



# Stirling-Alloa-Kincardine Railway (Route Re-opening) and Linked Improvements (Scotland) Bill

## ENVIRONMENTAL STATEMENT

## NON-TECHNICAL SUMMARY

FEBRUARY 2003

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**CLACKMANNANSHIRE COUNCIL**

**STIRLING - ALLOA - KINCARDINE RAILWAY (ROUTE RE-  
OPENING) AND LINKED IMPROVEMENTS (SCOTLAND) BILL**

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## **INTRODUCTION**

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Clackmannanshire Council has announced a Scheme, supported by the Scottish Executive, the Strategic Rail Authority, Scottish Enterprise, Fife Council and Stirling Council to re-open the railway line for passenger transport between Stirling and Alloa, freight transport between Stirling and Kincardine and onwards to Longannet and re-signalling throughout the line from Stirling Middle Signal Box to Longannet Signal Box. A new passenger train station is also to be built at Alloa. In addition, the Alloa Eastern Link Road will be constructed to provide alternative routes to the east of Alloa, required due to the closure of level crossings at Hilton Road and Hilton Farm. Figure 1 shows the location of the Scheme proposals.

Clackmannanshire Council's proposals take the form of a Scottish Private Bill which will be introduced into the Scottish Parliament to obtain the necessary powers to implement the Scheme proposals to re-open the railway line between Stirling at the Forth Viaduct and Kincardine at Hawkhill Road including land for the new station at Alloa and constructing the Alloa Eastern Link Road. It is intended that the remainder of the works will be undertaken by Network Rail using its existing powers and Permitted Development Rights. The Network Rail works comprise changes to the signalling of the existing operational railway from Stirling Station to the Forth Viaduct and from Kincardine to Longannet, and the upgrading of the track, which is known as the permanent-way. Permitted Development Rights are provided under existing legislation for those railway works to be undertaken without planning permission having to be obtained.

Subject to the satisfactory completion of the Scottish Parliamentary procedures, construction will commence in Spring 2004, with the route re-opening in Winter 2005/6.

This Non Technical Summary supports the Scottish Private Bill, describes the Scheme and summarises, in non-technical language, the Environmental Statement that has been published in accordance with European Directives 85/337/EEC and 97/11/EC as applied by the Environmental Impact Assessment (Scotland) Regulations 1999.

## **WHY IS THE RAILWAY NEEDED?**

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The railway is needed to improve public transport accessibility links to Alloa, reduce pressure on the Forth Bridge and improve efficiency and increase capacity when transporting coal to Longannet Power Station. Other potential benefits include: a greater potential for attracting major development, both residential and commercial, in Clackmannanshire and Fife, increased integrated transport opportunities for commuting, education, leisure and tourism and the removal of cars and lorries from roads reduces congestion on roads in Central Scotland and pollution.

## **THE SCHEME**

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The Scheme includes the upgrading of 21.1km of track and, in some places, the relaying of track. Work will be undertaken to strengthen and upgrade a number of bridges along the route, and six out of the 12 level crossings will be closed between Stirling and Kincardine for safety and signalling purposes. The remaining level crossings will be upgraded with automated barriers and audio-visual warnings or maintained as occupational crossings. In addition, the two private level crossings at Longannet Power Station will be upgraded. The track will follow the existing railway line, with three train passing loops constructed at the Forth Viaduct, Cambus and Hilton. Two new footbridges will be built in Alloa at Hilton Road and at Grange Road. Fencing will be provided along both sides of the railway to define the boundary of the Scheme and act as a safety and access barrier.

A new passenger train station will be built at Alloa, linking the town with Stirling, providing a direct service to Glasgow and also enabling connections to Edinburgh and the north of Scotland. It should be possible to catch a train in Alloa and travel directly to Glasgow in approximately 50 minutes. The new

station will be developed on the former Carlsberg-Tetley brewery site in the town centre, as part of a mixed-use development incorporating the station, retail and commercial activity.

The construction of the 1km long Alloa Eastern Link Road will extend from an upgraded roundabout at the junction of the A908 Whins Road/Carsebridge Road/Hilton Road to a new roundabout constructed on the A907 Clackmannan Road east of Alloa. The road will be mainly on level land or on an embankment, which rises up over the railway line on a three-span concrete over-bridge. The new road will be single carriageway with a footpath.

The whole of the railway from Stirling to Longannet will have new signalling to provide a satisfactory interface between the existing and proposed signalling infrastructure.

Through implementation of the Scheme, the route will achieve an hourly passenger service between Alloa and Stirling and onwards to Glasgow and up to 15 freight services in each direction per day between Stirling and Longannet.

## **SCHEME ALTERNATIVES**

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A number of alternative solutions were considered during the progression of the Scheme design. The alternatives were:

- A mix of freight and passenger options at different speeds
- A series of railway alignments which bypass Clackmannan to the north and to the south
- A minor track re-alignment to the south within the existing railway boundary at Kincardine
- A track realignment to the south through ScottishPower land at Kincardine
- Three options for the Alloa Eastern Link Road with different access junctions to Hilton Farm and to the southern roundabout area.

The Scheme was selected from the alternatives because it will improve efficiency and increase capacity in transporting coal to Longannet Power Station, reduce rail freight congestion on the Forth Bridge and improve accessibility, particularly to Alloa.

The railway route has been developed to keep new infrastructure within the existing railway corridor to minimise land take and disruption to neighbours.

## **PUBLIC CONSULTATION**

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In addition to the statutory consultations, a series of public exhibitions and meetings were held at Stirling, Alloa, Clackmannan and Kincardine during September 2002. These meetings provided members of the public and interested parties with an opportunity to comment on the Scheme. The responses received from this consultation have been taken into account in developing the Scheme and helped establish potential significant impacts.

## **CONSTRUCTION DISRUPTION**

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Should the Scottish Parliament accept the proposals, it is expected to take around 18 months to build the Scheme from the date of commencement of the works.

The contractor appointed to implement the works will establish the construction sequence subject to certain guiding principles stipulated in the contract. Specific measures will include restriction on the hours of working, a limitation on disruption to existing road traffic and restricting the routes for construction traffic. In addition, the contract will stipulate requirements to minimise the effects of construction, such as noise, vibration and dust, as well as measures to prevent pollution to watercourses.

## **COMMUNITY EFFECTS**

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The Scheme will entail the closure of six level crossings at Causewayhead and Abbeycraig in Stirling; New Mills to the west of Cambus; and Grange Road, Hilton Road and at Hilton Farm in Alloa. In the case of the two level crossings at Grange Road and Hilton Road, new pedestrian footbridges with cycle and disabled access will be provided. These footbridges will allow for continued community access over the railway corridor and improve community safety.

The closure of the Causewayhead level crossing in Stirling will permanently sever an existing vehicular/pedestrian access. There are, however, no houses south of the railway. An alternative permanent route is available via the Waterside level crossing that will add an additional journey time for pedestrians in the order of 4-12 minutes.

The provision of alternative access routes has also addressed permanent severance for both pedestrian and vehicular traffic at the Abbeycraig and Hilton Farm level crossings and for pedestrians at the New Mills (Cambus) level crossing. These alternative routes will result in an additional journey time for pedestrians of between 3 -12 minutes.

The new Alloa Eastern Link Road will provide both vehicular and pedestrian access between the A907 and the Carsebridge Road roundabout.

## **CULTURAL HERITAGE**

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The re-signalling works required for the Scheme will affect the two signal boxes, the associated semaphore signals and the station building at Stirling, which are Category A listed buildings with statutory protection. There are no Scheduled Ancient Monuments (SAM) within the Scheme. The only SAM affected by the scheme is the Parkmill early medieval stone cross and burial site located adjacent to the proposed Alloa Eastern Link Road southern roundabout.

The Bill includes provision that will avoid the need to obtain listed building consent that would otherwise be required. In advance of any works affecting these buildings a programme of historic building recording is recommended prior to their alteration. Additionally, an archaeological evaluation is recommended along the route of the Alloa Eastern Link Road and particularly at the southern roundabout in view of the proximity of the route to the Scheduled Ancient Monument whose setting may be affected by the works.

A number of other non-protected features along the route of the railway, such as bridges, are likely to benefit from the re-opening through the upgrading works. A programme of photographic recording is recommended, in addition to archaeological monitoring during ground-breaking works at the old Alloa Brewery site and the site of the former Alloa harbour branch junction, between Mar Place and Ludgate.

## **LAND USE AND AGRICULTURE**

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The scheme corridor is located in close proximity to a range of residential, industrial, commercial, cultural, recreational and agricultural land uses. In addition, there are also a number of adjacent vacant sites that are designated or have the potential to be designated for development.

Construction of the Alloa Eastern Link Road will require agricultural land, of which some is prime quality, three Bonded warehouses at Carsebridge, part of the Hiltonhawk Road garage and recreation areas off Hilton Road and Gaberston Avenue. Land will also be required for the Relocatable Equipment Buildings, and for permanent access to the railway line at a limited number of locations at

Blackgrange, Mar Place and the former pumping station at Station Road level crossing, Kincardine. In addition several small areas of land are required for infrastructure improvements including two footbridges, and the new Station at Alloa and associated car park.

In addition, a number of areas of land along the Scheme corridor will be temporarily required during the construction phase. The principal areas are located at the Forth Viaduct, Bridgehaugh, Abbeycraig level crossing, Blackgrange level crossing, Alloa New Marshalling Yard, Recreation Park at Hilton Road, Hilton Farm, Helensfield, Meadow End, Broomknowe and Kincardine Power Station.

Land take overall is minimised as the Scheme uses an existing transport corridor. However, where land take occurs, either on a temporary or permanent basis, there is provision within the Bill to pay compensation to the landowner or tenant.

## **AIR QUALITY**

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Ambient air quality in the vicinity of the proposed railway is generally very good and well within the latest air quality objectives for Scotland. Emissions from Longannet Power Station result in high Sulphur Dioxide concentrations downwind, but modelling and monitoring of these concentrations indicates that the objectives are unlikely to be breached. In addition, air pollution concentrations are within the objectives for the protection of vegetation and ecosystems.

The major potential sources of dust during construction of the railway will come from the blast cleaning of 13 bridge structures, ballast placing and processing and the infilling of two bridges. The major potential sources of dust during construction of the Alloa Eastern Link Road will come from the removal of topsoil and embankment construction. A range of mitigation measures is recommended, including the complete enclosure of bridges undergoing blast cleaning and the use of water bowsers and sprays to dampen down dust in dry weather if required.

The transfer of freight trains from their current route to the proposed re-opened line results in a minor overall reduction in air pollutant emissions and greenhouse gas on the current route, although the new rail passenger service will contribute a very small quantity of pollution. In addition, the number of lorries supplying coal to Longannet Power Station will be reduced as a result of the Scheme and will result in a minor reduction in road traffic pollution.

The Alloa Eastern Link Road will benefit residential properties along Hilton Road and Clackmannan Road to the east of Hilton Road, as they will experience a significant reduction in pollution levels and the majority of properties on Clackmannan Road to the west of Hilton Road will experience a minor reduction in pollution levels. However, properties in Hilton Crescent and the majority of the proposed new houses to the west of the Alloa Eastern Link Road will experience an increase in pollution levels.

## **LANDSCAPE AND VISUAL EFFECTS**

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The majority of the Scheme is on the flat, low lying broad floodplain of the River Forth, which is bounded by the prominent ridge of the Ochil Hills to the north. The existing route forms a prominent green corridor in the landscape with some of the route carried on a high embankment. Part of the Scheme, particularly in Alloa and parts of Clackmannan, passes through undulating terrain and is located in deep wooded cuttings. The south-east section runs along the coastal flats of the River Forth. Some Areas of Great Landscape Value and the Tulliallan Castle Designed Landscape are close to the route at Stirling, Alloa, Kennet and Kincardine. There are a number of houses adjacent to the route, which directly overlook it at Stirling, Alloa, Clackmannan and Kincardine.

The Scheme will have effects on the landscape throughout the route due to the clearance of vegetation from the line, building of the two footbridges at Grange Road and Hilton Road, erection of security

fencing and also in locations where specific alterations are taking place particularly along the proposed Alloa Eastern Link Road. The Alloa Eastern Link Road at its junction with the A907 would affect a Tree Preservation Order. Houses located close to the route will have their views affected by the scheme largely as a result of vegetation clearance from the line and areas adjacent to it required for construction and railway operation safety.

Replacement planting and screening is proposed where opportunities exist including new planting for the Alloa Eastern Link Road and at the new Alloa Station. In the long-term, the impact of the scheme on the landscape will be minor.

## **ECOLOGY**

Five statutory nature conservation sites and two non-statutory sites lie in close proximity to the Scheme: Abbey Craig and Alloa Inches Sites of Special Scientific Interest (SSSIs); Firth of Forth Special Protection Area (SPA); Firth of Forth Ramsar site; the River Teith candidate Special Area of Conservation (cSAC); Manor Powis/Blackgrange local wildlife site and Braehead Woodlands local wildlife site. Existing vegetation along the railway is fairly recent in origin and includes types that are widespread locally. Scrub, and tall ruderal (plants that colonise waste ground) are the most common types. Broadleaved trees and woodland, and small areas of neutral grassland also occur, and whilst these are of greater local interest, the examples present along the railway are fairly small and species-poor. The railway crosses three major rivers, which support migratory fish species including salmon, which is a species requiring priority action within Europe. Smaller watercourses also cross the line. Otter is the only protected species that has been confirmed to occur, but others may be present in the area. Investigations on the current status of protected species will be required prior to construction. Much of the proposed route of the Alloa Eastern Link Road extends across areas already developed, or agricultural land. The area of greatest interest is a small area of marshy grassland adjacent to the proposed road, which may have potential for amphibian populations, for example, frogs, toads and newts. Further surveys of this area are required, but could not be accommodated within the timeframe for this study (amphibian surveys have to be carried out between March – June).

Based on the scoping consultations, fieldwork and desk studies, no severe impacts upon ecological receptors are anticipated. Potential, moderate impacts upon the River Teith cSAC have been identified at construction and operation stages as a result of accidental discharges. Careful mitigation, and risk management will reduce both the scale of impact and the likelihood of their occurrence. The cSAC lies *upstream* of the proposed works, and is only vulnerable as the river is tidal at this point. Fish species of a regional/national importance are present in the Forth, Devon and Black Devon and these may experience minor – moderate effects during construction as a result of discharge of sediments, oils etc., and moderate impacts as a result of ongoing maintenance operations. Good construction practice will reduce the significance and risk of these potential impacts.

Numerous potential minor impacts upon small watercourses were identified; direct risks of pollution, sediment discharge and run-off during construction and operation of the scheme, and indirect impacts on invertebrate (e.g. insects) and fish populations as a result of water quality changes. The magnitude of these can be reduced by appropriate mitigation (e.g. adherence to SEPA advice). Minor impacts are also anticipated individually to a range of habitat types as a result of either temporary or permanent land take. Cumulatively, this loss of habitat is considered to be of minor to moderate significance, particularly in terms of the loss of suitable nesting habitat for bird species, and could be minimised by restricting the amount of existing vegetation along the railway that is cleared. Enhancement opportunities are also possible in management of the new railway line.

The inclusion of an ecologist in the design and construction teams is important to ensure that ecological impacts are reduced, particularly for the river crossings, and that habitat enhancement opportunities are maximised. Mitigation is also required to fulfil legal obligations for protected

species. Additional survey and pre-construction checks will be required, particularly for otter. Comprehensive discussions will be required with the Forth District Salmon Fisheries Board for major rivers crossings, and with SNH about proposed working practices at the Forth Viaduct to ensure that no impacts upon the River Teith cSAC result. The timing of operations will also be important to minimise potential adverse impacts (e.g. avoid works on bridges during the salmon and sea trout runs, avoid scrub clearance during the bird breeding season).

## **GEOLOGY AND SOILS**

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Along the proposed route from Stirling to Longannet Power Station there will be a negligible impact on the soils and geology of the area. This is a consequence of the proposed rail line following the route of the existing disused railway corridor and minimising the need for new structures and earthworks. Remedial works required to ensure the long-term stability of some existing cutting and embankment slopes will be small scale. However, the presence of mine workings within the vicinity of the Scheme which have not been definitively quantified, may require a substantial amount of ground stabilisation by means of pressure grouting with any mineshafts backfilled or capped. This will be carried out to have the minimal impact on underlying and superficial geology of the surrounding areas.

The majority of the Alloa Eastern Link Road will be constructed on a new embankment, with limited excavation and disposal of soils off site. Consequently, the new road is considered to have a negligible impact on the underlying geology of the area, including the foundations for the bridge over the railway. However, an allowance has been made for the treatment of shallow mine workings and shafts known to be present in the area.

Hazardous material is not likely to be encountered during the construction works. In the event of potentially hazardous material being encountered, procedures would be included in the contractor's Environmental Management System to deal with this situation. Most of the effects due to contaminated land or impacts on contaminated land will be avoided or controlled by the incorporation of best practice and mitigation measures.

## **NOISE AND VIBRATION**

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Properties that would be sensitive to noise and vibration along the rail corridor were identified and existing background noise levels established. Ground vibration measurements were carried out at a comparable site running freight trains similar to those proposed for the Scheme and estimates of likely building vibration levels due to the operation of the line were made.

The noise and vibration impacts of the construction and operation of the line have been estimated and assessed. A judgement was made as to the numbers of residents living within the rail corridor who may be exposed to specific increases in noise level and the likely overall impact calculated. Consideration has also been given to the vibration effects as a result of proximity of the Scheme to a number of small mines.

Recommendations for noise and vibration mitigation have been made and these are shown in Figure 1. Over 7.5 kilometres of close boarded wooden fencing noise barriers is proposed at a number of locations along the railway corridor boundary which is 18% of the railway perimeter. Anti-vibration mitigation measures are also proposed along 1.4 kilometres of key sections of the railway. These measures will comprise increased ballast depth, and a number of other railway design features including resilient rail fasteners, resilient sleepers or ballast mats

Noise and vibration from the construction and operation of the Alloa Eastern Link Road also have been assessed. Operational noise was assessed for scenarios with and without the possible housing development to the west of the proposed road. The noise and vibration impacts were considered to be



below the levels for which mitigation is required, as the opening of the road will ultimately result in a reduction in the number of local residents annoyed by road traffic noise

## **WATER RESOURCES**

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The Scheme crosses a number of significant watercourses such as the River Forth, the River Devon, and the River Black Devon, as well as a number of smaller watercourses, which drain the area to the north. Based on the proposed works at these crossings (e.g. bridge / culvert refurbishment, culvert replacement or construction, etc.) any potential impacts on water resources features were assessed.

Impacts during the construction phase were assessed as being short term and temporary in nature, with a small number being moderately adverse localised impacts. Impacts occurring during the operational phase of the scheme were generally assessed as being of a lesser significance compared to those occurring during the construction phase, with only Brothie Burn experiencing longer-term moderately adverse localised impacts. The adoption of construction and design Best Practice will minimise the magnitude of impacts during construction and operation of the scheme.

## **TRAFFIC AND TRANSPORTATION**

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The Scheme proposals are likely to have a beneficial effect on the trunk and surrounding road network especially on the A876 and A985 at Kincardine with a significant reduction in the number of lorries supplying coal to Longannet Power Station. The modal shift from car to train following the introduction of the new passenger service will also benefit the trunk and surrounding road network including the A907 between Alloa and Stirling.

The proposed AELR will take traffic off Hilton Road and provide an alternative route from the A907 to the Carsebridge Road roundabout. In addition, six of the twelve level crossings between Stirling and Kincardine will be closed and alternative provision has been made to accommodate affected traffic movements.

## **WHAT HAPPENS NEXT?**

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The draft Private Bill will be lodged with the Scottish Parliament. This will be followed by a 60-day period for objections. The current fee set by the Scottish Parliament for lodging an objection to a Private Bill is £20. Both promoters and objectors must pay their own costs of representation, including legal and other professional fees.

The draft Private Bill must go through a three-stage process before it can be passed by the Parliament. At the first (Preliminary) stage a Private Bill Committee of up to five MSP's will consider objections and make a recommendation to the Parliament. The Parliament will then decide whether the draft Bill should proceed to the second (Consideration) stage.

At the Consideration Stage, the Committee will examine evidence from the promoter and objectors and this will include consideration of the Environmental Statement. Both the promoter and objectors will be given the opportunity to present their case and to question each other. The Committee will then put forward and agree amendments to the Bill, which it considers appropriate.

The amended Bill will then proceed to the third (Final) stage where it will be put before the full Scottish Parliament. Members will consider any further amendments (any MSP may propose amendments at this stage) and decide whether or not the Bill should be passed. If it is passed and is not subject to any legal challenge within four weeks, the Bill finally receives Royal Assent and becomes an Act of the Scottish Parliament.

## **FURTHER INFORMATION**

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Copies of the Bill and all of its accompanying documents, including plans and sections, the book of reference and the environmental statement will be available for inspection at the following Scottish Parliament Partner Libraries:

- Dalgety Bay Library, Regents Way, Dalgety Bay, Fife KY11 5UY
- Dunfermline Central Library, 1 Abbot Street, Dunfermline KY12 7NL
- Alloa Library, 26/28 Drysdale Street, Alloa FK10 1JL
- Stirling Central Library, Corn Exchange Road, Stirling FK8 2HX

Information about procedure may be obtained from the clerks at the Non-Executive Bills Unit, The Scottish Parliament, Edinburgh EH99 1SP (Tel 0131 348 5417, [nebu@scottish.parliament.co.uk](mailto:nebu@scottish.parliament.co.uk)).

The Bill and the following documents will be available, free of charge, on the Scottish Parliament's website ([www.scottish.parliament.uk](http://www.scottish.parliament.uk)):

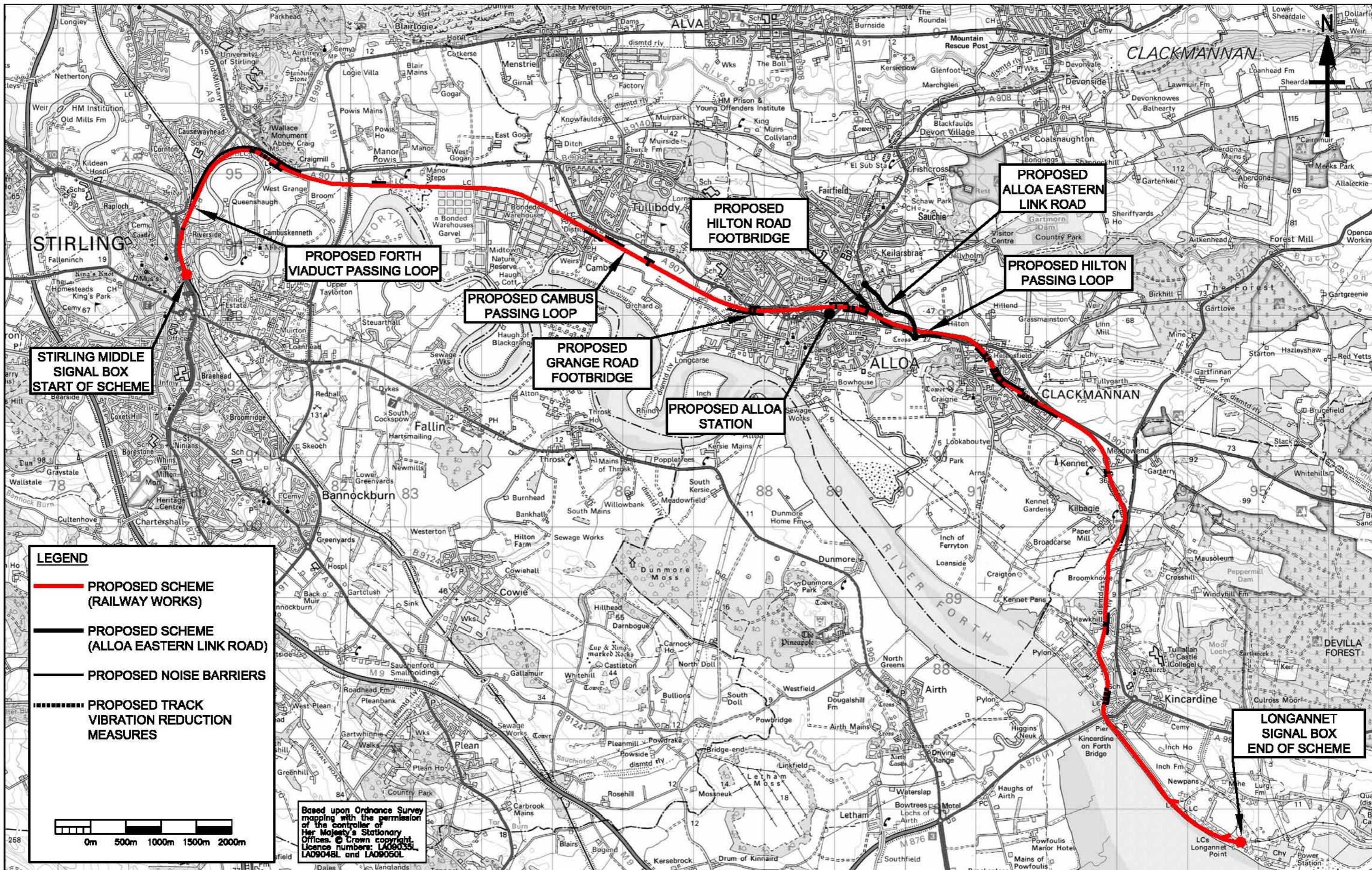
- Explanatory Notes
- Promoter's Statement
- Promoter's Memorandum
- Estimate of Expenses and Funding Statement; and
- Statement by the Presiding Officer of the Scottish Parliament on the legislative competence of the Bill.

Copies of the Bill and the accompanying documents published by the Parliament will be available for sale from any Stationery Office bookshop. Copies of the other accompanying documents will be available for sale from:

Tara Whitworth  
Project Manager  
Babtie Group  
95 Bothwell Street  
Glasgow, G2 7HX

The price of each document is:

- Environmental Statement - £150.00
- Non Technical Summary - £4.25
- Environmental Statement and Non Technical Summary on CD-Rom - £50.00



Drawing Title  
**Figure 1**  
 Summary of Scheme Proposals

**Stirling – Alloa – Kincardine Railway (Route Re-opening) and Linked Improvements (Scotland) Bill**

Scale at A3 : 1:50,000

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Chk	Date	Date	Date
	FEB '03		

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