

The M74 Completion Environmental Statement

Non Technical Summary

2003



SCOTTISH EXECUTIVE



M74 COMPLETION

ENVIRONMENTAL STATEMENT NON-TECHNICAL SUMMARY

1 *INTRODUCTION*

The Scottish Executive, in partnership with Glasgow City Council, South Lanarkshire and Renfrewshire Councils, (the M74 Project Partners), is seeking to complete the link between the end of the existing M74 at Fullarton Road near Cambuslang, South Lanarkshire and the M8 motorway west of the Kingston Bridge in Glasgow. The proposed line of the route is shown on *Figure 1*.

The Scottish Executive is publishing draft road orders and a compulsory purchase order ⁽¹⁾ to seek the powers to construct the new scheme. To meet the requirements of the *Environmental Impact Assessment (Scotland) Regulations 1999* an environmental impact assessment of the new trunk road proposals has been undertaken. The findings of the assessment, including the measures that will be taken to avoid, reduce or remedy adverse impacts are reported in an Environmental Statement which is being published at the same time as the draft orders. This document is the Non-Technical Summary (NTS) of that Statement.

2 *THE PROPOSALS*

The proposals (which for the purposes of the Environmental Statement have been described from west to east, to follow the engineering drawings) include:

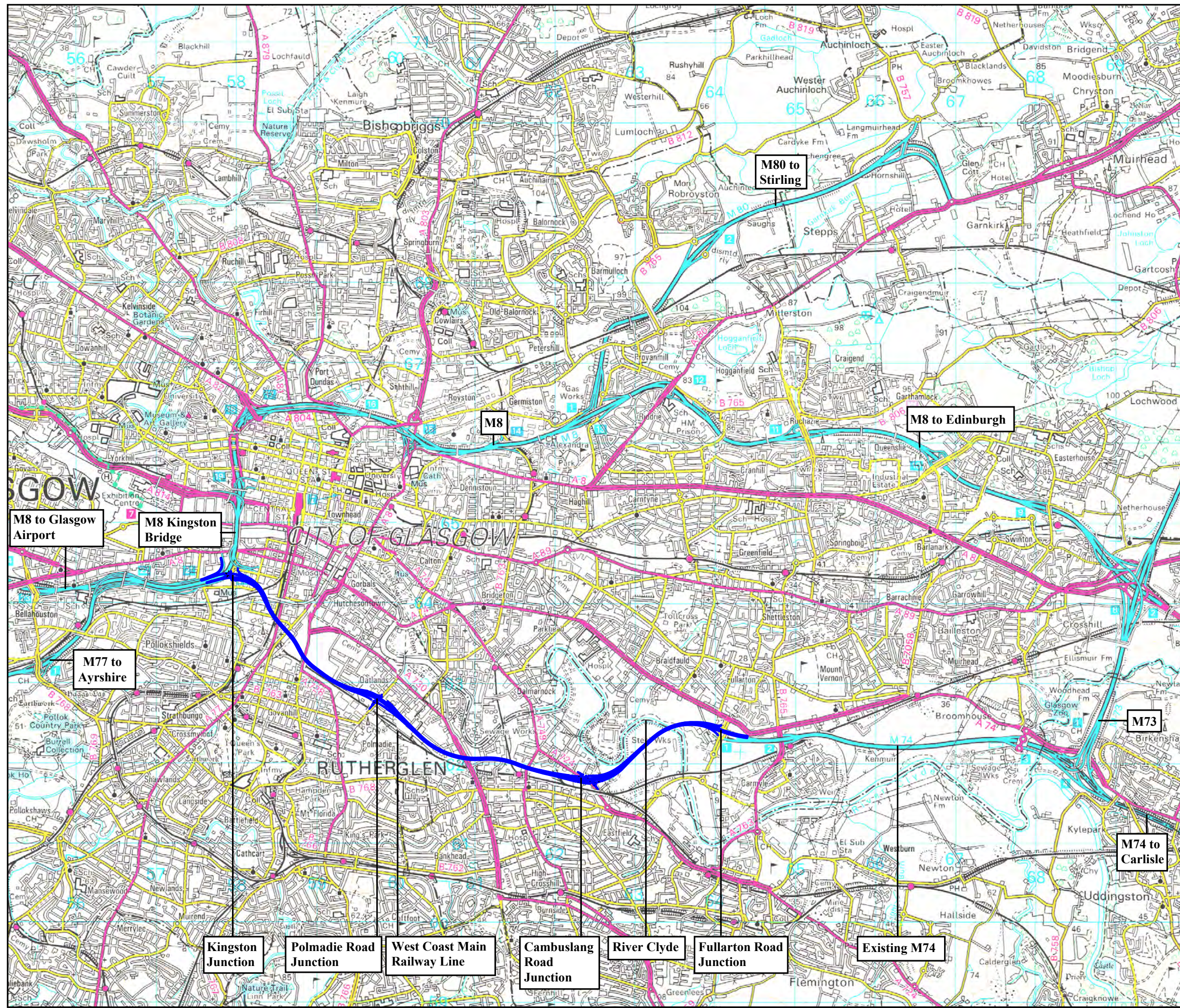
- An 8 kilometre (5 mile) section of new motorway, with three lanes in each direction and hard shoulders on each side of the road.
- A connection between the new section of the M74 and the existing M8 and M77 motorways 500m west of Kingston. There is no direct connection from the M74 in either direction to the Kingston Bridge.


(1) Road orders are published by the Scottish Ministers under the *Roads (Scotland) Act 1984* as the statutory development consent process for construction and operation of a trunk road. The orders show the line of the road. A compulsory purchase order is the means whereby land not owned by the Scottish Executive can be acquired to allow construction of the scheme. Draft orders are initially published and a period of public consultation follows. Any objections are taken into account in making the decision about whether the scheme should be approved and the orders made. If any objections cannot be resolved there may be a Public Local Inquiry at which the objections are examined further. All this information is taken into account when the Scottish Ministers make their final decision about whether the scheme should proceed.

- A junction on the new section of the M74 at Kingston which allows access from the motorway to local roads in that area and from the local roads to the new M74 motorway.
- A full junction at Polmadie Road where the motorway will bridge over the existing road.
- A full junction at Cambuslang Road where the motorway will bridge over the existing road.
- Upgrading of the existing Fullarton Road Junction to a full junction allowing connection to and from the motorway in all directions from Fullarton Road. The motorway will bridge over Fullarton Road.
- Bridges to carry the motorway over other roads and railways along the line of the road, apart from at Cathcart Road where the new motorway will pass under the road.
- Minor realignments and changes to other roads including:
 - conversion of the existing hard shoulders and minor widening of the M77 southbound from the M8 to Junction 1 to create an additional running lane;
 - conversion of the hard shoulders of the M8 to running lanes by re-lining of the M8 from Junction 21 to 25;
 - a new local road connection between Polmadie Road and Aikenhead Road in Polmadie;
 - realignment of Quay Road in Rutherglen;
 - realignment of Salkeld Street in Tradeston; and
 - permanent closure of a number of minor sideroads including Gloucester Street, Kinning Street, Laidlaw Street and Paterson Street in Tradeston and Francis Street and Mackinlay Street in Eglinton.


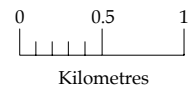
**M74 Completion
Environmental Statement**

**Figure 1
Scheme Context**



Key:
 Line of M74 Completion

Project: M74 Completion
 Client: Glasgow City Council as Appointed Agent on behalf of the Scottish Ministers
 Date: 03.03.03
 Drawn: PM
 Checked: HC
 Approved: AS

North: 
 Scale: 
 0 0.5 1
 Kilometres



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This trunk road scheme has been developed from the proposal granted planning permission in 1995 that completed the link between Fullarton Road and the M8 west of Kingston. The current scheme is a scaled down version of the 1995 proposals with only three lanes in each direction and two rather than four intermediate junctions. The scheme is generally located in the same corridor as the 1995 scheme but with a realignment of the route in the Eglinton and Polmadie areas and the deletion of direct connections between the M74 and Kingston Bridge.

The scheme has been developed in consultation with many organisations and was also informed by a public information exercise in September 2002. Various options for the scheme have been considered and these are reported in full in the Environmental Statement.

At the conclusion of the statutory process, if successful, the scheme will be procured through a Design and Build or similar contract. Competitive tendering will be used to select a preferred bidder to develop the detailed design of the scheme and to construct the works in accordance with requirements set out in the contract.

As a result of this approach some details of the scheme are not yet known and certain assumptions have been made for the environmental impact assessment of the proposals, to determine appropriate mitigation measures. The detailed design will ensure that the level of mitigation measures identified in the Environmental Statement is met and that the final scheme has no environmental impacts greater than those described in the Environmental Statement. If the final scheme design is considered to have significantly different environmental impacts an addendum to the Environmental Statement would be published for public comment and consideration by the Scottish Ministers.

It is anticipated that the works will be constructed within a three year period. For the purposes of the environmental impact assessment it has been assumed that construction activities will be undertaken during daytime periods only (generally 08.00 to 19.00) from Monday to Friday and 08.00 to 13.00 on Saturdays. Night and Sunday working will be required for some activities, for example, the erection of major structures over roads and railways that could not safely be undertaken during normal working hours and also to minimise

disruption to travellers. Noise limits will be controlled by requirements in the contract documents.

Construction activities for the scheme will involve earthworks and land forming for embankments, piling for bridges, erecting structures including bridges, viaducts and retaining walls, road surfacing, drainage measures, signing and lighting *etc.* These activities will create additional traffic movements averaging some 220 heavy goods vehicle (HGV) movements per day to deliver materials to the various site accesses along the route. Some activities will require traffic management measures to be put in place. Minor diversions of traffic in some bridge locations will be required for limited periods, including a slip road at M8 Junction 21, Polmadie Road, Glasgow Road, Farmeloa Road and Cambuslang Road.

Land made available to the contractor in the contract can be used for a site compound and to store materials, equipment *etc.* The contractor may wish to use additional land outwith the scheme corridor. If this is the case the contractor would be required to gain all necessary permissions and licences to use the land.

The scheme, once operational, will be maintained by the Scottish Executive.

5 *IMPACTS OF THE PROPOSALS*

The impacts of the proposals on the environment, including the physical, natural and human environment are summarised below. Mitigation measures to reduce these impacts, which have been agreed with the M74 Project Partners, have been taken into account when reporting the impacts. Scheme summary plans which show the mitigation measures and describe the key effects of the scheme are included at the end of this document (*Figures 2a-i*).

5.1 *PLANNING POLICY*

Completion of the M74 supports the strategic aims of the Glasgow and the Clyde Valley Structure Plan by implementing one of its strategic transport schemes and making an important contribution to the economic development strategy set out in the plan.

The Glasgow City Plan and the Cambuslang/Rutherglen Local Plan support the principle of completing the M74. Mitigation measures are, however, required to reduce the impact of the scheme to meet the aspirations of individual policies.

The proposed scheme will affect a number of development sites that are the subject of planning permissions, applications or development pressure.

5.2 *LAND USE AND PROPERTY*

The scheme, for much of its length, follows a corridor between the River Clyde and the West Coast Main Line railway. Construction of the scheme requires permanent occupation and a change in land use for over 77 hectares of land of which nearly 95% is currently in mixed land uses, including residential and commercial development, derelict areas (some of which are designated for development) and some open space (woodlands and grasslands *etc*). Just over four hectares is land of local nature conservation or landscape value (see *Sections 5.5 and 5.6* below). A small area of community land will be lost to development (less than 0.2 hectares from the Glasgow to Edinburgh cycleway). The integrity of the cycleway will not be affected.

A total of 93 properties will require demolition, including eight residential buildings, some of which are tenement blocks.

5.3 *GEOLOGY, SOILS AND CONTAMINATED LAND*

There will be no impacts to any features of particular geological interest. Along the route corridor there are areas of old mine workings and contaminated land. Grouting of old mine works has the potential to displace contaminated groundwater. Working in contaminated areas can raise health and safety issues. The scheme has been designed to minimise disturbance to all areas of contamination (including groundwater) and the scheme mitigation has been developed to ensure that the risk of adverse impacts to people, water and the wider environment is controlled during construction and in the longer term. The contractor will be required to comply with various performance criteria to manage contaminated materials. With these mitigation measures in place the scheme can be constructed without any significant adverse impacts. In the longer term there may be some beneficial impacts by capping off areas of contamination and stabilising areas of former mining activities.

5.4 *WATER QUALITY AND DRAINAGE*

The scheme road drainage system is largely independent of existing burns and groundwaters. It will include Sustainable Urban Drainage Systems (SUDS) measures such as wetland areas to remove pollutants in the runoff from the road prior to their discharge to the River Clyde. These measures, combined with adherence to current best practice guidance and the specific measures to control potential impacts from areas of contamination, are predicted to prevent any significant adverse impacts to surface water and groundwater quality.

Flood risk assessments for the scheme have confirmed that the scheme will not result in any significant increases in flood risk in the area.

5.5 *ECOLOGY AND NATURE CONSERVATION*

No sites with statutory designations for nature conservation will be affected by the scheme. There will be habitat loss (some 2.6 hectares in total) from two sites of local nature conservation importance (the Clyde Industrial Estate and Auchenshuggle Community Woodland Sites of Importance for Nature Conservation). There will also be loss of habitat from the River Clyde and some road and railway Corridors of Wildlife and Landscape Importance (approximately 1.2 hectares). Scheme mitigation measures have been designed to compensate for the loss of these areas and to ensure the integrity of the important wildlife corridors is conserved. New planting will seek to enhance the remaining areas of the sites within the scheme corridor through underplanting with native species to strengthen the edges of the sites, which are affected.

No habitats of particular importance have been identified that will be affected by construction although the nature conservation value of all habitat is increased in the urban context where green space is generally more limited. Some protected species (badger, bat and otters) have been identified in the corridor and appropriate measures (including surveys prior to construction to identify all necessary protective measures) will be put in place to safeguard these species during construction and afterwards when the road is in use.

New habitats will be created as part of the landscape planting for the scheme. Existing habitats that remain within the road corridor will be enhanced with new planting with native species typical of the area. These new and enhanced habitats have been designed to enhance local biodiversity in the longer term with appropriate management and to compensate for the habitats that are lost.

5.6 *LANDSCAPE APPRAISAL*

The M74 Completion route passes through a range of urban landscapes between the River Clyde and the West Coast Main Line Railway. From the built up areas of Kingston, Tradeston and Eglinton, the route crosses vacant and industrial sites, before linking into the existing motorway in the more open urban fringe around Fullarton Road.

The new road scheme will have a major impact on the landscape and townscape of the corridor through which it passes. Mitigation measures will be implemented as part of the scheme including new planting, but the scale of the development is such that significant adverse impacts on the character of the area will remain.

There will be impacts to two Sites of Special Landscape Importance (at the River Clyde and at Auchenshuggle Woodland). The new road will affect the setting of some listed buildings close to the scheme.

There will be significant adverse temporary impacts on landscape throughout the scheme corridor during construction although these will cease at the end of the construction period.

5.7 *VISUAL IMPACTS*

The scheme will introduce major new infrastructure into the route corridor which will result in visual changes for all those who live, work or pass through the area.

The visual impacts of the scheme will be mitigated by the successful implementation of new planting, the quality of the design of major structures and the associated artworks and feature lighting.

Even with these measures in place there will be significant impacts in the year the scheme opens throughout the route corridor. There will be no significant adverse impacts around Aikenhead Road and Cathcart Road, where the new motorway will be in a cutting.

The visual impacts of the motorway will be reduced as the new planting matures. Adverse impacts will remain in locations where views of the new road cannot easily be screened.

There will be significant longer term benefits at Butterbiggins Road in Govanhill, Crown Street in New Gorbals and Logan Street in Polmadie, where new planting will replace existing views of derelict land or industrial estates.

5.8 *CULTURAL HERITAGE*

There are many sites of potential archaeological and cultural interest within the immediate vicinity of the scheme corridor. These include five sites of national importance and 15 of regional importance to industrial archaeology. There will be direct impacts or indirect effects to the setting of 10 of these.

Four listed buildings of regional importance and five non-listed buildings of some importance to industrial archaeology or social history will be demolished. There will be significant impacts to three sites of national archaeological importance.

Various mitigation measures will be implemented which may include building surveys, photographic surveys and excavations depending on the scale of impact and the importance of the building or site. These surveys will

provide new information which will help increase the understanding of the past history of the area.

New planting will mitigate potential impacts to the setting of East Pollokshields, Rutherglen and Farme Cross Conservation Areas.

5.9 *DISRUPTION DUE TO CONSTRUCTION*

In all locations where the scheme crosses existing roads temporary traffic management will be used and at least one lane of traffic will be maintained in each direction apart from limited periods where this may not be possible. Although some traffic disruption will occur during peak hours on these roads, significant traffic or environmental impacts are not predicted. Mitigation measures will be implemented during construction to minimise these impacts.

Traffic diversions are required for a small number of overnight and/or weekend periods during construction. Although the most appropriate diversion routes will involve routing traffic through some residential areas, the short duration of these events and the low traffic volumes involved during such periods mean that no significant environmental impacts are predicted.

Scheme construction will require some works affecting crossings of railways at Tradeston (Paisley Railway), Eglinton Street (the West Coast Main Line) and Rutherglen Station, although the structures can be completed without disruption to railway operations.

Import and export of construction materials by HGV will result in small increases in traffic flows on key access routes along the scheme corridor, particularly Polmadie Road, Farmeloan Road and Cambuslang Road. Slight reductions in amenity are predicted for pedestrian and cyclist users of these roads and for residents in roadside properties in locations such as Farme Cross and Rutherglen during some periods of the construction works. It may prove possible to use rail freight for at least some deliveries, which has the potential to reduce these impacts.

5.10 *NOISE AND VIBRATION*

Modelling of the noise impacts in a wider study area remote from the scheme indicates that in most locations changes in noise level are unlikely to be noticeable. Overall, in the wider study area, there are more properties which are predicted to experience decreases in noise levels than increases and there will be an overall net benefit from the scheme.

Mitigation measures such as the use of low noise road surfacing, and noise barriers in some locations, will be implemented to reduce the impacts of traffic noise from the new road.

Even with these measures in place major adverse noise impacts are predicted at:

- approximately 110 residential properties in North Toryglen;
- the adult education centre and at the tower block flats on Prospecthill Road (also Toryglen); and
- the residential properties and homeless people's shelter in Dalbeth (at the east end of the scheme north of the River Clyde).

Moderate adverse impacts are predicted at:

- some 20 residential properties in Jamieson Street, Govanhill;
- the new flats at Queen Street and King Street and Burgh School in Rutherglen (approximately 40 properties); and
- some 22 residential properties along the northern edge of Rutherglen.

Slight to moderate adverse impacts are predicted at residential properties in:

- some 100 properties in Richmond Place (east Rutherglen adjacent to Cambuslang Road Junction) and at other locations a similar distance from the new road; and
- Montarvie Street at Farme Cross.

There will be positive moderate benefits at Maxwell Road (Eglington Toll/St Andrew's Cross) and slight to moderate benefits along Rutherglen Main Street because of reductions in traffic on these streets.

There will be some noise impacts at properties in proximity to the scheme during construction. These are predicted to be greatest for properties within 110m of the route. Some properties at a greater distance from the route (up to 170m) could also be affected by driven piling. General construction work affecting these locations is likely to be ongoing for four to nine months. Piling could last for between one and three months at any structure.

At some locations such as the major bridge crossings at Eglington Street, Polmadie Road, Glasgow Road, Farmeloan Road, Cambuslang Road and at railway crossings, some night time work will be required to ensure safety and to limit disruption to travellers during construction. These works are likely to cause noise impacts at nearby properties but the severity of impacts can be reduced to some extent with mitigation.

Mitigation will be required at all work sites to reduce the severity of impacts. Measures will be chosen by the eventual contractor but could include using inherently quieter plant, mobile noise barriers *etc.* Even with mitigation there will be significant impacts whilst work is ongoing. Contract requirements will restrict most activities to normal working hours.

There will be an overall improvement in air quality in the wider study area for the scheme because of reductions in traffic on local roads following opening of the M74 Completion. Some 45% of properties in the wider study area are predicted to experience a reduction in nitrogen dioxide (NO₂) concentrations as a result of the scheme and 30% experience no change. 56% of properties experience a reduction in particulate matter (PM₁₀) concentrations and 1% no change.

Air Quality Management Areas (AQMA) are designated by local authorities in areas where future national air quality objectives are unlikely to be met. An AQMA covers most of the city centre of Glasgow although not the scheme corridor. This AQMA is predicted to experience a benefit to air quality as a result of the scheme.

The detailed air quality modelling shows some increases in pollutants are predicted close to the road corridor as would be expected from traffic on a new road. These include increases in the level of PM₁₀ and NO₂. Whilst small, these increases, in combination with the high background concentrations already found in Glasgow city centre, could result in a marginal exceedence of the Government's air quality objectives (AQOs) for these pollutants.

The scheme is predicted to cause a slight increase in global emissions of carbon dioxide, NO₂ and PM₁₀ due to the overall increase in vehicle kilometres travelled on the road network in the year of opening. Emissions of carbon monoxide and total hydrocarbons are predicted to decrease marginally in the short term as a result of changes in vehicle speeds and changes in the heavy goods vehicle fleet. These changes do not affect the other pollutants in the same way. Once the scheme has been open for 15 years a slight increase in all the pollutants is predicted.

The contractor will be required to implement best management practices during construction to reduce the risks of impacts from dust which could be created by the works. Specific measures will be implemented in all areas of contaminated land.

Changes in traffic flows on the network as a result of construction traffic are not predicted to impact significantly on air quality.

The scheme is not predicted to have any significant direct effects on community journeys made by pedestrians or cyclists. No permanent diversions of footways, rights of way or cycleways will be required.

Pedestrian and cyclist users of Polmadie Road and Cambuslang Road are predicted to experience substantial changes in their journeys due to significant increases in traffic on these roads close to the junctions and the physical effects of the sliproads. Pedestrian crossings will help to mitigate these effects.

The physical impact of the new motorway may result in slight severance of communities on either side of the scheme due to a perceived barrier effect of the new road corridor. There will also be reductions in amenity for pedestrians walking under M74 bridges during the day. Careful design of the structures including artworks and feature lighting will help mitigate this impact. However the effect on pedestrians is still predicted to rise to moderate at night.

Pedestrians using footways along sections of Aikenhead Road and Rutherglen Main Street will benefit due to traffic flow reductions on these roads.

During construction, pedestrian and cyclist journeys may be more difficult where they pass close to the works and along roads where flows are increased by construction traffic.

5.13

VEHICLE TRAVELLERS

The M74 Completion will provide vehicle travellers with generally open and long range views of the surrounding landscape and townscape apart from where views are obscured by noise barriers. The scheme will provide particularly impressive views of the city centre of Glasgow for westbound travellers and new views of the River Clyde will be opened up by the scheme.

Travellers on the existing road network close to the scheme or passing under the motorway will have a significant change in their views, although the impact of new scheme structures will reduce as the proposed landscape planting matures and views are softened in the longer term.

Driver stress levels in the future will be high on the M74 Completion and on the existing M74 due to heavy traffic flows, but will decrease on the M8 compared with the situation without the M74 Completion. The scheme is not predicted to significantly affect levels of driver stress on other parts of the motorway network in west central Scotland.

On Cambuslang Road and Polmadie Road, traffic flows are predicted to increase significantly resulting in higher levels of driver stress for drivers using these roads in the vicinity of the M74 junctions. Elsewhere on the local road network away from the junctions, driver stress is predicted to reduce on roads such as Aikenhead Road, Rutherglen Main Street and Cathcart Road where significant traffic flow reductions are predicted. Many other roads will experience small reductions in traffic which will have slight benefits for drivers.

Scheme construction will affect local drivers significantly on roads in the vicinity of the working areas as a result of elevated levels of construction traffic and due to temporary traffic management arrangements on local roads.

5.14 *CUMULATIVE IMPACTS*

The effects of the whole scheme are summarised in the previous sections. The scheme may also result in cumulative impacts when considered in combination with other new developments.

The assessment of all traffic related environmental impacts has been based on data from the transport model used to predict future year traffic flows on roads in the M74 Completion corridor and further afield. The predicted flows take account of future growth in traffic due to land use change and they take into account all committed transport schemes. The reporting of changes in noise and air quality in particular have taken into account the cumulative effect of traffic flow changes on the road network of anticipated future developments and transport projects, in addition to the predicted effects on strategic and local traffic of the M74 Completion.

A key objective of the M74 Completion is to stimulate the economic regeneration of the corridor. Although the direct effects of the project in terms of stimulating land use change on adjacent sites cannot be predicted, it is anticipated that industry will relocate to sites with good accessibility to the motorway (in particular around the junctions). Regeneration of the area will result in the remediation of areas of derelict land and although there may be some impacts to the natural and cultural heritage there is also potential for positive landscape and visual changes.

All new developments would be required to demonstrate adequate drainage and flood protection measures and cumulative impacts are not predicted in terms of quantity or quality of discharge from the M74 Completion when combined with these potential new developments.

6 *COMMENTS*

Comments on the proposals or their environmental effects are invited in writing to the Chief Road Engineer at the address below within six weeks of the publication of the Environmental Statement.

The Environmental Statement (two volumes) has been made available for public consultation at the locations published by the Scottish Executive for a period of six weeks. Copies of the Environmental Statement are available for

£300 or on CD for £15 including postage and packing. VAT is chargeable on CDs. This NTS (which is available free of charge) and the other documents are available from:

Douglas Forson
Scottish Executive Development Department
Trunk Roads Design and Construction Division/M74 Team
Victoria Quay
Edinburgh
EH6 6QQ

The Non-Technical Summary is also available on the M74 Completion website (www.m74completion.com).



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