TRANSPORT SCOTLAND

M8/M73/M74 Network Improvements

Environmental Statement

Non-Technical Summary

2008

Mouchel FAIRHURST

M8/M73/M74 Network Improvements

Non-Technical Summary

Introduction

An Environmental Impact Assessment has been completed on the proposed network improvement strategy developed under the M8 Baillieston to Newhouse and Associated Improvements study. The proposed scheme is referred to as the M8/M73/M74 Network Improvements, and comprises improvements to the M8 immediately west of Baillieston Interchange, the M73 between Baillieston Interchange and Maryville Interchange and the M74 from west of Maryville to the Hamilton Junction.

An Environmental Statement for the scheme has been prepared in accordance with EC Directive 85/337 as required by the Roads (Scotland) Act 1984, and as amended by the Environmental Impact Assessment (Scotland) Regulations 1999.

This Non-Technical Summary sets out the key findings of the Environmental Statement.

Scheme Location Plan

Background to the Scheme

The M8, M73 and M74 motorway networks are vital links in the trunk road network of Central Scotland.

The need for the M8/M73/M74 Network Improvements Scheme emerged from traffic modelling studies carried out as part of the M8 Baillieston to Newhouse option evaluation process.

Major influences that were identified were as follows:

- It is forecast that there will be significant congestion at peak times on the M8, M73 and M74 motorway network in the vicinity of Baillieston and Maryville Interchanges.

- Improvements are necessary to provide an acceptable level of service, and to ensure that benefits are maximised on adjacent committed schemes (M8 Baillieston to Newhouse and M74 Completion).

Objectives

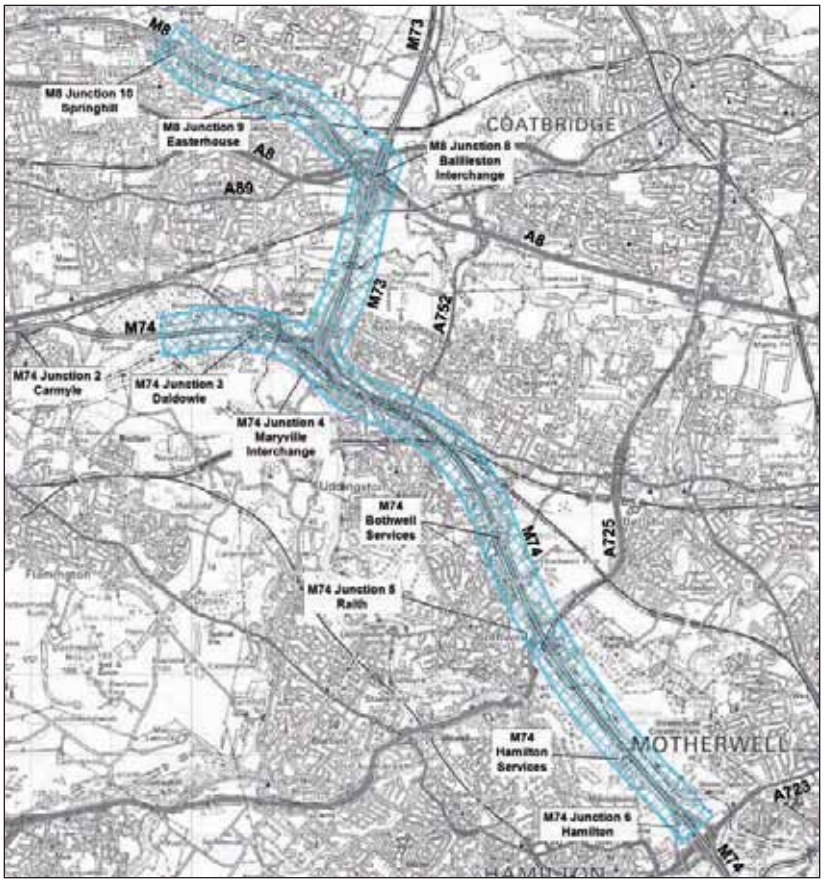
Specific objectives identified for the scheme were to:

- relieve traffic congestion;
- minimise impacts on the environment;
- design to reflect Scottish Minister's general policy on strategic traffic growth;
- optimise benefits of the M8 Baillieston to Newhouse works by improving east – west traffic movement between the M8 and M74;
- integrate benefits realised from other works such as the M74 Completion Scheme and the M80 Stepps to Haggs Scheme.

Alternative Improvement Options

A number of possible strategies to address congestion issues along the M8/M73/M74 corridor were prepared and given initial consideration against the identified objectives for the scheme. An initial appraisal of six alternative options was carried out, which included demand management and hardshoulder running. Unsuitable options were ruled out as a result of the appraisal and three schemes, involving on-line widening and limited new carriageway construction, were subject to a detailed assessment.
The preferred scheme was identified as being the one which best achieved the scheme objectives.

M8/M73/M74 Route Corridor



The Scheme

The preferred scheme has been further developed into a conceptual design as shown on the plans contained in this Non-Technical Summary. Of the alternatives considered, the scheme offers:

- minimum land take;
- minimum impact on developable land;
- best Net Present Value and the highest benefits.

The Scheme provides improvement to the M8 between Junction 8 and 10, the M74 between Junction 2 and 6 and the M73 between Junction 1 and 2. It will provide an improved strategic motorway network in the vicinity of the M8 Baillieston to Newhouse scheme; catering for traffic movements between the M8 corridor and the M74 corridor via the connecting length of M73 motorway.

The scheme includes widening the existing carriageway by an additional lane at the following locations:

- Eastbound M8 from Junction 10, Easterhouse to Junction 8, Baillieston Interchange.
- Northbound and southbound carriageways of the M73 between Baillieston Interchange and Maryville Interchange.
- Northbound and southbound carriageways of the M74 from east of Junction 2, Carmyle to Junction 5, Raith.
- Southbound carriageway of the M74 between Junction 5, Raith and Junction 6, Hamilton.

The scheme will maintain the existing slip road arrangements through the Baillieston Interchange.

New construction will comprise:

- At M74 Junction 3, Daldowie, relocation of the existing slip road to the M73 northbound, to west of its current position.
- At M74 Junction 3, Daldowie, remodelling of two existing roundabouts.
- Widening of four underbridges on the M74.
- Demolition of the existing accommodation bridge over the M73 to the south of Baillieston Interchange and provision of a new realigned access bridge.
- Replacement of existing road drainage, including introducing new Sustainable Drainage Systems (SuDS) where practicable, over the extent of the scheme.

Environmental Impact Assessment

The Environmental Statement describes the Environmental Impact Assessment (EIA) carried out as part of the scheme design in relation to its potential impacts on humans, the natural and historic environment, and current and future uses of the environment.

Consultations

The design and environmental impact assessment of the scheme included consultation with a range of organisations, public bodies, non-governmental organisations and private individuals and businesses. Consultation responses were used to inform the development of the conceptual design, identify key environmental issues, and to develop mitigation measures.

Environmental Impacts and Mitigation

Air Quality

In terms of local air quality impacts, the Scheme is predicted to improve air quality in some locations and to cause deterioration in others. At most locations, any change in local air quality will be negligible. Near to the M8, M73 and M74 motorways where widening is proposed, there will be impacts ranging from slight to moderate adverse. Conversely, there will be some slight beneficial impacts near to roads relieved by the scheme. Overall, the effect of the proposed scheme on local air quality is expected to be minor adverse. The scheme is not expected to have any effect on air quality within existing Air Quality Management Areas (AQMAs)

In terms of wider-scale impacts in the design year, the scheme is expected to bring about an extremely small increase in the total emissions of relevant air pollutants across the road network. In context, this increase is not judged to be significant. The scheme will increase emissions of carbon dioxide, but the increase will be extremely small.

The scheme would however have a slight beneficial impact on rates of nitrogen deposition at Bothwell Castle Grounds SSSI.

Cultural Heritage

No Scheduled Monuments or Listed Buildings are directly affected by the Scheme. Consultation with Historic Scotland and an assessment of the scheme corridor indicates there are no significant adverse impacts on cultural heritage and therefore no specific mitigation is required. Should any previously unrecorded remains be discovered during the construction phase, appropriate steps will be followed by the Contractor to inform Historic Scotland and conserve, record or further investigate as considered necessary.

Land Use

Mitigation to minimise new land take has been an inherent element of the road design. The Scheme is essentially an on-line widening scheme, a fundamental objective of which is containment within existing road boundaries.

The Scheme requires the purchase of a relatively small area of land to allow its construction, future operation and maintenance. Sustainable Drainage Systems (SuDS) require to be included as part of the road improvement scheme and this requires an additional land take of approximately 7 ha.

The overall Scheme footprint (including existing roads) covers an area of approximately 80 ha, of which the majority (approximately 60 ha) is already in Scottish Ministers' ownership. The total additional land take necessary for the scheme is approximately 20 ha.

No properties will be demolished as part of the Scheme. Land take will be required in the Green Belt, but there will be negligible effect on land used by the public.

Disruption Due to Construction

The construction period for the Scheme is expected to be up to 2 years. The construction programme will aim to minimise disruption to the existing environment and avoid unnecessary delay and disruption to existing road users and the surrounding area. Construction is likely to cause direct and indirect disruption at and around the junctions, and on sections of roads linking to the wider network.

There will be temporary adverse visual impact to occupiers of properties with views across the Scheme, and to road users. The most visually intrusive activities will relate to earthworks, for example where embankment and cutting slopes are to be steepened.

The impact of the construction phase on local air quality is likely to involve a temporary increase in dust and vehicle emissions. The number of construction vehicles and plant operating on site will be so small in comparison to existing flows on the surrounding road network that any impacts of vehicle emissions on local air quality will be negligible. Standard good practice measures to mitigate dust emissions will be implemented during the construction phase. Measures will also be set in place by the Contractor to protect adjacent groundwater, watercourses and water bodies from accidental damage, and to control construction noise and vibration.

During construction, temporary disruption to some pedestrian and cyclist crossing points can be expected as carriageway widening work (and hence widening of underpasses) takes place. Temporary diversions and other mitigation as necessary will be set in place to maintain access as far as possible.

To avoid or reduce impacts, the Contractor will be required to prepare an Environmental Management Plan and Method Statements specifying mitigation measures prior to commencement of works on site.
The Contractor's compounds and material storage areas will be established at appropriate locations adjacent to the works. The precise locations of the storage areas have not yet been determined, and will be considered by the Contractor at a later stage. However, the compounds will be sited away from watercourses and locations identified as sensitive and/or vulnerable so that, after site restoration, there are no permanent environmental impacts.

Ecology and Nature Conservation

The majority of the habitats affected are roadside planted areas of negligible/low nature conservation value. Additional habitat loss arising from off-line construction of road drainage management features will affect areas of low nature conservation value; new wetlands will be created in and around drainage attenuation and treatment (SuDS) basins as mitigation. Off-line construction of a new slip road at Daldowie will affect a small area of land (approximately 7330m^2) designated as ancient woodland, which has experienced past disturbance and currently comprises scrub and grassland.

Parts of the scheme fall within motorway land designated as Corridors of Wildlife Importance, but no Sites of Special Scientific Interest (SSSI) or Sites of Interest for Nature Conservation (SINC) will be affected by the scheme.

Widening of the bridge carrying the M74 over the North Calder Water will take place near to recorded otter activity, and detailed mitigation to protect otters will be set in place. Mitigation measures will also be implemented to protect badgers where they are present near to working areas.

In the medium and long term, creation of new wetland areas associated with some SuDS basins will provide local biodiversity benefits. Areas of species-rich conservation grassland/wildflower will be created, along with new planting of native-species trees and scrub as shown on Figures 1-8 at the end of this document.

With mitigation measures in place, no significant permanent adverse impacts are predicted in relation to the scheme.

Landscape and Visual Issues

The local landscape has already been significantly affected by the existing road corridor. Landscape and visual impacts have been minimised where possible by the design of the road improvements and through the proposed landscape planting as illustrated within the Scheme Plan.

The Scheme will have a slight adverse impact, which is not considered to be significant on the surrounding landscape within the 0-15 years short term period, but will have no significant impacts in the long term period of 15+ years.

The majority of visual receptors surrounding the Scheme will not experience significant adverse impacts as the scheme is essentially online for most of its length, and therefore will cause little change to existing views. Impacts to views are also reduced by existing roadside planting (which will be retained where possible), topography and built form. The main impacts to visual receptors are caused by loss and removal of screening vegetation, and the change in views associated with new road drainage features (SuDS basins). The new basins will have the potential to be a beneficial impact on the view, as they can create a visually attractive feature providing habitat and encouraging wildlife.

The loss of screening vegetation has an adverse impact in the short term but by planting new trees and screening vegetation in the restoration phase, as shown on Figures 1-8 of this document, this impact is expected to be negligible in the long term.

Vehicle Travellers

There will be transient negative effects on driver views during construction. When construction is complete, views will be retained out to the countryside from the M74, and travellers will experience only minor changes to their views over the longer term.

Vegetation and planting, as it matures, will help to screen views from the road where the route passes over embankments.

Once construction is complete the proposed development will relieve congestion and therefore reduce driver stress.

Traffic Noise and Vibration

Noise impacts of the Scheme have been assessed by comparing the difference in predicted noise levels with and without the Scheme in the Year of Opening (2010) and in Design Year 2020. Overall, for the Core Network assessed for the Scheme, there are no properties at which the predicted significance of impact is greater than “slight adverse” and, as such, noise mitigation is not required.

Noise modelling predicts that there are no residential properties where the increase in noise level, due to the Scheme exceeds 1dB. The average increase in noise level for properties likely to be affected is approximately 0.2dB. This small increase in the absolute noise level is not surprising when it is considered that the M8/M73/M74 Network Improvements simply consist of the widening of existing motorways.

It is estimated that a similar number of properties will experience an increase in potential noise nuisance over time with or without the Scheme. With an average increase in noise level at properties of 0.2dB changes in the number of people bothered by airborne vibration will be imperceptible.

Pedestrians, Cyclists, Equestrians and Community Effects

No pedestrian, cycle or equestrian routes will be lost as a result of the Scheme, and all existing routes will be retained.

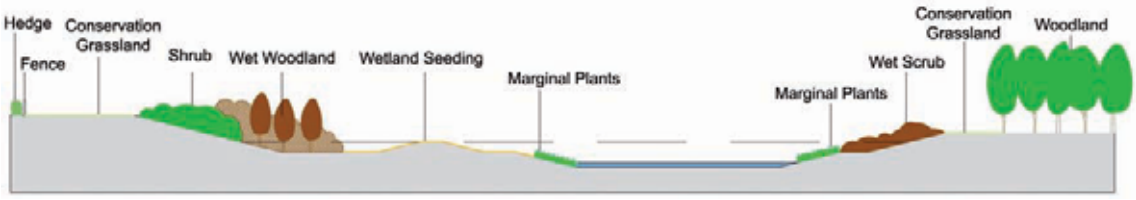
The Scheme will have no long term impact requiring specific mitigation for pedestrians, cyclists or equestrians. Residual impacts of the Scheme are assessed to be negligible.

Road Drainage and the Water Environment

No significant adverse impacts on water quality or quantity are predicted with mitigation in place.

Impact on water quality is assessed as negligible for both the North Calder Water and the River Clyde. The proposed widening of the M74 southbound carriageway will not affect the floodplain of the River Clyde between the motorway and the Strathclyde Loch.

The scheme incorporates a Sustainable Drainage System (SuDS) together with spillage containment facilities (neither of which are currently in place along the affected sections of motorway). These measures will treat runoff from the motorway and protect existing watercourses, as well as reducing the potential for accidental damage to watercourses and to important nearby habitats.



Typical SUDS Attenuation Detail

Geology and Soils

Impacts identified for the Scheme include potential ground surface instability due to mine workings collapse, disturbance of contaminated ground and the loss of economic coal deposits. Past mining activities may have caused ground contamination, although there is no risk to current users or to the public. The assessment indicates that construction of the road will not increase contamination exposure and remediation will therefore not be necessary. Appropriate mitigation will be identified if necessary by the Contractor.

With appropriate mitigation measures adopted during the detailed design, construction and operation of the Scheme, potential effects associated with ground instability and the disturbance of contaminated ground will be reduced so as not to pose significant risks to the development, site workers or the general public.

Policies and Plans

The Scheme generally complies with the relevant transport planning policies and guidance at national, structure plan, and local plan levels. It realises the strategic roads policy designation and it will contribute to improvements in the national road and transport infrastructure, as well as contributing to economic development and regeneration. The Scheme will be compatible with the policy of improving journey time reliability on the route network.

There are policy implications in relation to designated areas (Green Belt and Wildlife Corridor), which will be addressed through landscape planting and wildlife protection measures.

Scheme Development

The Environmental Statement is based on a conceptual design. The final specimen design, and Scheme as it will be implemented by the Contractor, will result in no material change to impacts described in the Environmental Statement without further consultation with statutory organisations and publication of an addendum to the Environmental Statement if required.

A final procurement plan has yet to be agreed, however, it is anticipated that the proposed scheme will be procured by a Design and Build contract and may be privately financed.

Comments

Any person wishing to comment on the Environmental Statement should write to:

The Chief Road Engineer
Transport Scotland
Major Transport Infrastructure Projects
Buchanan House
58 Port Dundas Road
Glasgow
G4 0HF

Written responses are invited within 42 days of the advertised date of publication of the Environmental Statement. Further copies of the Non-Technical Summary are available free of charge. Copies of the Environmental Statement and the Non-Technical Summary are available for download from the website www.m8completion.com. Printed copies of the Environmental Statement may be obtained from the above address at a cost of £250. A CD copy is also available for £10.

The Environmental Statement and Draft Road Orders are also available for public viewing at the above address and at the following locations:

South Lanarkshire Council
Montrose House
154 Montrose Crescent
Hamilton

North Lanarkshire Council
Civic Centre
Motherwell

Hamilton Town House Library
102 Cadzow Street
Hamilton

Glasgow City Council
City Chambers
George Square
Glasgow

Baillieston Library
141 Main Street
Glasgow

Library at the Bridge
1000 Westerhouse Road
Easterhouse
Glasgow

Bothwell Library
The Donald Institute
Main Street
Bothwell

Bellshill Cultural Centre Library
John Street
Bellshill

Viewpark Library
Burnhead Street
Viewpark

North Lanarkshire Council
Municipal Buildings
Kildonan Street
Coatbridge

Uddingston Library
1 Main Street
Uddingston

Scheme Summary

The Scheme comprises:

- Provision of additional running lanes and discontinuous hardshoulders over lengths of M8, M73 and M74.
- Modifications to the M74 slip road and roundabouts at Daldowie Junction.
- Widening of four underbridges on the M74.
- Demolition of the existing accommodation bridge over the M73 to the south of Baillieston Interchange and provision of a new realigned access bridge.
- Provision of a Sustainable Drainage System.
- Environmental mitigation and enhancement works.

The total length of the scheme:	approximately 18.2 km
Land requirements:	approximately 20 ha in total
(Note: Scottish Ministers already own 60 ha required for the scheme)	
Costs:	£53 - £64 million
Construction Period:	up to 2 Years (estimated)