Act 2005 requires that the Environmental Report includes an outline of the strategy's relationships with other relevant plans and programmes. Key relevant plans, programmes and strategies (PPSs) are listed below in Table 3.2. The relationship between the Renfrewshire LTS and each of these PPSs is highlighted in Appendix A, particularly how the requirements of each is addressed by the LTS.

Table 3.2 Relevant Plans, Programmes, Strategies and Environmental Objectives

Legislation
▪ The EC Directive on the Conservation of Wild Birds 79/409/EEC 1979 ▪ The EC Directive on the Conservation of Natural Habitats of Wild Fauna and Flora 92/43/EEC 1992 ▪ Directive 2000/60/EC The Water Framework Directive ▪ Directive 1996/62/EC on Ambient Air Quality and Management ▪ Directive 2003/30/Econ the Promotion of Biofuels and Other Renewable Fuels for Transport ▪ Our Energy Future – Creating a Low Carbon Economy 2003 ▪ Wildlife and Countryside Act 1981 ▪ The Conservation (Natural Habitats & c) Regulations 1994 ▪ Countryside and Rights of Way Act 2000 ▪ Ancient Monuments and Archaeological Areas Act 1979 ▪ Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 ▪ Nature Conservation Act 2004 ▪ The Air Quality Limit Values (Scotland) Regulations 2003 ▪ Water Environment and Water Services (Scotland) Act 2003 ▪ Transport (Scotland) Act 2005 ▪ Environmental Assessment (Scotland) Act 2005 ▪ The Pollution Prevention and Control (Scotland) Regulations 2000 ▪ Land Reform (Scotland) Act 2003 ▪ Road Traffic Reduction Act 1997 ▪ National Planning Framework 2004 ▪ Kyoto Protocol to the UN Framework Convention on Climate Change 1992
National Plans/Programmes/Strategies
▪ Scotland's Transport Future – Transport White Paper 2004 ▪ National Cycling Strategy (Department for Transport) (1996) ▪ Scottish Climate Change Programme (2000) ▪ Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2000) ▪ UK Biodiversity Action Plan (1994) ▪ Scotland's Biodiversity: It's in Your Hands - A strategy for the conservation and enhancement of biodiversity in Scotland ▪ Passed to the Future (Historic Scotland's policy for the sustainable management of the historic environment) ▪ Choosing our Future: Scotland's Sustainable Development Strategy ▪ National Transport Strategy (currently under development) ▪ National Transport Strategy – SEA Environmental Report ▪ Memorandum of Guidance on Listed Buildings and Conservation Areas 1998 ▪ National Waste Strategy
Local and Regional Plans/Programmes/Strategies
▪ Renfrewshire Local Plan ▪ Renfrewshire and Clyde Valley Joint Structure Plan 2006 ▪ Renfrewshire Community Plan ▪ Renfrewshire Local Biodiversity Action Plan ▪ Renfrewshire Local Transport Strategy ▪ West of Scotland Regional Transport Strategy ▪ Joint Health Improvement Plan ▪ Access Strategy (under development) ▪ Core Paths Plan (to be developed)

3.4 Environmental Baseline

The Environmental Assessment (Scotland) Act 2005 requires that the Environmental Report includes a description of 'the relevant aspects of the current state of the environment' and 'the environmental characteristics of areas likely to be significantly affected'.

Environmental baseline information/data provides the basis for predicting, evaluating and monitoring the environmental effects of the strategy. It also highlights some of the environmental issues/problems detailed in Section 3.5 and has informed the setting of SEA Objectives.

A summary of the baseline data collected for this SEA is presented in Appendix B. For each SEA topic the following is provided:

- The SEA objective(s) relevant to the topic
- A brief overview of the information collected
- Data gaps in the information held (where relevant)
- Trends (where possible)

3.5 Environmental Problems/Issues

The SEA Act requires the Environmental Report to include a description of existing environmental problems, in particular those which the LTS has the potential to influence. The purpose of this section of the Environmental Report is to highlight these environmental problems and to show where these have been addressed by the LTS.

3.5.1 Identifying Environmental Problems

Environmental problems have primarily been identified during statutory consultation with Historic Scotland, SNH and SEPA. Non-statutory stakeholders were also consulted ensuring that all relevant environmental problems had been captured. Additional environmental problems were identified through the analysis of baseline information.

Table 3.3 presents the environmental problems identified. These helped inform the preparation of SEA objectives and the collection of appropriate baseline information.

Table 3.3 Existing & Potential Environmental Problems Relevant to the LTS

Environmental Problems	Implications
Biodiversity, flora and fauna	
Through the construction of major transport schemes there is the potential for direct negative impacts on habitats, including designated areas such as: - Internationally protected sites i.e. Special Protection Area (SPA), Ramsar - Nationally protected sites i.e. (Sites of Special Scientific Interest (SSSI) - Locally protected sites i.e. Sites of Importance for Nature Conservation (SINC) Protected species can be negatively affected through ongoing maintenance and construction of major transport schemes. For example tree felling can have negative effects on bat populations due to the removal of roosts. Species that have the potential to be affected include: - European protected species (EPS), - Nationally protected species, and - Locally important species set out in the LBAP. Species of particular relevance to Renfrewshire are set out in Appendix B.	Actions have been inserted into the LTS to ensure that the presence of nesting birds, bats and bat roosts is given due consideration when timing works to remove or trim older trees, trimming hedgerows and also prior to commencing works on older bridges or structures. Should nests or roosts by identified prior to undertaking works on bridges or structures nest or roost resources would be relocated nearby. The LTS contains an Action to identify locations where wildflower diversity is an asset on verges and plan verge cutting to sustain this and an Action that states as a general rule, rural embankments will not be cut unless there are specific safety concerns.
Noise, vibration and light pollution all have the potential for negative effects on some species	An Action has been inserted into the LTS to produce a strategy to address street lighting.
Habitats have the potential to be directly affected by the construction of transport infrastructure through land-take, habitat fragmentation and severance of wildlife corridors	The Strategy includes an Action recognising the value of off-road walking and cycling links as corridors of biodiversity and animal movements and makes a commitment to follow management practices to encourage animal movement through such corridors.
Damage to integrity of wildlife corridors	
Importance of wildlife corridors	
Pollution of water bodies through run-off from transport infrastructure has the potential to affect habitats and species. Similarly air pollution has the potential for negative effects on species.	Water pollution is not directly addressed by the LTS. Mitigation commitments in Section 4.7 should reduce such impacts on the water environment from new transport developments.
Potential to improve biodiversity using transport budget through planting of native species and habitat creation – ponds etc.	The strategy includes Actions to encourage the planting of native trees in urban areas and to seek to replace removed trees.
Road kill adjacent to Linwood Community Forest (deer)	The Strategy includes an Action to identify locations where animals conflict with traffic and where possible provide safe crossing facilities or warnings to drivers.
Possible loss of SINC, golf course and woodland from proposed Renfrew North Development Road	Impacts will be addressed in more detail at project level through Environmental Impact Assessment (EIA) and Appropriate Assessment (if impacts on the SPA seem likely).
Possible damage to White Cart (a wildlife corridor) due to crossing required for proposed Renfrew North Development Road	

Environmental Problems	Implications
Paisley South Link cycle way and other links could have effects on biodiversity (including on an SPA), Clyde and Lochside	Mitigation in Section 4.7.1.2.
Clearance of trees/habitats adjacent to railways	The Strategy includes an Action that seeks to replace removed trees.
Landscape and Visual Amenity	
The construction of major transport infrastructure can be visually intrusive and can affect landscape and/or visual amenity. For example the proposed Renfrew Renfrew North Development Road and Paisley South Link cycle way	Addressed to an extent by mitigation (see Section 4.7.1.3)
Effects on townscape of minor infrastructure e.g. cycleways, signage	
Street clutter from signs and furniture, including bus infrastructure. A number of Conservation Areas could be affected	
Upgrading existing transport corridors can affect landscape character by for example, introducing urban elements to rural areas	
Light pollution from street lighting can have effects on visual amenity and landscape character	An Action has been inserted into the LTS to produce a strategy to address street lighting.
Cultural Heritage	
Poor air quality has the potential to negatively affect listed buildings and other historic features (including archaeological sites)	Addressed to an extent by mitigation (see Section 4.7.1.4)
Direct effects on historic buildings/sites/features from construction of transport infrastructure	
The construction of major transport schemes could affect the setting of historic buildings and features	
Degradation of townscape/landscape character due to inappropriate use of signage and street furniture, particularly in conservation areas	
Promotion of major schemes Access to 'cultural activities' in city centre and in rural areas	
It should be noted that effects on the historic environment overlap with the SEA issue relating to 'landscape' as historic features can contribute to landscape and townscape character. Similarly, there is overlap with 'material assets' through the potential for effects on listed buildings	
Soil and Water	
Loss of good agricultural land to transport infrastructure e.g. Renfrew North Development Road	Addressed to an extent by mitigation (see Section 4.7.1.5)
Water quality is not considered to be a major issue	
Potential for SUDS for new infrastructure	
Combinations of high tides and rain fall can cause major flooding, particularly in Renfrew	
Bridge maintenance and strengthening has the potential to negatively affect water quality	
Air Quality and Contribution to Climate Change	
AQMA at Central Road. Potential for other AQMA at Gordon St/Causeyside Street due to exceedances of PM_{10} and NO_2	Within the Spatial approach, an Action has been inserted for Paisley to complete studies into a statutory Bus Quality Partnership covering central Paisley specifically to address air quality problems at Central Road.
Parked buses left running are major contributors to poor local air quality	

Environmental Problems	Implications
Increased CO_2 output but limited information is available	Assumptions are made as part of the SEA relating to CO_2 output, in relation to increased traffic levels
Population and Human Health	
Inactive population due to few options for walking/cycling to work/study	The Renfrewshire-wide Aim regarding cycling and walking encompasses a number of Actions to promote increased cycling and walking for commuter, leisure and business trips. Actions include the implementation of the Paisley South Side Strategic Walking/Cycling Route and the development of leisure opportunities in partnership with SUSTRANS. The Spatial Actions highlight a number of areas where walking/cycling routes/linkages will be improved including Erskine, Linwood, Langbank and Inchinnan.
Noise and vibration from transport can negatively affect health	Addressed by the SEA – see Appendix E
Poor air quality can negatively affect human health	
Crime and fear of crime on public transport and in bus/train stations	Not specifically addressed by the LTS. Effects are assessed as part of the SEA.
Fear of crime also affects willingness to walk and cycle	
Car theft e.g. theft of and from vehicles	
The construction of major transport infrastructure can negatively affect access to greenspace in urban areas – e.g. roads and other transport corridors can act as barriers which sever communities from greenspace.	Severance has been identified as an issue at a number of locations within Renfrewshire including the A737 at Elderslie and between Houston and Crosslee on the B790.
Transport has the potential to enhance access to greenspace and services of importance to local communities	Accessibility, particularly the provision of bus services to rural settlements and evening bus services, is considered within the Renfrewshire-wide and Spatial Actions. Renfrewshire-wide, Actions have been included to investigate the potential for creating a statutory Bus Quality Partnership or contract in partnership with SPT to improve bus service quality, network coverage and hours of operation and to liaise with SPT on bus service subsidy. Spatially, Actions expand on the Accessibility theme promoting investigations, in partnership with STP, into the provision of improved and/or additional bus services to Erskine, Linwood, Bridge of Weir, Brookfield and others.
Access to the natural and built environment, plus cultural centres, is difficult in rural areas without private car use	
Road Safety and traffic accidents	The LTS includes an Aim to reduce traffic related accidents through education, introduction of engineering measures and supporting police

Environmental Problems	Implications
	enforcement with particular regard to vehicle speeds. Through the Spatial Actions the LTS seeks to implement strategies and propose measures to reduce vehicle speeds through a number of settlements including Erskine, Linwood, Elderslie and Bishopton among others.
Material Assets	
Effects of major schemes on recreation facilities (e.g. Glasgow Airport Rail Link)	GARL is promoted by SPT and supported by Transport Scotland and is therefore out with the scope of the LTS and this SEA. Loss of land from Council promoted transport schemes in the LTS is assessed by this SEA
Possible loss of golf course due to Renfrew North Development Road	

3.6 The Likely Evolution of the Environment without the Renfrewshire LTS

This section considers the likely evolution of the environment within Renfrewshire without the updated LTS. This focuses on changes which would take place as a result of transport and transport related activities and has not covered all other possible activities, although the wider context is noted. Table 3.4 below summarises the changes to the environment without the LTS, focusing on transport related changes.

By way of context, it should be noted that a range of activities with the potential to influence the evolution of the environment are taking place within Renfrewshire, including commercial and residential development. Development within Renfrewshire is controlled by the following plans:

- The Renfrewshire Local Plan (Adopted, 2006)
- Glasgow and Clyde Valley Joint Structure Plan (Adopted, 2000)
- Glasgow and Clyde Valley Joint Structure Plan Written Statement (2006)

While the effects of these plans have not been assessed as part of this SEA, their relationship with the LTS is recognised (see Section 3.3 above).

Table 3.4 Likely Evolution of the Environment without the Renfrewshire LTS

SEA Category	Possible changes without LTS
Biodiversity, flora & fauna	The ecological impacts resulting from projects promoted by the LTS would not occur. This includes both the negative impacts associated with development and maintenance, as well as the positive impacts of the Aims and Actions within the LTS. Habitats associated with transport infrastructure (e.g. road verges, railway corridors, cycleways) would remain largely unchanged, except for those areas subject to the natural process of succession and any maintenance works undertaken.
Landscape	Impacts on landscape/streetscape character and visual amenity, caused by projects promoted by the LTS would not occur.
Cultural Heritage	The effects on the historic environment resulting from projects promoted by the LTS would not occur. The projected increase in traffic volumes without the LTS would result in some minor effects on features of cultural heritage interest including, as a result of increased pollutants, impacts on stonework.
Soil & Water	The effects on the water environment resulting from projects promoted by the LTS would not occur. Other effects associated with the maintenance of roads, including the use of salt, would remain.
Air Quality	Air quality is predicted to deteriorate without implementation of the LTS. An AQMA, at Central Road in Paisley, has been designated as a result of predicted exceedances of air quality thresholds due to transport related activities. Furthermore, there is the potential for another AQMA to be designated at Gordon St/Causeyside Street.
Climate Factors	Greenhouse gas emissions from transport are predicted to increase.
Population & Human Health	The effects of poor air quality on human health would be predicted to continue. Proposals for improvements to public transport and for cyclists and pedestrians would not be implemented resulting in continued social exclusion and fewer opportunities for exercise. The effects on population as a result of not implementing the LTS are not known. Some economic development activities would not be realised resulting in fewer jobs.
Material Assets	The effects of major projects on material assets would not occur if the LTS is not implemented. However, the promotion of major transport schemes is linked to economic development and regeneration. As a result transport infrastructure will facilitate development activities including land for employment, leisure and residential uses.

3.7 SEA Objectives

The use of SEA objectives is a recognised way in which the environmental effects of implementing a plan or strategy can be assessed. The SEA objectives were used to appraise the Aims and Actions of the LTS, by predicting whether changes to the baseline would have positive, negative or neutral effects on the SEA objectives.

In devising the SEA objectives, the following were taken into account:

- The Scottish Executive's SEA Toolkit
- Examples of objectives used for assessments of similar strategies
- The review of Baseline data
- The review of other relevant plans, programmes and strategies
- The review of environmental problems

The SEA objectives, shown in Table 3.5 below, address each of the categories specified in the SEA Act: biodiversity; landscape; cultural heritage; water; air; climatic factors; soil; flora; fauna; human health; population and material assets.

These objectives are broad to enable all potential impacts within each category to be identified within the assessment. For each SEA objective, during the assessment particular consideration was given to potentially sensitive receptors or existing problems. The 'matters for consideration' for each objective are also listed in the table. For example, when assessing whether an Action will 'protect, maintain and, where possible, restore biodiversity', particular consideration was given to the potential impacts on European and nationally protected sites and species.

Table 3.5 SEA Objectives

SEA Objective	Matters for Consideration	SEA Category
1. Protect, maintain and where appropriate, enhance biodiversity	The potential effects of the aims and actions on: ▪ Internationally protected sites (SPA, Ramsar) ▪ Nationally protected sites (SSSI) ▪ Locally protected sites (SINC) ▪ European Protected Species (e.g. bats, otters, great crested newts) ▪ Nationally protected species (e.g. badgers) ▪ LBAP priority habitats and species ▪ Wildlife corridors (e.g. adjacent to transport infrastructure and rivers)	Biodiversity, flora and fauna
2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	▪ Designated sites e.g. Sites of Special Landscape Importance (SSLIs) ▪ Potentially sensitive receptors e.g. residential areas, recreation facilities, important footpaths ▪ Light pollution	Landscape and Visual Amenity
3. Protect, maintain and where appropriate, enhance the historic environment and other culturally important features	▪ Areas designated for importance in terms of cultural heritage e.g. Conservation Areas ▪ Listed Buildings ▪ Scheduled Ancient Monuments ▪ Known and unknown archaeology ▪ Other historic features ▪ Direct loss i.e. loss and/or damage to a feature of the historic environment; effects on setting ▪ Indirect e.g. through changes to surface	Cultural heritage, landscape, material assets

	drainage patterns, local air quality	
4. Reduce air pollution	▪ Key pollution indicators e.g. PM10 and NO_2	Air Quality
5. Reduce Renfrewshire's contribution to climate change	▪ Overall transport-related CO_2 emissions	Climatic factors
6. Reduce vulnerability to the effects of climate change	▪ Flooding of transport infrastructure ▪ Travel disruption due to weather ▪ Floodplains ▪ Drainage	Climatic factors
7. Protect, maintain and enhance water quality	▪ Water quality, including groundwater ▪ Pollution of water bodies ▪ Estuarine processes ▪ Catchment hydrology ▪ Effects on aquatic biodiversity ▪ Drainage	Soil and Water
8. Protect land and material assets	▪ Private property ▪ Quality agricultural land ▪ Soil quality ▪ Use of Greenfield and brownfield land ▪ Effects of use of brownfield land e.g. contamination of adjacent land and water bodies	Soil, material assets
9. Reduce, reuse, recycle and recover waste	▪ Materials used due to transport-related activity ▪ Potential for waste to be generated by transport-related activity	Material assets
10. Enhance access to the natural and historic environment	▪ Public transport links to natural and historic environment ▪ Length of footpath and cycle network	Population, cultural heritage, biodiversity
11. Improve accessibility and reduce social exclusion	▪ Accessibility of public transport ▪ Accessibility of services, including education and health services	Population
12. Improve human health	▪ Noise and vibration ▪ Crime and fear of crime relating to transport ▪ Transport accidents ▪ Walking and cycling	Human health

3.8 Testing the LTS Objectives

This stage of the SEA process involves testing the LTS objectives against the SEA objectives. The purpose of this was to highlight any potential areas of conflict. If appropriate, the LTS objectives could be amended to remove conflicts, therefore reducing potentially adverse environmental effects. Alternatively, mitigation measures can be considered later; following the detailed assessment of the preferred strategy.

The objectives of the LTS are as follows:

A Regenerate the local economy wherever possible
B Extend opportunities for all by:
- Combating poverty and promoting equality including supporting behavioural change
- Encouraging healthier lifestyles
- Encouraging a choice of transport options
- Improving access for all, including the mobility impaired

C Ensure a healthy and sustainable environment
D Improve community safety and security, both real and perceived, and increase connectivity between settlements and services
E Encourage integration of services and an integrated approach by public bodies whilst achieving best value

A simple matrix (see Appendix C) was used to test the LTS objectives and a number of conflicts between the SEA and LTS objectives were identified. Conflicts tended to occur where Aims and Actions of the LTS have the potential to result in physical development. The LTS is intended to tackle transport issues in a variety of ways and methods employed are likely to include development. It was therefore deemed inappropriate at this early stage to alter a high-level objective to preclude physical development. The LTS objectives were therefore retained in their existing form. Later stages in the development of the LTS and SEA allowed the inclusion of mitigation measures, related to previously identified potential impacts.

4 Assessment of Environmental Effects and Mitigation

4.1 Introduction

This section presents the results of the assessment. It is split into two parts:

- the STAG appraisal of strategic alternatives, and
- the assessment of the preferred solution for the LTS, including its proposed Aims and Actions.

The assessment of the preferred solution for the LTS was undertaken in three stages. The first stage was an appraisal of each Aim presented in the LTS using the method described in Appendix D and summarised below. In appraising each Aim, the likely impacts of each related Action was assessed (see Table 3.1 for a summary of Actions). The second stage was to consider the combined effects of each Section. The third stage was to summarise the effects of the LTS on each of the SEA topics and identify the likely cumulative effects of the strategy.

4.2 Strategic Alternatives

An important aspect of the SEA process is the consideration of alternative approaches to achieving the aims and objectives of the strategy. The SEA Act requires the environmental effects of reasonable alternatives (or options) to the strategy be identified, described and evaluated. They state that only reasonable, realistic and relevant alternatives should be put forward. For alternatives to meet these criteria, they must be capable of achieving the aims of the strategy.

4.2.1 The Alternatives Considered

Table 4.1 presents the strategic options that have been considered as part of the development of the LTS.

Table 4.1 Strategic Alternatives

Alternative / Option	Key Features
Integrated Transport	▪ High level funding for public transport development and integration to improve public transport facilities and reduce congestion ▪ New developments only on the basis of sustainability and operational GTPs
Car Based	▪ Road capacity improvements to minimise congestion ▪ Predict and provide for increased traffic volumes ▪ Parking availability at journey's end ▪ Decline in provision of and space available for public transport
Public Transport Only	▪ Additional bus facilities would improve bus journey times and reliability thus improving the attractiveness of the bus services ▪ High costs involved in public transport schemes therefore additional funding would be essential ▪ Regulation of certain routes would be required or Bus Partnerships implemented ▪ Creation of a central public transport interchange area would increase attractiveness, improve integration and encourage public transport use. ▪ Timetable and fares information has to be co-ordinated, accurate and up to date. This has huge service implications and could be costly
Do Minimum	▪ Road capacity improvements to minimise congestion ▪ Predict and provide for increased traffic volumes ▪ Parking availability at journey's end

4.2.2 *Appraisal of Alternatives*

The appraisal of the strategic alternatives was carried out following the Scottish Transport Appraisal Guidance (STAG). STAG contains 5 headline categories against which the alternatives were appraised. They are as follows:

- Environment
- Safety
- Economy
- Integration
- Accessibility and Social Inclusion

The findings of the STAG appraisal are summarised in Table 4.2 below. It should be noted that STAG scores are assigned on a scale of +3 (most positive) to -3 (most negative).

Table 4.2 Appraisal of Strategic Alternatives

Transport Objectives	Strategic Scenarios			
	Option 1: Integrated Transport	Option 2: Car Based	Option 3: Public Transport Only	Option 4: Do Minimum / As At Present
Environment	**+2** Encouraging modal shift to more sustainable forms of transport will contribute towards reducing emissions of CO_2 and other pollutants, and promote better air and water quality. There will be no adverse impacts on the environment. Renfrewshire will benefit from reduced volumes of vehicular	**-3** This option does not encourage modal shift to more sustainable forms of transport. Emissions of CO_2 and other pollutants will continue to rise, with associated adverse impacts on air and water quality. Reducing the volume of queuing traffic may negate some of this impact in the short term.	**+2** Encouraging modal shift to more sustainable forms of transport will contribute towards reducing emissions of CO_2 and other pollutants, and promote better air and water quality. There will be no adverse impacts on the environment. Renfrewshire will benefit from reduced volumes of vehicular	**+1** This option will maintain existing levels of public transport, walking and cycling provision. However, this is negated by emissions of CO_2 and other pollutants from car-based traffic which will continue to rise, with associated adverse impacts on air and water quality. Small positive benefit

Transport Objectives	Strategic Scenarios			
	Option 1: Integrated Transport	**Option 2: Car Based**	**Option 3: Public Transport Only**	**Option 4: Do Minimum / As At Present**
	traffic. Moderate positive benefit	Major negative benefit	traffic. Moderate positive benefit	
Safety	**+1** The proposal is likely to provide a small positive benefit due to the reduction in accidents associated with the reduction in vehicular traffic levels	**-2** The proposal is not likely to provide significant improvements in safety. In addition this option does not encourage modal shift. Overall moderate negative benefit	**+1** The proposal is likely to provide a small positive benefit due to the reduction in accidents associated with the reduction in vehicular traffic levels	**0** By providing minimal investment in transport schemes, the do minimum scenario will have a negligible impact on maintaining a safe and secure transport system
Economy	**+2** A reduction in levels of vehicular traffic will have a moderate positive impact on journey times and reliability of travel times. This, together with enhanced transport provision, will assist existing businesses and attract new developers to Renfrewshire	**0** Management of levels of congestion will have a small positive impact on journey times and reliability of travel times in the short term, providing a small positive benefit on existing and potential businesses / developers in Renfrewshire. This is negated by a decline in provision of, and space available for, public transport which would restrict access to employment for those people without a car. Overall negligible impact	**+2** A reduction in levels of vehicular traffic will have a moderate positive impact on journey times and reliability of travel times. This, together with enhanced transport provision, will assist existing businesses and attract new developers to Renfrewshire	**+1** This option will maintain existing access to employment within Renfrewshire. Sustainable transport will be enhanced in the long term through the promotion of hearts and minds initiatives and thus a small encouragement towards modal shift will be made
Integration	**+1** Small positive impact on transport integration. Encouraging modal shift is in accordance with local and national policies	**-2** Decline in public transport provision. By not addressing modal shift this option is not in accordance with local and national policies. Moderate negative benefit	**+2** Moderate impact on transport integration. Encouraging modal shift is in accordance with local and national policies	**+1** Limited impact on transport integration. This option maintains access to existing public transport services and has a small positive impact on land use integration. Encouraging hearts and minds initiatives is in accordance with local and national policies
Accessibility & Social Inclusion	**+1** Small positive impact on access to services and in tackling social exclusion	**0** Negligible impact on access to services and in tackling social exclusion	**+2** Moderate positive impact on access to services and in tackling social exclusion	**0** The do minimum maintains existing levels of transport infrastructure and provision and will therefore have a negligible impact on access to services and in tackling social exclusion

Source: STAG Appraisal Report

Based on the outcome of the STAG appraisal a preferred option was developed. The results of STAG indicated that in order to best meet the objectives of the LTS the preferred option should include elements of Options 1 and 3 and also be supplemented by measures to address essential car based travel and freight transport. An integrated package of sustainable transport measures was identified as the preferred option and taken forward to be subjected to more detailed environmental assessment as part of the SEA.

4.3 Assessment Methodology

Following the development of the preferred option for the LTS, Aims (and Actions to assist implement the Aims) were developed. The Aims and their corresponding Actions have been assessed using the SEA objectives presented in Table 3.5.

Full details of the methods used to assess the environmental impacts of the Aims and Actions are presented in Appendix D. The SEA environmental assessment process involved:

- Predicting the **potential environmental effects** of each Aim and Action
- Determining the likely **magnitude** of the effects and the importance of the receptors
- Determining the **sensitivity** of receptors
- Evaluating the **significance** of the effects of implementing each Aim/Action of the LTS
- Predicting the **cumulative effects** of the Aims
- Developing **mitigation** measures to prevent, reduce or offset effects
- Revising the assessment, taking into account agreed mitigation measures

4.4 Uncertainties and Assumptions

Due to the strategic nature of the strategy being appraised, uncertainties and assumptions are inevitable in this SEA. Of note are:

- The general nature of many Aims/Actions means that they cannot be attributed to a particular location and impacts are therefore uncertain
- A number of Actions promote feasibility studies, for example the M8 corridor and A737, with future actions stemming from these studies. Whilst these future actions have the potential for significant negative environmental impacts, details of these actions have not yet been developed for example, the design, scale and location of future developments. Where there is the possibility of development occurring, potential generic impacts are described
- In assessing impacts, the mitigation measures set out in Section 4.7 have been taken into account. There are opportunities to mitigate impacts of projects further during detailed design and by undertaking Environmental Impact Assessments (EIA). However at this strategic level a precautionary approach has been used and in determining whether an impact would be significant
- Construction activities have the potential for negative impacts on water quality. It is an obligation that such activities adhere to legislation[2] to ensure that water quality is not significantly affected. In the assessment of the LTS (see Appendix E), Aims likely to result in construction are shown as having 'Minor Negative' environmental impacts, which are not significant. It is therefore assumed that legislative requirements are adhered to.

[2] Water Environment (Controlled Activities) Regulations 2005

4.5 Effects of LTS Aims and Actions

The following section should be read in conjunction with the assessment matrix in Appendix E. The matrix provides an appraisal of each Aim and the Actions to be implemented in order to achieve it. It should be noted that the impacts described assume the implementation of the mitigation set out in Section 4.7.

4.5.1 Strategic Road and Rail Connections

4.5.1.1 Summary of Aim and Actions

The aim of these Actions is to reduce traffic congestion and improve transport links. This is to be achieved through studies in partnership with the Scottish Executive, Glasgow Airport, Transport Scotland and Strathclyde Partnership for Transport to reduce congestion on the M8 and A737 corridor and by promoting Fastlink the Renfrew North Development Road.

4.5.1.2 Summary of Assessment

The likely impacts of some of these actions are not clear due to uncertainty regarding the specific interventions that will eventually be promoted. Whilst Actions have been included to promote the development of the Renfrew North Development Road and Fastlink, impacts of Actions promoting studies into the M8 and A737 cannot be predicted, as for example, the studies could result in no action or a 'do minimum' approach', or alternatively lead to the development of major infrastructure. The former would represent the status quo and have limited environmental impact. The results described below assume an environmental 'worst case scenario' - if the construction of new infrastructure results from such studies, there is the potential for the following significant environmental impacts:

There is the potential for significant negative effects on biodiversity due to the construction of major infrastructure (e.g. Renfrew North Development Road and Fastlink), through the removal, disturbance and fragmentation of habitats and/or impacts on protected species. Due to its relatively close proximity, there is the potential for the construction of the Renfrew North Development Road to result in negative effects on the Black Cart and/or Inner Clyde SPAs. It will be necessary to screen this project for Appropriate Assessment, required by the Conservation (Natural Habitats & c) Regulations 1994, to determine the likely significance of impacts on these sites.

There is also the potential for new infrastructure to result in significant negative impacts on landscape/streetscape character ad visual amenity. The historic environment may also be negatively impacted upon by such activities through the demolition of, or damage to, historic buildings, archaeology and other features of historic interest. The setting of historic buildings and features may also be negatively affected.

Local air quality has the potential to be improved in some localities through a reduction in congestion. Conversely, new or upgraded road developments have the potential to encourage traffic growth. Existing Air Quality Management Areas (AQMA) are not predicted to be significantly affected by these actions as the actions to reduce congestion do not relate directly to the AQMA in Paisley. Developments resulting in increased road capacity and traffic growth will result in an increase in greenhouse gas emissions

Increased run-off from new infrastructure and associated pollution have the potential to negatively affect water quality. Negative impacts are not predicted to be significant due to mitigation and legislative requirements

The construction of major infrastructure has the potential to result in loss of property, amenity areas and other land, including agricultural land. The development of major infrastructure has the potential to generate large quantities of waste, whilst also providing the opportunity for recycling through the use of waste materials in construction.

Access to the environment and accessibility have the potential to be positively affected by infrastructure improvements. Conversely, accessibility can be negatively affected as new or larger roads can also act as barriers between communities.

4.5.2 *Network Maintenance*

4.5.2.1 Summary of Aim and Actions

These Actions are aimed at maintaining the standards of roads, bridges, street lighting and furniture to a standard that ensures public safety though the completion of the database of infrastructure condition and by prioritising improvements. Improvements including dropped kerbs to assist people with mobility impairments will also be carried out.

4.5.2.2 Summary of Assessment

Whilst there is the potential for biodiversity to be negatively affected through maintenance activities, the LTS includes Actions to protect and promote biodiversity and to support the Local Biodiversity Action Plan, when carrying out maintenance. Taking this into account, as well as legislative requirements, impacts on biodiversity are not predicted to be significant.

Similarly, maintenance does have the potential to negatively affect landscape character and visual amenity through, for example, road/footway resurfacing, bridge maintenance and addressing lighting requirements. Taking into account the Council's mitigation commitments, these impacts are not predicted to be significant

Significant positive effects on human health are predicted due to effective and prioritised maintenance to promote road safety.

4.5.3 *Demand Management*

4.5.3.1 Summary of Aim and Actions

These Actions promote alternatives to private car use such as walking, cycling, public transport and car sharing. This is to be achieved through the development of a Council Travel Plan and by maintaining a full-time Travel Planning Officer. They also seek to ensure effective provision of bus stops/shelters and timetabling. Measures to promote the use of long stay car parks by commuters and investigating the creation of a statutory Bus Quality Partnership or contract with SPT to improve bus service quality are also to be implemented.

4.5.3.2 Summary of Assessment

Encouraging a shift away from individual car use is likely to reduce emissions, thereby resulting in positive impacts on air quality and greenhouse gas emissions. Improved public transport services and integration between services is predicted to have a positive impact on access to the environment and social inclusion, through improving accessibility.

4.5.4 *Road and Community Safety*

4.5.4.1 Summary of Aim and Actions

The aim of these Actions is to reduce the number of road traffic accidents. This will be achieved by further extending community road safety initiatives and education such as 'Foolspeed' and the 'Road Safety Campaign', carrying out accident evaluations annually and developing strategies for investment in road safety engineering measures.

4.5.4.2 Summary of Assessment

Positive impacts on human health are predicted through road safety improvements.

4.5.5 Walking and Cycling

4.5.5.1 Summary of Aim and Actions

These Actions aim to improve health though promoting increased walking and cycling for commuter, leisure and business trips and to reduce car usage. This is to be achieved through the implementation of the Paisley South Strategic Walking/Cycling Route and delivering a cycle route between Barrhead and Paisley. Prioritising actions to tackle isolated locations, barriers against walking and cycling and improving pedestrian crossings, together with prioritised investment in improvements for 'Safer Routes to Schools' aim achieve this.

4.5.5.2 Summary of Assessment

Actions to promote cycling will generally result in positive effects on the environment. However, new, off-road cycle routes have the potential to result in negative effects.

The construction of the Paisley South link cycle way has the potential to have negative effects on the Inner Clyde SPA. As this is a designated Natura 2000 site, it will be necessary to screen for Appropriate Assessment to determine the likely significance of effects on this site.

Depending on their design and location, the provision of new cycle ways has the potential for significant negative effects on landscape/streetscape character and visual amenity. There is also the potential for the setting of historic buildings and features to be negatively affected by the provision of new infrastructure e.g. cycle ways, bicycle storage facilities. Taking into account the Council's mitigation commitments, effects are not predicted to be significant

Encouraging walking and cycling as an alternative to car use is predicted to have significant positive effects on local air quality and contributions to climate change

Construction activities have the potential to negatively affect water quality, although this is not predicted to be significant due to mitigation and legislative requirements. The provision of new cycling infrastructure has the potential to generate waste but also provides the opportunity for waste materials to be utilised in construction. Negative effects on material assets are possible due to loss of land to cycle ways. The significance of impacts depends on the scale of new routes.

Encouragement of walking and cycling, through the provision of cycle ways and facilities is likely to improve access to the natural and historic environment. This should also have positive effects on accessibility/social inclusion. Positive impacts on human health are predicted through encouraging physical activity. Road safety improvements are also predicted through improvements to the walking/cycling network.

4.5.6 Road Network Performance

4.5.6.1 Summary of Aim and Actions

The aim of these Actions is to achieve efficient operation of the road network and to minimise delays for road users. This is to be achieved by maintaining a database of all signal controlled junctions which is to be checked every 2 years and through the evaluation of the upgrade potential of traffic signal controlled junctions around Paisley. Roadworks will also be co-ordinated with the Scottish Executive's work on trunk roads (A737 and M8) to minimise disruption.

4.5.6.2 Summary of Assessment

These Actions are predicted to bring about positive impacts on air quality and greenhouse gas emissions, due to reduced congestion.

4.5.7 Biodiversity

4.5.7.1 Summary of Aim and Actions

Through the management of green elements and natural habitats these Actions aim to encourage biodiversity and support the Local Biodiversity Action Plan. This will be achieved by developing cutting programmes to reduce disruption of wildlife on verges, hedgerows and embankments. The cutting of hedgerows will be restricted to periods out with bird nesting seasons, and consideration for nesting birds and bats will be taken when trees are required to be removed. Old structures such as bridges will also be checked for resident bat colonies and roosting birds.

4.5.7.2 Summary of Assessment

These Actions are predicted to result in positive impacts on biodiversity. Secondary positive effects on landscape character and visual amenity are also likely through actions to encourage planting.

4.5.8 Paisley

4.5.8.1 Summary of Aim and Actions

The aim of these Actions is to develop transport actions which support a wider economic strategy, improve accessibility, minimise congestion and enhance street environment. This is to be achieved through a review of current traffic management and introduction of a central computer to improve bus accessibility to the town centre, reviewing the policy to create a bus interchange in Old Sneddon Street and by making the street bus and taxi-only by revising the existing layout. Historical proposals to upgrade Underwood Road and replace a rail-over-road bridge will be reviewed. An Action to promote the upgrading of Gilmore Street railway station is also included.

4.5.8.2 Summary of Assessment

The Actions which relate specifically to Paisley are not predicted to cause impacts on biodiversity. Significant effects on streetscape character and visual amenity are predicted due to proposals to upgrade Underwood Road, replace a bridge and create a bus interchange in Old Sneddon Street. The upgrading of Gilmour Street Railway Station, a Category B listed building, has the potential for significant negative effects on the historic environment. The significance of effects is dependent on the scale and design of upgrading work. Any construction/maintenance work in the centre of Paisley has the potential for significant negative effects due to its status as a Conservation Area

Positive impacts on traffic-related emissions are predicted due to studies into a Bus Quality Partnership, although it is not possible to determine whether this will significantly affect the Central Road Air Quality Management Area.

There is the potential for land take due to proposals for the Underwood Road upgrade and the bus interchange at Old Sneddon Street. The significance of this is dependent on the extent of these developments

4.5.9 *Renfrew*

4.5.9.1 Summary of Aim and Actions

Actions aim to reverse economic decline and provide linkages between the town centre and Renfrew riverside, as well as to create a more attractive and safe environment for residents and visitors. This is to be achieved though the installation of traffic signals with pedestrian facilities, liaising with transport providers to provide secure bus services along Kings Inch Road and Boulevard, and to investigate the feasibility of the Fastlink service.

4.5.9.2 Summary of Assessment

Many negative environmental effects are associated with the proposals for a Northern Development Road and LRT/Fastlink service. The significance of effects is dependent on the locations and designs these proposals, details of which are not currently known. These should be assessed in detail in an Environmental Impact Assessments (EIA) at a later date.

There is the potential for the construction of a Northern Development Road and LRT/Fastlink to have significant negative impacts on biodiversity, due to habitat loss, fragmentation or disturbance. There are also a number of designated sites around Renfrew which, if affected, would greatly increase the significance of effects; in particular, the Black Cart and Inner Clyde Special Protection Areas (SPA). There are also a number of SINCs to the North and West of Renfrew. If there is the possibility that negative effects on the SPA could occur, it will be necessary by law that it is screened for Appropriate Assessment, to determine the likely significance of effects on the site(s).

The construction of the Northern Development Road and LRT/Fastlink have the potential for significant negative effects on landscape character and visual amenity. Actions to create streetscape improvements are likely to have positive impacts on landscape/streetscape character and visual amenity

The construction of a new road and LRT/Fastlink has the potential for significant negative effects on the historic environment. There are several listed buildings, archaeological sites and a Scheduled Ancient Monument in the vicinity of north Renfrew. There is the potential for these historic features (including listed buildings, archaeology and other features of historic importance) to be negatively affected by construction activities, or for the setting of these to be affected.

Positive impacts on air quality are predicted as the Northern Development Road should relieve town centre congestion. Negative impacts are also predicted for air quality in the area of the new road. Emissions of greenhouse gases are likely to be increase as the provision of a new road is likely to encourage increased car use.

Positive impacts on accessibility / access are predicted through the provision of LRT / Fastlink services and a new road. There is also the potential for the provision of these to cause severance problems. Positive impacts on safety are predicted due to an Action to reduce speed.

4.5.10 *Johnstone*

4.5.10.1 Summary of Aim and Actions

Actions seek to support the shopping and commercial role of the town through considering upgrading Park & Ride at Milliken Park, improving bus services and reducing congestion.

4.5.10.2 Summary of Assessment

It is not clear at this stage whether these actions will result in physical development. If development does occur (e.g. improvements to park and ride) and depending on its location/scale, there is the potential for negative environmental effects, in particular on biodiversity, landscape and the historic environment. In and around Johnstone there are a number of SINCs, tree preservation orders, listed buildings and archaeological sites. If public transport is improved, there is also the potential for positive impacts on accessibility.

Improvements to traffic signals and public transport services/infrastructure could lead to positive impacts on air quality and greenhouse gas emissions.

4.5.11 Erskine

4.5.11.1 Summary of Aim and Actions

Actions aim to strengthen public transport links, address speeding on urban roads and ensure accessibility by walking and cycling. This includes improved pedestrian links and an investigation of the potential for a Bus Park & Ride.

4.5.11.2 Summary of Assessment

It is not clear at this stage whether physical development will be required to 'improve' pedestrian and cycle links. It is therefore not possible to determine if negative environmental effects would occur. If new routes are created, there is the potential for negative effects.

Air quality / climate - Improvements in accessing public transport services and encouraging walking and cycling, should have minor positive effects on traffic levels and therefore on air quality/greenhouse gas emissions. Improvements to safety are predicted due to reductions in vehicle speeds.

4.5.12 Linwood

4.5.12.1 Summary of Aim and Actions

Actions aim to promote road safety and to improve connectivity by means other than private car use. A strategy will be developed to reduce speeds and pedestrian/cycling infrastructure will be improved.

4.5.12.2 Summary of Assessment

It is not clear at this stage whether physical development will be required to improve pedestrian and cycle links. It is therefore not possible to determine if negative environmental effects would occur. Three SINCs are located nearby and Linwood contains one listed building therefore there is the potential for significant negative effects on biodiversity and the historic environment if physical development occurs and if it were to affect these.

Encouragement of walking, cycling and potential improvements to bus services are predicted to have minor positive impacts on traffic and therefore on air quality and greenhouse gas emissions. Improvements to safety are predicted due to traffic management and speed reduction.

4.5.13 *Houston and Crosslee*

4.5.13.1 Summary of Aim and Actions

Actions aim to agree a manage traffic in Houston centre, reduce vehicle speeds and to address the severance effect of the B790. Bus service improvements will also be investigated.

4.5.13.2 Summary of Assessment

If bus services are improved, there may be slight improvements to traffic levels, although this is not predicted to be significant. Air quality in Houston village centre should be positively affected by a traffic management plan. Reduced severance of the B790 should improve accessibility / social exclusion.

4.5.14 *Bishopton*

4.5.14.1 Summary of Aim and Actions

These Actions seek to ensure the redevelopment of the ROF site is associated with appropriate upgrades to infrastructure and to improve links to main employment centres. This is to be achieved by the expansion of the car park at the Rail Station and by permitting the provision of a direct connection to the M8 in connection with the redevelopment of the ROF site. Proposals to reduce traffic speed on the A8 through the village will also be implemented.

4.5.14.2 Summary of Assessment

Infrastructure upgrades, including rail station car park expansion and a connection to the M8, have the potential for negative environmental impacts, depending on their scale, design and location. Impacts on biodiversity are possible as woodland exists in the area, although no other designated sites are likely to be affected

Landscape character and visual amenity are likely to be negatively affected by the provision of new infrastructure. There are no landscape designations therefore impacts on landscape character are not predicted to be significant. New infrastructure does have the potential for significant negative impacts on visual amenity, however the significance of effects is dependent on the scale and design of any new structures, as well as its location in relation to receptors. As this information is not available, the significance of impacts is uncertain

One listed building is present in the ROF site; approximately 1 km from the site of the rail station. This is not predicted to be affected by proposals to expand the car park although as information is not available regarding the location of other infrastructure, there is the possibility that this building or its setting could be affected. Impacts are therefore currently uncertain

The development itself and associated road infrastructure are likely to increase traffic levels and therefore also increase emissions. This would have negative effects on local air quality and emissions of greenhouse gases. Improved bus services and rail parking should encourage public transport, with positive impacts on emissions.

Other impacts include those on material assets, as infrastructure is likely to result in land take. There is also the potential for generation and recycling of waste through construction activities.

Minor positive impacts are predicted for accessibility and access to the natural and historic environment due to public transport improvements. Road safety is likely to be positively affected by proposals to reduce traffic speeds through the village.

4.5.15 *Elderslie*

4.5.15.1 Summary of Aim and Actions

Actions address the on road element of the cycle route, speeding and parking requirements.

4.5.15.2 Summary of Assessment

Improvements to safety are predicted due to Actions to reduce traffic speeds and to address the 'on road element of the cycle route'.

4.5.16 *Bridge of Weir*

4.5.16.1 Summary of Aim and Actions

The aim of these Actions is to reduce traffic speed within the town centre and improve walking, cycling and public transport links with neighbouring towns. This is to be achieved through extending the 30mph speed limits, implementing 20mph zones within the town centre and to investigate footways and provide links to the cycling network.

4.5.16.2 Summary of Assessment

There is the potential for negative impacts on biodiversity through the provision of new walking paths and cycle ways, this will be of greater significance if developments affect nearby SINCs. There is the potential for negative effects on landscape/streetscape character and visual amenity due to the provision of new walking and cycling infrastructure. Much of the village is a designated Conservation Area therefore any development could negatively affect the historic environment. Impacts are not considered significant given the scale of likely development and taking into account the Council's mitigation commitments.

Positive effects on emissions are predicted due to the promotion of walking/cycling as an alternative to car use and due to public transport provision.

There is the potential for minor loss of land due to construction of paths and cycle ways. Construction is likely to generate waste but also provides the opportunity for recycling of waste materials.

Positive impacts on human health are predicted as the provision of improved cycle ways and paths encourage physical activity and improve road safety for cyclists/pedestrians. These should also result in improved accessibility and access to the environment. Positive impacts are also predicted due to an Action to reduce traffic speeds in the village.

4.5.17 *Kilbarchan*

4.5.17.1 Summary of Aim and Actions

Actions aim to improve connectivity by public transport and manage village parking through a proposal for parking control in conjunction with the community council and to explore options in partnership with SPT for improved bus services.

4.5.17.2 Summary of Assessment

Streetscape and the historic environment may be positively affected by proposals to control parking in this Conservation Area. Improvements to accessibility are predicted due to improved bus services.

4.5.18 Lochwinnoch

4.5.18.1 Summary of Aim and Actions

The aim of these Actions is to accommodate the expansion of housing and increased car ownership such that safety is not compromised and that the town continues to be attractive for tourism and leisure pursuits. This is to be achieved through an investigation into the enlargement of the Park & Ride and through the preparation of a Traffic Management Plan for the town centre together with an upgrade in the weight restricted bridge to restore access.

4.5.18.2 Summary of Assessment

There is the potential for negative impacts on biodiversity due to the expansion of park and ride facilities and bridge strengthening, although effects are not predicted to be significant, taking into account the Council's mitigation commitments. A SSSI is nearby although any potential development is not expected to be of a scale which is likely to affect this site

Landscape/streetscape character and visual amenity may be negatively affected by the expansion of park and ride and bridge strengthening, although this is not predicted to be significant.

A Conservation Area covers parts of Lochwinnoch, therefore development (park & ride, bridge strengthening) has the potential for significant negative effects on the historic environment – either directly on historic buildings/features or on their setting.

Minor positive effects on local air quality and greenhouse gas emissions are predicted through promotion of rail, as an alternative to private car use.

New or expanded infrastructure has the potential for minor negative effects on material assets through land take and construction could result in the production and recycling of waste materials.

Road safety improvements are predicted for the town centre due to an Action promoting the development of a traffic management plan.

4.5.19 Langbank

4.5.19.1 Summary of Aim and Actions

The aim of these Actions is to improve public transport, walking and cycling connectivity. This will be achieved by examining the A8 layout to address safety concerns, create parking areas for the local railway station, investigate bus routes into the village, link the village to existing walk and cycle routes and to pilot a 'Leisure Lanes' project to increase safe access into the countryside on single track roads for walkers, horse riders and cyclists.

4.5.19.2 Summary of Assessment

There is the potential for significant negative impacts on biodiversity due to the possible provision of car parking, walking and cycling routes. Physical development in Langbank has the potential for significant effects on biodiversity as the village borders the Inner Clyde SPA. Screening for Appropriate Assessment will be required if there is the potential for effects on the SPA. This will be determined at a later date when further details regarding location, scale and design are known.

There is the potential for negative effects on landscape/streetscape character and visual amenity due to the provision of new infrastructure. New infrastructure has potentially negative impacts on the setting of historic buildings/features

Minor positive effects on local air quality and greenhouse emissions are predicted due to the promotion of cycling, walking and through potential public transport improvements.

Positive impacts on access to the natural environment are predicted due to an Action to promote a 'leisure lanes' project, aimed at increasing safe access to the countryside for walkers, cyclists and horse riders. This initiative also promotes physical activity therefore minor positive impacts on human health are predicted.

4.5.20 *Inchinnan*

4.5.20.1 Summary of Aim and Actions

Actions aim to improve walking and cycling links, improve evening bus services and to address road safety concerns on the A8.

4.5.20.2 Summary of Assessment

The improvement of walking and cycling route has the potential for negative environmental impacts, depending on the scale of improvements. A SINC is located just out with the village and therefore the potential exists for negative effects on biodiversity. There are also a number of listed buildings and archaeological sites in the vicinity. Negative impacts on the historic environment are therefore possible. Taking into account the Council's mitigation commitments, these effects are not predicted to be significant.

As with similar Actions for other localities, minor positive impacts are predicted for access/accessibility, local air quality/greenhouse gas emissions and human health (through increased physical activity and improved safety).

4.5.21 *Howwood*

4.5.21.1 Summary of Aim and Actions

The aim of Actions is to reduce traffic speeds through the village in order to increase safety and to enhance existing bus services and to improve cycle routes.

4.5.21.2 Summary of Assessment

The provision of a direct link to the national cycle link could result in negative impacts on biodiversity. Woodland and a SINC are in the vicinity of the village. It is assumed that due to their location, the cycle link would not affect them. Effects on biodiversity are therefore not predicted to be significant.

The provision of a new route has the potential for negative effects on landscape character and visual amenity. Taking mitigation commitments into account, effects are not predicted to be significant.

Effects on the historic environment are possible; either directly on historic features or on there setting. Two listed buildings are located within Howwood. Given the scale of a likely route and taking into account mitigation commitments, it is predicted that impacts will not be significant.

Minor positive effects on emissions are predicted through promotion of cycling and due to potential public transport improvements. Minor positive impacts are also predicted for human health due to encouragement of physical activity and improved safety.

4.5.22 *Brookfield*

4.5.22.1 Summary of Aim and Actions

By providing walking and cycling connections to neighbouring towns, enhancing public transport and implementing a lower speed limit of 30mph on the A761, Actions aim to increase safety and to improve connectivity in order that villagers can have easier access to facilities such as health, food and leisure without having to rely on a private car.

4.5.22.2 Summary of Assessment

There is the potential for negative impacts on biodiversity through the provision of new walking paths and cycle ways, although no designated sites are located in areas likely to be affected, therefore impacts are not predicted to be significant.

There is the potential for negative effects on landscape character and visual amenity due to the provision of new walking and cycling infrastructure. Taking into account mitigation commitments, impacts are not predicted to be significant.

Brookfield contains archaeology and a listed building. There is the potential for significant negative effects on the setting of these, or perhaps directly, due to the construction of a walking/cycling route. It may be possible to mitigate impacts however taking a precautionary approach, significant impacts are predicted.

Positive effects on emissions are predicted through the promotion of walking/cycling as opposed to car use, in addition to the potential for improved public transport provision. Positive impacts on human health are also predicted due to increased physical activity and improved road safety due to an Action to lower the speed limit on the A761.

4.6 Summary of Effects on SEA Topics and Potential Cumulative Effects

This section summarises the overall impacts of the Aims and Actions of the Renfrewshire LTS on the SEA topics. This includes the potential for cumulative impacts, where the combined effects of a number of Actions on a particular receptor (e.g. biodiversity) are of greater significance than the individual Actions.

In assessing impacts, the mitigation measures set out in Section 4.7 have been taken into account. Many of the more significant impacts result from the potential for physical development. There are opportunities to mitigate impacts further during detailed design and by undertaking EIAs of individual projects. A precautionary approach has been taken and it has not been assumed that EIA would remove all impacts.

4.6.1 Biodiversity

The majority of the Aims and Actions of the LTS are predicted to have little or no effect on biodiversity. The LTS in some areas has positive effects on biodiversity as it includes Aims and Actions to promote biodiversity in the maintenance of the transport network and to support the Local Biodiversity Action Plan.

In some areas of the LTS, it has not been possible to determine whether effects on biodiversity will occur due to uncertainty regarding whether major infrastructure projects will be developed. Actions within the LTS to study the M8 and A737 corridors could lead to major road upgrades, which could therefore have significant negative effects.

In spite of mitigation measures set out in Section 4.7, the potential remains for significant negative effects on biodiversity. The promotion of major infrastructure, in particular the Renfrew North Development Road, Fastlink and the Paisley South Cycle Link, has the potential to result

in negative effects on Natura 2000 sites – the Inner Clyde SPA and/or Black Cart SPA. To determine the likely significance of effects on these sites, it will be necessary for the Council to carry out Appropriate Assessments, as required by the Conservation (Natural Habitats & c) Regulations 1994.

When considered alone, the effect on biodiversity of creating a new or upgraded footway/cycleway, in the majority of cases, is relatively minor. However, when all cycleways and footways proposed in the LTS are taken into account, the cumulative effects on habitats and wildlife corridors are more significant. Effective implementation of mitigation measures is required to limit these effects.

4.6.2 Landscape Character and Visual Amenity

As with biodiversity, the majority of the Aims and Actions of the LTS are predicted to have little or no effect on landscape/streetscape character and visual amenity.

Actions which do have the potential for significant negative impacts on landscape/streetscape character or visual amenity generally promote the construction of major new or upgraded infrastructure. This infrastructure includes the Renfrew North Development Road, Fastlink and new road infrastructure associated with the Bishopton ROF site to the M8. In Paisley, impacts are likely due to the upgrading of Underwood Road, construction of a new bus interchange at Old Sneddon Street and a bridge replacement.

In some cases, the likely impacts of the LTS are not yet clear due to current uncertainty regarding whether some projects will be developed. These include studies into the M8 and A737 corridors, and 'considering improved Park and Ride' facilities in Johnstone. If these projects are progressed, significant negative impacts are likely.

There is the potential for negative cumulative effects from the provision/upgrading of small-scale infrastructure, such as footways and cycle ways. Whilst individual developments may have minor effects, when all developments across Renfrewshire are taken into account, the overall effect has the potential to be significant. This is currently uncertain as it is dependent on the scale of these developments, details of which are not currently known.

4.6.3 Cultural Heritage

Significant negative effects on the historic environment are predicted due to the provision of new or upgraded transport infrastructure. There is the potential for direct effects on listed buildings, historic features or archaeology. For major transport projects (such as the Renfrew North Development Road and Fastlink), it will be necessary for EIAs to be carried out and for detailed mitigation proposals to be determined.

There is the potential for small-scale infrastructure, such as new/upgraded walkways and cycleways, to result in negative effects on the historic environment, particularly on the setting of historic features. Such developments may not require detailed EIAs and therefore effective implementation of mitigation, particularly in relation to appropriate design, is necessary to limit these effects.

Potential impacts have been identified from specific projects promoted through the strategy. These include the potential for enlargement of the Park & Ride car park and upgrading of a weight restricted bridge in Lochwinnoch (a Conservation Area). The upgrading of Paisley Gilmour Street railway station, a Category B Listed Building, has the potential for significant negative effects.

4.6.4 Local Air Quality

Overall, the Aims and Actions of the LTS are predicted to have positive effects on local air quality. The promotion of a number of new and upgraded walking and cycling routes, as well as proposed improvements to public transport services and infrastructure, is aimed at encouraging alternatives to private car use.

The Renfrew North Development Road is aimed at reducing congestion in Renfrew centre and should therefore improve local air quality in this location. This will also negatively affect air quality in the location of the new road. This new road also has the potential to encourage traffic growth, with negative long-term impacts on air quality.

An Air Quality Management Area (AQMA) is designated at Central Road in Paisley and a number of Actions have been included in the LTS to address this problem area. These are predicted to have positive effects on the AQMA, however due to uncertain outcomes, it is not possible to determine whether these would result in the removal of the AQMA designation.

An action to 'complete studies into a statutory Bus Quality Partnership' does not guarantee the development of such a partnership and therefore does not ensure improvements to buses – a major contributor to the AQMA.

4.6.5 Climatic Factors

Impacts on Renfrewshire's greenhouse gas emissions are predicted to be positive overall. The promotion of walking, cycling and public transport are aimed at encouraging alternatives to car use. The promotion of the Renfrew North Development Road is however likely to encourage private car use and therefore contribute to increased emissions.

Studies into the M8 and A737 corridors may or may not result in road upgrades. An increase in road capacity, and vehicle movements, is likely to increase CO_2 emissions.

No impacts are predicted on Renfrewshire's vulnerability to the effects of climate change.

4.6.6 Water Quality

There is the potential for the LTS to result in negative effects on water quality. This is most likely through Aims and Actions which promote the construction of infrastructure. It is an obligation that such activities adhere to legislation to ensure that water quality is not significantly affected. It is therefore assumed that legislative requirements will be adhered to and overall impacts on water quality are therefore not predicted to be significant.

4.6.7 Land and Material Assets

There is the potential for negative impacts on land and material assets. This is most likely to result through land take due to the construction of major transport infrastructure. In addition materials will be utilised in construction activities, with waste generated. Construction does also provide the opportunity for waste materials to be recycled.

Due to the relatively minor extent of proposed infrastructure, overall impacts on material assets are not predicted to be significant. It should be noted that if major projects result from studies into the M8 and A737, effects may be more significant.

4.6.8 Access to the Natural and Historic Environment

Significant positive effects on access to the natural and historic environment are predicted due to proposals to develop and upgrade walking and cycling routes. Public transport improvements should also contribute to this positive impact.

4.6.9 *Human Health*

The overall impacts of the LTS on human health are predicted to be positive. This is due to measures to improve local air quality and the encouragement of physical activity through walking and cycling. In addition, road safety improvements are predicted.

4.6.10 *Social Exclusion*

Impacts on social exclusion are predicted to be positive. This is due to improved accessibility through Actions to promote public transport, walking and cycling and increased connectivity between settlements and facilities.

4.7 Mitigation

4.7.1 *SEA Mitigation Proposals*

This list below contains mitigation measures that the Council commit to implementing and have been developed to prevent, minimise or offset the significant adverse effects that the LTS may have on the environment. Mitigation measures are listed under the aspect of the environment that has the potential to be affected by the LTS. The Director of Planning and Transport will ensure that mitigation is taken forward in the design and implementation of transport schemes.

4.7.1.1 General

While not strictly mitigation at an SEA level, it is recognised that transport projects likely to have significant impacts on the environment will be subject to Environmental Impact Assessment (EIA). The need for EIA will be determined on a project by project basis in liaison with the planning authority and following the requirements of the Environmental Impact Assessment (Scotland) Regulations.

4.7.1.2 Biodiversity

The Council is committed to the biodiversity Aims and Actions within the LTS and the Natural Heritage/Biodiversity policies within the Renfrewshire Local Plan. The following measures will also be implemented where appropriate:

- Sensitive sites (protected sites, second tier sites, semi natural habitat) will be avoided where possible
- Where appropriate, measures to enhance biodiversity will be implemented. Such measures may include seeding locally native species on roadside verges and other schemes, the use of locally native tree species in landscape schemes, habitat creation, habitat creation for protected species (e.g. barn owl boxes, log pile holts for otters) and the creation of greenways and wildlife corridors along footpaths and cycleways, to encourage the movement of species
- Potential Impacts on the integrity of Natura 2000 sites (or proposed Natura 2000 sites) will in the first instance be prevented by locating transport activities likely to cause disturbance

away from such sites. Where activities could directly, indirectly or in combination with other proposals affect the interests of a Natura site, the proposals will be screened for the potential for significant effects to the interests of the site in consultation with SNH. If the screening indicates potential for significant effects studies will be completed to inform an Appropriate Assessment

- Potential impacts on protected species will be avoided in the first instance by locating transport activities likely to cause disturbance away from sites associated with protected species. In other cases impacts will be avoided by complying with protected species legislation and by licensing proposed disturbance through the relevant licensing authority (SEERAD or SNH)
- In the early stages of developing transport corridors, consideration will be given to the provision of wildlife access corridors

4.7.1.3 Landscape and Visual Amenity

- Where EIA is required, the landscape and visual appraisals will be carried out for all schemes to determine the likely effects of the scheme on landscape character and visual amenity
- High quality design and construction principles will be applied to all new developments and modifications and improvements to existing schemes
- All schemes will be appropriately and sensitively designed for their location
- All schemes will be maintained to ensure they remain in good condition
- All schemes will retain important and distinctive landscape features (e.g. field patterns, hedgerows, trees, open space and urban form) where possible
- Where important and distinctive landscape features must be removed/modified or landscape character will be temporarily altered, Landscape Management Plans will be produced highlighting how the affected areas will be restored, reinstated and enhanced
- All landscape schemes will incorporate biodiversity enhancements where appropriate e.g. use of native species, creation of greenways and green networks
- The quality and design of street furniture (e.g. lighting and signage) will ensure they are appropriate to their setting, create a cohesive treatment and enhance streetscape quality

4.7.1.4 Historic Environment

- New transport related schemes in Conservation Areas will be of a high quality and will be designed to ensure they are appropriate to the character of the Conservation Area and its setting
- Surveys will be undertaken prior to the implementation of schemes to determine whether they will affect sites of archaeological importance and the setting of archaeological features
- Where EIA is required, landscape character assessments will incorporate Historic Land-Use Assessments (HLA) to inform all related assessments in terms of the historic elements of landscapes. This is a GIS-based analysis of past and present land-use, accessible at http://www.rcahms.gov.uk

4.7.1.5 Water

- All new transport schemes and improvement works will be carried out in accordance with relevant legislation for the protection of surface and groundwater (including the Water Framework Directive). These will also take into account SEPA's Pollution Prevention Guidelines (PPG):
  - PPG1: General Guide to the Prevention of Pollution
  - PPG2: Above Ground Oil Storage tanks
  - PPG5: Works In, Near or Liable to Affect Watercourses
  - PPG6: Working at Demolition and Construction Sites
  - PPG21: Pollution Incident Response Planning
- All engineering, building or other works in inland surface waters will require authorisation under the Water Environment (Controlled Activities) (Scotland) Regulations 2005 and may require licensing by SEPA (other than those covered by the General Binding Rules)

- Transport schemes and improvement works will implement appropriate means to minimise pollution from surface run-off e.g. oil separators and silt traps
- In accordance with Scottish Planning Policy 7 (SPP:7), if initial discussion with the appropriate planning authority indicate that flooding is likely to be an issue for a scheme a flood risk assessment will be carried out
- The council will require that all new transport-related developments implement Sustainable Urban Drainage Systems (SUDS)

4.7.1.6 Air Quality and Climate Change

- The LTS itself contains several proposed Actions to reduce emissions through increased walking, cycling and use of public transport

4.7.1.7 Human Health

- Noise impacts can be mitigated through appropriate acoustic screening, taking into account its appropriateness to the local environment
- Where appropriate cycle/footpaths will be separated from roads to reduce the risk of accidents and the impacts of air pollution on health

4.7.1.8 Material Assets

- In the development of transport infrastructure, using good quality agricultural land will be avoided where possible
- Wherever practicable, the Council will ensure that waste materials associated with transport infrastructure are reduced, reused, recycled or recovered

5 Monitoring

This section of the Environmental Report presents proposals for monitoring the environmental effects of implementing the Renfrewshire Local Transport Strategy.

Monitoring is an ongoing process which is undertaken throughout the duration of the strategy. The purpose of monitoring is to determine whether the strategy is performing as predicted by measuring how the baseline changes following implementation of the strategy.

5.1 The Purpose of Monitoring

Monitoring is important for identifying whether the LTS is having an adverse effect on the environment. If adverse effects are identified, these can be addressed. Any future reviews of the strategy can take this information into account, with the intention of avoiding similar effects. Similarly, information gained from monitoring can help to improve future predictions of environmental effects, by highlighting the effects of this LTS and by filling existing data.

5.2 Carrying out Monitoring

Monitoring involves the use of 'indicators'. An indicator is a measure of how the environmental baseline has changed. Indicators can comprise both quantitative (facts and figures) or qualitative (descriptive) information.

To ensure that monitoring is effective and that any identified impacts can be responded to, the indicators should be reviewed on an annual or two-yearly basis. The causes of any identified changes can then be analysed and dealt with appropriately.

It should be noted that information gathered from monitoring should also be considered in the context of activities out with the transport strategy. For example, biodiversity can be affected by transport activities but also by other activities such as aquaculture or residential development. If monitoring identifies impacts which are not caused by the transport strategy, these can be referred to the appropriate authority.

5.3 The Monitoring Framework

The monitoring proposals in this chapter were determined through analysis of the environmental effects and available baseline information. An initial list of indicators was set out in the SEA Scoping Report and the Consultation Authorities were given the opportunity to comment on these.

The proposed SEA monitoring framework is set out in Table 5.1. Following consultation on the draft LTS and this Environmental Report, a final monitoring framework will be developed and presented in the SEA Post-Adoption Statement.

Table 5.1 Proposed SEA monitoring programme

SEA Category	Indicator	Data Source
Biodiversity, Flora and Fauna	Reported damage to protected sites (SAC, SPA, SSSI) caused by transport-related activities	SNH
Biodiversity, Flora and Fauna	Number of successful licence applications for derogations of the Habitats Directive to disturb European Protected Species	SNH
Biodiversity, Flora and Fauna	Length of wildlife corridors lost and created	Council
Biodiversity, Flora and Fauna	Habitats lost or significantly altered	Council
Landscape and Visual Amenity	Proportion of transport projects accompanied by outline landscape design	Council
Cultural Heritage	Number of applications for Scheduled Monument Consent, related to transport	Historic Scotland
Cultural Heritage	Outcomes of applications for Scheduled monument consent, related to transport	Historic Scotland
Cultural Heritage	Number of applications for Listed Building Consent (inc demolitions) related to transport	Council
Cultural Heritage	Outcomes of applications for Listed Building consent related to transport	Council
Air	Exceedances of key air quality indicators in Air Quality Management Areas (AQMAs) & proposed AQMAs	Council
Climate Factors	% of people changing from single occupancy car use to public transport	Council
Water	Water pollution events related to transport	SEPA
Water	Number of flooding events affecting transport infrastructure	Council/SEPA
Water	Percentage of new road length incorporating SUDS features	Council
Water	Length of roads retro-fitted with SUDS features	Council
Water	Indicators and targets for waterbodies will be set out in forthcoming River Basin Management Plans. Where appropriate these will be incorporated in the monitoring of environmental effects	Council
Human Health	Transport-related crime	Strathclyde Police
Human Health	Road traffic offences	Strathclyde Police
Human Health	Road safety figures	Strathclyde Police
Human Health	Physical activity - travel to work/study by mode	Council

6 Next Steps

Table 6.1 below lists future milestones in the development of the Renfrewshire LTS and the accompanying SEA, with corresponding dates.

Table 6.1 Forthcoming LTS and SEA Milestones

Expected Date	Milestone
23rd February 2007	Final date for receiving comments on the draft LTS and Environmental Report
Early 2007	Publication of final LTS
Early 2007	Publication of Post Adoption SEA Statement, which will: ▪ Highlight how the SEA and consultation responses have influenced the development of the LTS ▪ State the framework for monitoring the environmental effects of the LTS

7 Appendices

Appendix A	Relevant Strategies, Plans, Programmes and Environmental Objectives
Appendix B	Baseline Situation
Appendix C	Testing LTS Objectives
Appendix D	Assessment Methods
Appendix E	Assessment Matrix
Appendix F	Addressing Scoping Comments

Appendix A Relevant Strategies, Plans, Programmes and Environmental Objectives and their Relationship with the Renfrewshire LTS

Name of plan/ programme/objective	Relevant requirement of plan/ programme/objective	Relevant SEA Objectives	Relationship with the Renfrewshire LTS, in terms of SEA Issues
International and National Directives/Legislation			
The EC Directive on the Conservation of Wild Birds 79/409/EEC 1979	▪ Protect birds naturally occurring in the European territory, applies to birds, eggs, nests and habitats. ▪ Preserve, maintain or re-establish a sufficient diversity and area of habitats. Maintain populations of species taking into account ecological, scientific, economic and cultural requirements. ▪ Pay particular attention to wetlands especially those of international importance.	SEA objective 1	Any development resulting from the LTS must comply with this legislation. The LTS contains an Aim to manage "green elements and natural habitats of the transport network in a manner which encourages biodiversity and supports the Local Biodiversity Action Plan." The Aim is supported by a number of Actions including commitments to consider nesting bird and bats in timing of maintenance works and to follow management practices that encourage biodiversity and animal movement along off-road walking and cycling links.
The EC Directive on the conservation of Natural Habitats of Wild Fauna and Flora 92/43/EEC 1992	▪ Preservation, protection and improvement of the quality of the environment, including the conservation of natural habitats and of wild fauna and flora. ▪ Maintain and restore natural habitats and of wild fauna and flora, working towards ensuring bio diversity and taking account of economic social and cultural requirements and regional and local characteristics.	SEA objective 1	Any development resulting from the LTS must comply with this legislation. The LTS contains an Aim to manage "green elements and natural habitats of the transport network in a manner which encourages biodiversity and supports the Local Biodiversity Action Plan." The Aim is supported by a number of Actions including commitments to consider nesting bird and bats in timing of maintenance works and to follow management practices that encourage biodiversity and animal movement along off-road walking and cycling links.

Directive 2000/60/EC establishing a framework for the community action in the field of water policy ('The Water Framework Directive')	▪ To establish a frame work for the protection of inland surface waters, transitional waters, coastal waters and groundwater ▪ To enhance protection and improvement of the aquatic environment and promote sustainable water use.	SEA objective 6, 7	The SEA addresses the effects of the LTS on water quality and proposes mitigation measures to avoid, reduce and offset impacts.
Directive 1996/62/EC on ambient air quality and management	▪ To protect the environment as a whole and human health. ▪ To maintain ambient air quality where it is good and to improve it in other cases using limit values and/or alert threshold set for ambient air pollution levels. ▪ Preserve best ambient air quality compatible with sustainable development	SEA objective 4	The LTS seeks to address air quality problems through number of Actions to reduce traffic congestion. A Paisley specific action has been included to address the AQMA at Central Road.
Directive 2003/30/EC On the Promotion of Biofuels and Other Renewable Fuels for Transport	▪ Calls for the dependence on oil in the transport sector to be reduced by using alternative fuels such as biofuels. ▪ Member States should ensure that a minimum proportion of biofuels and other renewable fuels is placed on their markets, and, to that effect, shall set national indicative targets. A reference value for these targets shall be 5,75 %, calculated on the basis of energy content, of all petrol and diesel for transport purposes placed on their markets by 31 December 2010.	Not addressed by any of the objectives	The use of biofuels is not addressed either by the LTS or through the SEA.
European Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment	Requires Strategic Environmental Assessment (SEA) of certain plans and programmes, including: ▪ Preparation of an Environmental Report on the likely significant effects of the draft plan or programme ▪ Consultation on the draft plan or programme and the accompanying Environmental Report ▪ Taking into account the Environmental Report and the results of consultation in decision making ▪ Providing information when the plan or programme is adopted and showing how the results of the environmental	All SEA objectives	Requires this SEA to be carried out, implemented in Scotland by the Environmental Assessment (Scotland) Act 2005.

	assessment have been taken into account		
Our Energy Future – Creating a Low Carbon Economy 2003	▪ To cut the UK's carbon dioxide emissions - the main contributor to global warming - by some 60% by about 2050, as recommended by the RCEP, with real progress by 2020.	SEA objective 5	Transport is a significant contributor to CO_2 emissions. The LTS seeks to address this problem through number of Actions are included in the LTS to reduce traffic congestion, improve public transport and encourage a behavioural shift in the modes of transport used by Renfrewshire residents.
Wildlife and Countryside Act 1981 (as amended)	▪ Protection of wildlife (birds, animals and plants), countryside, national parks, public rights of way and the designation of protected areas such as sites of special scientific interest or limestone pavement orders.	SEA objective 1	Any development resulting from the LTS must comply with this legislation. The LTS contains an Aim to manage "green elements and natural habitats of the transport network in a manner which encourages biodiversity and supports the Local Biodiversity Action Plan." The Aim is supported by a number of Actions including commitments to consider nesting bird and bats in timing of maintenance works and to follow management practices that encourage biodiversity and animal movement along off-road walking and cycling links.
The Conservation (Habitats & c.) Regulations 1994 ('Habitats Regulations')	▪ Measures relating to the conservation of natural habitats and of wild fauna and flora. ▪ Provides for the designation and protection of 'European Sites'. (SCIs, SACs, SPAs and RAMSAR sites) ▪ Protection of European protected species (such as bats and great crested newts)	SEA objective 1	Any development resulting from the LTS must comply with this legislation. The LTS contains an Aim to manage "green elements and natural habitats of the transport network in a manner which encourages biodiversity and supports the Local Biodiversity Action Plan." The Aim is supported by a number of Actions including commitments to consider nesting bird and bats in timing of maintenance works and to follow management practices that encourage

			biodiversity and animal movement along off-road walking and cycling links.
Ancient Monuments and Archaeological Areas Act 1979	▪ To consolidate law relating to ancient monuments and to provide for the inspection and recording of matters of archaeological interest and to regulate such activities. ▪ Provides for nationally important archaeological sites to be statutorily protected as scheduled ancient monuments ▪ Section 2 requires authorisation for undertaking certain works, in the form of Scheduled Monument Consent	SEA objective 3	Projects resulting from the LTS must comply with this legislation. The LTS has the potential to affect Ancient Monuments and areas of known and unknown archaeology. The SEA assesses the potential impacts and proposes mitigation measure to reduce, offset or avoid them.
Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997	▪ Listing of buildings of special architectural or historic interest ▪ 'Building preservation notice' Temporary listing ▪ Restriction on work affecting listed buildings ▪ Authorisation of works listed building consent ▪ Applications for listed building consent ▪ Power to impose conditions on grant of listed building consent ▪ Revocation and modification of listed building consent ▪ Rights of owners compensation ▪ Prevention of deterioration and damage ▪ Conservation Areas designation Preservation and enhancement of conservation areas	SEA objective 2, 3	Projects resulting from the LTS must comply with this legislation. The LTS has the potential to affect Listed Buildings and Conservation Areas. The SEA assesses the potential impacts and proposes mitigation measure to reduce, offset or avoid them.
Nature Conservation Act (Scotland) 2004	▪ Places a duty on public bodies to further the cause of biodiversity in undertaking their functions and in line with the Scottish Biodiversity Strategy ▪ Increases protection for Sites of Special Scientific Interest (SSSI) ▪ Amends legislation on Nature Conservation Orders, ▪ Provides for Land Management Orders for SSSIs and associated land ▪ Strengthens wildlife enforcement legislation ▪ Requires every public body, in exercising any functions, to	SEA objective 1	Any development resulting from the LTS must comply with this legislation. The LTS contains an Aim to manage "green elements and natural habitats of the transport network in a manner which encourages biodiversity and supports the Local Biodiversity Action Plan." The Aim is supported by a number of Actions including commitments to consider nesting bird and bats in timing of maintenance works and to follow

	further the conservation of biodiversity		management practices that encourage biodiversity and animal movement along off-road walking and cycling links.
Air Quality Limit Values Regulations 2003	▪ Transpose into national legislation the requirements of Directive 2002/3/EC ▪ Duty to ensure compliance with limit values of relevant pollutants in ambient air ▪ Sets target values and long term objectives for levels of ozone in ambient air ▪ Assess ambient air quality ▪ Production of action plans where there is a risk of exceeding limit values for any of the relevant pollutants	SEA objective 4	The LTS contains Actions to address air quality problems in Renfrewshire, including a specific Action to address the AQMA at Central Road, Paisley.
Water Environment and Water Services (Scotland) Act 2003	▪ Protection of water environment ▪ Production of river basin management plans	SEA objective 7	The SEA addresses the effects of the LTS on water quality and proposes mitigation measures to reduce, offset and avoid impacts.
Transport (Scotland) Act 2005	▪ Proposals for development of Regional Transport Partnerships, Regional and National Transport Strategies ▪ Enables a national concessionary scheme ▪ Procedures for tackling road works		RT and NTS both inform the LTS and its objectives
Environmental Assessment (Scotland) Act 2005	▪ Extends Scottish legislation for SEA beyond the requirements of the 'SEA Directive'	SEA as a whole	Requires this SEA to be undertaken.
The Pollution Prevention and Control (Scotland) Regulations 2000	▪ Aims to control pollution from industrial sources. It requires the prevention or reduction of emissions from installations and promotes techniques that reduce the amount of waste and releases overall	SEA objective	Air quality is monitored by the Council and water quality is monitored by SEPA. The LTS contains a number of Actions to
Part IIA of the Environmental Protection Act 1990	The goals of the EPA are: ▪ To identify and remove unacceptable risks to human health and the environment ▪ To seek to bring damaged land back into beneficial use ▪ To seek to ensure that the cost burdens faced by	SEA objective 8	Impacts on health and land assessed by the SEA

	individuals, companies and society as a whole are proportionate, manageable and economically sustainable		
Land Reform (Scotland) Act 2003	▪ Increases the public right of access, within certain controls, to private land ▪ Requires the development of Core Path Plans and Local Access Fora	SEA objective 11	A number of Actions with the objective of improving accessibility and integrating public transport service are contained within the LTS, the overarching aim being to improve accessibility to the natural and built environment.
Road Traffic Reduction Act 1997	Makes it the duty of local councils to prepare a report containing: ▪ An assessment of the levels of local road traffic in their area; ▪ A forecast of growth in those levels; ▪ Specific targets for the reduction of levels of local road traffic; ▪ A reduction in the rate of growth in those levels of traffic	SEA objective 5	The LTS contains Actions which seek to reduce traffic congestion. Reduction of volumes of traffic is not explicitly stated as an aim however alternative modes of transport – public transport, walking and cycling – are all promoted by the LTS.
Kyoto Protocol to the UN Framework Convention on Climate Change 1992	The objective of the Kyoto Protocol is to stabilize and reduce greenhouse gas (GHG) emissions, mitigate climate change, and promote sustainable development worldwide	SEA objective 5	Transport is a significant contributor to CO_2 emissions. The LTS seeks to address this problem through number of Actions are included in the LTS to reduce traffic congestion, improve public transport and encourage a behavioural shift in the modes of transport used by Renfrewshire residents.

Name of plan/ programme/objective	Relevant requirement of plan/ programme/objective	Relevant SEA Objectives	Relationship with the Renfrewshire LTS, in terms of SEA Issues
National Strategies/Plans/Programmes			
Scotland's Transport Future- Transport White Paper June 2004	▪ Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency. ▪ Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network. ▪ Protect out environment and improve health by building and investing in public transport and other types of sustainable transport which minimise emissions and consumption or resources and energy. ▪ Reduce accidents and enhance personal safety of pedestrians, drivers, passengers and staff. ▪ Improve integration and ensure smooth connections between different forms of transport.		The primary objectives outlined by the LTS are based on the 5 national transport objectives set out in this White Paper.
National Cycling Strategy (Department for Transport) (1996)	▪ Increase cycle use ▪ Achieve convenient cycle access to key and major destinations and provide cycle parking facilities at these destinations. ▪ Improve cycle safety and reduce cycle theft by improving security and recovery. ▪ Provide increased cycle use within all local highways and traffic management schemes ▪ Design safe and convenient cycle use of the road network ▪ Reallocate road spacing to cycling. ▪ Raise awareness, expertise and status amongst transport providers, service providers, employers, potential cyclists and other road users. ▪ Encourage and enable cycling amongst school children,	SEA objective 4, 5, 12	The LTS includes an Aim to promote increased cycling for commuter, leisure and business trips. It promotes the implementation of the Paisley South Side strategic walking/cycling route and development of leisure opportunities for cycling.

	and encourage cycle use for business trips. ▪ Unlock financial resources to meet the strategy objectives. ▪ To make the best use of existing infrastructure and resources and to integrate cycling into other programmes. ▪ Progress the national cycling strategy and monitor the results of the strategy.		
Climate Change: The UK Programme (2000)	▪ Aims to improve business use of energy , use renewable sources of electricity, cut emissions from the transport sector, continue cutting emissions from agriculture, improve energy efficiency and to ensure the public sector takes a leading role for example by develop green travel plans.	SEA objective 5	Transport is a significant contributor to CO_2 emissions. The LTS seeks to address this problem through number of Actions are included in the LTS to reduce traffic congestion, improve public transport and encourage a behavioural shift in the modes of transport used by Renfrewshire residents.
Air Quality Strategy For England, Scotland, Wales and Northern Ireland: Working Together for Clean Air 2000	▪ Plans to improve and protect ambient air quality in the UK, to protect people's health and the environment without unacceptable economic or social costs. Details of national air quality standards and objectives for nine pollutants.	SEA objective 4	The LTS contains Actions to address air quality problems in Renfrewshire, including a specific Action to address the AQMA at Central Road, Paisley.
Scotland's Biodiversity: It's in Your Hands A strategy for the conservation and enhancement of biodiversity in Scotland	▪ Outlines a number of actions with the overall aim of conserving biodiversity for the health, enjoyment and well being of the people of Scotland now and in the future	SEA objective 1	Any development resulting from the LTS must comply with this legislation. The LTS contains an Aim to manage "green elements and natural habitats of the transport network in a manner which encourages biodiversity and supports the Local Biodiversity Action Plan." The Aim is supported by a number of Actions including commitments to consider nesting bird and bats in timing of maintenance works and to follow management practices that encourage biodiversity and animal movement along off-road walking and cycling links.

"Meeting the needs" Priorities, Actions and Targets for Sustainable Development in Scotland (Scottish Executive Environment Group 2002)	Vision is based on the principles : ▪ regard for others who do not have access to the same level of resources, and the wealth generated ▪ minimise the impact of our actions on future generations by radically reducing our use of resources and by minimising environmental impacts Main priority areas are ▪ Resource use: ▪ Energy: ▪ Travel:	All SEA objectives	The principles which underpin sustainable development are addressed within the LTS through social, economic and environmental objectives.
Passed to the Future (Historic Scotland's policy for the sustainable management of the historic environment)	▪ Recognising Value ▪ All actions should include long-term strategies for management, conservation, use, maintenance and monitoring, and good stewardship of the historic environment should have regard to its capacity for change as well as to the sustainable use of resources. ▪ Assessing impact on the historic environment. ▪ Sustainable management should involve everyone.	SEA objective 3	The LTS has the potential to affect Ancient Monuments and areas of known and unknown archaeology. The SEA assesses the potential impacts and proposes mitigation measure to reduce, offset or avoid them.
Choosing our Future: Scotland's Sustainable Development Strategy	▪ Respecting the limits of the planet's environment, resources and biodiversity – to improve our environment and ensure that the natural resources needed for life are unimpaired and remain so for future generations. ▪ Meeting the diverse needs of all people in existing and future communities, promoting personal well-being, social cohesion and inclusion, and creating equal opportunity for all. ▪ Building a strong, stable and sustainable economy which provides prosperity and opportunities for all, and in which environmental and social costs fall on those who impose	All SEA objectives	The principles which underpin sustainable development are addressed within the LTS through social, economic and environmental objectives.

	them (Polluter Pays) and efficient resource use is incentivised. ▪ Promoting good governance ▪ Using Sound science responsibly.		
National Transport Strategy	The Strategy is based upon the Scottish Executive's 5 transport objectives: ▪ To promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency ▪ To protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy ▪ To promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network ▪ To improve safety of journeys by reducing accidents and enhancing the personal safety of pedestrians, drivers, passengers and staff ▪ To improve integration by making journey planning and ticketing easier and working to ensure smooth connection between different forms of transport. The aims of the NTS are: ▪ Cover all modes ▪ Cover all travellers ▪ Be medium to long-term in nature ▪ Provide the context for the Strategic Projects Review ▪ Be based on wide-ranging public consultation - which is underway		The primary objectives outlined by the LTS are based on the 5 national transport objectives.

	▪ Be complemented by the Regional Transport Strategies (RTSs) ▪ Be evidence based.		
National Planning Framework 2004	Document offers perspective on Scotland's long term spatial development and highlights the important role transport plays in this development. As part of taking the Framework forward there will be investment in the transport infrastructure and recognises the need to 'effect a shift to more sustainable modes of transport'		The LTS contains Aims and Actions to promote behavioural change and the provision of infrastructure
Regeneration Policy Statement 2006	Policy highlights; ▪ Investing in infrastructure; and ▪ Increasing accessibility in order that opportunities are more reachable.	SEA objective 11	A number of Actions with the objective of improving accessibility and integrating public transport service are contained within the LTS, the overarching aim being to improve accessibility to the natural and built environment.
Memorandum of Guidance on Listed Buildings and Conservation Areas 1998	▪ Provides information on procedures for activities which may affect listed buildings, conservation areas and gardens and designed landscapes.	SEA objective 3	Projects resulting from the LTS must comply with this legislation. The LTS has the potential to affect Listed Buildings and Conservation Areas. The SEA assesses the potential impacts and proposes mitigation measure to reduce, offset or avoid them.
National Waste Strategy	The aim is to encourage more effective use of natural resources through greater efficiency, waste minimisation, recycling and increased value recovery from waste. The main objectives include; ▪ Ensuring that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment and, in	SEA objective 9	Transport projects could potentially generate significant volumes of waste. The SEA proposes mitigation to reduce, offset or avoid the impacts associated with waste generation.

	particular, without causing nuisance through noise or odours. ▪ Establishing an integrated and adequate network of waste disposal installations, taking account of the best available technology not involving excessive costs. ▪ Encouraging the prevention or reduction of waste production and its harmfulness, in particular by the development of clean technologies more sparing in their use of natural resources.		

Name of plan/ programme/objective	Relevant requirement of plan/ programme/objective	Relevant SEA Objectives	Relationship with the Renfrewshire LTS, in terms of SEA Issues
Local and Regional Strategies/Plans/Programmes			
Renfrewshire Local Plan	*Transport Objectives* ▪ encouraging more sustainable forms of transport ▪ assessing the transportation implications of development proposals and ▪ ensuring that the provisions made for transport facilities are acceptable ▪ making provision for public transport, pedestrians and cyclists ▪ providing for freight transport requirements ▪ making appropriate allocations of land for transport proposals *Wider Environment Framework* *Green Belt* ▪ To define a Green Belt boundary within the framework of Structure Plan policy and Government guidance which delineates the limits of the built-up areas and the extent of the countryside within which encroachment of development will be resisted; and complements the development strategy for Renfrewshire by directing development away from greenfield sites beyond the built-up areas towards brownfield sites within the built-up areas. ▪ To provide a positive planning framework within which	All SEA objectives	The LTS addresses transport requirements within Renfrewshire which are to a large extent influenced by development plans. The transport objectives contained in the Local Plan are reflected in the LTS, as are a number of the environmental objectives. The SEA will address many of the environmental objectives and will encourage the LTS to address issues directly. The LTS and the Local Plan are closely linked – they inform and constrain each other. The requirement for new transport services and infrastructure is influenced by the location of development set out in the Local Plan. Similarly, opportunities for development are, in part, constrained by the presence or otherwise of appropriate transport infrastructure.

	acceptable countryside uses including access and informal recreation can be encouraged, whilst unacceptable uses are resisted. ▪ To indicate clearly the planning criteria against which proposals for development within the Green Belt will be considered. *Natural Heritage* ▪ Identify, protect and where appropriate enhance areas of importance for their species and nature conservation value. ▪ Protect existing trees and woodlands that have an amenity or nature conservation value, promote their positive management and encourage the planting of native and particularly broad-leaved trees. ▪ Promote access to the countryside for cyclists, horse riders and pedestrians and where possible, facilitate opportunities for recreation and environmental improvement. *Built Heritage* ▪ Preserve and enhance the character and appearance of conservation areas and listed buildings and their settings. ▪ Protect and preserve Scheduled Ancient Monuments, other locally important archaeological remains and their settings. ▪ Protect historic gardens and designed landscapes and their settings from inappropriate development. ▪ Improve townscape quality by commissioning works of		

	public art. ▪ Give due consideration to the possible environmental impacts of applications for advertisement consent. *Open Space and Recreation* ▪ To represent the Council's policies and to make appropriate land use allocations for any proposals in respect of sport and recreation provision, as well as those arising out of the various strategies currently in preparation by the Director of Environmental Services. ▪ To protect important active recreational, formal and informal open space and allotment gardens from development pressures. ▪ To ensure adequate provision of open space, including areas for children's play, in new housing developments. *Renewable Energy* ▪ To reflect the Government's policy of increasing the proportion of electricity produced from renewable sources, and the Structure Plan's support for wind farm developments, while ensuring that this is not achieved at the expense of unacceptable damage to the environment and amenity. *Mineral Extraction* ▪ To ensure that any proposals for mineral extraction are justified in terms of strategic demand and supply. ▪ To ensure that in assessment of any proposals for mineral extraction, the protection of the environment and the amenity of the population are given proper		

	consideration. *Waste Management* ▪ To ensure that, in consideration of any proposals, protection of the environment and the effect on amenity is given proper consideration. *Telecommunications* ▪ While recognising the economic and social benefits of a modern mobile telecommunications network, to ensure that this is not achieved at the expense of unacceptable damage to the environment and detrimental visual impact *Safe Environment* ▪ To set minimum standards to reduce the risk of flooding in new developments, particularly residential areas. ▪ To ensure that the risk of flooding is fully taken into account when new development proposals are being assessed and to inform the public and developers of flooding issues within the Council area.		
Renfrewshire and Clyde Valley Joint Structure Plan 2006	▪ Promote greater social inclusion and integration ▪ Sustain and enhance the natural and built (including historic) environment ▪ Increase the integration of land use and transportation	All SEA objectives	Some of the objectives contained within the Joint Structure Plan are reflected in the LTS, such as integration of transport services, the protection of environmental assets and greater social inclusion. The historic environment is addressed through the SEA.
Renfrewshire Community Plan	Guiding principles of the Community Plan are: *Social Inclusion:* ▪ Ensuring our day-to-day activities prevent and tackle	SEA objective 1, 2, 5, 10, 11	The LTS includes Aims that seek to reduce social exclusion by improving accessibility. Consultation on the LTS and this

	exclusion ▪ Focusing our efforts and resources on those areas and groups where exclusion is greatest ▪ Promoting and encouraging equal opportunities ▪ Involving local people *Modernising Government:* ▪ Seek to agree common definitions of need and prioritise our resources and activities accordingly ▪ Develop joint approaches to consultation and participation ▪ Make it easier for people to participate and get involved ▪ Widen the involvement of those groups and individuals whose views are not currently heard ▪ Provide information, training, and support to help individuals, groups and communities influence what we do *Sustainable Development:* ▪ Build sustainable development into what we do ▪ Protect, care for and enhance our natural and built environment ▪ Promote and encourage sustainable transport		Environmental Report has ensured public participation in the process. The SEA process provides the opportunity to address environmental concerns.
Renfrewshire Local Biodiversity Action Plan	The Local Biodiversity Action Plan area covers the Council areas of Inverclyde, Renfrewshire and East Renfrewshire and will provide a framework for the three authorities and their partners to address biodiversity. The primary objective of the LBAP is to increase awareness and appreciation of the various species and habitats of national and	SEA objective 1	The LTS contains an Aim to manage "green elements and natural habitats of the transport network in a manner which encourages biodiversity and supports the Local Biodiversity Action Plan." The Aim is supported by a number of Actions including commitments to consider nesting bird and

	local importance found throughout the local area and to promote good practice for their protection, conservation and enhancement The partnership between Inverclyde, Renfrewshire and East Renfrewshire was set up in 1998 with the main aims of: ▪ Protecting, caring for and enhancing local habitats and wildlife ▪ Raising public awareness of and encouraging involvement with local biodiversity issues.		bats in timing of maintenance works and to follow management practices that encourage biodiversity and animal movement along off-road walking and cycling links.
Renfrewshire Local Transport Strategy	The principle of objectives are: ▪ Regenerating the local economy ▪ Extending opportunities, combating poverty and promoting equality ▪ Improving community safety and security ▪ Ensuring a healthy sustainable environment ▪ Supporting older people and people with disabilities ▪ Achieving best value		The new LTS replaces this document
West of Scotland Draft Regional Transport Strategy	▪ To improve safety and personal security on the transport system ▪ To increase the proportion of trips undertaken by walking, cycling and public transport ▪ To enhance the attractiveness, reliability and integration of the transport network ▪ To ensure the provision of effective and efficient transport infrastructure and services to improve connectivity for people and freight ▪ To promote and facilitate access that recognises the transport		The developing Renfrewshire LTS has informed the development of the West of Scotland Regional Transport Strategy (RTS). The RTS also has implications for the finalised LTS.

	requirements of all ▪ To improve health and protect the environment by minimising emissions and consumption of resources and energy by the transport system ▪ To support land-use planning strategies, regeneration and development by integrating transport provision		
Joint Health Improvement Plan	Under development	SEA objective 12	The LTS contains an Aim to promote walking and cycling as alternative modes of transport.
Access Strategy (under development)	Under development	SEA objective 10, 11	The LTS includes Aims which seek to improve accessibility and reduce social exclusion.
Core Paths Plan (to be developed)	Under development	SEA objective 10, 11	The LTS contains Actions to promote walking.

Appendix B Baseline Situation

A Biodiversity

Relevant SEA Objective: *Protect, enhance and, where appropriate, restore biodiversity*

Urban areas can be likened to ecosystems in their own right. For example, buildings provide artificial nest sites for birds including cliff nesting birds such as swifts and peregrines while open spaces such as parks and river corridors provide a network of habitats.

Areas adjacent to transport infrastructure can act as important wildlife corridors; allowing movement of species between habitats and forming habitats themselves. Whilst important features these corridors have not been formally designated and their locations are therefore not available for inclusion in this report.

Sites that have been recognised as being ecologically important have been designated at international level (e.g. Special Protection Area – SPA); at national level (e.g. Sites of Special Scientific Interest - SSSI) or at a local level (e.g. Sites of Importance for Nature Conservation - SINC).

Designated Sites and Protected Species

In Renfrewshire, sites that have been designated for their importance in terms of biodiversity and natural heritage fall under one of the categories listed in Table A.1. Figure A.1 illustrates their distribution. Some sites overlap as a particular area may receive more than one designation.

Table A.1 Designated Conservations Sites in Renfrewshire

Renfrewshire Council (Total Area= 268.5km^2)	Total Number	Total Area (km^2)
Special Protection Area (SPA)*	3	91.3
Site of Special Scientific Interest (SSSI)*	10	111.43
Country Parks (CP)	3	8.60
Local Nature Reserve (LNR)	2	0.12
Site of Importance for Nature Conservation (SINC)	40	8.19
Woodland Resource	154	9.12

Source: www.SNHi.gov.uk, 29/08/06
**Designation extends beyond Renfrewshire Council Boundary*

Special Protection Areas (SPA)
SPAs are classified by the UK Government to meet its obligations under the EC Birds Directive. These contain the most important habitats for rare (listed on Annex I to the Directive) and migratory birds within the European Union. SPAs are classified under the Wildlife and Countryside Act 1981. Three SPAs are located in Renfrewshire; the Black Cart River, Renfrewshire Heights and the Inner Clyde; Renfrewshire Heights and Inner Clyde extend beyond Renfrewshire Council's boundary. It should be noted that this area of the Inner Clyde is also a designated RAMSAR[1] site.

[1] Ramsar sites are designated under the 1971 Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, to which the UK was a signatory.

Sites of Special Scientific Interest (SSSI)
This is a statutory designation for areas that represent the best examples of habitats and support rare species or are the best example of geological features. There are eight SSSIs in Renfrewshire; Barmufflock Dam, Castle Semple and Barr Lochs, Clochodrick Stone, Dargavel Burn, Formakin, Glenn Moss, Shovelboard and Black Cart. A further two SSSIs; the Inner Clyde, which overlaps with the SPA, and Renfrewshire Heights, both lie within Renfrewshire but also extend beyond the Council's boundary.

Country Parks
There are three Country Parks within the boundary of Renfrewshire; Muirshiel Country Park, Gleniffer Braes Country Park and Castle Semple Country Park.

Local Nature Reserves (LNRs)
LNRs are sites of special local nature interest that are administered by Renfrewshire Council. They provide opportunities for environmental education and the informal enjoyment of nature by the public. There are currently two LNRs in Renfrewshire; Paisley Moss close to Glasgow Airport and Jenny's Well in the Blackhall area of Paisley.

Sites for Importance to Nature Conservation (SINC)
SINCs are locally designated sites, having been assessed as being important in the context of Renfrewshire as a whole. There are currently 40 SINCs designated in Renfrewshire.

Woodland Resource
Further to Table A.1, there are areas of Ancient Woodland scattered throughout Renfrewshire. Woodland covers approximately 3.4% of the total area of the region, and 21% of this is classified as Ancient Woodland. There are currently 33 Semi-natural or Ancient woodland sites within Renfrewshire. A further 112 are designated as long-established woodland.

Biodiversity Action Plan
The UK Biodiversity Action Plan (UK BAP) was published in 1994 by the UK Government as part of its commitment made at the Earth Summit in Rio de Janeiro in 1992. Local Biodiversity Action Plans (LBAPs) implement the UK BAP at the local level. The LBAP covers the local council areas for Inverclyde and East Renfrewshire as well as Renfrewshire itself. The LBAP identifies priority habitats and priority species. An important element of the LBAP is the production of Habitat and Species Action Plans (HAPs and SAPs), which set out objectives and targets to promote the long term health and viability of particular species or habitats. Habitats and species with action plans are listed in Tables A.2 and A.3 respectively.

Table A.2 LBAP Priority Habitats

Habitats with HAPs
Broadleaved & Mixed Woodland
Dwarf Shrub Heath
Mires
Unimproved Grasslands
Rivers and Streams
Fens
Standing Open Water
Urban

Source: www.renbap.paisley.ac.uk

Table A.3 LBAP Priority Species

Species with SAPs	Statutory Protection	UKBAP Status	LBAP Status
Butterfly Orchids	Generic under Schedule 8 of the Wildlife & Countryside Act 1981	UK/Local	Priority
Common Juniper	Generic under Schedule 8 of the Wildlife & Countryside Act 1981	Priority	Priority
Spignal	Generic under Schedule 8 of the Wildlife & Countryside Act 1981	UK/Local	Priority
Waxcaps	Generic under Schedule 8 of the Wildlife & Countryside Act 1981	Vulnerable	Priority
Atlantic Salmon	- None -	UK/Local	Priority
Black Grouse	Nature conservation Act 2004 amends Wildlife & Countryside Act 1981 in respect of birds with leks, e.g. Black Grouse.	Conservation Concern	Priority
Hen Harrier	Protected under Schedule 1 of the Wildlife & Countryside Act 1981	Priority (red-listed)	Priority
Brown Hare	- None -	Conservation Concern	Priority
Lesser White Throat	- None -	UK/Local	Priority
Otter	European protected species under the Conservation (Natural Habitats & c.) Regulations 1994.	Priority	Priority
Pipistrelle Bat	European protected species under the Conservation (Natural Habitats & c.) Regulations 1994.	Priority	Priority

Source: www.renbap.paisley.ac.uk, www.naturenet.com

It should be noted that the above information is based on species identified as a priority in Renfrewshire, East Renfrewshire and Inverclyde. Other protected species are also likely to be present in the area, however as these have not been identified as being threatened locally no SAPs are required. Information regarding the presence of protected species throughout Renfrewshire, which do not have SAPs has not been identified.

Data Gaps

- Protected species without Species Action Plans
- Species data specific to Renfrewshire Council area. LBAP data relates to three local authorities

B Landscape and Townscape

Relevant SEA Objective: *Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape*

The landscape of Renfrewshire is varied with large areas of rural greenbelt and urban areas which include Paisley, Johnstone and Renfrew.

Important landscapes and townscapes are protected by several designations as outlined in Table B.1; Figure B.1 illustrates their distribution across Renfrewshire. In an urban context landscape/townscape have close relationships with cultural heritage, as illustrated in Figures B.2 & B.3. Information on Conservation Areas, historic buildings and other features of heritage interest are summarised in Section C and Figure C1.

Table B.1 Designated Sites - Landscape

Renfrewshire Council	Total Number	Total Area (km^2)
Gardens & Designed Landscape	2	1.34
Greenbelt	2	195
Tree Preservation Orders	104	6.5

Source: www.SNHi.gov.uk, 29/08/06, Renfrewshire Council GIS data

Inventory of Gardens and Designed Landscapes
The Inventory identifies the Gardens and Designed Landscapes in Scotland that are of national significance, including private gardens, parks and policies in country estates, public parks, cemeteries, and botanical gardens. There are 2 sites currently designated as Gardens and Designed Landscapes within Renfrewshire: Finlaystone House and Formakin.

Greenbelt
The countryside surrounding Renfrewshire's existing towns and villages built is designated as Greenbelt. The Local Plan makes provisions for protecting the Greenbelt by applying strict criteria when considering development proposals.

Tree Preservation Orders (TPOs)
TPOs protect trees, groups of trees, and/or woodlands that contribute to the amenity of an area. It is an offence to chop down, top, lop or wilfully destroy trees protected by a TPO without consent. There are currently over 100 TPOs throughout Renfrewshire.

Landscape Character
Landscape Character Assessment (LCA) is a recognised analytical technique which identifies areas with a distinct composition of inter-related natural physical, cultural and historical characteristics. A national programme of LCAs was initiated by SNH. There are currently 12 different landscape character areas within Renfrewshire. These are listed below and their locations are presented in Figure B2:

- Rugged Moorland Hills
- Ayrshire Lowlands
- Broad Valley Lowland
- Floodplain
- Inland Loch
- Loch Island
- Raised Beach

- Rugged Moorland Hills and Valleys
- Rugged Upland Farmland
- Upland River Valleys
- Urban
- Urban Greenspace

Data Gaps

- Information relating to light pollution
- Information regarding Public Parks
- Number of transport development schemes accompanied by detailed landscape and townscape design
- GIS data relating to Greenspace
- GIS data relating to townscape and built form

C Cultural Heritage

Relevant SEA Objective: *Protect, maintain and where appropriate, enhance the historic environment and other culturally important features*

For the purpose of this SEA the key baseline features which are considered are the areas and sites which are formally protected or which are of recognised value. Important cultural heritage features are protected by several designations as outlined in Table C.1. Figure C.1 illustrates the designated sites across Renfrewshire.

Table C.1 Designated Sites - Cultural Heritage

Designation	Total Number
Listed Buildings	748
Scheduled Ancient Monuments	18
Number of Conservation Areas	8
Recorded Archaeological Sites	181

Source: www.historic-scotland.gov.uk, 29/08/06, Renfrewshire Council GIS data

Within Renfrewshire there are currently a total of 748 **Listed Buildings**. Of these, 39 are Category A, 541 Category B, and 168 Category C(S). Buildings are protected by being 'listed' under the Planning (Listed Buildings and Conservation Areas (Scotland) Act 1997. The three categories as described below:

- Category A: Buildings of national or international importance, either architectural or historic, or fine little-altered examples of some particular period, style or building type.
- Category B: Buildings of regional or more than local importance or major examples of some particular period, style or building type which may have been altered.
- Category C(S): Buildings of local importance, lesser examples of any period, style or building type, as originally constructed or altered; and simple, traditional buildings which group well with others in Categories A and B or are part of a planned group such an estate or an industrial complex.

There are 18 **Scheduled Ancient Monuments** in the Renfrewshire area, protected due to their national importance. These include Barr Castle, St Fillans Church and Churchyard, Whitemoss Roman Fort, Barochan Cross and Ranfurly Castle.

There are 8 **Conservation Areas**. Within these Conservation Areas the buildings and spaces between the buildings are identified as being of architectural or historical value. The aim is to maintain the integrity of these areas and preserve their special character. As the planning authority, Renfrewshire Council has a duty to protect the character and appearance of Conservation Areas and to prepare and publish proposals for doing so. The Conservation Areas are:

- Lochwinnoch
- Kilbarchan
- Thornly Park
- Ranfurly
- Castlehead
- Greenlaw
- Houston
- The Cross/Oakshaw

There are 181 recorded **archaeological sites** in Renfrewshire. The specific point locations of archaeological sites may not be accurate and are graded on a confidence scale from 1 to 3. This information can be found from the West of Scotland Archaeological Services.

Data Gaps

There are numerous historic buildings within Renfrewshire which are not listed, this information can be obtained by point locations from the RCAHMS (Royal Commission on the Ancient and Historical Monuments of Scotland). However, this data does not state the building's current status e.g. whether it has been demolished etc.

Historic Scotland is currently an audit of the historic environment in Scotland. The results were not available for this assessment although they should be useful for future assessments. These results are likely to identify trends, problems and other issues.

D Air Quality and Climate Factors

Relevant SEA Objectives: *Reduce air pollution*
Reduce Renfrewshire's contribution to climate change
Reduce vulnerability to the effects of climate change

The National Air Quality Strategy provides a framework for air quality control through air quality management and air quality standards. These and other air quality standards and their objectives have been enacted in Scotland through the Air Quality (Scotland) Regulations 1997, as amended, most recently in 2002. The Environment Act 1995 requires Local Authorities to undertake air quality reviews. Air quality objectives exist for the following pollutants:

- Benzene
- 1,3 Butadiene
- Carbon Monoxide
- Lead
- Nitrogen Dioxide
- Particles (PM10)
- Sulphur dioxide

In areas where an air quality objective is not anticipated to be met, Local Authorities are required to establish Air Quality Management Areas (AQMA) and to develop and implement Air Quality Action Plans that detail the measures to be taken to work towards reducing pollution levels to below the objective targets.

Central Road in Paisley, Renfrewshire was classified as an AQMA for Nitrogen Dioxide (NO_2) and PM10 in September 2005. Additionally, a second AQMA is proposed in Paisley at the corner of Gordon Street and Causeyside Street again on the basis of NO_2 and PM_{10} (see Table D1). There is also an air quality monitoring station located on the eastern fringe of Glasgow Airport however this is not a designated AQMA as the statutory air quality objectives for NO_2 and $PM_{10}$are not likely to be exceeded.

Table D.1 Existing and Proposed Air Quality Management Areas

AQMA	Total Number	Targets
Existing AQMAs *Central Road, Paisley*	1	Targets set by Scottish Executive National Air Quality Strategy
Proposed AQMAs *Corner of Gordon Street and Causeyside Street*	1	Targets set by Scottish Executive National Air Quality Strategy

Source: Renfrewshire Council

Climate Factors

Global warming is caused by the emission of greenhouse gases accelerating the Earth's natural greenhouse effect. The main anthropogenic contributor to global warming is carbon dioxide (CO_2) which is emitted in great quantities by human activity across the world. The probable effect of global warming on the UK climate is still not fully understood, however it is predicted that storms will increase in frequency and severity, resulting in an increased risk of flooding.

The UK is committed to meeting its targets for reducing emissions of greenhouse gases by 20% by 2010. This is a more challenging target than the 12.5% reduction to 1990 levels by 2008-2012 as agreed under the Kyoto Protocol.

Transport plays a major role in emissions of greenhouse gases and therefore to Renfrewshire's contribution to climate change. Information regarding transport related CO_2 emission levels is not available, however, passenger numbers and journey modes can give an indication of this contribution. This information, with averages across Scotland for comparison, is presented in Table D.2. The car is the most utilised mode of transport for people travelling to work, used by around 2/3 of Renfrewshire's working population. The LTS has the potential to exert a degree of influence on this by encouraging people to switch from the car to other modes of transport.

Table D.2 Mode of Travel to Work

Mode of Travel to Work	Percentage of the Population of Renfrewshire	Percentage of the Population of Scotland
Car	67.35	64.43
Train or Bus	19.34	15.15
Other	9.56	14.71
Working Mainly at Home	3.75	5.71

Source: http://www.scrol.gov.uk

Transport related contributions to climate change are influenced by Glasgow Airport on the outskirts of Renfrewshire. It is now widely recognised that air travel is the world's fastest growing source of greenhouse gases and predictions suggest that in the UK air travel will double over the coming decades. Glasgow Airport is Scotland's largest and busiest airport acting as a hub for both domestic and international destinations. Current passenger levels at the airport are given in Table D.3 alongside past figures. It can be seen that the trend is clearly an upward one.

Table D.3 Glasgow Airport, current and previous passenger levels

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Millions of passengers per year	5.4	5.4	6.0	6.5	6.8	6.9	7.2	7.8	8.1	8.6

Source: Glasgow Airport Rail Link, SPICe briefing, 8 March 2006, 06/17

The DTI White Paper and Civil Aviation Bill, the Future of Air Transport predicts that by 2030 approximately 15.1 million passengers per year will be passing through Glasgow Airport per year.

Greenhouse gas emissions associated with the airport are not restricted to flights, there is a considerable contribution arising from traffic travelling to and from the airport for passenger pick up and drop off. This problem is amplified due to poor public transport links to the airport and elevated congestion levels on the arterial routes to the airport. However, there are proposals to improve public transport links to the airport, including the Glasgow Airport Rail Link (GARL).

Data Gaps

- GIS data relating to the AQMA and proposed AQMA

E Water Environment

Relevant SEA Objectives: *Protect, maintain and enhance water quality*
Reduce vulnerability to the effects of climate change

The main river catchments in Renfrewshire include the River Clyde, Black Cart Water, White Cart Water, the River Gryfe and the River Calder. Smaller tributaries include the Dargavel and the Locher Water.

The Scottish Environment Protection Agency (SEPA) monitors surface water quality in watercourses, estuaries and other water bodies. In addition, under the Water Framework Directive, enacted in Scotland in the Water Environment and Water Services (Scotland) Act 2003, SEPA has new responsibilities relating the management and protection of river catchments (river basin districts), which includes the groundwater resource within those catchments.

Water Quality

SEPA classifies rivers in terms of water quality from A1 (excellent) to D (seriously polluted) this classification is based on a combination of chemical, biological and aesthetic criteria. Similarly estuarine waters are also classified from A to D. Table E.1 below gives details of surface water quality at selected river stretches in the Renfrewshire area.

Table E.1 Water Quality of Selected Sections of Watercourses

Water Course	Water Quality Range
River Clyde	Ranges from B, Fair to C, poor
Black Cart Water	Ranges from C, poor to A1, excellent
White Cart Water	C, poor
River Gryfe	Ranges from A2, good to A1, excellent
River Calder	A2, good
Dargavel Burn	A1, excellent

Source: www.sepa.org.uk

The Effects of Climate Change

With regard to flooding issues, Renfrewshire Council is the competent authority. The Council convenes the Carts Flood Liaison and Advice Group (FLAG). The Group comprises planning and engineering representatives from other councils as well as SEPA, Scottish Water and SNH. It acts as a forum providing advice to key public and private sector interests.

Flooding events have occurred in the past either as a result of the tidal influence of the River Clyde, heavy rainfall events, river overspill or poorly maintained culverts. Where culverts have become blocked, runoff problems have been exacerbated and flooding has occurred. Extensive flooding has occurred throughout Renfrewshire in December 1994 and February 1996. The most recent recorded event was in June 2002.

Table E.2 below gives details of some past flooding events in Renfrewshire.

Table E.2 Historical Flooding Events in Renfrewshire

Affected Watercourse	Date	Cause	Effects
Black Cart Water	12/12/94	River overspill	Caused road closures, damaged properties.
White Cart Water	12/12/94 14/3/96	River overspill	Caused road closures, damaged properties.
Espedair Burn	11/12/94	River overspill, culvert surcharge	Caused road closures, damaged properties
Firth of Clyde	Not provided	Tidal flooding	Not provided
River Gryffe	14/3/96	Not provided	Not provided
Candren Burn	12/12/94 14/3/96	Culvert problems Not provided	Damaged properties Not provided
Sewer/surface water flooding	9/6/02	Sewers overloaded during high rainfall event	Not provided
Todd Burn	Not provided	Potential flood risk due to culvert blockage	Not provided

Source: Renfrewshire Council

Data Gaps

- Water pollution incidents caused by transport-related activities
- GIS data relating to the floodplain

F Population and Human Health

Relevant SEA Objectives: *Improve human health*
Improve accessibility and reduce social exclusion
Enhance access to the natural and historic environment

Health

The census taken in 2001 showed that the total population in Renfrewshire is 172,687. Council statistics show that between 1991 and 2005, the population of Renfrewshire fell by 3%.

Major health problems in Renfrewshire are cancer, heart disease and lung disease. These health problems are related to smoking, drinking, diet and lifestyle.

Physical activity is a factor in the health of the population and the LTS has the potential to influence this to an extent. Table D.2 contains information relating to the population of Renfrewshires's chosen modes of travel to work.

In Renfrewshire walking and cycling are currently under utilised modes of transport accounting for approximately 11% and 0.4% of journeys respectively.

Poor air quality associated with transport can also negatively affect health, particularly for the elderly and for people who suffer from heart conditions and severe lung diseases (e.g. bronchitis, emphysema). Information relating to air quality is presented in Section D of this appendix.

Noise

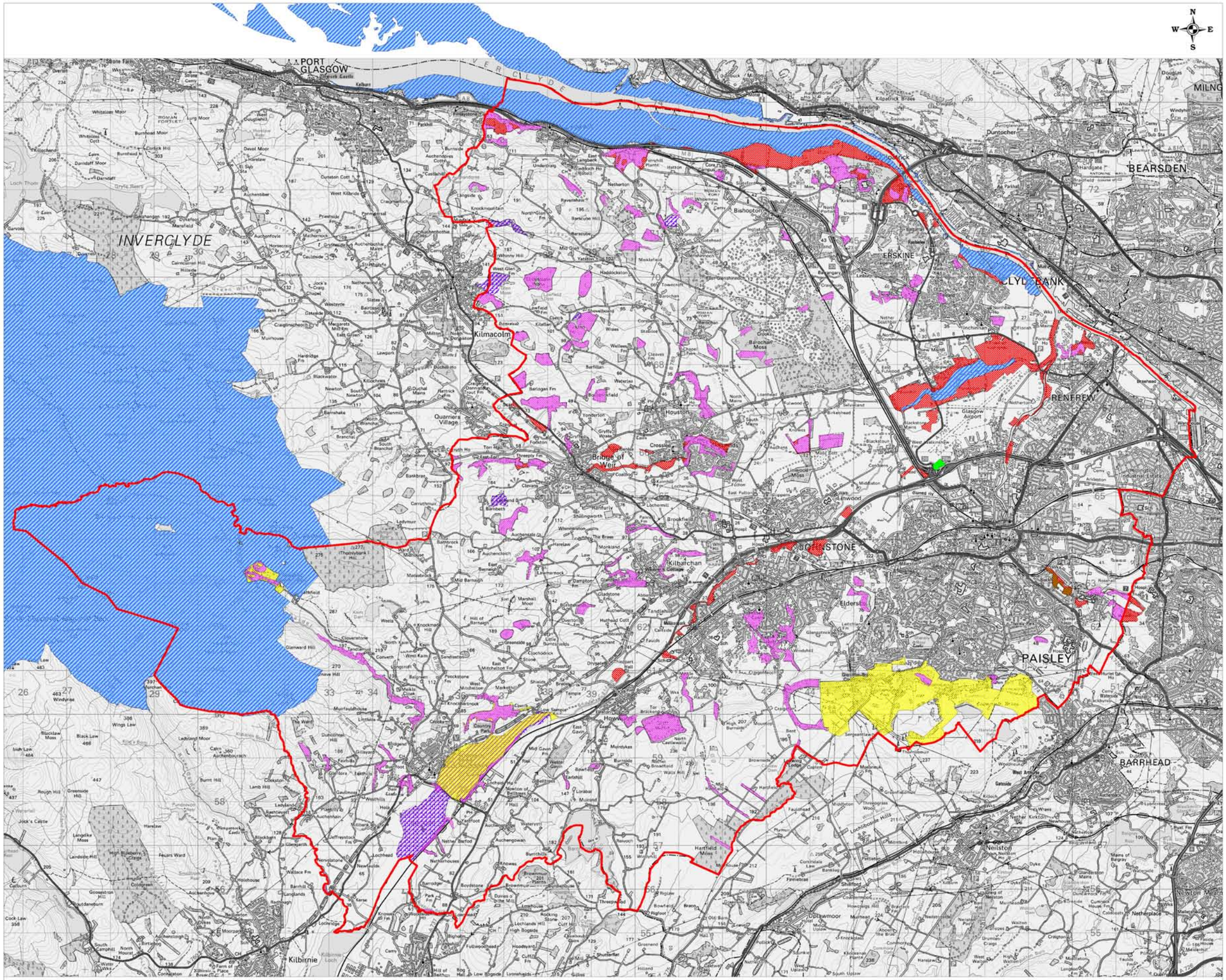
Transport-related noise is a problem that can affect health and well-being. No data is available on the extent of such problems, nor exactly how transport noise affects the population. At the time of writing, data relating to noise complaints to the Council was not available.

Crime

Crime associated with transport can range from thefts from cars to physical assaults on public transport. Actual incidents of crime or a perception of the likelihood of becoming a victim of crime, can affect peoples' behaviour in terms of choices of transport mode. Vandalism has been associated with increasing the fear of crime. Information that gives a full indication of the levels of transport-related crime within Renfrewshire is not available.

Data Gaps

- Comprehensive transport-related crime statistics for Renfrewshire Council area
- Road accident statistics are available for Strathclyde but not specifically for Renfrewshire Council area
- Transport-related noise complaints
- Data regarding the impacts of transport-related noise on human health
- Data regarding physical activity
- Data regarding the use of cycleways and footpaths for e.g. recreational purposes.
- Data regarding links between air quality and health in Renfrewshire



Legend

- Renfrewshire Council Boundary
- SPA (Special Protection Area)
- Site of Special Scientific Interest (SSSI)
- Woodland (inc. Ancient & long established woodland)
- Country Park
- LNR (Local Nature Reserve)
- SINC (Site of Interest for Nature Conservation)

Client
Renfrewshire Council

Project
Local Transport Strategy - SEA

Title
Figure A.1 Biodiversity & Natural Heritage

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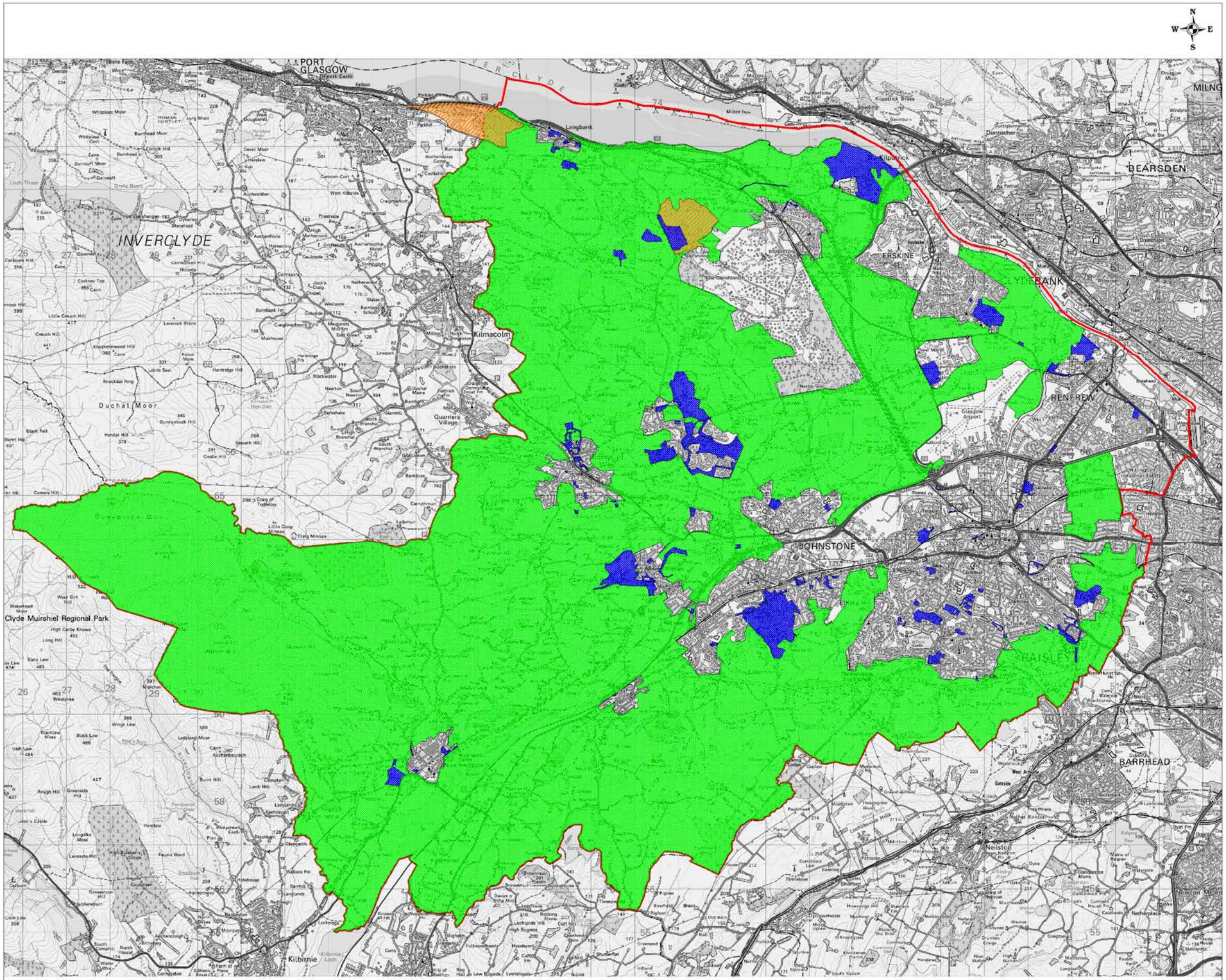

Legend

- Renfrewshire Council Boundary
- Greenbelt
- Tree Preservation Orders
- Inventory of Gardens & Designed Landscapes

Client
Renfrewshire Council

Project
Local Transport Strategy - SEA

Title
B.1 Landscape

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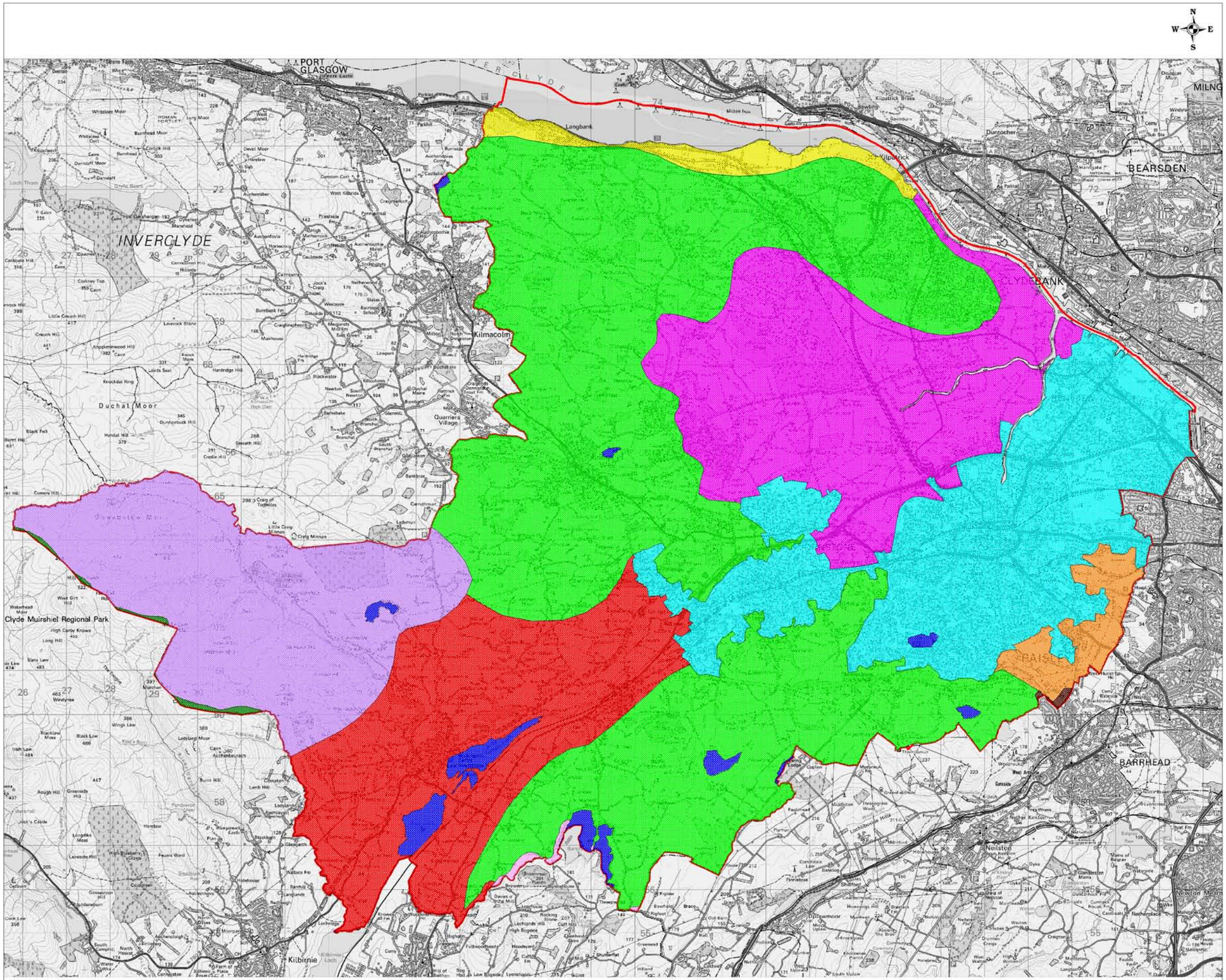

Legend

- Renfrewshire Council Boundary
- Raised Beach
- Rugged Upland Farmland
- Urban
- Inland Loch
- Urban Greenspace
- Upland River Valley
- Flood Plains
- Ayrshire Lowlands
- No Window
- Loch Island
- Rugged Moorland Hills
- Broad Lowland Valley
- Rugged Moorland Hills & Valleys

Client
Renfrewshire Council

Project
Local Transport Strategy - SEA

Title
Figure B.2 Landscape Character Assessment

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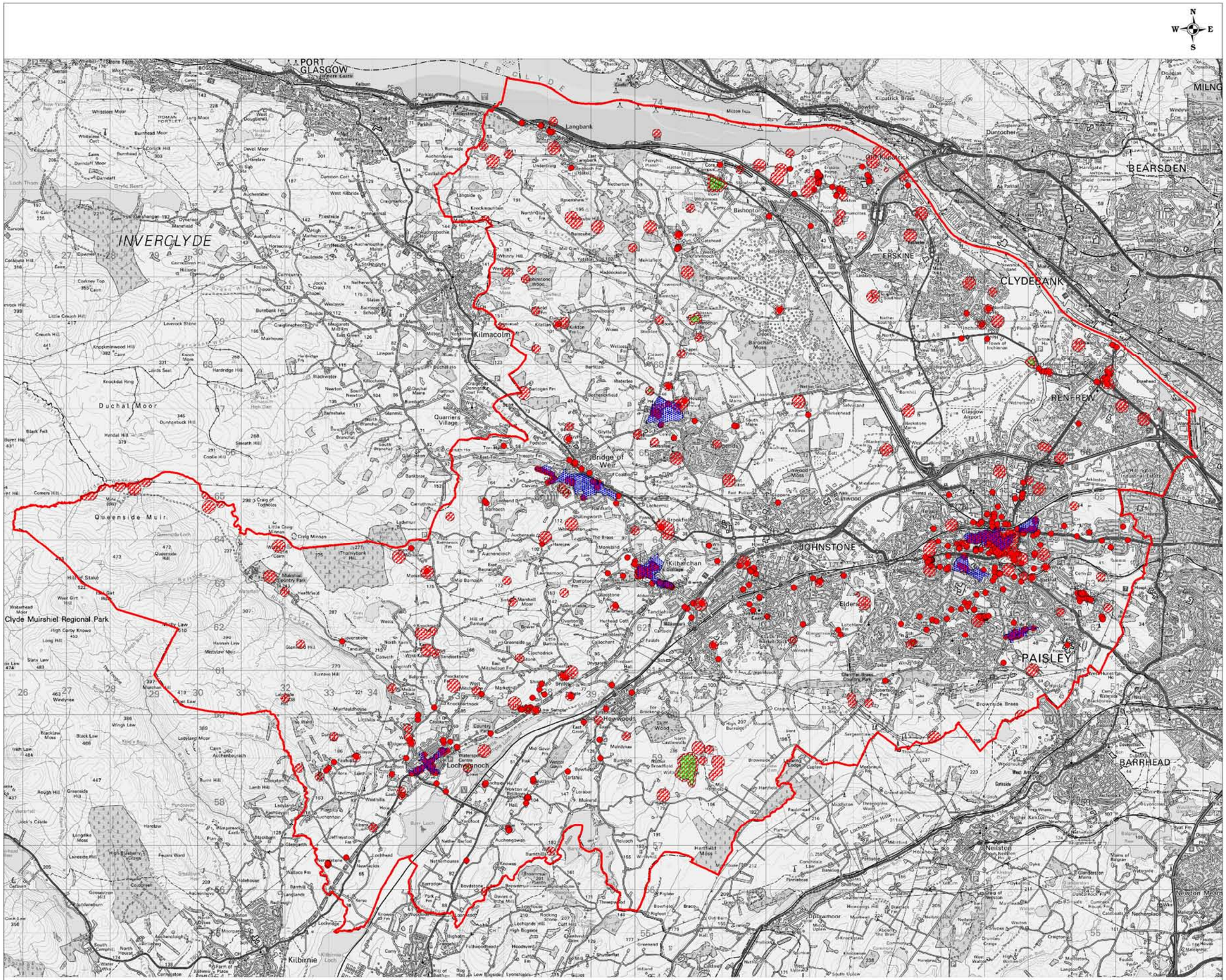

Scale - 1:90,000

Legend

- Renfrewshire Council Boundary
- Scheduled Ancient Monument (SAM)
- Listed Building
- Archaeological Site
- Conservation Area

Client
Renfrewshire Council

Project
Local Transport Strategy - SEA

Title
C.1 Cultural Heritage

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Appendix C LTS Objectives Testing Matrix

SEA Objectives	LTS Objectives (full wording of the LTS objectives is contained within section 3.2.1 of the Environmental Report)					Comments Regarding Potential Incompatibilities (letters A-E refer to the LTS objectives)
	A. Economic Growth	B. Social Inclusion	C. Environment	D. Safety	E. Integration	
Protect, maintain and enhance biodiversity	✘	✘	✓	-	-	**A.** Physical infrastructure associated with economic growth could negatively affect biodiversity. **B.** Measures to promote social inclusion may include physical developments that could negatively affect biodiversity.
Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	✘	✘	✓	-	-	**A.** Townscape and landscape could be negatively affected by the introduction of physical infrastructure associated with economic growth. **B.** Measures to promote social inclusion may include physical developments that could negatively affect townscape and landscape.
Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	✘	✘	✓	-	-	**A.** Physical infrastructure associated with economic growth could result in the loss of culturally important features or may negatively affect their settings. **B.** Measures to promote social inclusion may include physical developments that could result in the loss of culturally important features or negatively affect their setting.

Reduce air pollution	✗/✓	-	✓	-	-	**A.** Physical infrastructure associated with economic growth could negatively affect air quality however measures to reduce congestion could reduce air quality.
Reduce Renfrewshire's contribution to climate change	✗/✓	-	✓	-	-	**A.** A potential indirect secondary effect resulting from economic growth is the long term increase in CO_2 output from increased traffic. Measures to reduce traffic congestion in Renfrewshire would reduce CO_2 emissions.
Reduce vulnerability to the effects of climate change	✓	-	✓	-	-	
Protect, maintain and enhance water quality	✗	✗	✓	-	-	**A.** Physical infrastructure associated with economic growth could result in the reduction of water quality. **B.** Measures to promote social inclusion may include physical developments that could result in a decrease in water quality. .
Protect land and material assets	✗	-	✓	-	-	**A.** Physical infrastructure associated with economic growth could result in the loss of land and/or material assets.
Reduce, reuse, recycle and recover waste	-	-	✓	-	-	
Enhance access to the natural and historic environment	✓	✓	✓	-	✓	

Improve accessibility and reduce social exclusion	✓	✓	✓	-	✓	
Improve human health	-	✓	✓	✓	-	

Key

✓	**Objectives are compatible**
✘	**Objectives are not compatible**
-	**Not directly compatible or incompatible**

Appendix D Assessment Methods – LTS Preferred Option

This Appendix provides details of how the assessment of the preferred option for the LTS was undertaken and how the level of significance of impacts was determined.

Predicting the Effects of the LTS

The first phase of the environmental assessment of the LTS was to predict the likely environmental effects. This involved identification of likely changes to the baseline situation caused by implementing the strategy. The predicted effects on the baseline were determined by comparing how the baseline would change with each policy of the LTS compared to the 'do minimum' scenario i.e. how the baseline would change in absence of the strategy, but taking into account other environmental changes which could be expected (see Section 3.6). The predicted changes to the baseline were then described in terms of the magnitude and direction of change (i.e. positive or negative).

This prediction of effects was qualitative rather than quantitative. The strategic nature of the LTS means that no modelling data was available to assist in the prediction of effects of policies.

Each Aim and the Actions to be implemented to achieve it, was appraised against each of the SEA objectives.

Effect Magnitude

For the purpose of this SEA, the magnitude of the predicted effect was measured as negligible, minor, moderate or major. Magnitude is a combined measure of the geographical scale of the effect; the probability of the effect, the duration of the effect; whether changes in the baseline (taking into account future changes) which are permanent or temporary, reversible or irreversible, direct or indirect; the frequency of the effects and the rate of change. Direction of change is measured as positive, negative or neutral. Table D.1 contains a summary of how the magnitude of predicted effects was determined.

Table D.1 Terminology for Determining Effect Magnitude

Magnitude	Description
Negligible	No effect on the baseline. Effects would be one or more of the following: possible, short term, indirect
Minor	Slight change in the baseline. Effects would be one or more of the following: likely, short term, direct or indirect
Moderate	Identifiable change in the baseline. Effects would be one or more of the following: definite, medium term, direct or indirect
Major	Substantial identifiable change in the baseline. Effects would be one or more of the following: definite, long term, direct

The terms used to describe effect magnitude above, relate to the following types of potential environmental effects.

Table D.2 Types of Effects

Predicted Effect	Description
Probability	Definite Likely Possible
Geographical Scale	Community Local (Renfrewshire) Regional (Strathclyde) National (UK) European or International
Frequency	Frequent Rare

Sensitivity of the Receptors

To enable an evaluation of the significance of the environmental effects of the LTS, the sensitivity of receptors must be identified. Receptors are the aspects of the environment that are affected. The following criteria have been developed to describe the sensitivity of receptors:

Table D.3 Sensitivity of Receptors

Sensitivity of Receptors	Description
Low	No statutory recognition/designation, not vulnerable or sensitive to change
Medium	Local or regional recognition/designation, sensitive to change
High	International or national statutory recognition/designation, features with legal protection, receptors vulnerable or highly sensitive to change

Determining the Significance of Environmental Effects

The significance of effects will depend on the magnitude of effects and the sensitivity of the receptors. The following matrix has been developed to determine the significance of the effects that the policies of the LTS would have on the environment.

Table D.4 Determining the Significance of Effects

Sensitivity of the Receiving Environment	Magnitude			
	Negligible	**Minor**	**Moderate**	**Major**
Low	Not Significant	Not Significant	Not Significant	Significant
Medium	Not Significant	Not Significant	Significant	Highly Significant
High	Not Significant	Significant	Highly Significant	Highly Significant

Presenting the Results of the Assessment

The matrix presented in Appendix E highlights the predicted environmental effects of the LTS policies – displaying magnitude, sensitivity significance and providing explanatory comments. Mitigation measures set out in Section 4.7 are taken into account in the assessment. Appendix E provides more detailed comments regarding effects of transport schemes that are named in the Aims of the LTS. The matrix in Appendix E provides details of impacts of each LTS Aim. The following key (Table D.5) explains how effect magnitude is displayed in the matrix. Table D.6 illustrates the meaning of the symbols used to display significance.

Table D.5 Assessment Matrix Key - Magnitude

Description of Magnitude	
-	Negligible level of magnitude
Min (+ve or –ve)	Minor level of magnitude
Mod (+ve or –ve)	Moderate level of magnitude
Maj (+ve or –ve)	Major level of magnitude

Table D.6 Assessment Matrix Key – Significance

Symbol	Meaning
✓✓	The policy will have a highly significant, positive effect
✓	The policy will have a significant, positive effect
?	There is uncertainty over the effect
●	The effect of the policy is positive but not significant
○	The effect of the policy is negative but not significant
-	There is no effect/ it is not applicable
×	The policy will have a significant, negative effect
××	The policy will have a highly significant, negative effect

Section 4.5 summarises the predicted environmental effects that are set out in Appendix E.

Cumulative and Synergistic Effects

Cumulative effects may arise where the effects of two or more policies combine to create a greater effect on a particular receptor (e.g. landscape). In some instances the environmental effects of individual policies may be insignificant when considered in isolation (e.g. CO_2 emissions) but the combined effects of several policies of the LTS may be significant.

In undertaking the assessment of cumulative effects, the SEA focuses on the key environmental categories e.g. biodiversity, landscape, cultural heritage etc. The combined effects on each of these key issues has been identified; as far as possible given available information. The predicted cumulative impacts are presented in Section 4.6.

Iteration

The assessment of effects and development of mitigation was undertaken in an iterative manner. Effects were identified, mitigation measures were developed and the policies were re-assessed taking into account agreed mitigation measures. As a result the effects described in Section 4.5 are the residual effects of the LTS which assume that the mitigation measures set out in Section 4.7 will be implemented.

Key to Matrix

Symbol	Meaning
✓✓	The policy will have a highly significant, positive effect
✓	The policy will have a significant, positive effect
?	There is uncertainty over the effect
●	The effect of the policy is positive but not significant
○	The effect of the policy is negative but not significant
-	There is no effect/ it is not applicable
✘	The policy will have a significant, negative effect
✘✘	The policy will have a highly significant, negative effect

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
STRATEGIC ROAD AND RAIL CONNECTIONS															
AIM The Council seeks to resolve traffic congestion on the M8 and A737 and rail capacity at peak periods such that economic growth is supported without constraints imposed by transport. **ACTIONS** o Partner with the Scottish Executive/Glasgow Airport /Transport Scotland/Strathclyde Partnership for Transport (SPT) into studies of the M8 corridor encompassing both public and private transport and agree a strategy for action. o Co-ordinate strategies on the M8 corridor with Glasgow Airport's Access Strategy being taken forward as part of the Airport Master Plan. o Liaise with the Scottish Executive/Transport Scotland/Strathclyde Partnership for Transport and North Ayrshire on the A737 corridor and agree traffic projections and actions stemming from increased commuting from Ayrshire to Glasgow. o Prioritise travel planning amongst local employers where they generate significant numbers of car trips on the M8 and A737. o Liaise with Glasgow City Council and Strathclyde Partnership for Transport over parking policies which influence peak hour traffic growth. o Seek funding from Strathclyde Partnership for Transport for the Renfrew North Development Road o Form a working group with Glasgow City Council, and West Dunbartonshire to promote Fastlink.	Magnitude	Mod -ve	Mod -ve	Mod -ve	Mod -ve/ Mod +ve	Mod -ve/ Mod +ve	Min -ve	Min -ve	Mod -ve	Min -ve/ +ve	Min -ve	Mod -ve/ Mod +ve	Min +ve Min -ve	M	M
	Significance	✘	✘	✘	✓/✘	✓/✘	●	○	✘	●/○	●	✓/✘	●/○		

COMMENTS

The likely impacts of a number of these actions are not clear due to uncertainty regarding the specific interventions that will eventually be promoted. Whilst one Action has been included to promote the development of the Renfrew North Development Road, impacts of actions promoting studies of the M8, A737 and other infrastructure cannot be predicted, as for example, the studies could result in no action or a 'do minimum' approach', or alternatively lead to the development of major infrastructure. The former would represent the status quo and have limited environmental impact. The results from the table above assume an environmental 'worst case scenario' - if the construction of new infrastructure results from such studies, there is the potential for the following significant environmental impacts:

- Biodiversity - through the removal, disturbance and fragmentation of habitats and/or impacts on protected species. Due to its relatively close proximity, there is the potential for the construction of the Renfrew North Development Road to result in negative effects on the Black Cart and/or Inner Clyde SPAs. It will be necessary to screen this project for Appropriate Assessment, to determine the likely significance of impacts on these sites.
- Landscape – landscape / streetscape character can be negatively affected by new infrastructure. Visual impacts would also occur.
- Cultural heritage – new infrastructure can negatively affect cultural heritage through the demolition of, or damage to, historic buildings, archaeology and other features of historic interest. There is also the potential for the setting of historic buildings and features to be negatively affected.
- Local air quality has the potential to be improved in some localities through a reduction in congestion. Conversely, new or upgraded road developments have the potential to encourage traffic growth. Existing Air Quality Management Areas (AQMA) are not predicted to be significantly affected by these actions as the actions to reduce congestion do not relate directly to the AQMA in Paisley
- Developments resulting in increased road capacity and traffic growth will result in an increase in greenhouse gas emissions
- Increased run-off and associated pollution have the potential to negatively affect water quality. Negative impacts are not predicted to be significant due to mitigation and legislative requirements
- Road upgrades have the potential to result in loss of property, amenity areas and other land, including agricultural land
- The development of major infrastructure has the potential to generate large quantities of waste. There is also the potential for waste materials to be utilised in construction.
- Access to the environment and accessibility have the potential to be positively affected by road improvements, whilst new or larger roads can act as barriers between communities.

LTS Aims and Actions		SEA Objectives: Environmental Objectives 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
NETWORK MAINTENANCE															
AIM The Council will maintain roads, bridges, street lighting and furniture to a standard that ensures public safety and the most cost effective combination of structural repairs and cyclic maintenance **ACTIONS** o Complete the database describing the condition and location of all infrastructure and finalise the process of best value asset management to:- ▪ Identify definitively the expenditure necessary to recover the condition of the network ▪ Identify the base level maintenance budget necessary to maintain all infrastructure such that the condition will not deteriorate to an unsatisfactory level in the future, ▪ Bring forward a specific strategy to address street lighting, ▪ Carry out bridge condition indicators to track the changes to our stock of structures using nationally agreed criteria, ▪ Provide a complete picture of the load carrying capacity of the Council and privately owned bridge stock, ▪ Prepare an investment programme to bring weak bridges and structures up to an acceptable standard o Prioritise carriageway resurfacing through a process involving visual inspections, machine surveys, accident records and customer feedback o Prioritise footway resurfacing to locations which address safety, high pedestrian flows and frequent passage by school children or people with mobility difficulties. o Include dropped kerbs in all footway reconstruction work to assist people with mobility impairment. o To track the changes to our stock of structures using nationally agreed criteria. o Provide a complete picture of the load carrying capacity of the council and privately owned.	Magnitude	Min -ve	Min -ve	-	-	-	-	Min -ve	-	-	-	-	Mod +ve	M	M
	Significance	○	○	-	-	-	-	○	-	-	-	-	✓		
COMMENTS - Biodiversity – However such effects are not predicted to be significant due to LTS Actions to promote and protect biodiversity when maintaining the transport network, as well as legislative requirements - Landscape/streetscape – maintenance has the potential to affect landscape/streetscape character and visual amenity through, for example, resurfacing, bridge maintenance and addressing lighting requirements. Taking into account the Council's mitigation commitments, such impacts are not predicted to be significant - Human health - significant positive effects on safety are predicted due to effective and prioritised maintenance														

LTS Aims and Actions		SEA Objectives: Environmental Objectives 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
DEMAND MANAGEMENT															
AIM The Council will continue to develop strategies for travel planning and parking which reduce the growth of trips by private car and achieve a shift to walking, cycling, public transport and car sharing, thus having a positive input on our environment. **ACTIONS** o Continue to fund a full-time Travel Planning Officer; o Further develop travel planning in schools such that all schools are involved and pupils travel behaviour is affected in a positive way. o Develop a Council Travel Plan o Work in partnership with the local Enterprise Company and major employers to promote sustainable travel plans; o Through the Local Plan, prioritise development to locations sustainable in transport terms; o Work in partnership with SPT to improve parking and public transport accessibility at railway stations; o Set high standards with respect to the provision and maintenance of all bus stops and shelters within council control; o Encourage SPT to ensure that all bus companies provide timetables at bus stops as required by the Transport (Scotland) Act 2001 o Continue to develop parking policies that favour shoppers in town centres and displace commuters to long stay car parks. o Investigate the case in Renfrewshire for creating a statutory Bus Quality Partnership or contract in partnership with SPT to improve bus service quality, network coverage and hours of operation; o Continue to liaise with SPT on bus service subsidy which provides socially necessary services, linking people to jobs, shops, health and leisure facilities.	Magnitude	-	-	-	Mod +ve	Mod +ve	Mod +ve	-	-	-	Min +ve	Mod +ve	Min +ve		
	Significance	-	-	-	✓	✓	✓	-	-	-	●	✓	●	M	M

COMMENTS

- Air quality and climate - encouraging a shift away from individual car use is likely to reduce emissions.
- Improved public transport services and integration between services will have a positive impact on access to the environment, and accessibility

LTS Aims and Actions		SEA Objectives: Environmental Objectives 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	Social Objectives 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Social
ROAD AND COMMUNITY SAFETY															
AIM The Council will continue to target accident reduction through education and awareness raising for drivers and pedestrians, introduce engineering measures to reduce risk and support Police enforcement with particular emphasis on achieving compliance with speed limits. **ACTIONS** o Further extend community road safety initiatives in support of the Scottish Executive road safety campaign "Foolspeed" which encourages drivers to slow down, especially in urban areas. o Develop a strategy for driver behavioural change throughout Renfrewshire which engages all the community in improving the quality of life for Renfrewshire residents. o Carry out accident evaluation annually and report to Council. o Develop strategies for investment in road safety engineering measures which emanate from accident evaluation and risk assessment to establish priorities. o Address perceived risk of road danger through engineering and community actions where this impacts significantly on the quality of life. o Continue with, and develop road safety education in all Renfrewshire schools using the curriculum materials produced by the Scottish Executive "Road Safety Campaign". o Partner with the Police on priorities for enforcement and maintain close liaison on the Council's road safety strategy. o Address road safety problems on rural roads with higher than average accident rates, through route actions plans.	Magnitude	-	-	-	-	-	-	-	-	-	-	-	Mod +ve	L	M
	Significance	-	-	-	-	-	-	-	-	-	-	-	✓		
COMMENTS Aim/actions are all predicted to have positive impacts on human health, through road safety improvements															

LTS Aims and Actions		SEA Objectives: Environmental Objectives 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Social
WALKING AND CYCLING STRATEGY															
AIM The council will continue to promote and encourage increased cycling and walking for commuter, leisure and business trips in order to improve the health of our citizens and improve the environment through reduced car usage. **ACTIONS** o Continue to develop a strategy which facilitates walking and cycling as an alternative for all short to medium length trips in the Council area. o Partner with SUSTRANS in developing leisure opportunities for walking and cycling and support the Council's Access Strategy. o Implement the Paisley South Side Strategic Walking/Cycling Route which links East Renfrewshire to the national cycle route and provides off-road linkages between schools, homes, shops and work on the south side of Paisley. o In partnership with East Renfrewshire Council, deliver a cycle route between Barrhead and Paisley. o Identify locations isolated from jobs and services due to barriers to walking and cycling and prioritise actions to tackle this. o Support the Council's economic development strategy by providing safe walking and cycling access to employment, particularly for areas with low car ownership. o Improve pedestrian crossings on busy roads through the introduction of zebras or signal controls where this coincides with pedestrian desire lines and removes barriers. o Ensure pedestrian crossings are suitable for disabled persons and endeavour to reduce crossing distances where possible. o Prioritise investment in the improvement of walking routes where this supports the Council's "Safer Routes to Schools" programme. o Continue to roll out secure cycle parking in town/village centres. Railway stations etc. and provide cycle parking facilities in schools. o Continue to refine design principles for urban roads in Renfrewshire to safely accommodate cyclists where off road facilities do not exist. o Partner in supply of bicycle storage at public transport nodes o Encourage bicycle transport facilities on public transport	Magnitude	Mod -ve	Mod -ve	Min -ve	Mod +ve	Mod +ve	-	Min -ve	Mod -ve	Mod – ve/ Mod +ve	Mod +ve	Mod +ve	Mod +ve		
	Significance	✘	✘	○	✓	✓	-	○	✘	✘/✓	✓	✓	✓	M	M

COMMENTS

The promotion of cycling will generally result in positive effects on the environment. However, new, off-road- cycle routes have the potential to result in negative effects.

- Biodiversity – the construction of the Paisley South link cycle way has the potential to have negative effects on the Inner Clyde SPA. As this is a designated Natura 2000 site, it will be necessary to screen this project to determine whether an Appropriate Assessment is required
- Landscape – depending on their design and location, the provision of new cycle ways has the potential for significant negative effects on landscape character and visual amenity.
- Cultural heritage – there is the potential for the setting of historic buildings and features to be negatively affected by the provision of new infrastructure e.g. cycle ways, bicycle storage facilities. This is likely unlikely to be significant and given mitigation commitments, effects are not predicted to be significant
- Encouraging walking and cycling as an alternative to car use is predicted to have significant positive effects on local air quality and contributions to climate change
- Construction has the potential to negatively affect water quality, although this is not predicted to be significant due to mitigation and legislative requirements
- Negative effects on material assets are possible due to loss of land to cycle ways
- The development of cycle ways has the potential to generate waste but also has the potential for waste materials to be utilised in construction
- Encouragement of walking and cycling, through the provision of cycle ways and facilities is likely to improve access to the natural and historic environment. This should also have positive effects on accessibility/social inclusion
- Positive impacts on human health are predicted through encouraging physical activity. Road safety improvements are also predicted through improvements to the walking/cycling network.

LTS Aims and Actions		SEA Objectives: Environmental Objectives 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
ROAD NETWORK PERFORMANCE															
AIM The Council will strive to achieve the most efficient operation of the road network to minimise delays for road users, particularly for public transport, subject to constraints imposed by road safety, physical limits on the network and the need for repairs **ACTIONS** o Maintain a database of all signal controlled junctions and check and optimise the efficiency of each junction on a 2 year cycle; o Evaluate the potential to upgrade traffic signal controlled junctions around Paisley such that they are incorporated within a real time reactive computer control system which maximises signal efficiency; o Review the need for signals at priority junctions; o Co-ordinate Council roadworks to minimise disruption, taking account of any works being undertaken by the Scottish Executive on the trunk roads (A737 and M8); o Record and co-ordinate public utility works on the road network as required by the Transport (Scotland) Act 2005 (recognising that access cannot unreasonably be denied to public utilities and emergencies would be treated as exceptions); o Carry out periodic reviews of directional road signs.	Magnitude	-	-	-	Min +ve	Min +ve	Min +ve	-	-	-	-	-	-	M	M
	Significance	-	-	-	●	●	●	-	-	-	-	-	-		
COMMENTS - Positive impacts on air quality and climate change contributions are predicted through reduced congestion.															

LTS Aims and Actions		SEA Objectives: Environmental Objectives 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Social
BIODIVERSITY															
AIM The Council will manage green elements and natural habitats of the transport network in a manner which encourages biodiversity and supports the Local Biodiversity Action Plan. **ACTIONS** o Identify locations where wildflower diversity is an asset on verges and programme verge cutting to sustain this; o Will endeavour to only cut hedgerows out with the bird nesting season; o As a general rule, rural embankments will not be cut unless there are specific safety concerns; o Consider nesting birds and bats when required to trim or remove older trees and time works accordingly; o Encourage native trees in urban areas where they can be accommodated; o Seek to replace trees removed; o Check older bridges and structures for resident bat colonies and nesting birds prior to commencing works and replace any roost and or nesting resources nearby; o Recognise the value of off-road walking and cycling links as corridors of biodiversity and animal movement and follow management practices to encourage this; o Identify locations where animals conflict with traffic and where possible provide safe crossing facilities (i.e. Tunnels) or warnings to drivers. o Use a mixture of grass seed and wild flowers when forming or reinstating grass verges.	Magnitude	Mod +ve	Min +ve	-	-	-	-	-	-	-	-	-	-	M	L
	Significance	✓	●	-	-	-	-	-	-	-	-	-	-		
COMMENTS - Positive impacts on biodiversity are predicted. Secondary positive effects on landscape character and visual amenity are also likely through actions to encourage planting															

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
PAISLEY															
The Council will develop transport actions for Paisley which support and complement the wider economic regeneration strategy, improve accessibility, particularly for cycling, walking and public transport, minimise congestion around the ring road and enhance the street environment. o Review the current traffic management system in the core of the town centre to determine if the current network of bus and taxi-only streets remains appropriate. o Reduce congestion on the ring road through the introduction of central computer controlled dynamic traffic signal management to improve bus accessibility to the town centre and generally reduce queuing traffic. o Review parking location, signage and supply in the context of future development aspirations in the town centre and prepare a long-term parking supply strategy. o Prioritise travel planning amongst employers who impact on Paisley town centre traffic levels to reduce the rate of peak hour traffic growth. o Undertake studies into walking and cycling accessibility to the town centre giving particular consideration to the barriers created by the ring road. o Complete studies into a statutory Bus Quality Partnership covering central Paisley specifically to address air quality problems in Central Road. o Review an historical proposal to create a bus interchange in Old Sneddon Street, immediately behind the railway station through making this street bus and taxi-only and revising the layout of the existing ring road to accommodate this. o Review an historical scheme which includes proposals to upgrade Underwood Road which forms part of the Northern Ring Road and the replacement of a rail over road bridge which has severe height restrictions. o Encourage the Regional Transport Partnership and Transport Scotland in partnership with Network Rail to identify and upgrade Gilmour Street railway station	Magnitude	-	Mod -ve	Mod -ve	Min/ Mod +ve ?	Min +ve	-	Min -ve	Min -ve	Min +ve/ -ve	-	-	-		
	Significance	-	✘	✘	●/✓ ?	●	-	○	○	●/○	-	-	-	M	M
COMMENTS - Biodiversity – no impact s on biodiversity are predicted - Landscape – effects on streetscape character and visual amenity are predicted due to proposals to upgrade Underwood Road, replace a bridge and create a bus interchange in Old Sneddon Street - Cultural heritage – the upgrading of Gilmour Street Railway Station, a Category B listed building, has the potential for significant negative effects on the historic environment. The significance of effects is dependent on the scale and design of upgrading work. Any construction/maintenance work in the centre of Paisley has the potential for significant negative effects due to its status as a Conservation Area - Air quality/climate change – positive impacts on air quality are predicted due to studies into a Bus Quality Partnership, although it is not possible to determine whether this will significantly affect the Central Road Air Quality Management Area. - Material assets – there is the potential for land take due to proposals for the Underwood Road upgrade and the bus interchange at Old Sneddon Street. The significance of this is dependent on the extent of these developments															

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
RENFREW															
Redress the balance in access demands for the town in order to reverse economic decline whilst providing linkages between the town centre and Renfrew riverside, as well as creating a more attractive and safe environment for Renfrew residents and visitors. o Implement the Renfrew town Centre Regeneration Strategy including - Installing traffic signals with pedestrian facilities at the cross (Hairst Street / Glebe Street / Inchinnan road / Paisley Road). -Introducing 'gateway' traffic management measures to (reduce speeds around the town centre) raise the awareness of drivers that they are entering an area where vehicle speeds should be reduced. -Implementing 'streetscape' projects in Hairst Street and High Street to create space for people, deter through traffic and visually enhance the town centre. - Manage parking to assist access for people shopping or visiting the town centre. o Liaise with transport providers and Strathclyde Partnership for Transport to provide bus routes along Kings Inch Road. o Discuss route penetration and timetabling with Strathclyde Partnership for Transport. o Discussion with bus operators to secure bus services along Kings Inch Boulevard as housing developments are implemented. (Investigate provision of bus shelters as well as bus poles). o Bid for funding from the Regional Transport Partnership initially for a feasibility study and subsequently for construction of the Northern Development Road to relieve town centre congestion. o Investigate, in partnership with SPT, the feasibility of an LRT / fastlink bus service along the river Clyde linking residential areas to health facilities, leisure facilities and employment centres.	Magnitude	Mod -ve	Min +ve / Mod -ve	Mod -ve	Min +ve/ -ve	Min +ve/ -ve	-	Min -ve	Mod -ve	Mod -ve/ +ve	Min +ve/ -ve	Mod +ve/ -ve	Min +ve	M	M
	Significance	✘	●/✘	✘	●/○	●/○	-	○	✘	✘/✓	●/○	✘/✓	●		

COMMENTS

Many negative environmental effects are associated with the proposals for a Northern Development Road and LRT/Fastlink sevice. The significance of effects is dependent on the locations and designs these proposals, details of which are not currently known. These should be assessed in detail with the use of Environmental Impact Assessments (EIA).

- Biodiversity – there is the potential for the construction of a Northern Development Road and LRT/Fastlink to have significant negative impacts on biodiversity, due to habitat loss, fragmentation or disturbance. There are also a number of designated sites around Renfrew which, if affected, would greatly increase the significance of effects. In particular, the Black Cart and Inner Clyde Special Protection Areas (SPA). There are also a number of SINCs to the North and West of Renfrew. If there is the possibility that negative effects on the SPA could occur, it will be necessary by law that it is screened for Appropriate Assessment, to determine whether significant effects are likely.
- Landscape – the construction of the Northern Development Road and LRT/Fastlink have the potential for significant negative effects on landscape character and visual amenity. Actions to create streetscape improvements are likely to have positive impacts on landscape/streetscape character and visual amenity
- Cultural heritage – the construction of a new road and LRT/Fastlink has the potential for significant negative effects on the historic environment. There are several listed buildings, archaeological sites and a Scheduled Ancient Monument in the vicinity of north Renfrew. There is the potential for these historic features to be negatively affected by construction, or for the setting of these to be affected
- Air quality/climate change – positive impacts on air quality are predicted as the Northern Development Road could relieve town centre congestion. Negative impacts are also predicted for air quality in the area of the new road. Emissions of greenhouse gases are likely to be increase as the provision of a new road is likely to encourage increased car use.
- Positive impacts on accessibility / access are predicted through the provision of LRT / Fastlink services and a new road. There is also the potential for the provision these to cause severance problems
- Human health – positive impacts on safety are predicted due to reduced speeds

LTS Aims and Actions		SEA Objectives: Environmental Objectives 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
JOHNSTONE															
Seek to support the shopping and commercial role of the town through transportation actions which ensure accessibility, sufficient parking and a safe and pleasant environment. o Partner with Strathclyde partnership for Transport to address parking problems at the rail station Park & Ride car park. o Explore options to reduce the pressure on Johnston rail station such as considering improved Park and Ride at locations such as Milliken Park. o Undertake parking studies to quantify the appropriate level of supply and develop a strategy to achieve this. o Investigate bus route penetration and timetabling with Strathclyde Partnership for Transport and develop proposals to be discussed with bus companies. o Improve the performance of traffic signals in the town centre for both vehicles and pedestrians by introducing a computer controlled system which responds dynamically to traffic levels.	Magnitude	?	?	?	Min +ve	Min +ve	-	?	?	?	?	?	-	M	M
	Significance	?	?	?	●	●	-	?	?	?	?	?	-		

COMMENTS

- It is not clear at this stage whether these actions will result in physical development. If development does occur (e.g. improvements to park and ride) and depending on its location/scale, there is the potential for negative environmental effects. In and around Johnstone there are a number of SINCs, tree preservation orders, listed buildings and archaeological sites. If public transport is improved, there is also the potential for positive impacts on accessibility, however this is not yet certain
- Improvements to traffic signals and possible improvements to public transport services/infrastructure could lead to positive impacts on air quality and climate change contributions

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
ERSKINE															
Support the town centre redevelopment, strengthen public transport links, address speeding on urban roads and ensure accessibility by walking and cycling modes to improve connectivity to jobs both within and out with Erskine. o Study speeding problems and propose measures to reduce speed and assist pedestrians on urban distributor roads. o Ensure adequate pedestrian links to bus stops. o Investigate provision of Bus Park & Ride. o Investigate routes and seek SPT to improve penetration and bus timetabling. o Improve links to the existing cycle / walking network.	Magnitude	?	?	?	Min +ve	Min +ve	-	?	?	?	Min +ve	Min +ve	Min +ve	M	M
	Significance	?	?	?	●	●	-	?	?	?	●	●	●		
COMMENTS - It is not clear at this stage whether physical development will be required to 'improve' pedestrian and cycle links. It is therefore not possible to determine if negative environmental effects would occur. - Air quality / climate - Improvements in accessing public transport services and encouraging walking and cycling, should have minor positive effects on traffic levels and therefore emissions - Human health – improvements to safety are predicted due to reductions in vehicle speeds															

LTS Aims and Actions		SEA Objectives: Environmental Objectives 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
LINWOOD															
Increase connectivity to assist with access to employment, services and leisure pursuits by means other than the private car and enhance road safety in the town centre. o Improve pedestrian access to the Phoenix retail park by providing traffic signals with pedestrian facilities at Linclive roundabout on the A737. o Provide safe pedestrian and cycle routes to new secondary school. o Improve linkages with the national cycle network for walking as well as cycling. o Investigate options for improved bus services in partnership with SPT. o Liaise with developers on town centre traffic management and develop a strategy to reduce vehicle speeds.	Magnitude	?	?	?	Min +ve	Min +ve	-	?	?	?	Min +ve	Min +ve	Min +ve	M	M
	Significance	?	?	?	●	●	-	?	?	?	●	●	●		
COMMENTS - It is not clear at this stage whether physical development will be required to improve pedestrian and cycle links. It is therefore not possible to determine if negative environmental effects would occur. 3 SINCs are located nearby and Linwood contains one listed building therefore these is the potential for significant negative effects if physical development occurs and if it were to affect these - Air quality / climate - Encouragement of walking, cycling and potential improvements to bus services should have minor positive impacts on traffic and therefore emissions - Human health – improvements to safety are predicted due to traffic management and speed reduction														

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
HOUSTON AND CROSSLEE															
Agree a strategy to manage traffic in Houston centre, reduce vehicle speeds and the severance effect of the B790. Improve linkage to adjacent communities o Prepare a plan for traffic management in Houston village centre. o Investigate and report on options to reduce the severance effect of the B790. o Undertake feasibility studies with walking/cycling links to adjacent communities. o Explore options, in partnership with SPT, for improved bus services.	Magnitude	-	-	-	Min +ve	Min +ve	-	-	-	-	-	Min +ve	-	M	M
	Significance	-	-	-	●	●	-	-	-	-	-	●	-		
COMMENTS - Air quality / emissions - If bus services are improved, there may be slight improvements to traffic levels, although this is not predicted to be significant. Air quality in Houston village centre should be positively affected by a traffic management plan - Accessibility – reduced severance of the B790 should improve accessibility / social exclusion															

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
BISHOPTON															
Ensure the redevelopment of the ROF site is associated with appropriate upgrades to infrastructure which contribute positively to the existing community and improve links to main employment centres o Expand the car park at the Rail Station. o Permit the provision of a direct connection to the M8 in connection with the redevelopment of the ROF site. o Ensure appropriate local infrastructure is proposed along with the redevelopment of the ROF site. o Develop proposals to reduce traffic speeds on the A8 through the village. o Explore options to improve bus services in partnership with SPT.	Magnitude	Min -ve	Mod – ve ?	Mod –ve ?	Min +ve/ -ve	Min +ve/ -ve	-	Min -ve	Min -ve	Min +ve/ -ve	Min +ve	Min +ve	Min +ve	M	M
	Significance	○	✘ ?	✘ ?	○/●	○/●	-	○	○	○/●	●	●	●		
COMMENTS - Biodiversity - Infrastructure upgrades, including rail station car park expansion and a connection to the M8, have the potential for negative environmental impacts, depending on their scale, design and location. Impacts on biodiversity are possible – woodland exists in the area although no other designated sites are likely to be affected - Landscape – landscape character and visual amenity are likely to be negatively affected by the provision of new infrastructure. There are no landscape designations therefore impacts on character are not predicted to be significant. New infrastructure does have the potential for significant negative impacts on visual amenity, however, the significance of effects is dependent on the scale and design of any new structures, as well as its location in relation to receptors. As this information is not available, the significance of impacts are uncertain - Cultural heritage - One listed building is present in the ROF site; approximately 1 km from the site of the rail station. This is not predicted to be affected by proposals to expand the car park although as information is not available regarding the location of other infrastructure, there is the possibility that this building or its setting could be affected. Impacts are therefore currently uncertain - Air quality / climate - The development itself and associated road infrastructure are likely to increase traffic levels and therefore also increase emissions. Improved bus services and rail parking should encourage public transport, with positive impacts on emissions. - Material assets – infrastructure is likely to result in land take - Waste – potential for generation and recycling of waste - Access to environment – positive impacts - Accessibility/social exclusion – improved accessibility for people without regular access to private vehicles - Road safety is likely to be positively affected by proposals to reduce traffic speeds through the village - Improvements to bus services and the expansion of the rail station car park should encourage use of public transport and could therefore slightly reduce traffic													

LTS Aims and Actions		SEA Objectives: Environmental Objectives 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
ELDERSLIE															
Reduce the severance and safety concerns associated with Main Road and improve accessibility to community facilities and shops. o In partnership with SUSTRANS, identify a long term solution to the on road element of the cycle route o Develop a route Action Plan for Main Road to reduce speeds o Prepare a long term parking strategy for the village to serve community facilities and local shops	Magnitude	-	-	-	-	-	-	-	-	-	-	-	Min +ve	M	M
	Significance	-	-	-	-	-	-	-	-	-	-	-	●		
COMMENTS - Improvements to safety are predicted. No other clear effects are identified due to a current lack of detail regarding specific plans for parking															

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
BRDIGE OF WEIR															
Enhance the village centre through reducing traffic speeds and creating entrance features to improve the village environment and improve connectivity by public transport, walking and cycling to Johnstone and Paisley. o Undertake a study and implement a Town Centre Action Plan to address the traffic and transportation issues in the village. This including consideration of plans for introducing entrance treatments, extending the 30mph zone, implementing 20mph zones in appropriate locations, improve links to the cycling / walking network and define suitable parking areas. o Improve pedestrian links to Johnstone (investigate footways and remote footpaths). o Provide links to the cycling network. Investigate opportunities in partnership with SPT to improve public transport linkages, especially during the evening.	Magnitude	Min	Min -ve	Min -ve	Min +ve	Min +ve	-	Min -ve	Min -ve	Min -ve/ +ve	Min +ve	Min +ve	Min +ve	M	M
	Significance	○	○	○	●	●	-	○	○	○/●	●	●	●		
COMMENTS - Biodiversity – there is the potential for negative impacts on biodiversity through the provision of new walking paths and cycle ways, this will be of greater significance if developments affect nearby SINCs - Landscape – possible negative effects on landscape / streetscape character and visual amenity due to the provision of new walking and cycling infrastructure - Cultural heritage – development has possible negative impacts on the setting of historic buildings/features as much of the village is covered by a Conservation Area. Impacts are not considered significant, taking into account the Council's mitigation commitments - Air quality/climate – positive effects on emissions through promotion of walking/cycling as opposed to car use and possibility of improved public transport provision - Water quality – possible negative effects due to construction - Material assets – minor loss of land possible due to construction of paths and cycle ways - Waste – potential for generation and recycling of waste - Access to environment – positive impacts - Accessibility/social exclusion – improved accessibility for people without regular access to private vehicles - Human health – cycle ways, paths encourage physical activity and improve road safety for cyclists/pedestrians. Positive impacts also from lower speed limit in the village															

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
KILBARCHAN															
Improve connectivity by public transport and manage parking in a manner sympathetic to the historical and conservation nature of the village. o Prepare a proposal for parking control where appropriate, working with the community council. o Explore options in partnership with SPT for improved bus services.	Magnitude	-	Min +ve	Min +ve	-	-	-	-	-	-	-	Min +ve	-	M	M
	Significance	–	●	●	–	–	–	–	–	–	–	●	–		
COMMENTS - Streetscape and the historic environment may be positively affected by proposals to control parking, in this Conservation Area - Improvements to accessibility due to improved bus services															

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Social
LOCHWINNOCH															
The Council will seek to accommodate the expansion of housing and increasing car ownership such that access and safety in the village is not compromised and that the town continues to be attractive for tourism and leisure purposes. o Investigate enlargement of rail station Park & Ride car park in partnership with SPT. o Prepare a traffic management plan for the town centre to address parking and road safety. o Upgrade the weight restricted bridge to restore unrestricted access	Magnitude	Min -ve	Min -ve	Mod -ve	Min +ve	Min +ve	-	Min -ve	Min -ve	Min -ve / +ve	-	Min +ve	Min +ve	M	M
	Significance	○	○	✘	●	●	-	○	○	○/●	-	●	●		
COMMENTS - Biodiversity – there is the potential for negative impacts on biodiversity due to expansion of park and ride and bridge strengthening activities, although effects are not predicted to be significant. A SSSI is nearby although any potential development is not expected to be of a scale which is likely to affect this site - Landscape – landscape /streetscape character and visual amenity may be negatively affected by the expansion of park and ride and bridge strengthening, although this is not predicted to be significant - Cultural heritage – a Conservation Area covers parts of Lochwinnoch, therefore development (park & ride, bridge strengthening) has the potential for significant negative effects on the historic environment – either directly on historic buildings/features or on their setting. - Air quality/climate – positive effects on emissions are predicted through promotion of rail - Water quality – possible negative effects due to construction, although not significant - Material assets – minor loss of land possible due to car parking – not significant - Waste – potential for generation and recycling of waste in construction activities - Human health – road safety improvements due to traffic management plan															

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
LANGBANK															
Seek to improve public transport, walking and cycling connectivity for Langbank to increase access to services and jobs. o Examine A8 layout and request that the Scottish Executive consider access needs for the village to address safety concerns. o Investigate opportunities to create parking areas that can support the railway station. o Liaise with transport providers and the Regional Transport Partnership to investigate bus routes to and through the village. o Link the village with the existing walking/cycle network. o Introduce a pilot Leisure Lanes project to increase safe access into the countryside for walkers, horse riders and cyclists on single track rural roads.	Magnitude	Mod -ve	Min -ve	Min -ve	Min +ve	Min +ve	-	Min -ve	Min -ve	Min -ve / +ve	Mod +ve	Min +ve	Min +ve	M	M
	Significance	✘	○	○	●	●	-	○	○	○/●	✓	●	●		
COMMENTS - Biodiversity – there is the potential for negative impacts on biodiversity due to the possible provision of car parking, walking and cycling routes. Physical development in Langbank has the potential for significant effects on biodiversity as the village borders the Inner Clyde SPA. Screening for Appropriate Assessment will be required if there is the potential for effects on the SPA. This will be determined at a later date when further details regarding location, scale and design are known. - Landscape – possible negative effects on landscape character and visual amenity due to the provision of new infrastructure - Cultural heritage – new infrastructure has potentially negative impacts on the setting of historic buildings/features - Air quality/climate – positive effects on emissions through promotion of cycling, walking and possible public transport improvements - Water quality – possible negative effects due to construction - Material assets – minor loss of land possible due to walking/cycling route and car parking - Waste – potential for generation and recycling of waste in construction activities - Access to environment – positive impacts - Accessibility/social exclusion – improved accessibility for people without regular access to private vehicles if actions result in improved public transport. Positive impacts by links to walking cycling network - Human health – improved walking and cycling routes encourage physical activity and improves road safety for pedestrians/cyclists															

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
INCHINNAN															
Enhance walking and cycling in and around the village, public transport connectivity in the evening and address road safety at the main access on the A8. o Ensure walking and cycle routes, especially to Inchinnan Industrial estate are improved. o Investigate options for improved evening bus services in partnership with SPT. o Develop proposals to improve the access to the village on the A8 to address road safety concerns.	Magnitude	Min	Min -ve	Min -ve	Min +ve	Min +ve	-	Min -ve	Min -ve	Min -ve/ +ve	Min +ve	Min +ve	Min +ve		
	Significance	○	○	○	●	●	-	○	○	○/●	●	●	●		
COMMENTS - Biodiversity – there is the potential for negative impacts on biodiversity through walking paths/cycle way improvements - Landscape – possible negative effects on landscape character and visual amenity due to the provision of new cycling infrastructure - Cultural heritage – possible negative impacts on the setting of historic buildings/features from improved walking and cycling routes - Air quality/climate – positive effects on emissions through promotion of cycling, walking and potential public transport improvements - Water quality – possible negative effects due to construction of cycle route link - Material assets – minor loss of land possible due to walking/cycling route improvements - Waste – potential for generation and recycling of waste in construction activities - Access to environment – positive impacts - Accessibility/social exclusion – improved accessibility for people without regular access to private vehicles - Human health – improved walking and cycling routes encourage physical activity and improves road safety for pedestrians/cyclists															

LTS Aims and Actions		SEA Objectives: Environmental Objectives: 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	SEA Objectives: Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Sensitivity of Receptor: Social
HOWWOOD															
Reduce traffic speeds through the village to improve road safety and the environment, enhance bus services in the evening and provide a direct link to the national cycle route. o Prepare a route management strategy for the main route through Howwood to reduce vehicle speeds o Provide a direct link to the national cycle route o Investigate improved evening bus services with SPT	Magnitude	Min	Min -ve	Min -ve	Min +ve	Min +ve	-	Min -ve	Min -ve	Min -ve/ +ve	Min +ve	Min +ve	Min +ve	M	M
	Significance	○	○	○	●?	●?	-	○	○	○/●	●	●	●		
COMMENTS - Biodiversity – there is the potential for negative impacts on biodiversity through the provision of a new cycle way - Landscape – possible negative effects on landscape character and visual amenity due to the provision of new cycling infrastructure - Cultural heritage – possible negative impacts on the setting of historic buildings/features - Air quality/climate – positive effects on emissions through promotion of cycling and potential public transport improvements - Water quality – possible negative effects due to construction of cycle route link - Material assets – minor loss of land possible due to construction of cycle way link - Waste – potential for generation and recycling of waste - Access to environment – positive impacts - Accessibility/social exclusion – improved accessibility for people without regular access to private vehicles - Human health – cycle way link encourages physical activity and improves road safety for cyclists. Positive impacts also from reduced speeds in Howwood															

LTS Aims and Actions		SEA Objectives: Environmental Objectives 1. Protect, maintain and enhance biodiversity	2. Protect, maintain and where appropriate, enhance the quality and distinctiveness of the area's landscape and townscape	3. Preserve, protect, enhance and where appropriate restore the historic environment and other culturally important features	4. Reduce air pollution	5. Reduce Renfrewshire's contribution to climate change	6. Reduce vulnerability to the effects of climate change	7. Protect, maintain and enhance water quality	8. Protect land and material assets	9. Reduce, reuse, recycle and recover waste	10. Enhance access to the natural and historic environment	Social Objectives: 11. Improve accessibility and reduce social exclusion	12. Improve human health	Sensitivity of Receptor: Env	Social
BROOKFIELD															
Reduce traffic speed in the A761 and improve connectivity in order that the villagers can more easily access facilities such as health, food and leisure pursuits without having to rely on the private car. o Provide walking and cycling connections to Linwood and Johnstone o Investigate enhanced public transport provision in partnership with SPT o Implement a lower speed limit (30mph) on the A761 where it runs through the village	Magnitude	Min	Min -ve	Min -ve	Min +ve	Min +ve	-	Min -ve	Min -ve	Min -ve/ +ve	Min +ve	Min +ve	Min +ve	M	M
	Significance	○	○	○	●	●	-	○	○	○/●	●	●	●		
COMMENTS - Biodiversity – there is the potential for negative impacts on biodiversity through the provision of new walking paths and cycle ways - Landscape – possible negative effects on landscape character and visual amenity due to the provision of new walking and cycling infrastructure - Cultural heritage – possible negative impacts on the setting of listed buildings and archaeology, Brookfield itself contains a listed building and archaeological sites. - Air quality/climate – positive effects on emissions through promotion of walking/cycling as opposed to car use and possibility of improved public transport provision - Water quality – possible negative effects due to construction - Material assets – minor loss of land possible due to construction of paths and cycle ways - Waste – potential for generation and recycling of waste - Access to environment – positive impacts - Accessibility/social exclusion – improved accessibility for people without regular access to private vehicles - Human health – cycle ways, paths encourage physical activity and improve road safety for cyclists/pedestrians. Positive impacts also from lower speed limit in the village														

Appendix F Addressing Comments on SEA Scoping Report

Consultation Authority	Comment from Consultation Authority	How Comment has been Addressed
Historic Scotland	1.3 I note that the historic environment has been scoped into the assessment, and that the Environmental Report will consider the likely impacts of the strategy on the historic environment. Simply for information, the "historic environment" is defined in Section 16(3) of the Public Appointments and Public Bodies etc. (Scotland) Act 2003 as "… any or all of the structures and places in Scotland of historical, archaeological or architectural interest or importance". Scottish Historic Environment Policy (SHEP) 1 builds on this definition by identifying that the historic environment encompasses built heritage features (e.g. ancient monuments, archaeological sites and landscapes, historic buildings, townscapes, parks, gardens and designed landscapes as well as marine heritage) and the context or setting in which they sit, and the patterns of past use, in landscapes and within the soil, and also in our towns, villages and streets. The historic environment also has less tangible aspects recognised as the historical, artistic, literary, linguistic and scenic associations of places and landscapes. I expect the environmental assessment to take cognisance of these features, both in the collection of baseline data and in considering the likely impact of the plan on the historic environment.	Noted
Historic Scotland	1.4 Impacts on the historic environment should be considered in terms of the following: ▪ Direct loss i.e. loss and/or damage to a feature of the historic environment; effects on setting ▪ Indirect e.g. through changes to surface drainage patterns, local air quality	Noted
Historic Scotland	**Relationship with other plans, programmes, strategies and legislation** 1. Table 2.1 and Appendix A set out the plans, programmes, strategies and legislation that have been reviewed as part of the scoping process and I note that this includes *Passed to the Future* and the *Memorandum of Guidance on Listed Buildings and Conservation Areas*. You may also wish to review: ▪ Scottish Historic Environment Policy 2 Scheduling: Protecting Scotland's nationally important monuments ▪ NPPG 5 Archaeology and Planning ▪ NPPG 18 Planning and Historic Environment	The relevance of these is noted. Planning guidance has not been analysed in detail for this SEA. This section of the SEA focuses on relevant strategies, plans, programmes and relevant legislation.

Consultation Authority	Comment from Consultation Authority	How Comment has been Addressed
Historic Scotland	**Relationship with other plans, programmes, strategies and legislation** 2. Simply for information, Historic Scotland is developing a new series of policy documents (Scottish Historic Environment Policy (SHEP)) that sets out Scottish Ministers' vision and strategic policies for the wider historic environment, and provides greater policy direction for the historic environment. It provides a framework for more detailed policies that inform the day to day work of a range of organisations that have a role and interest in the managing the historic environment.	Noted
Historic Scotland	**The baseline situation** 4. Simply for information, Historic Scotland is in the process of undertaking an audit of the historic environment in Scotland. Although the results are not available for this assessment, the audit results will likely assist in identifying trends, problems and issues in future assessments.	Noted
Historic Scotland	**The baseline situation** 5. Also for information, at some point in the future historic Scotland is likely to request that historic landscapes are taken into consideration. Historic land-use assessment (HLA) can add information on the historic dimension to landscape character assessment.	Addressed within the mitigation section of the Environmental Report
Historic Scotland	**The baseline situation** 6. When you undertake the assessment it might also be useful to map the baseline data alongside the elements of the strategy that have spatial information e.g. transport schemes.	Baseline data is mapped and the SEA took the locations of protected sites, features and buildings into account in the assessment of effects of transport schemes. Schemes themselves are not mapped.
Historic Scotland	**Environmental problems** 7. Table 2.2 captures many of the potential issues for the historic environment that may arise from transport measures and proposals. For clarity, it might be useful to mention that 'historic features' includes archaeological sites.	Added
Historic	**Alternatives**	Project alternatives have not

Consultation Authority	Comment from Consultation Authority	How Comment has been Addressed
Scotland	9. It is not clear from the Scoping Report whether alternatives to the project will be assessed in the SEA. Where a preferred option for a project is identified in the LTS, a discussion of the project's alternatives would need to be included in the Environmental Report to demonstrate that the environmental implications of the various options have been taken into account in the final decision that is being ratified in the LTS.	been appraised as part of the development of the LTS
Historic Scotland	**Framework for assessing and mitigating the environmental effects** 12. When assessing policies, you may wish to group policies which are unlikely to exert environmental effects.	It was felt grouping policies/aims in this way could reduce the clarity of reporting. Instead, the aims in Appendix E are in the same order that they appear in the LTS
Historic Scotland	**Appraising environmental effects** 14. It would also be helpful to identify who will be responsible for ensuring that the mitigation measures are taken forward into lower levels of transport planning.	See Section 4.7. The Director of Planning and Transport will ensure that mitigation is taken forward in the design and implementation of transport schemes
Scottish Environment Protection Agency (SEPA)	**The plan** SEPA are satisfied that the Scoping Report covers the general context of and the legal requirement for the Local Transport Strategy (LTS). However, it would be useful if some explanation was included regards the relationship between the LTS, the Regional Transport Strategy (RTS) and the National Transport Strategy (NTS).	Brief explanation added, see Section 3.2
Scottish Environment Protection Agency (SEPA)	**Relationship with other relevant plans and programmes** Chapter 2.0 lists the main plans and programmes relevant to the strategy. However, the Council may also wish to consider the whether the following SEPA policies, available on our website, are relevant to the Strategy: Groundwater Protection Water Policy for Scotland (Policy 19) and Policy on the Culverting of Watercourses (Policy 26).	For manageability, this section was restricted to plans, programmes, strategies and legislation
Scottish Environment	**The baseline situation** It should be noted under the Water Framework Directive SEPA is required to develop a new	Noted

Consultation Authority	Comment from Consultation Authority	How Comment has been Addressed
Protection Agency (SEPA)	classification and monitoring system by December 2006 covering all surface water and groundwater bodies. This system will be based on a new Ecological Classification system with 5 quality classes.	
Scottish Environment Protection Agency (SEPA)	**SEA objectives and indicators** Additionally, it is felt that indicators set out in Table 3.2 could be made more meaningful if they were linked where possible to a measureable target. For example the Air Quality and Climate Factors could be linked to a target to decrease the annual transport related CO_2 emissions by x% below 1990 levels by 2010. The SEA targets can be derived from European and National plans such as the UK Climate Change Programme, National Waste Plan, National Air Quality Strategy and the Water Framework Directive.	Where appropriate, targets will be referred to in the finalised monitoring framework, which will be set out in the Post-Adoption SEA Statement
Scottish Environment Protection Agency (SEPA)	**SEA objectives and indicators** ..with regard to the biodiversity indicators they would be more measureable if they were grouped into specific habitats, for example, “the length of wildlife corridors lost/created”. As well as measuring the habitats restored or created it would also be useful to assess “Habitats lost or significantly altered”	Added to monitoring proposals
Scottish Environment Protection Agency (SEPA)	**SEA objectives and indicators** Water targets should be related to the Water Framework Directive. SEPA would highlight that the Water Environment and Water Services (Scotland) Act 2003 (Designation of responsible Authorities and Functions) Order 2006 also identifies local planning authorities as one of the responsible authorities who under paragraph 2(2) of the Water Environment and Water Services Act (Scotland) 2003 (WEWS) are required to exercise their designated functions so as to secure compliance with the requirements of the Directive.	Where appropriate, targets will be referred to in the finalised monitoring framework, which will be set out in the Post-Adoption SEA Statement
Scottish Environment Protection Agency (SEPA)	**SEA objectives and indicators** It is also essential that reference is made to forthcoming River Basin Management Plans, produced for each defined River Basin District. These plans will set out, amongst other things, the environmental objectives (targets) for all waterbodies, present the Programme of Measures (actions) to achieve these objectives and display the monitoring programmes set up to assess progress.	Reference made in the Monitoring framework. Relevant indicators and targets will be incorporated when these are developed
Scottish Environment	**SEA objectives and indicators** As well as looking at the % of new road length incorporating SUDS features the length of retro-fitted	Amended

Consultation Authority	Comment from Consultation Authority	How Comment has been Addressed
Protection Agency (SEPA)	SUDS schemes introduced should also be looked at.	
Scottish Environment Protection Agency (SEPA)	**Monitoring** SEPA considers that it would be useful to link monitoring to the SEA objectives.	The potential environmental effects of the LTS form the basis of the monitoring proposals; the SEA objectives are aspirations which are used to assess these likely effects. Monitoring is however linked with each SEA category
Scottish Natural Heritage (SNH)	we would like to draw your attention to Table 3.1 of the report where Strategic Alternatives are listed for consideration, and would suggest that the range of alternatives given here is not fully realistic. The table compares a strategy of integrated transport against a continuation of the present approach, but also lists possible strategies that are "Car Based" and "Public Transport Only". SNH would suggest that serious consideration cannot realistically be given to an entirely car based or public transport based transport strategy, and that if a consideration of strategic alternatives is to be undertaken, a better way of doing so may be to look at alternative approaches to an integrated strategy.	Given that the Council's transport strategy until now has promoted a basket of measures to address the various transport issues, it is unlikely that any future transport strategy would abandon this approach to promote a purely car based scenario to address the issues. The best possible approach for the forthcoming strategy would be continuing to take forward a basket of measures to address issues through promoting behavioural change, reducing unnecessary car use and improving public transport connections.
Scottish	A further comment on the content of this report relates to Table 4.1 Next Steps, where the remaining	Individual policy alternatives

Consultation Authority	Comment from Consultation Authority	How Comment has been Addressed
Natural Heritage (SNH)	stages of the Strategic Environmental Assessment process for this strategy are considered as a series of tasks. SNH believe that an aspect possibly missing from this task list is a consideration of the effects of individual policy alternatives in terms of the preferred strategy identified. Either as a part of Task B4 (evaluating the significance of the strategy's predicted effects and the effects of strategic alternatives) or as a separate task of it's own, SNH would seek to ensure that the likely effects of a range of policy alternatives are considered (for example increased parking charges versus congestion charging, etc).	were not formally appraised
Scottish Natural Heritage (SNH)	….in Appendix B, Section A (Baseline Situation – Biodiversity) is that the Renfrewshire Unitary Authority area includes parts of 3 Special Protection Areas (SPAs) rather than two. Renfrewshire Heights has recently been designated as an SPA for its internationally important population of breeding hen harriers, with the formal process expected to be concluded in December of this year. This will relate also to Figure A.1 of the appendices (Biodiversity & Natural Heritage), where the Renfrewshire Heights site is shown is a Site of Special Scientific Interest (SSSI) only, rather than as an SPA.	Amended