ROADS (SCOTLAND) ACT 1984; ACQUISITION OF LAND (AUTHORISATION PROCEDURE)(SCOTLAND) ACT 1947

M74 SPECIAL ROAD (FULLARTON ROAD TO WEST OF KINGSTON BRIDGE) ORDERS
REPORT OF PUBLIC LOCAL INQUIRY INTO OBJECTIONS
VOLUME 1 : MAIN REPORT

Reporters: R M Hickman CBE MA BA(Hons) Dip TP MRTPI
Donald Watt LLB NP

Date(s) of inquiry: **1 December 2003 – 3 March 2004**
File References: **2/NEA/13/2-3, 10 & 33**

CONTENTS

File Ref: 2NEA/13/2, 2NEA/13/3,
2NEA/13/10 & 2NEA/13/33

Scottish Ministers

ROADS (SCOTLAND) ACT 1984: ACQUISITION OF LAND (AUTHORISATION PROCEDURE)(SCOTLAND) ACT 1947: THE ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 1999

1. **THE M74 SPECIAL ROAD (FULLARTON ROAD TO M8 WEST OF KINGSTON BRIDGE) SPECIAL ROAD AND CONNECTING ROADS SCHEME 200**
2. **THE M74 SPECIAL ROAD (FULLARTON ROAD TO M8 WEST OF KINGSTON BRIDGE) SIDE ROADS ORDER 200**
3. **THE M74 SPECIAL ROAD (FULLARTON ROAD TO M8 WEST OF KINGSTON BRIDGE) COMPULSORY PURCHASE ORDER 200**
4. **THE M74 SPECIAL ROAD (FULLARTON ROAD TO M8 WEST OF KINGSTON BRIDGE) SPECIAL ROAD SCHEME – ENVIRONMENTAL STATEMENT AND NON TECHNICAL SUMMARY**

In accordance with our Minute of Appointment dated 4 August 2003, we held a public local inquiry into objections lodged and not withdrawn to the above Orders and related Environmental Statement. In the interests of brevity, the special road scheme to which the Orders relate is referred to as the "M74C" throughout our report.

Inquiry arrangements

A pre-inquiry meeting was held in Glasgow on 20 August 2003. A copy of the minute of that meeting is provided as appendix 1 to this report. All appendices are contained in volume 2 of the report.

The inquiry took place at 3 locations, namely the Parish Hall, West George Street, Glasgow; the Millennium Hotel, West George Street, Glasgow; and the Reuther Hall, Rutherglen. The details of these sittings and the objections heard are set out in the inquiry programme at appendix 5 in volume 2.

Prior to the inquiry, we carried out an unaccompanied site inspection of the entire route of the proposed motorway extension and we have made further unaccompanied site visits to specific locations as necessary, both during and after the inquiry. Accompanied site visits to inspect individual properties affected by the proposed compulsory purchase order were made on 21 January 2004, 16 February 2004, and 21 April 2004, and there was an accompanied inspection of most of the route of the motorway by bus and on foot on 17 February 2004.

We wish to record our appreciation for the very helpful cooperation that we have received from all parties. This has greatly helped the organisation and efficient programming of the inquiry, and the consideration of the evidence. We also wish to

thank the Programme Officer for her care and efficiency in carrying out her responsibilities.

Legal submissions

At the start of the inquiry on 1 December 2003, there was a motion from JAM74/FOE for an indefinite adjournment of the inquiry. This motion was rejected. The summaries of the submissions for and against the motion, and our ruling thereon are set out in appendix 6. Legal submissions of a similar nature were also made at the inquiry on 26 January 2004 on behalf of Albion Chemicals Limited and these are also set out in appendix 6. In addition, at the inquiry on 1 March 2004, there was a motion on behalf of the MRC Pension Trust for an award of expenses against the TRA. The submissions in support of and against that motion, and the recommendation thereon are set out in appendix 7.

Number and scope of objections

In common with general practice, objectors to the compulsory purchase order are sometimes referred to as statutory objectors, while objectors to the other orders are sometimes referred to as non statutory objectors. However all objections timeously lodged have a proper statutory basis.

There were objections to the orders by or on behalf of 42 statutory objectors. Of these statutory objectors, 40 objected to the proposed compulsory purchase of their property, and 13 to the road authorisation orders. A number of these objections were subsequently withdrawn, mainly as a result of successful negotiations between the acquiring authority and the property owners/occupiers, so that by the close of the public local inquiry, there were objections from 31 statutory objectors that had not been withdrawn. By the time of the completion of this report (6 July 2004), a further 6 statutory objections had been withdrawn, leaving 25 maintained objections to the compulsory purchase order.

The maintained statutory objections affect 41 separate plots of land (sometimes contiguous) ranging in size from a few square metres to two plots belonging to Corus plc extending to a total of about 8ha. Of these statutory objectors, 3 presented oral evidence at the public inquiry, with 22 resting on their written submissions. The table at the beginning of chapter 9 lists the 25 statutory objectors who have not withdrawn their objections, while the inquiry appearances list (appendix 5) identifies the 3 statutory objectors who took part.

In addition, there were some 340 (non statutory) objections from individuals and organisations opposed to the proposed motorway. These are listed at appendix 3 in volume 2. Among them are the following organisations that object to the proposed motorway :

Friends of the Earth Scotland	Joint Action Against the M74 (JAM74)
Scottish Green Party	Scottish Association for Public Transport
BBA Group plc	Renfrewshire Green Party
SERA Scotland	Scottish Socialist Party Orkney Branch
Greencity Wholefoods	CTC Scotland

Friends of the Earth Aberdeen SPOKES
Living Streets Scotland TRANsform Scotland
World Wildlife Fund Scotland

5 Members of the Scottish Parliament object to the proposals.

The vast majority of the objections from individuals express concern about similar issues, some 280 of them being in identical or nearly identical terms. The issues of most widespread concern to objectors are :

- Inequitable/undesirable use of public funds (mentioned by 49 objectors)
- Environmental concerns (mentioned by 49 objectors)
- Congestion/traffic concerns (mentioned by 42 objectors)
- Concerns about economic benefits (mentioned by 36 objectors)
- Concerns about contaminated land (mentioned by 18 objectors)
- Community severance effects (mentioned by 17 objectors)
- Lack of studies of transport alternatives (mentioned by 10 objectors)
- Concerns about impacts on health (mentioned by 9 objectors)
- Concerns about visual impact (mentioned by 5 objectors)
- Cycling and pedestrian issues (mentioned by 4 objectors)
- Concerns about lack of public consultation (mentioned by 3 objectors)

Appearances at the inquiry are listed at appendix 5. Friends of the Earth Scotland and JAM74 combined to make a joint presentation, and also represented a further 40 or so individual objectors. This joint work was of considerable benefit to all concerned (including the Reporters) as it resulted in more efficient use of inquiry time and avoided the potential duplication of effort by witnesses. The Scottish Association for Public Transport also made an extensive contribution to the inquiry. A further 5 organisations and individuals presented evidence at the public inquiry.

Support for the proposal

Letters of support for the proposal have been lodged by :

CBI Scotland Renfrewshire Chamber of Commerce
Weir Engineering Services University of Strathclyde
Greater Glasgow and Clyde Valley Tourist Board
Glasgow Chamber of Commerce Virgin Trains
BAA Glasgow Scottish Enterprise
Automobile Association Scottish Council for Development and Industry
The AA Motoring Trust Strathclyde Passenger Transport Executive
Royal Automobile Club

The structure of the evidence and this report

The inquiry proceedings were split into 2 phases, the first dealing with general objections to the principle of the Orders, and the second with site/location specific objections. The structure of this report generally reflects that split. The first part of the report covers the general description and policy background. Part 2 of the report

covers the principle and broad effects of the proposed road, including the localised environmental impacts. The chapter headings in part 2 reflect the main issues that were covered during the first part of the inquiry, and in the written representations. Part 3 of the report covers the statutory objections to the proposed compulsory purchase order by those with an interest in affected properties. Part 4 of the report sets out the findings of fact resulting from the evidence, and the conclusions and recommendation.

Appendix 4 in volume 2 lists the documents produced by the parties who appeared. The following page contains a list of abbreviations that have been used in the report.

At the conclusion of the inquiry, a complete set of the productions lodged at the inquiry was forwarded to your office and this report should be read in conjunction with the productions.

A short summary of the main findings of the report follows this preamble.

Additional points

Donald Watt has made a major contribution to all stages of the public inquiry and the writing of the report. However, for medical reasons, he has not been able to contribute to the final stages of the work. For that reason, the report has been completed by Richard Hickman, and he is the sole signatory of the report.

During the preparation of the report, it was noted that the number of HGV trips required during the construction work may have been underestimated in the Environmental Statement (see paragraph 5.94 below). However this report and its conclusions have been based solely on the evidence as presented to the inquiry, and no account has been taken of the possibility that the number of HGV trips occurring during the construction phase may be higher than those forecast in the environmental assessment. If Scottish Ministers are minded to authorise the road, it would be necessary to clarify the position on the probable numbers of HGV construction trips, and to consider the implications of any increase in the forecasts.

List of Abbreviations

Parties and Organisations

DEFRA	Department of Environment, Fisheries and Rural Affairs
FOE	Friends of the Earth Scotland
GCC	Glasgow City Council
JAM74	Joint Action Group Opposing the M74C
RC	Renfrewshire Council
SAPT	Scottish Association of Public Transport
SE	Scottish Enterprise
SLC	South Lanarkshire Council
TRA	Trunk Roads Authority/Acquiring Authority

Documents

CSTCS	Central Scotland Traffic Corridor Studies
CWLP	GCC City Wide Local Plan
EKOS	Economic Appraisal prepared by EKOS Limited
ES	Environmental Statement (Production TRA/F/1)
GCVSP	Glasgow and Clyde Valley Structure Plan
OBC	Outline Business Case prepared by the Local Authorities
SACTRA	Standing Advisory Committee on Trunk Road Appraisal

Others

M74C	The Special Road Scheme

M74 INQUIRY : SUMMARY OF MAIN CONTENTS OF REPORT

General background

This motorway proposal has been in place for many years. It is a proposal in the approved structure and local plans for the area, and has been included in the road programmes of the Strathclyde Regional Council, the Scottish Executive, and the two highway authorities who have succeeded the regional council. Planning permission for the road was issued in 1995, and subsequently renewed.

The current proposal that is the subject of these orders, and the objections to them considered at the public inquiry, generally follows the line of the road approved in 1995, but differs in not having direct motorway links to the Kingston Bridge and deviating northwards at Polmadie to avoid affecting the railway maintenance facilities. The new motorway would complete the M74 by linking the existing northwestern end of the motorway at Fullarton to the M8 to the southwest of the Kingston Bridge. There would be two intermediate junctions at Cambuslang Road and Polmadie Road. The new motorway would be 6 lanes wide, and much of it would be elevated on embankments and viaducts to pass over the various surface roads and railways, and to cover areas where there is ground contamination. The cost of the road is currently estimated at £375-500 million.

A comprehensive environmental assessment has been carried out, published in the two large volumes of the Environmental Statement.

Objections to the proposed motorway and associated compulsory purchase order

Approximately 340 individuals and organisations objected to the proposed motorway. Among them are the following organisations :

Friends of the Earth Scotland	Joint Action Against the M74 (JAM74)
Scottish Green Party	Scottish Association for Public Transport
BBA Group plc	Renfrewshire Green Party
SERA Scotland	Scottish Socialist Party Orkney Branch
Greencity Wholefoods	CTC Scotland
Friends of the Earth Aberdeen	SPOKES
Living Streets Scotland	TRANsform Scotland
World Wildlife Fund Scotland	

5 Members of the Scottish Parliament object to the proposals.

The vast majority of the objections from individuals express concern about similar issues, some 280 of them being in identical or nearly identical terms. The issues of most widespread concern to objectors are :

- Inequitable/undesirable use of public funds (mentioned by 49 objectors)
- Environmental concerns (mentioned by 49 objectors)

- Congestion/traffic concerns (mentioned by 42 objectors)
- Concerns about economic benefits (mentioned by 36 objectors)
- Concerns about contaminated land (mentioned by 18 objectors)
- Community severance effects (mentioned by 17 objectors)
- Lack of studies of transport alternatives (mentioned by 10 objectors)
- Concerns about impacts on health (mentioned by 9 objectors)
- Concerns about visual impact (mentioned by 5 objectors)
- Cycling and pedestrian issues (mentioned by 4 objectors)
- Concerns about lack of public consultation (mentioned by 3 objectors)

Friends of the Earth Scotland and JAM74 combined to make a joint presentation, and also represented a further 40 or so individual objectors. This joint work was of considerable benefit to all concerned (including the Reporters) as it resulted in more efficient use of inquiry time and avoided the potential duplication of effort by witnesses.

In addition, there were 42 objections to the proposed compulsory purchase order by businesses or persons having an interest in the land proposed for acquisition. By the close of the inquiry, this number had been reduced to 31 through agreed acquisitions or withdrawal for other reasons. A further 6 objections have been withdrawn since the inquiry closed, leaving 25 for consideration.

Support for the proposal

Letters of support for the proposal have been lodged by :

CBI Scotland
Weir Engineering Services
Greater Glasgow and Clyde Valley Tourist Board
Glasgow Chamber of Commerce
BAA Glasgow
Automobile Association
The AA Motoring Trust
Royal Automobile Club
Renfrewshire Chamber of Commerce
University of Strathclyde
Virgin Trains
Scottish Enterprise
Scottish Council for Development and Industry
Strathclyde Passenger Transport Executive

Main effects of the proposed motorway

The main effects of the proposed motorway are fully explained in the various chapters of this report.

The proposal would provide a major new radial motorway into Glasgow from the southeast. This extra road capacity would accommodate predicted traffic growth (assumed to be about 25% under the high growth scenario), and would itself generate further traffic, amounting to about 5% additional vehicle kilometres in the wider Glasgow area. Both of these increases would be in direct conflict with the Scottish Ministers' commitment to stabilise road traffic at 2001 levels by 2021 contained in *Scotland's Transport : Delivering Improvements* (2002). The additional traffic made possible by the

road would add to greenhouse gas emissions, amounting to about 135,000 tonnes of CO2 per year in 2020 compared to the predicted situation without the new road.

The Scottish Executive publication *A Partnership for a Better Scotland* (2003) contains a high level commitment to target 70% of transport expenditure on public transport by 2006. The trunk road authority hopes that construction of the new motorway will have started by that year. An analysis of road and public transport schemes that are scheduled for construction in the west of Scotland during the period 2004-2008 shows that road schemes, including the M74 completion, would amount to about £837-1181 million, while committed public transport schemes would amount to £75 million, with a further £360-£560 million for public transport schemes that are not yet commitments. Even if all of these came to fruition, the public transport component would amount to 35% and the road component to about 65%, virtually reversing the balance proposed in the high level commitment.

The results of the environmental assessment, which are summarised in the table on page 10-12 in chapter 10 of this report, show that there would be a series of significant adverse effects on residential communities along the route of the new motorway, principally at Eglinton/Pollokshaws Road, Oatlands/Polmadie, north Toryglen, Rutherglen (west/ central), Farme Cross, and Rutherglen (east). These effects are due to community severance, visual intrusion, traffic noise, and disruption during construction, including piling, night time working, and difficulties for pedestrians and cyclists.

The destruction of property along the proposed route would be surprisingly small for a project of this size, partly reflecting the long period during which the motorway line has been safeguarded. Less than 10 dwellings would be directly affected. However a number of businesses would be affected, with an important group at Polmadie where the current proposal deviates from the line that has been safeguarded and approved. The trunk road authority has estimated that businesses providing some 2,800 jobs would be affected by the new road. The timescale envisaged for the start of construction is such that it would probably not be possible for some of the larger and more complicated of these businesses to successfully relocate to new sites before the land is required for the start of construction. If some of the more significant businesses are unable to relocate successfully elsewhere in the area, there would be potentially very serious implications for these businesses and their employees, for the local economy, and for the wider Scottish economy where many other businesses are supplied with specialist services by the businesses under threat.

The new road has also been criticised for not promoting social inclusion and environmental justice, on the basis that it would cause community severance; would be of little use to the local population who have low levels of car ownership; and would have an adverse effect on the environment of the local communities without providing local benefits.

On the positive side, the road would be expected to ease congestion on various parts of the motorway and main road network, especially on the M8 where it passes through

Glasgow city centre and on the main radial routes on the east side of Glasgow which would be relieved of traffic. Journey times would be expected to improve, to the extent that M8 journeys through the city centre at peak periods might be reduced by 5-10 minutes. The reduction of traffic on the surface network would be expected to improve conditions for public transport, pedestrians, cyclists, business deliveries, and residents.

The new road would bring improved vehicle accessibility for the south side of Glasgow and the area to the west of the Kingston Bridge south of the Clyde. This would be expected to make these areas more competitive in comparison to other areas, so that they would attract a greater share of new employment in the years to come. These extra jobs would be located mainly in Glasgow and South Lanarkshire, with benefits extending to North Lanarkshire, East Renfrewshire, and Renfrewshire, but not as far as Inverclyde and West Dunbartonshire. These jobs would be likely to be drawn away from the Forth valley, the Stirling area, and Ayrshire. However the improved accessibility could be gradually eroded by continuing traffic growth unless measures are taken to lock in the benefits. No such measures were proposed in the evidence presented to the public inquiry by the highway authorities.

Conclusion

Drawing these various strands together, and looking at all the policy, transport, environmental, business, and community disadvantages of the proposal as a whole, it is concluded that the proposal would be very likely to have very serious undesirable results; and that the economic and traffic benefits of the project arising from the transfer of future jobs from other parts of Scotland would be much more limited, more uncertain, and (in the case of the congestion benefits) probably ephemeral. It is therefore concluded that the public benefits of the proposal would be insufficient to outweigh the considerable disadvantages that can be expected.

PART 1: DESCRIPTION AND BACKGROUND

CHAPTER 1 : DESCRIPTION OF SCHEME AND PROCEDURAL HISTORY

Description of proposal and setting

1.1 The M74C as proposed for consideration at the public local inquiry would consist of a 6 lane motorway approximately 5 miles long, extending from Fullarton Road on the eastern edge of the Glasgow built up area westwards to the Tradeston area to the south of the city centre and close to the south end of the Kingston Bridge (M8 motorway). The route would be within the administrative areas of the City of Glasgow and South Lanarkshire Council, divided about 50/50 between them.

1.2 At the eastern end, the new scheme would link up to the existing M74 motorway (Glasgow – Carlisle), with the completion of the Fullarton Road junction to give access on and off the new section of motorway. There would be two intermediate diamond junctions along the route of the new motorway, at Cambuslang Road on the east side of Rutherglen, and at Polmadie Road, adjacent to Oatlands. At Tradeston, there would be off and on ramps linking to the local road system, and two lane east/west connections to the M8 to the south west of the Kingston Bridge. These links would give a direct connection between the new section of the M74 and the western section of the M8, serving the M77 (Kilmarnock/Ayr motorway), the southwestern suburbs of the city, Paisley, Renfrew, Glasgow Airport, the Erskine Bridge, and the settlements further downstream (Port Glasgow and Greenock).

1.3 There would be no direct motorway connections between the extended M74 and the Kingston Bridge, so that traffic wishing to enter the city centre or west end from the new motorway, or vice versa, would have to use the local road network at Tradeston (consisting mainly of a rectilinear grid of one way streets) to gain access to the Kingston Bridge by means of the existing east facing ramps, or use other nearby bridges to cross the Clyde to enter the city centre.

1.4 The route of the proposed new motorway would be generally parallel to and a little to the south of the River Clyde, which follows a meandering course in this area. Much of the central section of the new motorway (about 4 kms) would be alongside the north side of the west coast main railway line (WCML). The route would diverge from the railway line at the eastern end, to cross the River Clyde on a major new bridge near Auchenshuggle; and towards the western end, to link up with the M8. There would also be a short deviation away from the railway line at Polmadie Road, to avoid the Polmadie rail depot.

1.5 Much of the central section of the new motorway adjacent to Rutherglen, Farme Cross, Toryglen and Oatlands would be on embankments, and also on the approach to the

Fullarton Road junction, while it would be in a cutting on the east side of Cathcart Road, to the north of Govanhill. The western section of the new road would be elevated on embankments, bridges, and a 600m long viaduct to cross the local road system in the vicinity of Pollokshaws Road, Eglinton Street, and West Street/Tradeston.

1.6 Apart from a short semi-rural section at the eastern end of the new motorway adjacent to the new bridge over the Clyde, the route is through a heavily urbanised area. Existing uses within the land take of the proposed road are largely industrial and storage and distribution, including a good deal of vacant and derelict land reflecting the long period that this corridor has been earmarked for the proposed new road. There is a dense pattern of relatively small older commercial properties in the Kingston/Tradeston area at the western end of the motorway, and larger newer commercial properties (much apparently dating from the development of industrial estates in the 1960s) along the central section of the route. There are now some 8 residential properties remaining within the land take. There are also limited areas of other former uses, including a local football ground at Southcroft Park (Glasgow Road, Rutherglen). The eastern section of the route, between Cambuslang and Fullarton Road, is characterised by much larger industrial or former industrial sites, and a somewhat less urban character.

1.7 Land uses adjoining the route of the proposed motorway include residential communities to the south of the route and WCML at Rutherglen, Toryglen, and Govanhill, and on the north side at Farme Cross and Oatlands. The Pollokshaws Road/Eglinton Street area is in mixed use, with significant sections of residential use close to the proposed road. Non residential uses along the motorway corridor are largely industrial/commercial towards the eastern end and along the north side of the route, and on the south side in the vicinity of Polmadie Road. Rutherglen town centre (mixed retail, local services, and community uses) lies close by to the south of the route. There are sports facilities at Toryglen (Burnhill Sports Centre) immediately to the south of the WCML and motorway route. Local impacts, including visual intrusion, community severance, noise, and air quality are covered in chapter 5 of this report (physical and community impact).

History of the project

1.8 Prior to 1996, the trunk road network for the most part did not run through cities or towns and motorways within Glasgow were the responsibility of the former Strathclyde Regional Council (SRC). In 1996, the road network was reviewed to provide the road user with a coherent and continuous system of routes and the Glasgow motorway network was trunked at that time.

1.9 Proposals for completing the M74 have evolved over a considerable period of time. Options for the extension of the motorway network around the southern side of Glasgow appeared in highway plans of the City of Glasgow in the 1960s. These plans were subsequently recognised in strategic planning, with a southern corridor emerging as the preferred link in the 1988 Strathclyde Structure Plan update (Document TRA/A/26).

1.10 In the early 1990s, a detailed alignment in the southern corridor was developed by SRC, culminating in 1995 in the grant of planning permission for the construction of the M74 Northern Extension, extending 8km from Fullarton Road, Cambuslang, to the west of Kingston Bridge. An application for renewal of this planning permission, sought by Renfrewshire Council (RC), was granted in 2001.

1.11 A proposed review of the trunk road network, published in 1994 in the Scottish Office consultation document 'Shaping the Trunk Road Network' (Document TRA/A/5), recognised the future extension of the M74 between Cambuslang and the M8 as an important proposal and recommended that its planning should pass to central government on local government reorganisation. In the publication 'Shaping the Trunk Road Network – The Government's Response' (TRA/A/5), the extension of the M74 is shown as a possible new trunk motorway. Following local government reorganisation in 1996, the scheme fell to Glasgow City Council (GCC) and South Lanarkshire Council (SLC) to progress.

1.12 A 1998 White Paper entitled "Travel Choices for Scotland" established an appraisal methodology based on 5 criteria, namely, environment, safety, economy, integration and accessibility (see Chapter 2, paragraph 2.20 for detail). An M74 scheme from Fullarton Road to Kingston Bridge was tested using this methodology, the appraisal identifying very substantial economic and accident reduction benefits. The integration and accessibility aspects were assessed as positive and significant, delivering the following benefits:

- Benefits to urban public transport operations;
- Improved links to air, rail, ferry and port facilities;
- Improved public transport links from regeneration areas to employment, education, and health facilities; and
- Removal of development constraints in Glasgow, Renfrewshire and Lanarkshire.

1.13 The environmental assessment produced a mixed result. In particular, the detrimental affect on listed buildings along the route and the high ratio of peak to off-peak traffic flows, suggesting there would be substantial volumes of car commuting on the route, were identified as concerns. The Scottish Executive referred the scheme back to GCC, SLC and RC for further review, addressing the concerns raised by the appraisal.

1.14 Following further discussions between the Scottish Executive, GCC, SLC and RC, the Minister for Transport in the Executive announced to the Scottish Parliament on 28 September 2000, that she had accepted, in principle, the need for a strategic road link in the M74 corridor and that she would be meeting council leaders to discuss a sensible and affordable way to undertake the scheme through a partnership with the local authorities

Partnership Agreement

1.15 In a Partnership Agreement (Document TRA/A/11), the Scottish Ministers agreed with GCC, SLC and RC, to take forward a scaled down version of both the 1995 scheme and the scheme considered in the Strategic Roads Review. The

agreement was for a 3 lane motorway in each direction, with 2 new intermediate junctions and the upgrade of 2 existing junctions, following the line of the route for which planning permission was granted in 1995, with the exception of a local realignment at Polmadie to avoid the railway depot.

Legislative Framework

1.16 Under the Roads (Scotland) Act 1984 (TRA/A/1), Scottish Ministers, as Trunk Road Authority, are responsible for reviewing the trunk road network in Scotland, managing and maintaining the network, including extending it where appropriate, and for ensuring a safe and efficient national network of roads.

1.17 The M74 is the main strategic link between west central Scotland and the motorway network in England. It runs north from the national border but currently terminates at the Fullarton Road junction near Cambuslang. The TRA has reviewed the trunk road network and considers that the gap between Fullarton Road and the M8 to the west of Kingston Bridge represents a vital missing link in the central Scotland motorway network. To provide the missing link, the TRA has prepared a Special Road Scheme under the 1984 Act to enable the construction of an 8km motorway extension, with 3 lanes in each direction and 2 intermediate full diamond junctions.

1.18 The Special Road Scheme is the subject of 3 draft Orders published by Scottish Ministers on 24 March 2003. These Orders are:-

(a) The M74 Special Road (Fullarton Road to M8 West of Kingston Bridge) Special Road and Connecting Roads Scheme 200 (Document TRA/A/2).

(b) The M74 Special Road (Fullarton Road to M8 West of Kingston Bridge) Side Roads Order 200 (Document TRA/A/3).

(c) The M74 Special Road (Fullarton Road to M8 West of Kingston Bridge) Compulsory Purchase Order 200 (Document TRA/A/4).

1.19 An Environmental Statement (Document TRA/F/1) and a Non Technical Summary of the Environmental Statement (TRA/F/2) were also published along with the draft Orders in March 2003.

Public Consultation

1.20 The M74C has been the subject of wide consultation, with major public information exercises and public exhibitions. Consultation included the following: -

a. A dedicated web-site was launched in May 2002. This web-site, which is updated as the Scheme development progresses, includes information on the scheme background and benefits, and shows the public exhibition material and a virtual reality model.

b. Leaflets explaining various aspects of the scheme and the statutory processes have also been produced (Documents TRA/A/20, TRA/A/21, TRA/A/22, TRA/A/23 and TRA/A/24) and have been widely circulated during the

development of the Scheme, copies being made available at the Mitchell Library, Govanhill Library, the Royal Burgh House in Rutherglen and a number of council offices in Glasgow, South Lanarkshire and Renfrewshire.

c. During the development of the Scheme proposals, public exhibitions were held on 23 to 26 September 2002 in Rutherglen, Govanhill and Pollokshields to illustrate the 'Developing Proposals' for the M74C. At these exhibitions comments were invited from the public on the developing proposals. Over 1650 people attended these exhibitions.

d. Public exhibitions were held from 25 to 29 March 2003 to illustrate the final proposal. These exhibitions coincided with the commencement of the statutory process. In addition, advertisements were placed in local streets in the vicinity of the proposed route. Over 1600 people attended these exhibitions.

e. Public Notices advertising the Special Road and Connecting Roads Scheme, the Notice of Determination and the Environmental Impact Assessment were placed in The Herald, The Evening Times, The Edinburgh Gazette and The Rutherglen Reformer in March 2003. Public Notices advertising the Compulsory Purchase Order were placed in The Herald, The Evening Times and The Rutherglen Reformer between March and April 2003. In addition, these orders were advertised in local streets in the vicinity of the proposed route.

CHAPTER 2 : CURRENT POLICY BACKGROUND

National Policies

Working Together for Scotland – A Programme for Government

2.1 In January 2001 the Scottish Executive published "*Working Together for Scotland – A Programme for Government*" (Document TRA/A/7) that set out the Scottish Executive's overall policy priorities. As part of that, the Executive committed itself to increasing investment in transport infrastructure and to completing the M74 strategic link between Cambuslang and west of the Kingston Bridge by 2008.

A Partnership for a Better Scotland

2.2 In May 2003, the Scottish Executive published "*A Partnership for a Better Scotland*" (Document TRA/A/8). Recognising that the Scottish people and the Scottish economy need reliable, efficient transport and that an effective transport system is central to a thriving economy and strong communities, the Scottish Executive committed itself to completing the central Scotland motorway network. The M74C is a major element of this commitment. The document also contains a high level commitment to target 70% of transport expenditure on public transport by the year 2006.

The statutory development plan : the structure plan

2.3 The approved structure plan for the area is the *Glasgow and the Clyde Valley Joint Structure Plan (2000)*, approved by the Scottish Ministers in 2002. The structure plan (document TRA/M/1) has 4 aims (page 8):

- **To increase economic competitiveness**, by identifying a framework of development opportunities which will meet the needs of new and expanding businesses, develop an inclusive economy and improve the attractiveness of the area for investment.
- **To promote greater social inclusion and integration**, by improving the quality of life and identity of local communities in terms of jobs, housing, services and environmental conditions, particularly for the most disadvantaged in society.
- **To sustain and enhance the natural and built environment**, particularly by the re-use of existing urban land and buildings and the sustainable use of natural resources.

These 3 aims are to be underpinned by aim 4,

- **To integrate land uses and transportation**, by promoting improved access to and between work, home, leisure and shops, in particular by public transport, and an increase in the proportion of goods moved by rail.

2.4 Each of these aims is expanded by additional commentary on page 9 of the plan. In particular, aim 2 makes reference to disadvantaged communities, concentrated in areas associated with poor housing, environment, and access to employment; aim 3 makes

reference to vacant and derelict urban land, with mention of a particular concentration in Glasgow's East End; and aim 4 refers to the constraint on the effectiveness of the motorway system because the Clyde crossings are becoming critical bottlenecks, particularly the Kingston Bridge.

2.5 The structure plan sets out a strategic vision for the area (page 10). Two of the 3 key themes to achieve this vision are to **strengthen communities** and to promote **a corridor of growth** for new economic development. The corridor of growth embraces a large urban area along the River Clyde, focussed on the Glasgow conurbation. The supporting text (page 12) notes that the corridor contains most of the significant and long standing areas in need of renewal, where special initiatives are required to realise their potential. Among other things, improvements to public and private transport access along this corridor are central to the wellbeing of all communities of the conurbation. Priority matters for action include the improvement of public transport access along the corridor, and the completion of the road and rail network serving the corridor.

2.6 The structure plan (page 32) also gives priority to the promotion of 3 areas as Metropolitan Flagship Initiatives : the Clyde Waterfront; the Clyde Gateway; and Ravenscraig – Motherwell – Wishaw. The Clyde Waterfront embraces an extensive area along both banks of the Clyde, from Glasgow City centre to Greenock and Dumbarton. The Clyde Gateway project embraces the Glasgow East End, Gorbals, and Rutherglen/Cambuslang. Specific structure plan objectives for the Clyde Gateway are the completion of the M74 motorway and tackling the high concentration of urban vacant and derelict land.

2.7 The transport section of the structure plan (page 42) lists a number of transport improvements that would make important contributions to the strategic transportation network. The M74 Completion is listed among the road schemes proposed for development, and is shown on Key Diagram Inset B (page 43 - Strategic Transport Network Development Proposals). The justification for the inclusion of this project is given on page 44, where it states that there are "*acknowledged gaps in the Strategic Road Network within the Structure Plan area which will have a significant impact upon the competitiveness of the Metropolitan Area over the longer term period up to 2020. These have already been the subject of detailed evaluation and justification, and previous approvals by the Secretary of State for Scotland".* The text goes on to note that the M74 Completion "*will improve access to and from Inverclyde, West Dunbartonshire, Renfrewshire and Glasgow International Airport, through Glasgow City Centre to Lanarkshire and the national motorway network of the M74/M6*".

The statutory development plan : adopted local plans

2.8 The local plan for the section of the motorway route within the Glasgow City Council area is the *Glasgow City Local Plan* (document TRA/M/2), adopted in 2003. The aim of the plan for transport infrastructure (page 27) is to "reduce the need to travel, particularly by car, and to meet the needs of residents, visitors, commerce and industry by (among other things) creating improved conditions for economic development".

2.9 Paragraph 6.9 of the plan (page 28) states that "*The East End and Riverside areas contain significant amounts of vacant land and derelict buildings poorly located in relation to transport infrastructure. To stimulate economic regeneration of these areas, gaps in Glasgow's strategic road network require to be filled, principally the M74 Completion…*". Paragraph 6.10 states that "*Completion of the M74, the crucial missing link in the Scottish motorway network, will relieve the congested Kingston Bridge and inner sections of the M8 and significantly improve road access to international transport facilities such as Glasgow Airport and Eurocentral. The M74 completion will help deliver the Clyde Gateway Initiative identified in the Joint Structure Plan. Its completion will improve access to the area responsible for generating over 60% of Scotland's manufactured exports and help to unlock vacant industrial land and buildings*".

2.10 Text following paragraph 6.11 of the plan (page 28) states the City Council's commitment to the implementation of the M74 Completion, indicating that it is of national strategic importance. The route of the proposed motorway is safeguarded in the development control manual forming part 2 of the City Plan (policy TRANS 1 – page 173) and is shown on the Proposals Map (figure 6.4) and on the Transport Route Reservations Plan.

2.11 The adopted local plan for the section of the motorway route within the South Lanarkshire Council area is the *Cambuslang/Rutherglen Local Plan* (document TRA/T/1a-1c), adopted in 2002.

2.12 The local plan strategy is to promote urban renewal. Policy STRAT 1 : Urban Renewal (paragraph 2.14) states :
'The Local Plan strategy will be to facilitate development and other investment in the urban area in support of the process of renewal and regeneration, in particular, through measures to:
[a] remediate and redevelop vacant and derelict land;
[b] promote the development of brownfield sites for housing, industry/business, and other uses;
[c] enhance the vitality and viability of town and village centres;
[d] integrate land use and transportation planning'.

2.13 This is supported by three other strategic policies which expand on the measures identified within it. These are :
Policy STRAT 2: Promotion of Brownfield Development
'The Council will work in partnership with Scottish Enterprise Lanarkshire, Scottish Homes and other agencies and private sector interests in developing and implementing a rolling programme for the remediation of contaminated sites and redevelopment of vacant and derelict land.
Policy STRAT 3: Support for Town and Village Centres
'The Local Plan strategy requires that the vitality and viability of the town and village centres within the area, particularly Rutherglen and Cambuslang town centres, shall be

sustained and enhanced through integrated development, transportation and environmental policies and proposals.

Policy STRAT 4: Integrated Land Use and Transportation Planning

'The Local Plan strategy requires the integration of land use and transportation planning to:

[a] minimise the demand for travel, particularly by private car;
[b] maximise the use of public transport;
[c] encourage cycling and walking;
[d] protect the environment;
[e] maximise the opportunities which the proposed M74 extension will create'.

Transport Policies

NPPG 17 : Transport and Planning

2.14 This national planning policy guideline sets out the Government's policies on planning and transport matters. It covers a wide range of topics. Those that are of particular relevance to the subject matter of this inquiry are as follows.

2.15 The NPPG promotes (paragraph 6) an integrated approach to land use, economic development, transport and the environment, based on the following objectives :

- to meet Government commitments and targets on greenhouse gases and local air quality;
- to maintain and enhance the quality of urban life…..;
- to maintain and enhance the natural and built environment, through restricting adverse environmental impacts….;
- to support sustainable economic development within a pattern of land use and integrated transport which serves the economy and communities, promotes genuine choice of transport mode, facilitates a reduction in car use, and supports more use of walking, cycling and public transport.

2.16 Land use planning is expected (paragraph 7) to contribute to these objectives by:

- reducing the need to travel;
- enabling people to access local facilities over local networks by short walking or cycling trips;
- supporting the provision of high quality public transport to development, in order to persuade motorists that public transport is more attractive to them than car use;
- and supporting the management of motorised travel to enable it to undertake its essential role effectively, but in all other respects to contribute to sustainable transport objectives.

2.17 Paragraphs 14-17 of the NPPG note that :

- Good access is a key element in enabling Scotland's economy to be successful... An essential component is integrated transport infrastructure.

- In 1996, 62% of Scottish households had use of a car. For those households or members of households without access to a car, accessibility beyond walking or cycling distance depends on a good quality, safe, reliable public transport service.
- Lack of choice in transport can exclude people from opportunities enjoyed by the majority of society.

2.18 Among the general principles for transport and planning policy, paragraph 20 indicates that cars, in appropriate circumstances, will no longer be allowed universal freedom of access. Consideration should be given to re-allocating road space to increased footway width, to cycle lanes, to dedicated public transport use, or in appropriate locations use by freight vehicles.

2.19 Paragraphs 59-60 of the NPPG set out the wider planning and environmental context for transport schemes. Structure plans and local transport strategies provide the coordinating mechanism. For road planning for trunk roads, which includes all motorways, paragraph 61 notes that these have an important strategic role in carrying long distance traffic between major centres. Plans should aim to reduce the use of trunk roads for short local journeys.

Strategic Roads Review

2.20 The 1998 White Paper "*Travel Choices for Scotland*" (TRA/A/6) provides the framework for the development of an integrated transport system in Scotland. It refers to the Government's Strategic Roads Review, which was undertaken in parallel with the White Paper and which uses an appraisal framework to determine future priorities for trunk road investment. Assessment methodology for trunk road projects was reviewed in 1997/8, resulting in the publication in December 1998 of a report entitled "*Review of Scotland's Trunk and Strategic Road Programme – Understanding the New Appraisal Methodology*" (TRA/A/9). The new appraisal methodology was broadly based and took account of 5 criteria; namely, environment, safety, economy, integration and accessibility. A comprehensive review of the strategic road network in Scotland was published in 1999 in a report entitled "*Travel Choices for Scotland – the Strategic Roads Review*" (TRA/A/10), which acknowledged the role of major trunk road improvements within the Scottish Executive's integrated transport strategy and appraised all schemes in the trunk road programme at that time on the basis of the 5 criteria.

Scotland's Transport : Delivering Improvements

2.21 In "*Scotland's Transport : Delivering Improvements*" (Document TRA/A/13) published by the Scottish Executive in March 2002, there is recognition of the important contribution of the trunk road network to an integrated transport strategy, road transport being the predominant transport mode in Scotland. Significant investment in the motorway and trunk road network, including a commitment to fund the M74C, was confirmed. The document also recognises the importance of curbing traffic growth, including a commitment to strive to stabilise road traffic at 2001 levels by 2021.

Building Better Transport

2.22 In 2003, the Scottish Executive published a report entitled "*Building Better Transport*" (Document TRA/A/14), highlighting the need for further investment in the trunk road and motorway network, including the M74C across Glasgow to improve access through the Clyde Corridor and to relieve the M8.

Central Scotland Transport Corridor Studies

2.23 While these strategic reviews were taking place, parallel work developing other complementary transport proposals within the *Central Scotland Transport Corridor Studies* (CSTCS) for the A8, A80 and M74 trunk road corridors was undertaken (Document TRA/A/16 and JAG/7). The overriding aim of these studies was to devise plans for specific interventions that would resolve or ameliorate transport problems along the corridors, while also meeting the 5 criteria. For the M74 corridor, the CSTCS were to consider measures needed to complement the proposed new road, either by addressing local difficulties which might arise as a result of the new road or by taking advantage of the relief provided by the new road which was targeted at resolving existing strategic problems.

2.24 The CSTCS work was a strategic appraisal of the whole of the A8, M74, and A80 corridors, whereas the SIAS Paramics work on the M74 proposal, which forms the basis of the TRA traffic evidence to this inquiry, is a much more focussed and detailed appraisal of the road network in the M74 corridor. The two studies have been based on similar planning scenarios, but there are important differences. The CSTCS work has limited capacity restraint built into the model, so that the predicted flows represent the unrestrained demand. In contrast, the Paramics work for the M74 has restraint built into the model, and thus reflects the actual constraints in the road network more realistically. In addition, the CSTCS did not include the proposals for local improvements west of Kingston (at the M8/M74/M77 merge/diverge), as they had not been devised at that time, but now form an important component of the M74 scheme. In the absence of these improvements, the CSTCS study predicted problems in that location.

2.25 Chapter 5 of the CSTCS report (document JAG/7) identified a number of existing problems within the study area (paragraphs 5.2.6- 5.2.8). These included :

- severe congestion on the M8 west of the city centre, particularly between Charing Cross (junction 18) and Anderston (junction 19), with peak period queues up to 4-7 kilometres in length and congestion lasting 2-3 hours, even without an incident;
- congestion blocking back onto the surface street network in the city centre;
- congestion on the westbound approach to Townhead (junction 17) in the morning peak;
- heavy peak period congestion on the surface road network, notably on Rutherglen Road, Glasgow Road, and Cambuslang Road, and the eastern radial routes – A8 (Edinburgh Road), A89 (Gallowgate), Tollcross Road, and Duke Street;
- unreliable travel times for freight traffic on the motorways, due to congestion;

- a substantial number of accidents in the M74 corridor (10 fatal, 177 serious, and 770 slight) within the 3 year period April 1998 – March 2001.

2.26 The causes of these problems were identified (in section 5.4) as :

- the M8 has only two effective through lanes at junction 17;
- insufficient weaving capacity westbound on the Kingston Bridge, just south of junction 19;
- vulnerability of the M8 to incidents (accidents, breakdowns, bad weather) when operating near capacity;
- increased necessity for trips by car, due to employment locations becoming more transient/dispersed and the deficiencies of public transport;
- difficulties for those without cars, who will suffer a relative decline in accessibility compared to those with cars (paragraph 5.7.14).

2.27 The forecast of future problems (in the year 2010) (section 5.6) included :

- increased trip making, particularly a dispersed pattern of long distance commuting car journeys on the trunk road network, resulting in a generally more congested network, even with the extra capacity of the M74;
- while public transport can serve radial journeys to the city centre, it is not attractive for peripheral journeys between suburban locations;
- by 2010, much of the road network in the M74 corridor can be expected to operate close to capacity for long periods of the day, with resulting impacts on the quality of life along traffic routes into and around Glasgow;
- an overall decrease in traffic speeds;
- significant deterioration of traffic congestions at various locations.

2.28 The predicted effects of the M74 Completion scheme (paragraphs 5.7.3-5.7.9) included :

- transfer of traffic from the M8 north of Glasgow city centre to the M74;
- a small reduction in M8 flows attracts transfer of Clyde Tunnel traffic to the Kingston Bridge, and shorter local trips onto the M8;
- reduced traffic on London Road and other links to existing M74 terminus;
- stable traffic levels on east-west circumferential trips around the south of the city, as M74 Completion would provide east/west relief for these routes;
- increased traffic on most other roads, including southern radial routes.

2.29 In the light of these conclusions, chapter 8 of the CSTCS addresses the issue of road traffic demand management, in order to lock in the benefits of improvements. The recommendations that emerged from this assessment (section 8.13) were that the most promising strategy to manage traffic demand would include :

- control of the form of further development in the vicinity of trunk road junctions;
- apply urban congestion charging over the whole of Glasgow and the surrounding urban areas;

- provide car pooling and shared use taxi sites at trunk road interchanges;
- control the flow of traffic entering trunk roads by means of ramp metering;
- provide high occupancy vehicle lanes to bypass ramp metering on entry to trunk roads and elsewhere as necessary;
- charge tolls for entry to trunk roads, set at levels to lock in the effects of other measures rather than to reduce traffic.

2.30 The authors of the CSTCS report recognised that the recommended urban congestion charging scheme would be very unlikely to be publicly and politically acceptable. Instead, road widening and traffic management would have to be used reduce congestion.

2.31 Having considered the recommendations of the CSTCS, the Transport Minister (January 2003) announced that the Executive would support and provide funding where appropriate for bus and pedestrian priority and road safety and traffic management measures that are complementary to the M74 completion scheme. Details would include:

- the introduction of bus priorities on Cambuslang Road to provide better operating conditions for buses on Stonelaw Road;
- the reallocation of road space on the A74 London Road;
- junction modifications on Cambuslang Road;
- the development of a local network of recommended routes for heavy goods vehicles;
- the use of localised traffic management measures to reinforce the road hierarchy in the Corridor; and
- improvements to footpaths and streetscape on pedestrian routes to rail stations and bus stops."

2.32 Other recommendations arising from the Corridor Studies which will benefit the M74 Corridor include:

- improvements to the Glasgow to Carfin/Holytown rail services;
- improvements to the Glasgow to Whifflet rail services;
- improved integration and facilities for public transport; and
- "Hearts and Minds" Initiatives:

Local Transport Policies

2.33 GCC's "*Keep Glasgow Moving – Local Transport Strategy*" (Document TRA/Q/2) sets out the long-term strategy for transport in Glasgow, a key aim of which is to develop a road network that supports sustainable economic and social development. This aim is supported by the Development Strategy policy seeking completion of the motorway network by connecting the existing M74, terminating at Fullarton Road, to the M8 west of Kingston Bridge.

2.34 South Lanarkshire Council's Local Transport Strategy – "*A Vision for Genuine Travel Choices*" (TRA/P/2) sets out the long term strategy for local transport in South

Lanarkshire. It recognises that constructing new roads is still required in some areas and in specific circumstances and contains a commitment to the M74C.

Local Economic Regeneration Policies

2.35 A number of economic development and regeneration studies and reports have been lodged by the TRA as inquiry documents. The following is a brief overview, focussing on references to transport improvements, and specific references to the completion of the M74.

General

2.36 *A Common Economic Development Perspective for Glasgow and the Clyde Valley Metropolitan Area* (TRA/R/3) was published in 1999. It was produced by the Glasgow and the Clyde Valley Structure Plan Joint Committee in conjunction with Scottish Enterprise and the Local Enterprise Company network. The report refers to weak external transport links, particularly rail, and notes the opportunities for new linkages to national networks, including the M74 and M80. It notes the need to improve accessibility to deprived areas (key action 8), and to upgrade environmental quality and provide development in disadvantaged areas. It recognises the need for better management of the road and rail network, prioritising and managing the use of road space. The report makes specific reference to the need to reduce dependency on the Kingston Bridge, as a pinch point in the motorway system, and to the completion of the M74 (key action 13).

2.37 *Metropolitan Glasgow : Our Vision for the Glasgow City Region* (TRA/L/3) was published by Glasgow City Council in 2003. The report notes that transport weaknesses include funding for transport development, lack of direct air services, incomplete broadband coverage, and lack of transport integration. Opportunities include airport rail links, airport development, Clyde Waterfront public transport system, complete broadband coverage, and public transport integration. Completion of the M74 between South Lanarkshire and Renfrewshire is listed among the key physical regeneration projects and transport projects (pages 20 and 21), as are various public transport projects. Public transport patronage is one of the identified performance measures.

2.38 *Glasgow's Continuing Prosperity : a joint economic strategy for Glasgow 2003-2005* (TRA/L/4} was published by the Glasgow Economic Forum. Among the weaknesses noted in the SWOT analysis (page 18) are insufficient direct international air links, poor West Coast Main Line service; and urban traffic congestion. The M74 completion is seen as an opportunity to be exploited. Support for the M74 completion is listed under the actions for sustainable economic growth (page 25).

Glasgow City Council

2.39 *The East End Social Inclusion Partnership : Towards a Development Strategy* (TRA/L/5} was published by the partnership in 2002. The SIP area is entirely north of the River Clyde, so that the only part of the motorway corridor within the area is the short

section between the Fullarton junction and the new river bridge. However the proposed East End Regeneration Route (EERR) passes north/south through the SIP area, connecting to the M74 completion scheme at Polmadie Road. The development strategy report is an audit intended to identify the physical developments to take place within the following 5 years. The focus is primarily on improving conditions and opportunities for those who live in the east end area. This includes using the potential afforded by major transport infrastructure developments (page 5). The report lists strategic regeneration transport projects on pages 11-14. These include the EERR; the Faifley – Baillieston Quality Bus Corridor; Parkhead railway station; park and ride facilities at rail stations; and the Crossrail project. The report does not list the M74 completion as a strategic regeneration project, but it is shown on the map of the projects (page 17).

2.40 *The Gorbals Social Inclusion Partnership: Partnership Implementation Review and Revised Strategy* (TRA/L/6) was published in 2003. The purpose of the review is to produce an updated strategy for the Gorbals SIP for the period 2003-2006. Like the East End SIP strategy, the primary focus is on improving conditions and opportunities for the existing and future population of the SIP area. One of the prime objectives (page 5) is to promote road safety and to minimise the impact of traffic on the community by traffic calming proposals and through proposals aimed at improving public transport. Among the key issues listed to achieve a "Vibrant Gorbals" (page 34) is connecting the Gorbals to the M74 completion corridor. There is no reference to the completion of the M74 as part of the strategy for the improvement of the Gorbals.

2.41 The *Tradeston Local Development Strategy* (TRA/L/8) was published by Glasgow City Council in 2002. Among other things it is intended to provide a vision for the future of the Tradeston area, to encourage the sustainable long term regeneration of the area. The report refers to the M74 completion project on page 7, where it notes that the construction of the new road would inevitably have a traffic impact on the Tradeston area, and would particularly affect the area south of Cook Street, but would also offer excellent linkage to the national motorway network. The vision for the regeneration of Tradeston notes the need to look at traffic management and traffic calming measures in the context of the M74 completion, to promote safety and amenity as the residential population in the area grows. More detail about the implications of the M74 completion is given on page 20 (paragraph 2.17). This notes that the area would be expected to experience a reduction in traffic, apart from Carnoustie Street, Wallace Street, and West Street. The new motorway would be expected to bring both positive and negative effects to the Tradeston area. The last two pages of the report (appendix B) give details of the M74 Completion proposals.

2.42 The *Clyde Gateway Development Framework* (TRA/L/10) has been prepared by a group of consultants, led by Ironside Farrar, on behalf of Scottish Enterprise. The purpose of the development framework is to assist in forward planning and capturing the benefits of the M74 northern extension and the proposed EERR. It covers the area between the new motorway (on the south side) and London Road (on the north side), extending from Oatlands eastwards to Auchenshuggle, and including Oatlands, Dalmarnock, and Farme Cross. The proposed EERR would run through the western part of the area on a

north/south alignment. The two new roads have been a key factor in preparing the development framework. A series of proposals are put forward, embracing new housing; new business space, leading to increased economic output; and the development or improvement of around 500 acres of land. There are also proposals for entertainment and sports developments; a transport interchange and park and ride facility; a further educational campus; an out of centre retail park; a local nature reserve and flood attenuation; and a new site to accommodate show people.

South Lanarkshire Council

2.43 *Changing Gear Towards 2010 : An Economic Strategy for Lanarkshire* (TRA/R/1) was published in 2003 by the Lanarkshire Local Economic Forum. The strategy sets out Lanarkshire's economic priorities for the first decade of the century. One of the key priorities is to capitalise on the opportunities brought about through major projects, including the completion of the M74. The report notes (page 21) the need to improve local rail and bus routes, as the lack of an effective and integrated public transport network increases the reliance on cars, contributing to road congestion which has been identified as a current weakness in the local economy. The SWOT analysis identifies an ageing transport infrastructure as a weakness, and proposed transport investment as an opportunity. The Lanarkshire Action Plan includes lobbying for investment in upgrading motorway and trunk routes and junctions in Lanarkshire; lobbying and planning for local area rail improvements; and improving local area bus services.

2.44 *A Regeneration Framework for Cambuslang and Rutherglen* (TRA/R/2) was published in 2003 by the New Leaf Partnership, developed from the Cambuslang Social Inclusion Partnership. The framework is intended to provide a way forward to improve conditions for local people. Like the other documents, it identifies the opportunity provided by the proposed M74 extension for the development of new and existing industrial estates around the corridor of the new motorway. Previous uncertainties over the M74 extension have resulted in significant problems of dislocation and blight. Among the proposals in the regeneration framework are the provision of sites, premises, and assistance for relocation of companies affected by the construction of the M74; investments in various business projects including Clyde Gateway; and to assist in the progress of the M74 project, including improved local roads and transport links. The report recognises (New Leaf Integration Plan, fourth page) that the benefits to the local population resulting from the M74 extension are limited. New Leaf will help to realise the specific benefits of the project and ensure that they reach individuals and communities.

Renfrewshire Council

2.45 *Renfrewshire 2010 : An Economic Development Strategy* (TRA/S/2) was published in 2003 by the Renfrewshire Economic Forum. The strategy notes that major developments are planned for the M74 and the M77, but that there is congestion at a

number of existing junctions. The need for a world class transport infrastructure is recognised.

2.46 The annual *Operating Plan 2003/2004* of the Economic Development Division of Renfrewshire Council (TRA/S/1) states (page 7) that the Council will continue to work with other partners to improve transport and communication links to Renfrewshire. This includes promotion of development of Glasgow Airport, and (on page 8) a commitment to work with other partners to ensure that the economic benefits of the completion of the M74 are widely disseminated.

PART 2 : SUMMARY OF EVIDENCE : GENERAL OBJECTIONS

CHAPTER 3 : TRANSPORT : STRATEGIC ISSUES AND MODE SHARE

The principle of the new motorway : summary of evidence on behalf of objectors

3.1 A large number of objectors have objected to the proposed motorway on the basis that it would be an undesirable piece of transport infrastructure that would detract from the effectiveness of public transport and would not reduce congestion levels; and that it represents poor value for money which would be better spent on public transport improvements. JAM74/FoES, the Scottish Association for Public Transport (SAPT), and a number of individual objectors presented evidence on these matters at the public local inquiry.

3.2 There are several main strands of objection to the principle and broad effects of the proposed motorway :

- conflict with published Government policies for transport;
- the overall cost of the project, and the implications of that expenditure on the budget available for public transport investment;
- the overall effect of the proposal on travel patterns, particularly in relation to mode share, induced traffic, the potential shift of trips from public transport to cars due to the availability of the new road, continuing traffic growth, and Scottish Executive targets for road traffic stabilisation;
- implications for Scottish Executive policies for social inclusion, urban regeneration, and environmental justice;
- the overall environmental effects of the new road during construction and in relation to climate change, air quality, noise, visual intrusion and community severance once it is in use; and
- urban regeneration and economic benefits.

3.3 This chapter contains a summary of the main arguments put forward by the various objectors relating to the implications the new motorway for transport policies and strategy, followed by the corresponding rebuttal evidence presented on behalf of the TRA. Road traffic issues are covered in the following chapter, while objections relating to social inclusion, environmental issues, and regeneration and economic issues are covered in chapters 5 and 8 below.

Conflict with Government transport policies

3.4 JAM74/FoES witnesses and other objectors (notably Patrick Harvie MSP) cited published Government policies which they considered would be breached by the M74 proposal. These were:

"We want to see new roads built only where it makes sense to do so: that is, after a thorough appraisal of the costs and benefits associated with any proposed scheme and any possible alternative modes which might serve the same route." (Scottish Transport White Paper 1998)

"Our transport system should be sustainable, minimising impacts on our environment, particularly by greater use of public transport." (Scottish Executive Partnership Agreement)

Chapter 3 : Transport : strategic issues and mode share

"Before including major[road] schemes in their strategy, local authorities should be able to demonstrate that they have looked at alternative or complementary solutions……..and that the road scheme is consistent with an integrated transport strategy." (Scottish Executive guidance on Local Transport Strategies, 2000)

Where a transport project is to be justified on economic development grounds *"..it needs to be demonstrated that devoting resources to the transport project would represent a more cost effective means of developing the local economy than the use of other existing strategy instruments."* (Scottish Executive guidance on Local Transport Strategies, 2000)

"We want a Scotland that delivers sustainable development; that puts environmental concerns at the heart of public policy and secures environmental justice for all of Scotland's communities." (Scottish Executive Partnership Agreement)

This is interpreted to require that no population group should be forced to shoulder a disproportionate share of environmental damage or degradation, due to their lack of political or economic strength.

3.5 The objectors also consider that the proposal would be at variance with the Government policy to stabilise and reduce traffic levels to the 2001 level by 2021. In contrast, the computer modelling of traffic flows on the new road and other parts of the road system were based on the assumption that traffic would grow by about 10%-12% (morning and evening peak hours) for the medium growth scenario and 24%-26% for the high growth scenario. Research commissioned by the Scottish Executive had stated that *"spending more on roads will, perhaps unsurprisingly, make it less likely that objectives relating to the reduction in car use are achieved."* (Transferability of Best Practice in Transport Delivery Policy; Colin Buchanan and Partners, 2003)

The cost of the project

3.6 Objectors noted that the estimated cost of the M74C project at the time of the public inquiry was in the range £375-£500 million, although this was based on various assumptions and without full detailed estimates of various aspects where the final costs were not yet known, such as land decontamination and noise protection works. The objectors also noted that during the course of the inquiry, the Scottish Executive had placed an advertisement in a European journal inviting preliminary notes of interest in a possible PPP/PFI scheme that would embrace the building of the M74 and the ongoing maintenance of the new road and some 30 miles of other roads. The indicators in that advertisement suggested that the M74 project could cost as much as £800 million, after allowance for the maintenance elements, if private finance was to be used. Thus the eventual cost of the new road would be far higher than the current estimate, due to borrowing charges on both the local authority and central government components of the scheme.

3.7 Some objectors noted that the estimated cost of the M74C was of the same order as that of the new building for Scottish Parliament. It was suggested that some of the deficiencies exposed by the Fraser inquiry into the escalation of the costs of the building

were equally applicable to the decision to proceed with the M74, and that there should be a similar level of public concern about whether this would represent a wise use of considerable public funds.

3.8 Objectors were concerned that the proposal would absorb a very large proportion of transport expenditure on capital projects in Scotland, undermining the published commitment of the Scottish Executive to raise public spending on public transport projects (including walking and cycling projects) to 70% of total transport spending by the end of 2006. The lists of proposed transport capital projects in the west of Scotland for 2004-2008 showed a package of proposed road investment (excluding maintenance) amounting to £837-£1181 million, compared to committed public transport projects totalling around £75 million, and further uncertain prospects for public transport projects totalling an extra £360-£560 million. Expenditure of around £500 million on the M74 would distort the situation, with little prospect of achieving the 70% public transport target, especially if future cutbacks reduced the transport budget but the M74 construction contracts were committed.

3.9 The M74 project was said to result in substantial economic advantages in terms of direct time savings for those using the new road, but there were serious doubts about the validity of counting time savings for private individuals on personal journeys, including commuting. This approach valued time spent in cars, whereas the Government was seeking to reduce unnecessary car travel. The scheme would be of little benefit to those who did not have cars, who were the majority of households in the Glasgow area. The provision of better public transport and more effective regeneration of derelict and contaminated land should form the basis of assessing the benefits.

3.10 There was also doubt about the scale of any indirect benefits to the Scottish economy, in terms of regeneration of land along the M74 corridor, benefits to existing businesses further to the west, and attraction of new investment in competition with other parts of Scotland. (The evidence relating to these indirect potential economic benefits is covered in chapter 8 below.) Benefits for freight distribution had also been overstated, as the Freight Transport Association had made it clear that congestion and unpredictable journey times were only one part of the industry's problems, with delays at points of collection and delivery (which are under the control of management) being the main causes of delay. Steps could be taken to give priority to freight traffic on the existing motorway system, and by providing a freight lorry (only) link east from Kinning Park.

Travel patterns and mode shares

3.11 Objectors criticised the travel forecasting and appraisal methods on which the M74C proposal was based. Unlike the M8 and M80 corridors, there had been no full multi-modal study of travel options in the M74 corridor, and thus no analysis of other transport options. The new section of the M74 had been accepted as a commitment, rather than an option for consideration alongside other alternatives. The draft Scottish Transport Appraisal Guidance (document TRA/C/16) made it clear that the range of options to be considered should not be constrained by the capabilities of the modelling framework.

There were various possible responses to the problem of road congestion, and these should be examined. The guidance states that simply retro-fitting existing proposals or those with a planning history may be tempting but is clearly not the way to proceed, but this was exactly what had been done in the case of the urban M74.

3.12 The analysis also failed to take account of the possible impact of road charging, especially peak period charging, which would both reduce traffic levels and assist public transport. Road user charging was supported by the Scottish Executive (*Scotland's Transport : Delivering Improvements, 2002, page 16)*. These factors led to over-estimation of the traffic flows on the roads within the corridor, and under-estimation of the potential role of public transport. This was at variance with the observed stabilisation of non-motorway traffic levels in the Glasgow area, and the higher expectations of the public transport operators.

3.13 The acceptance of the M74C scheme as a commitment was at variance with Scottish Executive policies for overall road traffic stabilisation and modal shift away from cars. The traffic predictions were based on the assumption that there would be a substantial and continuing increase in traffic (see paragraph 3.5 above). This contradicted the policy objective that traffic volumes should be reduced to 2001 levels by the year 2021. The additional capacity that the new motorway would provide would encourage modal shift towards car travel. The evidence given on behalf of the TRA indicated that the M74C would generate a 2-3% increase in vehicle trips in the Glasgow area, and about 10% increase in vehicle kilometres.

3.14 Objectors argued that travel patterns in Glasgow and other Scottish cities need to move towards a much higher proportion of trips by public transport, as in European towns and cities, where there were higher levels of car ownership, but where public transport travel costs are less and there is much greater use of public transport. Comparing Scotland and Switzerland, where Switzerland has approximately 50% larger population and 20% higher car ownership than Scotland, the Swiss Federal Railway (SBB) carries nearly 6 times as many passengers as Scotrail, charging passengers one third less per kilometre. The M74C would pass through a densely populated corridor, where there were good prospects for improved public transport as a realistic alternative to major road investment.

3.15 The M74C was not required to handle extra traffic movement, but would encourage more traffic, in conflict with published policy objectives. The increased traffic levels along the new motorway and the approach roads would lead to higher greenhouse gas emissions, and more noise, air pollution, and social disruption, especially along the elevated sections (see chapter 5 below). The space released on the M8 (due to trip transfers to the M74) would attract yet more traffic to the M8, leading to problems further west where the M8 and the M74C converged. The increased motorway capacity would allow ever longer commuter journeys for those having access to cars, while doing little for the majority dependent on public transport and local employment. Thus the new road would promote social exclusion rather than inclusion, and would be contrary to the Executive's objectives for social justice.

3.16 Objectors argued that the completion of the M74 would do little for transport integration, as it is essentially a road project with a few add ons to assist public transport on the parallel surface streets. There would be adverse effects for public transport, due to the commitment of such a large proportion of transport funding, as well as local effects on users of Rutherglen railway station and the proposed new station at West Street on the new Strathbungo rail link, both of which would have elevated motorway viaducts passing over the platforms, with consequential effects of overshadowing, noise, and fumes. Although the structure and local plans made provision for the road, the failure to deliver successful public transport improvements, because of funding shortages and other hindrances, would result in imbalanced implementation, swinging travel patterns in favour of car journeys and to the detriment of public transport.

3.17 The Scottish Association for Public Transport accepts that in a few cases, the benefits for local economic growth might over-ride the need to restrict road building in favour of public transport. However there was no convincing evidence to show this to be the case for the extension of the M74. The economy of the west of Scotland would benefit much more if traffic levels were stabilised and £500 million spent in other ways to improve public transport, including better links to the Clyde Waterfront project and to Glasgow Airport.

3.18 Individual objectors argued that Glasgow had no need for more road building. Congestion occurs mainly at peak hours and when there are special events such as football matches. Although the current proposal is described as the Completion Scheme and "the missing link", there were ongoing plans for further roadbuilding, in the form of the East End Regeneration Route linking the M8 and M74, which would form an eastern inner ring road by stealth, and the Southern Orbital. Throughout the developed world, it is recognised that building major urban roads does not offer a solution to congestion. Where cities continued to build new roads, congestion continues to rise, and already, some freeways in the US are being dismantled, or not replaced following destruction by an earthquake.

3.19 The congestion solutions now being pursued elsewhere are the managed use of the existing system, and provision of attractive and efficient public transport services. The sequence for decision making on transport projects should be :

(a) priority, promotion, and facilities for walking, cycling, and public transport;
(b) facilitation of the transport of goods;
(c) demand management measures which reflect the requirements of (a) and (b);

before turning to

(d) localised changes in the road system; and then finally
(e) the building of new roads.

This represents a fully integrated approach to transport planning and provision, but there is no evidence that an approach of this kind has been entertained, let alone applied, by the applicant. While a decision to build the M74C may have been made on political grounds, it is the function of the current public inquiry to test whether that decision can be

sustained on other grounds, which are the issues covered by the objectors to the principle of the scheme.

Alternatives

3.20 With regard to alternatives, objectors would prefer to see the proposed expenditure re-directed towards public transport projects and numerous small projects to assist road safety, walking, and cycling. These would offer better value for money in terms of delivering useful travel improvements available to all of the population, stabilising traffic levels, reducing air pollution, and increasing road safety. Better and cheaper public transport would allow people to make less use of cars, while more attractive and safer conditions for walking and cycling would lead to healthier communities. Smaller and less costly road schemes, such as the East End Regeneration Route, would ease local congestion problems, and could open up brownfield areas for regeneration.

3.21 Road freight traffic could be accommodated by priority use of lanes on existing motorways, and a lorry only road link along the M74C corridor. Alternatively restricting the M74C to a 2 lane dual carriageway, with fewer junctions and thus more segregated from local roads, would provide for lorry traffic, while not providing capacity for commuter car use. A lower capacity road could be built at or below ground level, reducing environmental intrusion. This would be in line with US examples where elevated road structures were being demolished and the land reclaimed for public transport and urban uses. Objectors see little benefit in building the M74C to 6 lanes (as proposed) but reserving one lane each way for priority use by buses and possibly lorries. The funds involved would be better spent directly on public transport improvements, with any improved facilities for buses focussed on the existing street network where there is better access for users.

3.22 SAPT accepts that significant road improvements on the M74 corridor could play an important part in an integrated transport strategy for the west of Scotland, but remains totally opposed to proposals which do not fit clearly in the context of traffic stabilisation, reduction, and sustainable development and which do not meet the highest design and community benefit standards. Any package for the next 5 years must be capable of demonstrating that the public transport spend, plus a public realm allowance for walking and cycling, will rise to 70% of total transport spending in the west of Scotland. While there might still be some congestion on parts of the motorway network at peak periods, this was inevitable.

3.23 SAPT considers that the appropriate package for road improvements in the M74 corridor should include :

- The introduction of peak period road user charging in Glasgow, including motorways, not later than 2007, with proceeds earmarked for fares reform and sustainable transport development.
- Any new road in the M74 corridor not to exceed 2 lanes each way, with a 40/50 mph speed limit, in the interests of noise reduction and road safety.

- Road improvements in the area should include a link from the current end of the M74 at Fullarton Road to the west of Rutherglen (bypassing Rutherglen) and passing under, not over, the Argyle line railway at Rutherglen; a modest upgrade of the existing road between Rutherglen and Caledonia Road; and a new link road, restricted to priority users in peak periods, between Caledonia Road and Kinning Park.
- Land safeguarding for a new surface and subsurface 2 lane road between Rutherglen and the M8/M77 south of the Kingston Bridge, pending the results of the implementation of the elements listed above.

3.24 JAM74/FoES considers that an alternative approach to building the M74 completion should include :

- The introduction of priority lanes for buses and lorries on the M8, to assist businesses in the area to the west and southwest of Glasgow; while this might pose practical traffic management problems, it could also provide a solution to the need for better access to and from the west for business purposes.
- Provision of improved rail services, including cross-Glasgow passenger services, with a rail extension serving Glasgow Airport, electrification of the Glasgow – Livingston – Edinburgh railway line, which runs parallel to the M74C, and rail freight feeder services between the areas to the west and southwest of Glasgow and rail freight hubs at Coatbridge and Mossend.

3.25 JAM74/FoES accepts that the M74C would afford some relief to traffic congestion on the M8. However that relief would be likely to be short lived, as any spare capacity would be absorbed by traffic growth due to rising levels of car ownership in the Glasgow area. Improved public transport should provide an attractive alternative to car commuting.

The principle of the new motorway : summary of evidence on behalf of the Trunk Road Authority

Evolution of the scheme

3.26 On behalf of the TRA, it was stated that the M74 Completion project would be a very desirable scheme in its own right, and that adequate alternative support would be given to the promotion of public transport and restraint on travel by private cars, especially for commuting. The scheme would provide the vital missing link in the main strategic route between west central Scotland and the motorway network in England.

3.27 A previous version of the scheme (3-4 lanes in each direction) was included in the Strategic Roads Review carried out by the Scottish Office. The scheme had been the subject of appraisal under 5 key criteria : environment, safety, economy, integration, and accessibility. It had been found to have substantial economic and accident reduction benefits, and integration and accessibility aspects were also found to be positive. However the environmental effects were mixed, especially the adverse effects on listed

buildings along the route. There were also concerns that the route would be used for a substantial volume of car commuting.

3.28 A further reduced scheme was devised, with 3 lanes in each direction and only two intermediate interchanges, incorporating a local realignment at Polmadie to avoid the railway depot. That is the scheme that is the subject of the present orders and public local inquiry.

3.29 Work on developing other complementary transport proposals was carried out within the Central Scotland Transport Corridor Studies. However a full multi-modal corridor study was not completed, as the Executive was satisfied that the M74C was fully justified on traffic, road safety, and economic grounds. Similarly an assessment based on Scottish Transport Appraisal Guidance (STAG) was not carried out, as it was not intended that this guidance should apply to projects that had already reached an advanced stage of planning.

Government transport policies

3.30 The Scottish Executive's report "*Working Together for Scotland – A Programme for Government*" included a clear commitment to complete the M74 strategic link by 2008, and this commitment was carried forward into the most recent programme : "*A Partnership for a Better Scotland*". The scheme has been included in the structure plan and two local plans that cover the area (see chapter 2 above). The Government wishes to overcome key blockages in the trunk road network, and to have free flowing traffic on the motorway network so as to improve motorway links to England and Europe.

The effect on public transport expenditure

3.31 The estimated cost of the scheme was around £240 million in January 2001, and was estimated to be in the range £375-£500 million (2008 prices, including an allowance for inflation) at the time of the public local inquiry. An additional £4.9 million would be required for localised improvements to the existing M8/M77 junction to accommodate the increased traffic flows where the westbound M8 and M74 flows converged to the southwest of the Kingston Bridge.

3.32 Regarding the possible use of a PPP/PFI scheme, a TRA witness confirmed that no decision on the procurement route had been made, but that procedure might be used if it represented good value for money. The £375-£500 million estimate for the project did not include loan charges. Government capital projects were usually financed out of revenue, while the local authority element of the scheme (about 12%, corresponding to some £45-60 million) would be likely to involve borrowing. These finance routes would involve additional costs to the public purse.

3.33 The Executive is committed to provide funding for numerous important public transport improvements, and for bus and pedestrian priority, road safety, and traffic management measures that would complement the M74C scheme. Expenditure on public

transport is expected to account for 70% of the transport budget by the end of 2006. Some of this money is ring-fenced for spending only on public transport. The M74 is expected to relieve traffic on much of the local road network, freeing up space for the local authorities to introduce effective measures to improve facilities for bus users, cyclists, and pedestrians. Communities can expect to benefit from the scheme through reduced traffic on local streets, as set out in tables 3.2-3.7 of document TRA/E/4 (see chapter 4 for more details).

Direct economic benefits

3.34 The economic benefits of the scheme are set out in document TRA/E/4. The forecasts show a Benefit/Cost ratio of 8.98 (higher traffic growth) and 6.57 (medium traffic growth). The first year rates of return would be respectively 25% and 19%, representing an immediate substantial return on the capital investment. These benefits were largely due to time saved during road trips. The accident reduction forecasts contained in the same document (based on average accident rates for different standards of road under different traffic volumes) suggest that between 760 and 975 accidents could be avoided/saved during the 20 year period from opening, with very large consequential cost savings. The economic benefits of accident reduction during the whole design life of the motorway (30 years) have been valued at £40 million. In addition, there would be economic benefits in facilitating the redevelopment of vacant and derelict sites to provide employment that would be conveniently accessible to local residents.

3.35 Even if traffic levels were to be stabilised at year 2000 levels, the new road would still have a favourable rate of return in the range 2.1–2.8, based on a net present value of £480-588 million, including accident reduction benefits.

3.36 The TRA accepted that the appraisal methods that had been used did not allow a comparison to be made with spending the same amount of money in different ways to improve public transport.

Transport strategy and mode share

3.37 The TRA accepted that the new motorway would result in increased traffic, representing a shift from public transport to private cars, due to the more attractive car journey options that would become available. This is a separate matter from the re-routing of existing trips from the M8 and the local road network onto the new motorway (see chapter 4 below), and the predicted growth in vehicle traffic irrespective of whether the new road is built or not. The general traffic growth assumptions are national figures, in the order of 10%-12% (morning and evening peak hours) for the medium growth scenario and 24%-26% for the high growth scenario.

3.38 The traffic modelling carried out for the TRA indicates that the M74C scheme would result in an induced increase of around 600 trips in each of the peak hours (2010, high growth scenario). This would represent about 0.1% of the global total of road based trips throughout the Central Scotland traffic study area, with a corresponding decrease in

public transport trips of up to 1.3%. However these changes would be focussed in the Glasgow conurbation area, where the local induced increase would be in the order of 1.5%-2.5% in road based trips for 2010. There would be a greater increase (perhaps about 5%) in vehicle/kilometres due to the increased length of trips on the strategic road network. It was accepted that the small induced shift from public to private transport, and the general traffic increases that underpin the forecasting, would be at variance with the Executive's intention that road traffic should be stabilised at 2001 levels by 2021. This was an ambitious target requiring sustained action on a number of fronts.

3.39 The TRA considers that the M74C proposal should be seen in the wider context of the Executive's policies to tackle traffic growth, worsening congestion, and climate change. The Executive is committed to delivering a transport system which is sustainable, minimises the impact on the environment, and encourages greater use of public transport. Specific examples of this are :

- The intention that by the end of 2006, 70% of the Scottish Executive transport budget will be targeted on public transport.
- The Cycling, Walking and Safer Streets Fund is currently £8 million per year. This fund has provided almost £21 million during the period 2000-2004.
- The Public Transport Fund has provided Scottish local authorities with over £18 million.
- The Trunk Roads Cycling Initiative has funded works valued at £7 million, for trunk road sections of the National Cycle Network.
- Public transport projects that will benefit the M74 corridor include the improvements for the Glasgow/Whifflet rail service (£16 million); improved train services between Glasgow and Carfin/Holytown; and funding for bus and pedestrian priority, road safety, and traffic management measures that are complementary to the M74.

3.40 The TRA does not accept that a reduction in the size of the new motorway from 3 lanes to 2 lanes in each direction would assist in restraining traffic and promoting increased use of public transport. Such a narrow motorway with intermediate junctions would have serious capacity problems even with 2006 traffic levels (ie from opening). However through traffic (ie end to end of the new section of motorway) could be accommodated on two lanes each way by omitting all intermediate interchanges.

3.41 Although there would be an overall increase in traffic flows on the whole network, the TRA expects the M74C scheme to relieve congestion on the heavily used section of the M8 between Baillieston and the Kingston Bridge, as well as reducing traffic on the local street network. Peak hour tailbacks on this part of the M8 already occur regularly for periods of 2-3 hours, extending some 2-3 miles along the motorway. The modelling indicates that the redistribution of traffic from the M8 to the M74 and other routes would give significant relief to this congestion. (See chapter 4)

Glasgow City Council transport policies and projects

3.42 The Glasgow City Council Local Transport Strategy "*Keep Glasgow Moving*" (document TRA/Q/2) was published in 2000. It has been prepared in the context of the emerging Glasgow and the Clyde Valley Joint Structure Plan and the Glasgow City Plan (see chapter 2 above), and confirms the policy objective to "seek completion of the motorway network (M74 Fullarton Road to M8 south of Kingston Bridge including junctions)".

3.43 Completion of the M74 would allow more freight traffic to be carried on the motorway system instead of local roads. It would also allow traffic to be diverted from the M8 to the M74 if there was an accident or roadworks on the parallel section of the M8. It would also reduce traffic on most main local roads, giving improved conditions for those using or living alongside these streets, including reduced congestion, better opportunities for public transport and delivery vehicles, better and safer conditions for pedestrians and cyclists, and better living conditions for local residents. The main local roads that would enjoy these benefits would be London Road, Gallowgate, Duke Street, Alexandra Parade, Dalmarnock Road, Cumbernauld Road, Tollcross Road, Westmuir Street, Shettleston Road, Edinburgh Road, and Kings Drive (see chapter 4 for more details).

3.44 Consequential improvements for public transport on these local main roads could include reserved bus lanes, widened pavements and traffic islands, cycle lanes, and bus boarder pavement extensions. These local improvements were not committed schemes, but funding programmes were already in place for this type of work. Although there had been recent delays in introducing more quality bus corridors, Glasgow Council now had £30m to spend on this type of project, and preparation work was in progress for the Hardgate – Baillieston corridor, with 4 more corridors to follow, including Rutherglen Road and Dalmarnock Road. They would have integrated bus signal control.

3.45 The completion scheme would also result in increased traffic at various locations on the local streets. Detailed studies have been carried out and recommendations made for remedial works where these are considered to be necessary (see chapter 4). These local improvements were not committed schemes, but could be brought forward in time to coincide with the opening of the M74C, if it was approved and implemented.

3.46 The Council was promoting a relief road at Oatlands as part of the renewal of that area. It would pass close to the proposed Polmadie Road interchange on the M74C scheme, swinging northeast to form part of the proposed East End Regeneration Route. The EERR was an important element in the Clyde Gateway renewal project, and would benefit from the construction of the M74C. However both of these local road schemes could proceed independently of the M74C, and the necessary funding was mainly in place.

3.47 Glasgow City Council is also involved in various public transport improvements, although these were primarily the responsibility of the Strathclyde Passenger Transport Authority. Among the key public transport schemes with the highest priority were the airport rail link, the Larkhall–Milngavie rail link, Crossrail, and new stations at Jordanhill and Parkhead Forge. The Scottish Executive had set aside funds for these projects. The M74C project would be compatible with the Crossrail project where they both passed through the proposed West Street public transport interchange, where a closed (ie roofed) station might be preferable as the motorway would be overhead.

3.48 Glasgow City Council is seeking a modal shift away from car travel, especially for commuter journeys. Public transport was already the dominant mode for peak hour travel to the city centre, and the Council expected to reinforce this pattern by extended control of parking provision in the central area. Glasgow City accounted for one third of the conurbation population (600,000 out of 1.8 million), with half of those employed in the city commuting inwards across the city boundary. The Council is promoting green travel plans for all new developments above a specified size. The Clyde Waterfront project would involve a green travel plan, and also perhaps a new public transport facility. It was impossible to say what level of modal shift might be achieved, but this was a long term approach based on the cumulative effect of a number of smaller components. The regular annual traffic surveys showed stable traffic levels in recent years at the mid suburban cordon, but a 2.3% increase at the city boundary cordon, mainly due to the flows on the motorways. Bus usage of First Group buses was increasing at 6% per annum The Council has no current plans to introduce congestion charging, but keeps the matter under regular review.

South Lanarkshire Council transport policies and projects

3.49 The South Lanarkshire Council local transport strategy ("*A Vision for Genuine Travel Choices*" – document TRA/P/2) was approved and published in 2001. One of the key issues identified in the document was that the strategic road network was incomplete. The strategy supports the completion of the M74, in order to :

- complete strategic transport links for West of Scotland business and industry, currently handicapped by severe congestion on the M8;
- improve national economic competitiveness, including better access to Glasgow and Prestwick airports;
- allow development of prime sites in high unemployment areas along the Clyde Corridor;
- relieve traffic congestion on the local road network, allowing higher priority for public transport; and
- improve road safety and reduce accidents.

3.50 The Council is taking steps to promote the use of public transport, including the provision of park and ride facilities at rail stations. Regular traffic surveys showed a modest reduction in traffic levels on main roads, probably due to congestion levels, but the Council had no plans to introduce road pricing. The local transport strategy was

seeking a 2.5% traffic reduction on Rutherglen Main Street, to be achieved whether or not the M74 completion was built.

3.51 The potential implications of the M74C scheme for traffic on local roads had been assessed by traffic modelling, reported in document TRA/E/21. The council had confidence in the modelling, as the same program (Paramics) had been used successfully elsewhere by the Council. The modelling predictions indicate that traffic growth is likely to lead to congestion at a number of locations in the Rutherglen area by 2010 if the M74 completion scheme is not built, notably Rutherglen Main Street corridor, Farme Cross junction, Western Road/East Kilbride Road junction, and the Dukes Road/Cambuslang Road junction. Some alleviation could be obtained by local junction improvements and signal optimisation.

3.52 If the M74C scheme is built, and with modest changes in junction layouts and traffic signal optimisation, the various increases in traffic flows on local roads could be accommodated. There would be a significant general reduction in congestion across the local road network, giving greater opportunities to implement a range of measures to give greater priority to public transport, cyclists, and pedestrians. These would include quality bus corridors on the Rutherglen Main Street corridor, linking to the quality bus corridors to be developed by Glasgow City Council, and more green time for pedestrians at signal controlled junctions. A larger share of local road space would be allocated to pedestrians and cyclists, where there was to be a reduction in vehicle flows. Funds for bus lanes had been earmarked by the Scottish Executive, and the detailed plans could be worked out and installed prior to the opening of the motorway, once it was known whether the orders were confirmed. Some of these improvements would proceed in any event, but the traffic reductions resulting from the construction of the motorway would allow the improvements for buses, cyclists, and pedestrians to be more effective.

3.53 The Council expects the M74C project to result in better road safety in a wide area (document TRA/A/23). Local road safety benefits would result from the removal of traffic from surface streets to a new high standard motorway. All local roads where traffic flows are expected to increase by more than 5% as a result of the construction of the M74C scheme would be the subject of appropriate mitigation measures, including measures to address the needs of cyclists and pedestrians, such as traffic calming and improved pedestrian crossing facilities. The main affected locations are those listed at paragraph 4.11 below, although there were many minor roads where existing low flows would increase by more than 5%, which was the standard professional rule of thumb to trigger consideration of mitigation measures. Some of these mitigation measures would be paid for from the M74C budget, and the Council had funds for further road safety improvements. The details of the mitigation schemes would be developed in consultation with the emergency services, Strathclyde Passenger Transport, public transport providers, the local community, and other interested parties, and would be installed prior to the opening of the new motorway. The situation would also be reviewed after the opening of the motorway.

3.54 Local traffic increases in the vicinity of the new motorway junction at Cambuslang Road would be addressed through adjustments to the junctions and signal arrangements (document TRA/C/14, drawings 474000/SK/156-158). South Lanarkshire Council is satisfied with these proposals.

Objectors' alternatives

3.55 TRA witnesses had considerable reservations about the alternatives to the M74C put forward by the objectors. The points of rebuttal included :

- The Government had no plans to introduce tolls on motorways. Any such proposal would require new legislation, and a reappraisal of the traffic implications for the M74C. It was thus most unlikely that such tolls would be introduced on the M74C.
- Similarly there would be serious practical difficulties in introducing priority lanes for buses and lorries on the M8, leaving only one through lane in each direction for general traffic.
- Taking the motorway below the railway at Rutherglen station would add £30-50 million to construction costs, due to the tunnelling work and the need to deal with contaminated land that would be disturbed.
- A tunnel option at Tradeston would cost about £100-115 million, whereas a well designed viaduct would have little effect on the businesses in the area, and the perceptions of passengers using the new elevated station proposed at West Street.
- Rail arrangements for freight and airport passengers would be likely to attract only a very small proportion of the traffic.

Support for the project : written submissions

3.56 Various organisations have expressed support for the proposal (see preamble to report). Most of these relate to the perceived benefits for business, which are covered in the chapter on economic benefits.

3.57 In relation to transport issues, the Strathclyde Passenger Transport Executive has expressed support for the proposal. The Executive explains that their interest has been principally concerned with safeguarding public transport aims, and that their initial objections have been overcome. They are now keen that the project progresses with all speed, and that the benefits are realised at the earliest possible date. The Executive believes that the M74C is an essential link in the strategic motorway network, which will be of benefit to the economy and communities in west Scotland. It will support the use of public transport by permitting bus priority measures, such as Rutherglen Main Street, and by reducing traffic congestion at road junctions. The motorway project would complement other public transport projects such as the Shields Road park and ride and the Larkhall–Milngavie rail project, that now have government support. The Executive welcomes the provision that has been made for the Crossrail Strathbungo project, and involvement in meeting the requirements of the Glasgow subway.

CHAPTER 4 : TRAFFIC IMPLICATIONS

Introduction

4.1 Extensive traffic modelling and technical analysis has been carried out on behalf of the TRA to predict the traffic flows that would result from alterations to the road system, new development, and assumed general increases in vehicle flows. The modelling is based on the existing road network together with various new projects that are regarded as firm commitments (the "do minimum" or "reference" case); and the addition of the preferred scheme for the M74C (the "do something" case). The modelling facility has also been used to compare the performance of different versions of the completion scheme, leading to the selection of the preferred option; and to test and then optimise the performance of road junctions on the surface (local) network that are likely to be affected by increased traffic flows. The traffic predictions also provide an input to the air quality predictions, and to the direct economic benefits of the proposal, in terms of reduced journey times.

4.2 Although there are criticisms of some of the basic assumptions that underpin this traffic analysis, notably the absence of a full multi-modal study and the assumption that traffic will continue to grow despite the various government policies to curb vehicle use and promote public transport, no objectors have contested the methodology of the technical analysis of the traffic flows. The resulting traffic predictions provide useful information about the probable traffic effects of the new road, and are the best information available for that purpose. This information is likely to be better than informed guesstimates.

4.3 The following section describes and (where necessary) explains the probable traffic implications of the preferred M74C scheme, based on the traffic modelling information. This is followed by sections that summarise the main points made by the TRA and the objectors in relation to traffic matters.

Description of probable traffic changes and re-distribution

4.4 The traffic modelling carried out on behalf of the TRA to predict the traffic effects of the M74C sits within the wider context of the higher tier modelling of traffic throughout central Scotland, known as CSTM3A. The CSTM3A results have been validated against observed traffic flows on roads in the M74 corridor and vicinity, comparing well on the main routes but showing more variable comparisons in some local areas. The M74C modelling is based on the national traffic growth assumptions described in the previous chapter. The use of the Paramics modelling system has allowed progressive refinement of the predictions to take account of more detailed influences on drivers' choice of routes, and micro simulations of the performance and optimisation of local junctions where traffic increases are expected to result from the new road.

4.5 The modelling facility has been used to assess the operation of different versions of the M74C scheme, varying from a more modest scheme (2 lanes each way and 2 intermediate junctions) to a larger scheme providing progressively 4 and 5 lanes at the western end. The smaller scheme would be likely to approach full capacity by the design year (assumed to be 2010 as a proxy for possible opening of the new road in 2008). The larger scheme would have adequate capacity at the western end in the design year, but would attract so much traffic that the eastern 3 lane section would approach available capacity in the opening year.

4.6 The preferred design (3 lanes each way, except for the 2 lane links to the M8 at the western end, and without direct connections to the Kingston Bridge) would be expected to operate below capacity along all sections in the opening year, and in 2020, under both the low and high growth scenarios. However there would be likely to be some congestion on the approach routes, including the existing M74 from the east (see paragraph 4.8-4.9 below). Thus traffic would be expected to flow freely once it was on the new section of road, giving considerable time savings both here and elsewhere. The reduction in journey times (2010 and 2020 – both growth scenarios) are predicted to be up to about 15 minutes (and up to 19 minutes in one example) for strategic journeys, and up to about 6 minutes for local journeys. These time savings are reflected in the direct economic benefit estimated for the scheme (see chapter 3).

4.7 The main changes in **motorway traffic flows** expected to result from the completion of the M74 are as follows :

- Reductions of approximately 13-18% (PM/AM peaks, 2010, high growth scenario, both directions combined) from the section of the M8 west of Baillieston; and 9-10% (both peaks, both directions combined) west of the M80 junction, a total reduction amounting to approximately 20,000 vehicles per day. The resulting combined AM flow on the section of the M8 west of the M80 is predicted to be about 13,745.
- On the Kingston Bridge mainline, traffic reductions of about 5% in the morning peak and 8%-19% in the evening peak, but increases of 15% (am peak) and 29% (pm peak) on the northbound outer braid.
- Increased use of the M73 and existing westernmost section of the M74 by vehicles using the M74C as an alternative to the M8 and the M80 to enter or pass through central Glasgow.
- Increased traffic flows on the M8 between the Clyde Tunnel and the M8/M74junction at Kingston.
- Increased traffic flows on the M77 to the south of the junction with the M8.
- Reduced congestion in the vicinity of the M8/M74/M77 merge area to the southwest of the Kingston Bridge, due to redistribution of traffic between the Kingston Bridge and M74 links.

4.8 At the eastern end of the new section of motorway, the increase in the westbound flow on the existing M74 approaching the Fullarton Road junction resulting from the new road is predicted to be in the order of +125% in 2010 (am peak) and even greater in the evening peak, compared with the do minimum situation. These much larger traffic flows

would be close to or exceed the capacity of the road during peak periods under the higher growth scenario in the opening year, and to exceed capacity in both peaks by 2020. Under the low growth scenario, the expected flows during both peak hours would be slightly lower than the available capacity, with a similar situation continuing to 2020. The comparison of actual and demand flows contained in table 5.1 of document TRA/E/14 (Operational Assessment of Preferred M74 Completion Scheme Option) shows that the excess westbound demand in 2010 for the higher growth scenario would be around 700 vehicles in the morning peak and 850 in the evening peak, rising to around 1050 and 1170 respectively by 2020. The corresponding figures for the lower growth scenario would be an excess of 373 vehicles in the evening peak in 2010, and around 700 vehicles in both peaks by 2020.

4.9 The excess demand of some 850 vehicles on the eastern approach to the new motorway in the year of opening (higher growth scenario) is predicted to form queues occupying some 1800m (about one mile) of the motorway, spread across all 3 westbound lanes, and possibly extending eastwards beyond junction 3. In practice, some drivers (with local knowledge or driver information) would be expected to respond to this congestion by rerouting to a theoretically less congested alternative route, re-time the journey to avoid the peak, alter their destination where that is possible, change mode, or refrain from travelling. The TRA evidence indicates that it is very difficult to predict what combination of these responses would occur. However it is expected that a combination of these factors and restraints resulting from congestion elsewhere in the system would significantly reduce the queues of M74 westbound traffic approaching the Fullarton junction under the higher growth scenario, and eliminate queuing under the lower growth scenario.

4.10 At the western end of the new section of motorway, an excess of some 600 vehicles is predicted on the eastbound approach to the M74C from the M8 in the evening peak (2010, higher growth scenario), rising to some 1100 vehicles by 2020, by which time there would also be an excess of some 230 vehicles in the morning peak as well. However this would be reduced by capacity limitations of the local network on the approaches to the motorway system in the Dumbreck area (see below), to the extent that the eastbound flows on the M77/M8 approach to the new section of the M74 would be approximately in line with the capacity of this link. It has been found necessary to carry out local improvements to the existing motorways immediately west of Kingston to provide extra capacity in the critical section between the convergence of the M8 and M77 from the west and the M8 and the new M74 from the east. These improvements, which are additional to the M74C scheme itself, would consist largely of converting some sections of hard shoulder to additional running lanes. The cost would be in the order of £15 million. (Details are given in document TRA/E/15, notably in figure 2.5.)

4.11 In relation to **increased traffic on local roads** that will serve the junctions on the new section of motorway, the following changes are predicted :
(absolute and % increases in AM peak, year 2010, high traffic growth, both directions combined.)

- Cambuslang Road east of Dukes Road : +296 vehicles +15%

- Cambuslang Road west of Dukes Road : +108 vehicles +4%
- Polmadie Road south of Rutherglen Road : +455 vehicles +36%
- Aikenhead Road north of Calder Street : + 252 vehicles +16%

These increases are not expected to result in any significant queues on these approach roads, as the additional number of vehicles is predicted to be less than 100 per hour. Any such queues would probably be reduced or eliminated by optimisation of traffic signals, delays elsewhere in the system, or re-routing or re-timing of trips. The re-opening of the junction of Aikenhead Road and Polmadie Road (south end) is expected to divert traffic to and from the M74 Polmadie Road junction to a mainly commercial street from a mainly residential street.

4.12 On other roads in the vicinity of junctions on the new motorway, there are either reductions in flows, or any increases are very small numbers of vehicles. The position in 2020 is generally similar, bearing in mind that traffic flows are assumed to increase both with and without the M74 Completion scheme.

4.13 In the **Rutherglen** area, general traffic growth is expected to lead to increasing congestion along Main Street. The Completion scheme would provide an alternative route for through traffic, reducing traffic levels. Some improvements to local street junctions would be desirable to accommodate traffic going to and from the motorway junctions. Bus lanes are already in place on Main Street.

4.14 In the **Govanhill** area, the introduction of the M74C is predicted to have little effect on traffic, compared with the do minimum scenario. Some local optimisation may be required to respond to continuing traffic growth, with or without the new motorway.

4.15 In the **Kingston** area, where some localised heavy queuing is already predicted in the do minimum forecast, the introduction of the M74C would alleviate some problems (by creating a segregated east/west route for through traffic) and relocate others. The modelling does not seek to remedy existing problems, but to establish the performance of the new arrangements that are proposed. With detailed optimisation of local signal and junction arrangements, the proposed arrangements are predicted to work well, but some localised queuing would remain, notably in the Shields Road/Scotland Street area.

4.16 In the **Seaward Street** area, there are already problems of congestion, which are expected to worsen due to general traffic growth. The introduction of the M74 extension is predicted to make little difference to the situation, although some improvement could be achieved by local optimisation. (Again, the modelling does not seek to remedy existing problems, but to establish the performance of the new arrangements that are proposed.)

4.17 In the **Dumbreck** area, the introduction of the M74C is predicted to result in a mixture of decreases and increases on local roads. The most significant increases are on Helen Street in the morning peak, and on Paisley Road West in all time periods. Congestion due to general traffic growth would continue in certain places at various times, and there is scope for local optimisation and improvements. However the overall

effect of the new M74 connection on the performance of local roads in this area is regarded as neutral. If the new road was not built, the do minimum analysis showed that existing congestion would continue and worsen.

4.18 **Reductions in traffic flows on local roads** are expected to be streets that are currently main east side routes in and out of Glasgow City centre, where traffic is expected to transfer to the new section of motorway. Significant reductions are expected on the following streets :
(absolute and % reductions in AM peak, year 2010, high traffic growth, both directions combined.)

- London Road east of Fielden Street: -61 vehicles -6%
- Dalmarnock Road north of Farme Cross : -151 vehicles -9%
- Shettleston Road east of Duke Street : -57 vehicles -5%
- Main Street, Rutherglen, west of Farmeloan Road : -254 vehicles -13%
- Main Street, Rutherglen, west of Cambuslang Road : -422 vehicles -22%
- Cambuslang Road east of Rutherglen Main Street : -739 vehicles -24%
- Calder Street east of Pollockshaws Road : -158 vehicles -22%

4.19 If the M74C scheme is not implemented, the do minimum modelling of the Fullarton Road junction shows that it would remain a focal point for traffic converging on and dispersing from the existing M74. This would lead to considerable peak hour congestion on all the approaches to the junction, including the westbound M74 itself, which in the worst case would be worse than would be experienced with the completion scheme in place.

Traffic implications : the case for objectors

4.20 In relation to traffic matters, the main points made by objectors were :

- Traffic on the new motorway and the approach roads to junctions would increase noise, air emissions, road safety problems, visual intrusion, and community severance for local residents and other road users. (These matters are covered in more detail in following chapters.)
- The motorway access junctions would be traffic focal points that would create serious problems for pedestrians and cyclists because of the numerous road junctions and traffic flows.
- The reduction in traffic on Rutherglen Main Street would be relatively small.
- Any traffic benefits of the M74C scheme at opening would be likely to be lost due to progressive traffic growth, with continuing congestion at various locations on the motorway network and approach roads.
- It was unrealistic for the TRA to expect to achieve a free flow of traffic on the trunk road network at all times : some congestion was to be expected in urban areas at peak periods.
- The scheme would feed more traffic into the city centre, whereas proposed new developments along the Clyde Waterfront should be served by public transport.

Similarly access to Glasgow Airport should be by rail, rather than making provision for more vehicle trips.

- At the western end of the Completion scheme, 2 lanes from the M74 would converge with 3 lanes (westbound) from the M8, creating a bottleneck. The proposal to provide extra running lanes at this location by converting the hard shoulders would make this heavily used area very vulnerable to disruption caused by accidents, broken down vehicles, or roadworks.
- No direct connections are proposed between the western end of the M74 Completion scheme and the Kingston Bridge (M8). Traffic using the new motorway wishing to travel to or from the city centre and the area to the north and west (eg the West End, Kelvinside) would have to use the surface streets between the Kingston Bridge and the M74 Kingston ramps, or surface streets and other Clyde bridges. It would be better for traffic to have a direct route from the M74 to the Kingston Bridge, and to avoid adding to flows on the local network. (See paragraphs 4.23-4.32 below on objection by Mr George Baillie for more detail.)

The traffic case for the trunk road authority

4.21 The TRA considers that the main traffic advantages of the proposed M74C scheme would be :

- It would complete the M74 motorway, giving a direct motorway link between areas to the west and southwest of Glasgow (Greenock, Renfrew, Paisley, Glasgow Airport, etc) and areas to the southeast of Glasgow (Hamilton, Motherwell, etc, and the motorway link to England and Europe via the M6).
- This would provide a quicker and more reliable route for freight traffic (predicted to be 7-15% of vehicles) to and from the areas to the west and southwest of Glasgow, where there are important business users. (See chapter 3 for direct economic benefits and chapter 8 for indirect economic benefits.)
- It would considerably reduce traffic on the parallel section of the M8 (between Baillieston and the Kingston Bridge) where there is very extensive traffic congestion and delay, and also on the A80/M80 approach to Glasgow.
- Time savings for journeys across and through Glasgow are expected to be in the order of 5-10 minutes during peak hours.
- It would alleviate congestion at the convergence of the M8 and M77 to the west of Kingston, by correcting an imbalance in the use of the inner and outer braids.
- It would allow traffic on the east side of Glasgow to be diverted between the M8 and the M74 when either was obstructed due to roadworks or an accident, using the driver advance information displays along the approach routes. This would add to the time savings and economic benefits resulting from the M74C.
- These results would contribute to the Scottish Executive's vision for 2021 that road traffic on all parts of the network will be flowing smoothly without congestion.
- It would relieve traffic on many local roads, giving road safety and environmental benefits to those using these roads or occupying nearby properties.

- It would create additional space on those roads which would be used by the local highway authorities for the benefit of pedestrians, cyclists, and public transport (see chapter 3, paragraphs 3.43-3.44 and 3.52).

4.22 In response to objections and criticisms, points made by TRA witnesses included :

- The M74C scheme would generate some additional traffic, as distinct from general traffic growth and transfers of trips from other routes, but this increase would be very small (see paragraph 3.38 above). The main use of the new section of motorway would be to relieve traffic on the existing network.
- The traffic reductions on local streets resulting from the M74C will make them safer for children and other vulnerable road users. It is predicted that there would be 760-975 fewer accidents across the network during the 20 year period after the opening of the new motorway, a revised estimate that updates the figures of 525-700 given in the Final Proposal brochure (March 2003).
- At the Kingston ramps, 73%-80% of M74 traffic is predicted to pass through the M8 east/west links, indicating that the majority of vehicles would not be using the M74C for commuting purposes to go to and from the city centre.
- References in consultant's reports to continuing congestion on the motorway at Kingston resulted in the proposed interventions west of Kingston to provide more running lanes on the M8 between the M74 and M77 junctions. This would involve the conversion of sections of hard shoulder to running lanes, but adjacent emergency lay-bys would be provided wherever possible.

Objection by Mr George Baillie : Omission of direct motorway connections between the M74C and the Kingston Bridge

Summary of case for the objector

4.23 The objection is to the lack of a direct connection from the M74C in either direction to the Kingston Bridge. As a retired professional engineer, he has provided indicative plans to show how this link could be provided. The boundaries of the areas to be acquired under the CPO should be extended to facilitate direct connections, with similar adjustment to the related Roads Orders. At the very least, the possibility of direct connections at a future date should be safeguarded. The development plan supports better transport links and economic regeneration across the conurbation. The objector has no wish to delay the M74C – all he seeks is a minor modification of the 1995 proposal for which planning permission was granted

4.24 In support of the objection, it is submitted that, while the M74C is to be welcomed as a major boost to the economy of the west of Scotland, all previous proposals for this strategic road link have included direct connections at the south end of Kingston Bridge. Indeed, as far back as the Glasgow Highway Plan of 1961, there was a proposal for an inner ring road. Without these connections, the Glasgow urban road network will be incomplete and the south east quadrant will be disadvantaged when compared to the rest of the conurbation. Locations in the south east of the city and South Lanarkshire will be

less attractive to potential investors and the local economy will suffer. The objector is concerned that the omission of this option may have disadvantaged Rutherglen and Cambuslang. Even between these 2 towns, Rutherglen is disadvantaged against Cambuslang which will have 3 motorway connections to the M74C. The economic witness for the TRA appeared to support the concept of direct connections. Recently announced developments in the north west quadrant, at the waterfront, and the SECC underscore the need for direct connections. Junction 19 of the M8, which serves the SECC, is already over capacity.

4.25 The objector's scheme proposes 2 single lane (with hard shoulder) elevated structures linking the south end of the Kingston Bridge with the M74C, the construction of which could be achieved without closing the M8. Instead of the embankment at Scotland Street/West Street/Wallace Street/Carnoustie Street proposed by the TRA, the elevated structure over West Street railway station should be extended towards Kingston Bridge, providing valuable city centre parking and revenue for the city council. The objector estimates the cost of the scheme at £10m, a small sum when compared with the overall cost of the M74C. This estimate relates only to the extended elevated structure and not to the connections to surface streets. The indicative scheme is not a working layout, being based on minimal plans and profiles. Further work would be necessary to achieve a satisfactory layout but an engineering solution, not requiring additional land take, may well be possible. There would be no need, as claimed by the TRA, to demolish the existing on ramp to the bridge. It has been closed before for a 6 months period when repairs to the bridge were being undertaken. A similar period towards the end of the M74C construction would be sufficient. The TRA estimates of costs are refuted. The scheme, which is based on 3 lanes in each direction, has not been tested by traffic analysis to conclude that additional running lanes would be required, nor have traffic flows across the direct connections been analysed to support the TRA claims that there would be more traffic on the M8.

4.26 The TRA proposals are criticised as using an unusual arrangement, namely, the city surface street network to link the M8 and M74C instead of direct links which would offer alternative routes for traffic from Lanarkshire, Stirling and Edinburgh, thus further relieving congestion on the M8 northern flank. The use of the surface streets link would result in increased journey times. The comparison with junctions 8 and 13 of the M8 is invalid in that these are not city centre junctions, nor is there any demand for additional connections at these junctions. Use of the surface street network would entail a heavily trafficked one way system in an area that is becoming increasingly residential and where the ES identifies a number of visually sensitive facades. Despite several requests, the TRA has failed to produce forecasts of traffic flow in this area. Extending the elevated structure as the objector proposes would significantly reduce the amount of fill and construction traffic associated with the long embankment proposed by the TRA. On/off ramps serving the objector's direct links would be at much lower levels and 2/3 storey parking could be accommodated under the extended elevated structure.

4.27 The objector considers that direct connections would overcome the problems of complex routing and congestion associated with the TRA's proposed link. While some

traffic from the south east quadrant may use the Polmadie interchange to access/egress the city centre, the limited capacity of that junction makes it imperative that adequate capacity is provided at Kingston. Traffic flows at the Kingston junction will be among the highest in the UK. The Outline Business Case for the TRA states that the Kingston junction is the nucleus of the system. The bridge has dual 5 lanes while the M8 from the airport has dual 3 lanes, leaving 2 spare lanes in each direction. Immediately to the north of the bridge there are 3 exits and entrances to the M8 in quick succession and the objector's scheme makes use of the resultant spare capacity. This would relieve the junctions on the northern flank of the M8 which currently serve the SECC. Existing lane barriers on the M8 would be retained. The objector's proposal assumes a speed limit of 50mph. The off ramp east bound uses the existing dead end structures. The on ramp west bound would go over the existing disused railway at West Street to connect with the existing on ramp at Gloucester Street. The proposal allows for the re-opening of Gloucester Street, re-instating the surface street links from Cook Street to the bridge and Gloucester Street/M8 west bound, while retaining surface street connections to the M74C. In short, the proposal is a modification of the scheme for which planning permission was granted in 1995. The proposal may require the purchase of additional land.

4.28 Reference is made to the government's key transport assessment criteria of environment, safety, economy, integration, and accessibility. The need for the strategic link is urgent given increasing congestion, the economic success of the east of Scotland when compared to the west, and the increasing growth of air traffic at Edinburgh Airport as compared with Glasgow. Competitiveness in the conurbation will at best stand still without direct government intervention, and existing business parks with good communications to the east of the city are most likely to benefit. Regeneration areas in the south east quadrant including Rutherglen and Cambuslang will suffer from the absence of a direct link. The Polmadie junction does not provide direct access to the city centre and surface streets would require to be used. The relief of traffic congestion will not be as significant as the TRA claims and the opportunity for better pedestrian, cyclist and public transport routes may not materialise. It is accepted that motorways have fewer accidents per vehicle mile.

Response from the TRA

4.29 In relation to Mr Baillie's objection, the TRA adopts, so far as relevant, the evidence submitted on its behalf in the non site specific first phase of the inquiry. The M74C will be the completion of the main strategic road transport link between west central Scotland and England and will take 20,000 vehicles per day off the M8 northern flank from Baillieston to south of Kingston Bridge. Its primary purpose is as a strategic link between the M74 and the M8/M77. While previous proposals did provide for direct connections, subsequent reviews of these proposals resulted in direct connections being abandoned because of the strategic nature of the link, the desire to discourage short distance commuting, and the likelihood of increased congestion on the bridge itself. The deletion of 2 interchanges at Cathcart Road and Rutherglen Road also followed from these considerations. The TRA proposal results in a decrease in traffic over the bridge.

Direct connections to the Kingston Bridge would increase traffic flow on both the M74 and M8, with the possibility of additional running lanes being required. The on/off ramps proposed by the TRA at Kingston are not intended as a motorway to motorway link but to allow easy access/egress to the motorway for essential traffic in the Kingston, Tradeston, and Kinning Park areas. Direct connections would encourage short distance commuting. It is not unusual for there to be motorway junctions without direct connections in either direction, examples being at junctions 8 and 13 of the M8.

4.30 The TRA has examined the objector's scheme against current design standards, the conclusion being that it would not be possible to achieve a satisfactory alignment, due to gradient difficulties. Even were it possible to achieve a satisfactory layout, the scheme would nevertheless entail the demolition of the existing ramp between West Street and the bridge, necessitating the need for an interim on ramp, thus adding to costs. The scheme would also require additional land and, with the TRA and GCC content with the M74C proposal before the inquiry, it is unlikely that such acquisition would be undertaken. The M74C proposal before the inquiry does not preclude direct connections at a future date, possibly by even higher elevated on and off ramps. The objector's scheme would result in the loss or relocation of a number of properties in the Scotland Street area and a change of direction of one way traffic at surface street level, with complex junctions. Direct connections would also involve more lanes, possibly 5 on the M74C between the bridge and Cambuslang Road and 4 lanes east bound thereafter to allow for merge and weave traffic manoeuvres. The TRA estimate of the cost of the scheme, with the necessary adjustments outlined above, is £18m and this does not include additional land acquisition costs. If additional lanes were needed on the M74C, the estimate would increase by a further £95m. The objector's scheme would require to be developed and tested with no guarantee of success. This would take time and, on the available evidence, a fresh compulsory purchase order and roads orders would, in all probability, be required. The objector clearly indicated no desire to delay the M74C, which has resulted from in depth reviews of previous proposals, leading to a down sizing aimed at meeting strategic objectives.

4.31 On environmental issues, the TRA proposal includes high quality design of the elevated structure and landscaped embankments to mitigate the impact on visually sensitive receptors. The impact of an extended elevated structure is difficult to mitigate and the potential for landscaping beneath structures is severely limited. It was nonetheless an option considered and ruled out for this reason when the proposal was being designed. An extended elevated structure would still have an adverse visual impact. While to an extent the removal of some traffic from the surface street network would be a benefit, the proposed embankment offers a better overall mitigation. The ES predicts that, during construction, increases in traffic would not be significant, nor would there be much detriment to local air quality.

4.32 In regard to traffic issues, the TRA submits that, on completion of the M74C, traffic from North and South Lanarkshire is likely to continue to use the M8 to access the city centre and will benefit from the reduction of 20,000 vehicles per day on the northern flank. The reduction in traffic on a number of key radial routes from the south east

quadrant will also benefit traffic from this direction. Traffic analysis indicates reduced traffic flows on the existing bridges over the river when the M74C is operational. The M74C proposal does not introduce any new one way roads at the Kingston junction and analysis shows that the altered traffic flows can be readily accommodated. The objector's scheme is criticised on grounds that it involves the closure of the connection from Wallace Street to the M8 west and also to the proposed M74 eastbound on ramp, necessitating major re-routing of traffic. This in turn could create major problems at a number of junctions. The scheme also makes that section of Wallace Street between Paterson Street and West Street two way, requiring traffic lights at the West Street/Wallace Street junction, where operational difficulties are envisaged. The need for additional lanes on the M74C is again demonstrated and there may be the need to re-design the Polmadie and Cambuslang junctions because of increased demand on the M74C. This may also require further land acquisition. The suggestion that the Polmadie junction has limited capacity is strongly refuted on the basis that the design is based on traffic demand predicted for 2020. Similarly, the claim that there is spare capacity on the Kingston Bridge is unfounded, there being severe congestion in both directions at peak periods. Direct connections would simply exacerbate the situation. The traffic analysis undertaken on behalf of the TRA clearly shows that traffic levels will reduce significantly on local roads and that the M74C will result in less accidents and enhanced road safety.

CHAPTER 5 : PHYSICAL, ENVIRONMENTAL, AND COMMUNITY IMPACT

Introduction

5.1 This chapter covers non statutory objections relating to the local physical, environmental, and community impact of the proposed road on the areas through which it would pass. These matters include the land take and demolition of buildings; loss of community land and facilities; effects on wildlife and natural habitats; water quality; conservation areas; listed buildings and archaeological sites; community severance; visual impact; noise; local air pollution; and problems during the construction period. This chapter also covers objections relating to social inclusion/exclusion and community impact. Economic benefits and regeneration, which also have a bearing on social inclusion, are covered in chapter 8, while wider air emission and global warming issues are covered in chapter 6 and ground contamination in chapter 7. Statutory objections from parties who have an interest in property that is affected by the proposed compulsory purchase order are covered in chapter 9.

Summary of objections relating to local physical, environmental, and community impact

5.2 General objections on these grounds have been lodged by a large number of non statutory objectors, many of whom were represented at the inquiry by JAM74/Friends of the Earth Scotland. Various other non statutory objectors have specific areas of concern on these matters.

5.3 Objectors are very concerned about the construction of a 5 mile elevated multi-lane motorway through a series of disadvantaged communities on Glasgow's south side. It would be expected to devastate these communities, making community severance worse by creating a physical barrier to residents' movements around their neighbourhoods. The increased amount of traffic in the area, both on the new motorway itself and on local roads that would carry traffic to and from the motorway junctions, would increase air pollution, in turn affecting local parks and green spaces. The increased traffic would also result in increased noise, and would make local roads more dangerous for cyclists, walkers, and children. There would be a great deal of noise, dust, and disruption during the construction period. There is also great concern about the health hazards that would arise from the disturbance of contaminated land during construction work. The combined effect of all these matters would be considerably increased stress for local residents. The construction of this road would be in complete contravention of any semblance of local democracy.

5.4 Objectors note that the motorway would pass through a disadvantaged area of low car ownership where increased accessibility for car travel by motorway would be of little benefit to the local population. Improving conditions for car users would encourage a more car oriented approach, with car users travelling further afield for shopping and other activities, adding to traffic and air emissions. This would undermine the local economy and community facilities, leaving those without cars more disadvantaged and dependent

on expensive public transport, increasing inequality in a divided community. The proposal would represent an undesirable use of public funds, which should be spent on improved public transport and more direct help to the local communities. It would not meet the true demands of Glasgow's population, and would be inconsistent with the Scottish Executive's aims for social inclusion and environmental justice.

5.5 Objectors have pointed to previous examples where the disruption and severance of building new roads had devastated local communities (the effect of the M8 on Charing Cross and St Georges Cross), and where considerable traffic increases had affected local roads (M77 – Newton Mearns). Where new motorways had passed close to disadvantaged communities, such as the M8 at Easterhouse, the new road had not helped the community, but had facilitated the relocation of employment to more distant areas.

5.6 Objectors consider that local facilities should be within 400-600m for convenient access on foot. The severance caused by the new M74 motorway would make these local walking trips longer. Pedestrians and cyclists would have to cross the new motorway at the motorway junctions, where there would be complex road layouts, concentrations of traffic, and where they would have to pass underneath large dark motorway bridges.

5.7 Objectors noted that the new motorway would result in the demolition of 2 churches, 41 homes (some now already demolished), and 99 business premises.

5.8 Among specific local concerns, the **Scottish Association for Public Transport** is concerned about the adverse effects for railway passengers using Rutherglen Station and the proposed new West Street station, due to visual intrusion, noise, and fumes from the proposed motorway viaducts that would pass over these stations.

5.9 Evidence presented by **Dr Marion Hersh** covered many of the above issues. In addition, her health witness expressed considerable concern about the negative health impacts of the M74C. These concerns included noise and air pollution along the motorway corridor, global warming, contaminated land, the impact of severance on the health of the communities affected, and the passing up of an opportunity to improve the environment by applying the funding allocated to the M74C to improve other forms of sustainable transport which promote healthy living activities such as walking and cycling. Research published in the British Medical Journal in 1995 stressed the importance of the environment on health.

5.10 A major issue was child health, with alarming levels of asthma and obesity in children and young persons in Scotland and in the west of Scotland in particular. A car dependent culture had become established, similar to that found in the USA, and not enough was being done to counteract the "obesogenic environment". The M74C would simply lead to more cars in the conurbation, with even less walking and cycling activity. The local road network would not be quieter as a result of the M74C. While local levels of car ownership are low, the rate of increase in car ownership locally is nonetheless high. Accordingly, in the short to medium term, there would be a substantial increase in the number of cars on the network.

5.11 As regards the findings of the environmental statement in regard to air quality and noise levels, any improvements would be short term as the surface road network will quickly fill up. While the presence of contaminated land is not regarded as a threat to the public water supply, a significant question mark remains over the extent and nature of contamination along and adjacent to the route corridor. The M74C is not needed to regenerate communities that have largely been destroyed over recent years by the threat of the M74C.

5.12 In relation to PM10 and asthma, it is not suggested that PM10 causes asthma, as there may be a range of causes. However the M74C would significantly increase traffic pollution generally. A precautionary principle should apply. With Type 2 diabetes occurring in children in Glasgow as young as 9-11, the significant increases in life expectancy over the last century may start to reverse.

5.13 The **Logan Street Tenants & Residents Association** considers that the motorway should pass under, not over, Polmadie Road. A high level motorway would be visually intrusive, and would cause more noise, compared with a low level route. This would be out of keeping with the intention that the Oatlands redevelopment would form part of a green route into the city centre.

5.14 Also at Polmadie Road, in a late objection, **Mr Thomas Hay** is concerned that increased traffic would make it difficult for him to have a skip in the roadway outside his premises. He operates as a scrap metal merchant, and the skip is an important part of his operation.

5.15 Further east at Farme Cross, the **Terrace Community Association** and various local residents are concerned about the potential effect of the new motorway on the setting of the colony style terraces that have been designated as a conservation area, and on their residential environment, including the issue of noise. Residents are already aware of the noise and vibration of freight trains passing on the west coast main line, but this is only an occasional occurrence, whereas the motorway traffic noise would be constant and the source nearer. There would be no redress available to residents if the noise barrier is inadequate to keep noise levels low.

5.16 Farme Cross residents are also concerned about increased difficulties in reaching local services in Rutherglen, which most people do at least once a day. To do so, they would have to pass underneath the motorway, through an area of supporting columns where there would be a risk of anti social gatherings and criminal activity. There would also be increased traffic, noise, and danger in Farme Cross and on Cambuslang Road, which would be an access route to and from the Cambuslang Road motorway junction. It may be necessary to reduce public parking on Cambuslang Road, which is already in short supply. In addition, Farme Cross and Rutherglen residents are concerned about the potential health risk resulting from the disturbance of chromium wastes, which are prevalent in the area, due to motorway construction work (see chapter 7).

5.17 There are similar concerns from objectors living on the south side of the proposed motorway, along the northern edge of Rutherglen. Here, in addition to concerns about noise and airborne emissions, there are concerns about the visual intrusion of the new road. This corridor of largely residential development is located along the crest of a ridge, where renovated tenements and some newer blocks of flats, as well as low rise development, enjoy panoramic views northwards across eastern Glasgow towards the distant Campsie Hills. The elevated new road would intrude into this outlook, screening it completely from the lower properties.

5.18 For all these reasons, objectors consider that the new motorway would have a very serious adverse impact on a series of disadvantaged communities, while conferring little or no benefit. Any benefits such as ground decontamination, derelict land reclamation, and landscape improvement could be achieved far more effectively by specific remedial programmes. The road would benefit vehicle users and businesses located largely outside the area, while the communities along the route would suffer all the disadvantages. This worsening of conditions for communities that were already among the most disadvantaged in Scotland would be contrary to the Scottish Executive's objectives for social inclusion.

Physical, environmental and community impact: summary of evidence on behalf of the Trunk Road Authority

5.19 The assessment of the environmental implications of the M74 Completion have been based on extensive specialist investigations and consultations, together with consideration of alternative alignment options at Polmadie and Eglinton, and the introduction of remedial and mitigation measures wherever possible. All this work is brought together in the published Environmental Statement (document TRA/F/1 – two volumes), summarised in the non-technical summary (TRA/F/2).

Land take and property demolition

5.20 The studies carried out for the TRA show that the new road would occupy about 77ha of land, consisting largely of commercial properties and derelict/unused land, plus some residential properties and open space (woodland, grassland, etc). The broad land use zones are shown in the Landscape Strategy map at the back of the Landscape Strategy document (TRA/C/2).

5.21 At the time that the surveys were carried out, the new road would require the demolition of some 93 properties. These would include :

- 27 commercial units in the Tradeston area;
- a listed tenement block at Pollockshaws Road;
- 13 commercial units between Cathcart Road and Polmadie Road;
- 13 industrial units between Polmadie Road and Glasgow Road;
- 2 residential properties and a Territorial Army depot at Polmadie Road;
- a football ground and social club at Southcroft Park (Glasgow Road);
- 5 blocks of tenements at Cambuslang Road (now demolished);

- 23 commercial units at the Rutherglen and Farmeloan industrial estates and in Cambuslang Road;
- 4 commercial units at Fullarton Road.

5.22 In relation to the concerns of **Mr Thomas Hay** about loss of parking space on Polmadie Road (see paragraph 5.20 above), the TRA states that the increased traffic flows on Polmadie Road would not be expected to have an adverse effect on the operation of the business. Access to and from Mr Hay's premises should not present any difficulties as the traffic signals at the junction will present opportunities to enter and exit the premises.

Green areas, wildlife habitats, and water quality

5.23 There are no sites along the motorway route that are designated for their international or national importance for nature conservation purposes. The new section of motorway would occupy various mainly small parcels of land along the route where open land has regenerated to scrub woodland. The motorway would affect larger areas of grassland and scrub woodland towards the eastern end of the route (totalling some 12.5ha) together with parts of the Clyde river banks. This would affect parts of two designated Local Sites of Importance for Nature Conservation (Auchenshuggle Community Woodland and Clyde Industrial Estate), and part of the River Clyde Corridor of Wildlife and Landscape Importance, totalling about 3ha altogether. Part of the Glasgow – Edinburgh cycleway passes along the north bank of the river, but the integrity of the route would not be affected by the motorway.

5.24 Otter, bat, and badger habitats have been identified along the motorway route. More detailed investigations would be carried out, and any necessary remedial measures would be provided. It would be essential to protect and maintain any identified badger routes. The costs of work on wildlife protection are not known at this stage.

5.25 The new motorway would occupy some 36ha of existing semi-natural and other green or wetland habitats. It would provide a total of about 27ha of new woodland and shrub planting and new wildflower grassland along the route corridor, mainly on motorway embankments. The net result of the motorway construction on natural and semi-natural habitats is thus estimated to be a loss of about 9ha.

5.26 There are 8 existing burns draining to the River Clyde that pass through the area of the motorway corridor. They are wholly or largely in culverts, and some of them are known to be contaminated with industrial wastes.

5.27 The drainage system for surface water from the area of the new motorway would be largely independent of existing surface watercourses and groundwater. New wetland areas would be created to act as sustainable urban drainage systems (SUDS) to remove pollutants from road run-off. Discharges would then be to the River Clyde. No adverse impacts on water quality are expected.

5.28 Parts of the motorway development will occupy sections of the flood plain of the River Clyde. Steps have been taken to ensure that the road does not encroach on any part of the flood plain that would be subject to a 1:200 year flood event. The analysis of the worst case situation indicates that run-off from the road is estimated to add 0.92% to the volume of a 1 in 10 year peak flood event of the Clyde, which would be reduced by retention in the SUDS ponds. Thus there would be no significant increase in flood risk.

Conservation areas

5.29 There are two conservation areas close to the proposed scheme, both in the vicinity of Farmeloan Road. The Farme Cross Conservation Area lies about 100m to the north of the boundary of the roadworks, and consists of 4 rows of one and two storey colony style houses. The Rutherglen Conservation Area covers the town centre, extending northwards to abut the southern boundary of the west coast main rail line. This area comprises renovated 4 storey red sandstone tenement terraces, the closest of which would be about 100m to the south of the motorway carriageway.

5.30 The proposal is assessed to have a substantial adverse visual impact on the Farme Cross area in the opening year, reducing to a slight adverse effect in year 15. However the project is not expected to have a negative impact on the character of the conservation area, due to the distance from the motorway and the intervening landscape treatment. The effect on the Rutherglen Conservation Area is expected to be slight.

Listed buildings, scheduled monuments, and archaeological interest

5.31 These matters, along with conservation areas, described collectively as "cultural heritage", are covered in chapter 12 of the Environmental Statement (volume 1), with more details in Technical Annex H in volume 2.

5.32 The investigations carried out on behalf of the TRA have shown that there are 127 sites or items of interest of this kind along the route of the new motorway. These are mainly domestic, industrial, and transport features, as would be expected in an urban area with a long history of occupation, and considerable former industrial and transport activity. Many of the sites contain no upstanding remains, and some are covered by more recent development or deposited material.

5.33 Within this total, there are 15 buildings listed for their special architectural or historic interest. These are mainly former industrial buildings, located at the western end of the route. Among the most important of these that would be demolished to make way for the new motorway are Scotland Street Engine Works (Kingston), Falfield Mills and Falfield Engine House (Eglinton), and a block of tenements on Pollokshaws Road, all listed category B. There are photographs of these buildings following page 158 of volume 1 of the Environmental Statement.

5.34 Various listed buildings would be retained but in close proximity to the new motorway, notably the Eglinton Engine Works on West Street (listed category A); and

the Kilbirnie Street motor works, Leyland motor works, and the St Andrews works (all listed category B). Further A listed buildings in the vicinity of the proposed motorway are Scotland Street School and the Sentinel Works at Jessie Street (Polmadie), both regarded as sufficiently far away to avoid any significant impact on their settings.

5.35 The overall conclusions of the investigation of potential impacts on buildings, monuments, and other sites of cultural heritage interest are given in table 12.12 on page 176 of volume 1 of the Environmental Statement. It is predicted that a total of 68 buildings or sites would be adversely affected by the new motorway construction, either by demolition or indirectly through the impact on their settings.

5.36 The impacts in 3 of these cases are expected to be severe (2 sites at Govan Iron Works of national importance, and the Caledonian Pottery in Rutherglen, of regional importance).

5.37 The adverse impacts in 9 cases are expected to be major : Shawfield Chemical Works (of national importance); the others are of regional importance, including the demolition of Scotland Street Engine Works, Falfield Mills, Falfield Engine House, Falfield Mill House, the block of tenements on Pollokshaws Road, the Ballochmill site near the Cambuslang Road junction, and the Clyde Waterproof Cloth works.

5.38 The adverse impacts are expected to be moderate in 49 cases, of which one is of national importance (impact on setting of Eglinton Engine Works); 7 are of regional importance; and 39 are of local importance.

5.39 Impacts at the other sites are expected to be minor.

5.40 Some the cultural heritage sites are the subject of continuing objections to compulsory purchase. Most of these have no upstanding buildings on them, and most of the cultural heritage impacts are described as of no significance or minor significance. However there are two exceptions, where upstanding buildings would be demolished, and where the potential adverse impacts are predicted to be major :

- Scotland Street Engine Works : cultural heritage site 81: CPO plot 30: Noble Imports Wholesale (B listed building, regional importance).
- Clyde Waterproof Cloth works : cultural heritage site 6 : CPO plot 178 : Somerville and Morrison Ltd (unlisted building, regional importance).

5.41 Where cultural heritage sites would be affected by the new road, mitigation measures would include building surveys, photographic surveys, and (in some cases) excavations, depending on the scale of the impact and the importance of the building or site. About £3 million has been earmarked for archaeological investigations.

Community severance

5.42 The TRA notes that the proposed alignment of the new road between Cambuslang Road and Cathcart Road (approximately 4 kilometres) would closely follow the route of

the west coast main railway line, minimising additional severance. The study of potential community severance (Environmental Statement, Volume 2, Technical Annex L) has identified the various communities to the north and south of the railway line and new motorway, and the routes used by residents to walk to local community facilities such as schools and health centres, and to reach other communities. The communities in question are Govanhill, Toryglen, and Rutherglen to the south of the railway, and Laurieston, New Gorbals, Polmadie/Oatlands, and Farme Cross to the north. There are few existing links across the railway line, and all of them would be maintained. The introduction of the M74C would thus not block or extend any of the routes used by local residents.

5.43 Adverse severance effects would occur at the two intermediate motorway junctions (Cambuslang Road and Polmadie Road) and at Fullarton Road, where the additional slip roads serving the motorway would require to be crossed, adding to delay and accident risk. These roads would also carry considerably increased traffic going to and from the motorway, making crossing more difficult, although new pedestrian crossings would help to some extent. The combined effect of these factors is predicted to be substantial severance for pedestrians and cyclists using these locations.

5.44 The TRA considers that there would be a loss of amenity and perceived security for pedestrians and cyclists where existing roads would pass underneath the motorway (Cambuslang Road, Farmeloan Road, Glasgow Road, Polmadie Road, and various streets in the Eglinton – Tradeston area), due to overhead traffic noise and perceived reductions in personal security. The overhead structures and the spaces beneath them would be designed to mitigate these effects by maximising natural and artificial light, and to deter vandalism and mis-use of the underneath spaces. The severance effects of these various factors are judged to be slight for most people during daylight hours, and moderate for vulnerable groups (eg wheelchair users) and underneath bridges at night.

5.45 The addition of the motorway would be expected to reinforce the perceived or psychological severance already caused by the main railway line. During construction, there would be moderate severance of pedestrian and cycle routes due to the construction activities, as well as noise, dust, and intrusion from the construction work.

5.46 There would be slight reductions in community severance at locations where traffic flows are predicted to reduce, such as Rutherglen Main Street and parts of Aikenhead Road.

5.47 Land beneath the viaducts and bridges that would carry the motorway would be designed to minimise impact on the surrounding townscape, and to deter mis-use. The use of a viaduct at Eglinton would maintain community continuity, compared with an embankment, and some of the land underneath the viaduct would be available for use for private business parking.

5.48 In relation to the specific concerns of **Farme Cross** residents about increased difficulties going to and from Rutherglen, the TRA intends that the new motorway bridge over Farmeloan Road would be as open as possible to maintain visual continuity. The

bridge design, materials, and colours would be compatible with local features, and high quality materials would be used. Feature lighting would allow passage below the motorway bridge to be as safe and as attractive as possible. Landscape planting would mitigate potential impacts on the setting of the Farme Cross Conservation Area.

Visual impact

5.49 The TRA expects the new motorway to have a major impact on the landscape and townscape through which it passes. The basic design philosophy has been to keep the road as low as possible in the landscape to reduce its impact, although parts of the route would be on embankments to avoid conflicts with existing transport routes or disturbance to contaminated land. There would be motorway bridges over the River Clyde at Auchenshuggle, Cambuslang Road, Farmeloan Road, the tracks and station platform at Rutherglen Station, Glasgow Road, and Polmadie Road. The section of the motorway in the vicinity of Aikenhead Road/Cathcart Road would be in a cutting, where Cathcart Road would be the only existing road that would cross over the new motorway. From this bridge, the motorway would rise westwards on an embankment, forming part of a sequence of embankments, bridges, and viaducts (approximately 1500m in total) linking to the M8 west of Kingston.

5.50 The analysis of visual impact has been based on an examination of the landscape character and resources along the route (see figure 10.1 and pages 124-129 of volume 1 of the Environmental Statement); the physical characteristics of the proposed works (especially where the motorway would be elevated); the zone of visual influence (ie, the corridor, of varying width, within which the motorway would be visible); and the location and sensitivity of visual receptors (eg residential properties) along the route. The method of assessment and the evaluation criteria used have been based on best professional practice design manuals. The position at each receptor has been assessed for the year of opening, and 15 years later, when the new planting along the route would be expected to become effective.

5.51 The motorway structures and landscape treatment would be designed to minimise visual impact. The overall project budget (2002 prices) includes £10-£13 million for landscape work within the boundary of the motorway land take (including planting on embankments, drainage lagoons, etc); expenditure on high quality cladding of retaining walls and feature lighting underneath bridges and viaducts; and about £1-£1.5 million on noise barriers. Additional landscape work on regenerated sites outwith the motorway route would not be covered by the motorway budget, but there are other sources of financial assistance for this work.

5.52 A computer generated visualisation and a series of photomontages have been prepared for the TRA, showing the expected appearance of the new motorway at various locations. Details of these studies are contained in Technical Annex G of the Environmental Statement (volume 2), and the Non Technical Summary provides a very convenient compact summary, including detailed maps showing the various environmental resources and the proposed construction works. The photomontages are to

be found following page 148 of volume 1 of the full Environmental Statement. There are drawings and further pictures of the appearance of the main structures in document TRA/C/1 (Structures in the Landscape).

5.53 Table 11.5 of the Environmental Statement (volume 1, page 151) summarises the assessments of the various visual impacts that would be expected, both adverse and beneficial. In summary, at the opening year, significant adverse visual impacts are predicted for 32 locations/receptors, of which 11 are predicted to be slight, 13 moderate, and 8 substantial. By 15 years after opening, when landscape treatments are expected to become fully effective, the number of locations/receptors where there would continue to be adverse impacts is reduced to 19, of which 10 are expected to be slight, 5 moderate, and 4 remaining substantial. No beneficial impacts are expected at the opening year, but 3 locations are expected to derive a slight visual benefit by year 15.

5.54 Details of the receptors and the effects of the new motorway are recorded in table G4.1 following page G20 of Technical Annex G (Environmental Statement, volume 2). The locations where substantial adverse visual impacts are expected in the opening year are :
Receptors A4, A5, and A6 : Eglinton Street(N)/Wellcroft Place, Devon Street, and Eglinton Street(S)/Turriff Street: There would be close views of the elevated motorway, including retaining walls, the Eglinton viaduct, and a planted embankment, from a number of residential properties in these streets and from Eglinton Street itself. The overall height of the structures in view would be in the order of 10m, plus the motorway parapets, which would be up to 1.5m in height where the viaduct crosses the railway tracks.
Receptor C7 : Western Avenue, Rutherglen: The new motorway embankment and bridge over Glasgow Road would dominate the view from a residential area.
Receptor D2 : Victoria Street/Farmeloan Road (S): The motorway viaduct over the Rutherglen railway triangle would intrude into elevated panoramic views from 4 storey flats, obscuring views of Farme Cross and the east of the city, while retaining the higher more distant view to the Campsie Fells.
Receptor D3 : Farme Cross, including the terraces: The view south up Farmeloan Road to the new motorway embankment and bridge over Farmeloan Road would obstruct views of the Rutherglen tenements though the tower of the town hall would be likely to remain visible.
Receptor D5 : Housing in east Rutherglen : Views across railway to planted motorway embankments. Views of the east of the city are likely to be obscured though some distant views of the Campsies may remain.
Receptor E1 : River Clyde footpath : Views up and down river interrupted by M74 crossing.

5.55 The photomontages following page 148 of volume 1 of the Environmental Statement illustrate before and after images of the views from receptors D2, D5 and E1 above, while images in document TRA/C/1 (Structures in the Landscape) show the Port Eglinton viaduct (receptor A4); the embankment in front of the Devon Street housing (receptor A5); the viaduct at Rutherglen Station (though not as viewed from the flats);

and the River Clyde bridge (although not the latest version). The other images in these documents show the Eglinton viaduct at West Street (receptor A3 : moderate adverse impact); the view north from St Andrew's Cross (receptor A7 ; moderate adverse impact); looking south from the Crown Street housing (receptor B1 : moderate adverse impact in year of opening improving to slight beneficial impact after 15 years when planting has become established); looking north from Toryglen Road (receptor C5: moderate adverse impact improving to slight adverse impact); and looking south along Glasgow Road towards Rutherglen (receptor C8 : moderate adverse impact, improving to slight adverse impact, though no image to demonstrate the latter).

5.56 The larger number of receptors where there is expected to be a moderate adverse impact are generally locations where the receptor is further away from the new motorway and/or the motorway structure would be less prominent.

5.57 In relation to the concerns of the **Scottish Association for Public Transport**, the proposed viaduct over Rutherglen Station has been carefully designed to take account of the effect on station users. The provision of feature lighting under the bridge will be considered. Where noise barriers are required, they will extend along bridges, and are likely to be made of transparent material to give a lighter visual effect.

5.58 At Polmadie Road, where the **Logan Street Tenants and Residents Association** has concerns about the elevation and visual intrusion of the motorway, the TRA considers that there is an overwhelming engineering and financial case for the motorway to pass over the road, due to the need to avoid disturbance of chromium wastes, and potential groundwater drainage and flooding problems. The adverse visual impact of the elevated motorway is predicted to be slight to moderate at the year of opening, but reduced to slight adverse or slight beneficial once the landscape planting has matured. To the east of Polmadie Road, the new Oatlands Master Plan indicates an area of woodland planting that would separate the new housing from the motorway.

5.59 The conclusion from the analysis of visual impacts is that significant visual impacts are predicted for the opening year for most parts of the new motorway, apart from the section in the cutting at Cathcart Road/Aikenhead Road. Although there would be some mitigation of impacts by year 15, it is concluded (on page 154 of volume 1 of the Environmental Statement) that "the scale of the works required to construct the M74 Completion is such that significant adverse impacts have been predicted on receptors throughout the corridor". There would be localised visual benefits once the planting has matured, where existing views of derelict land or industrial areas would be obscured. Work is continuing on developing detailed designs that would minimise local visual impacts.

Noise

5.60 The assessment of the noise impact of the proposed motorway has compared the predicted new traffic noise levels with the motorway with predicted noise levels without the motorway. Existing baseline noise levels have been measured at 34 locations along

the route, chosen to represent all noise sensitive receptors. The baseline locations are shown in figures J3.1a-e in Technical Annex J of volume 2 of the Environmental statement.

5.61 The predicted noise levels have been calculated for 65 receptor locations, including most of those where baseline measurements were taken. The results are shown in table J5.4 of Technical Annex J, and in map form in figures J5.1a-e in the same technical annex. Predictions are given for 2020 for do minimum noise levels (ie taking account of traffic growth, but without the M74C), and then with the M74C scheme in place, and then with M74C scheme noise mitigation measures (see below) in place. All figures are in decibels (dB) for $L_{A10,18\ hours}$, and for the higher traffic growth scenario.

5.62 Existing noise levels were found to be high (generally above 70dB) at the western end of the route (Kingston – Tradeston – Eglinton) due to traffic noise; in the vicinity of Aikenhead Road and to the south of the proposed Polmadie junction (again due to traffic noise and also noise from trains and nearby industrial premises); in Rutherglen town centre (traffic noise and occasional trains); and on Cambuslang Road and in the vicinity of the Fullarton Road junction (again due to traffic noise).

5.63 Elsewhere, existing noise levels are generally medium (60-70 dB) or low (less than 60dB), notably in Govanhill, Oatlands, Toryglen, much of Rutherglen, and at Auchenshuggle, except near major roads. At Oatlands, existing traffic noise from Rutherglen Road is expected to be transferred southwards, towards the route of the new motorway, due to the proposed re-alignment of Rutherglen Road. This is not part of the M74C scheme, but an independent project included in the do minimum scenario.

5.64 The changes in traffic noise expected to result from the new motorway would arise along the route, and at various streets on the approaches to motorway junctions where there would be increased traffic. Noise at some other locations would be reduced, due to traffic relocating to the motorway. It should be noted that due to the characteristics of traffic noise, and the logarithmic basis of the decibel scale, quite considerable changes in traffic levels are required for differences in noise levels to become discernible. Noise increases of less than 3 dB (the limit of perceptibility) are regarded as slight; 3-5dB as moderate; and more than 5 dB as a major impact. Traffic noise would be more noticeable at night, when ambient levels are low**.** A substantial traffic reduction is required to achieve a reduction in noise, with a 5% traffic reduction corresponding to a 0.2 dB noise reduction, and a 20% traffic reduction required to achieve a reduction of 1 dB.

5.65 Where noise increases are predicted, mitigation measures are proposed, notably the installation of approximately 5 kilometres of noise barriers along the edge of the motorway carriageways and the use of low noise road surfacing. The barriers would be 2-2.5m in height, and would be expected to achieve noise reductions of up to 14 dB. Low noise road surfaces are expected to deliver reductions of at least 3 dB. The final predicted figures for noise impacts given below take account of these proposed mitigation measures.

5.66 The proposed locations of noise barriers are shown on figure J4.1 of Technical Annex J and in the Environmental Statement Non-Technical Summary. (Reporters' note : The M74 Completion Final Proposal public brochure does not show the full extent of the proposed noise barriers.)

5.67 The changes in predicted noise levels due to the introduction of the M74C scheme are shown in table J5.5 of technical annex J. At most locations, the differences in noise levels attributable to the new motorway would be slight (+ or - <3dB).

5.68 Perceptible increases (>3 dB) in noise would be expected at the following locations :

Location	**Predicted increase**	**Property affected**
Dixon's Blazes Industrial estate (3 locations)	7.1-8.4 dB	industrial estate
Toryglen (NE)	10.3 dB	about 100 dwellings
Toryglen Adult Training Centre	9.1 dB	Training centre and community centre
Tower block, north Toryglen	7.8 dB	20 storey tower block
Queen Street, Rutherglen	3.3-3.6 dB	40+ dwellings
McDonald's Centre and Council offices, Rutherglen	4.7 dB	2 properties
Caledonia Avenue, Rutherglen	4.4 dB	10 dwellings
Eastcroft, Rutherglen	4.6 dB	10 dwellings
Richmond Place, Rutherglen	3.1 dB	100 dwellings
Montravie Street, Farme Cross	3.1 dB	22 dwellings
Shawfield Industrial Estate	8.1 dB	industrial estate
Cambuslang Road (1)	25.7 dB	Clyde steelworks
Cambuslang Road (2)	3.4 dB	Clyde steelworks
Clyde workshops	8.4 dB	industrial units
Dalbeth Presbytery	9.5 dB	presbytery
London Road	3.6 dB	1 dwelling

5.69 In summary, these impacts are regarded as moderate at :

- Queen and King Street, Rutherglen, and Burgh School (approximately 40 dwellings)
- Northern edge of Rutherglen (approximately 22 dwellings);
- Richmond Place, Rutherglen (approximately 100 dwellings);
- Farme Cross (approximately 22 dwellings);

and as major at:

- north Toryglen (approximately 110 dwellings + 20 storey tower block + adult education centre);
- the homeless peoples' shelter and residential properties in Dalbeth (Fullarton);

and with a positive benefit to :

- Rutherglen Main Street.

5.70 In some cases, those adversely affected may be able to apply for noise insulation grants, and for claims for loss of property value under the Land Compensation Act. Noise insulation grants would be available to the worst affected properties, where the motorway would result in noise levels in excess of 68 dB. This would be likely to amount to some tens of properties rather than hundreds, with expenditure of up to a few thousand pounds at each property.

5.71 There are no locations where the new motorway would be expected to result in perceptible decreases (>3 dB) in noise. Rutherglen Main Street would be expected to experience a reduction of 2.7 dB, affecting approximately 85 dwellings, and Maxwell Road, Laurieston, a decrease of 2.4 dB, affecting about 20 dwellings.

5.72 In the wider traffic study area, it is predicted that the transfer of traffic from main roads to motorways that would be facilitated by the M74C scheme would reduce traffic noise for some 3,000 people, approximately 2% of the 140,000 people in the wider study area who are annoyed by road traffic noise.

5.73 In relation to the objection from the **Logan Street Tenants and Residents Association**, seeking the provision of noise barriers to protect the new housing in the Oatlands area, the TRA notes that the original Environmental Assessment was based on existing noise receptors, and hence did not take account of the Oatlands proposals. The TRA has subsequently commissioned a special report (Oatlands Noise Assessment : document TRA/G/1). This assessment was based on the proposed new layout, with Rutherglen Road on a new alignment curving round the south side of the new housing, close to the motorway alignment.

5.74 The TRA considers that it is appropriate to include the new alignment of Rutherglen Road in the noise assessment, as much of the new housing cannot be built until the realignment has taken place. The new road is expected to be provided by 2020, the assessment year, and may well be built earlier. The TRA states that if it is not in place by the time that the M74C scheme opens, it would be necessary to pursue the compulsory purchase powers contained in the draft order to acquire land alongside Polmadie Road and the existing Rutherglen Road for road widening purposes. This would result in a delay to the Oatlands renewal project. The forecasts of noise levels have therefore been based on the realigned Rutherglen Road, and the volume of traffic that would be expected to use it, for the year 2020, with and without the M74C. The noise predictions are for various locations within the new community, and with and without 2.5m and 3m noise barriers in place along the northern side of the motorway.

5.75 The results are shown in the two maps contained in document TRA/G/1, the first for the $L_{A10\ 18\ hour}$ analysis (4 existing receptors) and the second for the $L_{Aeq\ 16\ hour}$ analysis (daytime noise at 25 receptors within the new Oatlands layout).

5.76 The first set of figures (for existing receptors) shows that for 3 of the receptors in the western part of the Oatlands area, situated some 300+m from the motorway, the addition of the motorway traffic would add 0.4 dB or less to noise levels, with the

addition of the noise barriers making very little difference to the situation. The fourth receptor is Richmond School on the west side of Logan Street, which is to be retained. There, the motorway is predicted to result in a 5.9 dB increase in the $L_{A10\ 18hour}$ noise level, reducing by 0.9 dB-1.2 dB if the noise barrier is in place.

5.77 The second set of figures (25 receptors within the proposed new layout) show that most locations within the main new housing area at Oatlands would be well screened from the realigned Rutherglen Road by intervening housing. These areas would experience moderate noise levels (mainly in the range 45-55 dB) without the M74C. The predicted increases due to the M74C scheme (no barrier) would be typically about 4 dB, and the M74C would be likely to be the main source of ambient noise, underlying noise from local traffic. These increased noise levels would not generally be high enough to require noise mitigation. The addition of the motorway noise barrier would provide some small reductions (between 1-4 dB), which would have a beneficial effect on open areas within the development.

5.78 The highest predicted noise levels under the do minimum scenario (69-70 dB) are along the realigned Rutherglen Road, attributable to the traffic on that road. Although these new residential facades would be closest to the motorway, they show the smallest increases due to the motorway (1-2 dB) as they abut the realigned Rutherglen Road, where the passing traffic would be expected to be the dominant source of noise, masking the noise from the motorway. The addition of motorway noise barriers would make little or no difference to the situation, as the realigned Rutherglen Road would be closer to the new houses than the motorway. A noise barrier may provide some subjective benefit because noise from the motorway would be likely to be more continuous than noise from the realigned Rutherglen Road and other local roads.

5.79 These predicted noise levels are such that noise protection measures would be required to achieve the standard set in PAN 56. The introduction of a noise barrier along the north side of the motorway would marginally reduce levels by up to 1.5 dB, but this would not avoid the need for further noise mitigation at these properties.

5.80 The situation would be somewhat different if the new Rutherglen Road is built with noise mitigation, such as barriers or low noise surfacing, as this would increase the effect of the noise from the M74C, but this has not been taken into account in the assessment.

5.81 The church on the west side of Polmadie Road is to be retained and converted to a community centre, abutting the realigned Rutherglen Road. It would experience similar noise levels to the new residential properties facing onto Rutherglen Road, and the description in the previous paragraphs applies.

5.82 The Oatlands Noise Assessment report makes it clear that night time noise has not been considered, as it is assumed that traffic flows will be much lower at night than during the day, and the average night time noise levels will be less significant than during the day. Night time traffic flows for Rutherglen Road and the M74C would be required to

check this assumption. However national guidance on the assessment of traffic noise from new roads, contained in the Design Manual for Roads and Bridges, does not require the prediction of night time noise levels. The methodology requires noise to be assessed in terms of 18 hour L10 levels, as a large body of research shows that these are a good indicator of overall traffic noise disturbance. This is national guidance, and to depart from it would be to accept that all traffic noise assessments based on it are flawed.

5.83 Further to the east at Farme Cross, the **Terrace Community Association** is also concerned about the potential effects of noise. Here, a noise barrier is proposed along the north side of the motorway. This would be expected to achieve noise reductions of up to 8 dB, resulting in increases in the order of 3 dB at the receptors, which would not be regarded as significant.

Local air pollution

5.84 The overall and general effects of the new motorway on air pollution and climate change are reported in chapter 6 below, where details of the methodology can be found. The air pollution studies were carried out at two levels, one covering a wide area and the other looking at local effects along the corridor of the proposed motorway, including adjoining roads (Figure K6.3 in the ES).

5.85 Within the smaller local study area, road traffic emissions were used as inputs to a dispersion model capable of quantifying changes in concentrations within this more detailed study area, for direct comparison with existing air quality and air quality objectives. Nearest residential receptors were identified along the motorway route, as depicted in Figure 4.4 of the Environmental Statement. The dispersion modelling produced detailed and quantified predictions of changes in concentrations.

5.86 The detailed dispersion modelling for this evaluation was undertaken for 5 separate, but contiguous, areas along the length of the M74C. The ES displayed the results of these modelling exercises for each of these areas, in the form of contour plots of NO2 concentrations for the 'Do Minimum' and 'Do Something' scenarios in the year 2010.

5.87 The new motorway would be expected to contribute to higher NO2 concentrations at locations within 100m of the route, compared to current and predicted concentrations in the absence of the motorway. Table 5.1 of the ES (page K38) lists 231 properties within 100m, 119 residential, 87 industrial, 15 retail, 5 office, 4 community, and 1 recreation. The nature of the route is such that this would lead to relatively low increased human exposure, given the small number of residences affected. For residents within approximately 500m of the M74C, road traffic using the M74C would not affect air quality significantly and would comply with air quality objectives designed to protect human health.

5.88 The modelling has provided estimates of the concentrations at 20 locations, selected on the basis that they are the nearest locations to the new road at which members

of the public are likely to be present and exposed over periods of time that are consistent with those used in defining the air quality objectives. The smallest practical unit of time in this respect is one hour. These modelling results are summarised in Table C1 of Appendix C of volume 1 of the ES. The residential site closest to the proposed motorway is at the junction of Eglinton Street and Devon Street, which is entered in the modelling process as a distance of 23m from the centre line of the road. At this point the annual average NO2 concentration in 2010 is estimated as being 39.3 µg m-3. Of this total, the contribution from the M74C traffic would be approximately 3 µg m-3. This would be the most affected receptor along the length of the new road. It was demonstrated in the ES (Table K4.5) that the higher concentrations would be at the western end of the route, and that all other receptors would experience lower concentrations.

5.89 The modelling exercise was extremely complex and the ES should be referred to for the detail. The annual average concentration of NO2 recorded in 1997 at the Glasgow City Centre site was 43.5 µg m-3. The prediction is that this value will have fallen to 33 µg m-3 in 2010. An initial and cursory inspection of some of the modelling results in the ES for locations next to the new motorway (Figure K4.5 or at pages K1-33-54) suggests that annual average concentrations of NO2 in some places would be in excess of 50 µg m-3. Concentrations as high as this would be well above the air quality objective value of 40 µg m-3. However, in practice, it is expected that concentrations would be much lower because of the allowance that needs to be made for the reduction in background concentrations between now and 2010 (as set out in K4.10 of the ES). Only in the area at the junction with the M8 is it predicted by the modelling process that annual average NO2 concentrations will be in excess of 40 µg m-3 and this is not primarily because of the new motorway but the influence of the higher concentrations in the city centre and the M8 traffic. These are not locations where the public will experience long term exposure.

Disruption during construction

5.90 The work for the Environmental Statement has included consideration of the impact of the scheme during construction. This is summarised in section 13 of volume 1 of the Environmental Statement, and illustrated in a series of maps 13.1a-13.1e, with some extra detail in Technical Appendix I in volume 2 of the Environmental Statement. The main matters considered were road closures and traffic diversions due to construction activities; construction traffic and its effects; and noise during construction work.

5.91 The effects on **traffic flows on existing roads** due to road closures and traffic diversions are summarised in table 13.2. This lists 23 locations where some disruption is expected, with disruption at most locations expected to last 2-3 months. However there are 10 locations (mainly major structures) where disruption is expected to last up to 6 months. At all locations, every effort will be made to minimise the delays to general traffic by the timing of the closures and diversions and careful management of the arrangements. Proposed diversion routes are shown on the maps. It is not predicted that drivers will divert onto other side roads that are less suitable for increased traffic.

5.92 The most severe disruption is expected on those roads which carry heavy volumes of traffic, and especially where the roads are already congested. This applies to the tie in of the viaducts at the west end of the M74C scheme to the existing running lanes of the M8 and the interventions west of Kingston (2-3 months at each location) where there would be additional congestion; and to the main surface roads : Eglinton Street, Cathcart Road, Polmadie Road, Glasgow Road, Farmeloan Road, Cambuslang Road, and Fullarton Road, where it is hoped that at least one lane in each direction can be maintained to limit disruption.

5.93 Table 13.3 in volume 1 of the Environmental Statement shows the predicted increases in **construction HGV movements** for various roads in the area, and the proposed access routes for this construction traffic are shown on the maps. These predictions are derived from estimates of quantities of materials to be shifted contained in table I2.2 (technical annex I in volume 2 of the Environmental Statement); the probable access routes to be used; and the duration of operations, leading to predicted additional trips per week, all explained in more detail in the appendix to the technical annex.

5.94 The approximate total number of HGV loads that are expected to be required would be about 213,000. Although these are described as “movements” in table I2.2, and “trips” in the appendix to the technical annex, it would appear that they are in fact loads, so that the number of vehicle trips and percentage increases predicted in the environmental statement (and recorded below) would be doubled, as it is assumed that there would be no backloading of materials to be removed from the site. However it is possible that some materials may be brought in by rail.

5.95 The predicted construction traffic figures are based on 18 hour flows., and show increases in total traffic flows due to construction work of less than 1% in all cases. The increases in HGV flows are predicted to be mainly in the range of 2%-3%, but with increases of 6%-10% in the worst situations. Although these increases are regarded as insignificant, it is accepted that the duration of the increased movements (up to 60 weeks) is likely to lead to some disruption of traffic, particularly during congested peak hour conditions.

5.96 Table I4.3 in the technical annex brings the information together to show the probable additional HGV movements along individual access roads on a daily basis. This takes account of all HGV trips to different working locations for different purposes, based on 5.5 day working week. The worst case results are as follows, and would be doubled if (as appears to be the case) the return trips have been omitted :

Access road	**Additional HGVs per day**	**Maximum worst case period**
Pollokshaws Road	44	15 weeks
Polmadie Road	86	15 weeks
Glasgow Road	125	55 weeks
Farmeloan Road	131	22 weeks
Cambuslang Road	131	48 weeks
Fullarton Road	89	60 weeks

5.97 Sensitive receptors, principally residential properties and community uses, alongside the access routes to be used by construction traffic have been identified and are shown on the maps, notably at Rutherglen, Farme Cross, Caledonia Road, Cathcart Road, Pollokshaws Road, and Devon Street. Although significant environmental impacts are not predicted, due to the small relative increase in vehicle flows, the numbers and duration of movements are such that the increases would be noticeable to people in the sensitive receptors. In addition, pedestrians and cyclists who use these routes would be likely to experience a reduction in amenity.

5.98 The construction work would cross or affect **railway routes** at 4 locations. This would involve some night time line closures, but no disruptive possessions would be required. Construction work would also disrupt users of Rutherglen Station.

5.99 There would also be some interference with **utilities**, although this would be confined to areas where there are bridges and other structures, as most of the utilities are within existing streets.

5.100 Regarding **noise during construction,** estimates have been based on assumptions about what plant and equipment would be used, and are worst case predictions relating to the noisiest phases of the work and no mitigation measures. The predictions are shown in table J5.1-3 for the receptor locations shown in blue on the series of maps figure J5.1a-e in technical annex J in volume 2 of the Environmental Statement. The predictions have been assessed on the basis of a daytime criterion of 75 db and a night time criterion of 45 dB. The latter would be raised where ambient levels are higher. Levels in excess of 10 dB above these criteria are regarded as severe impacts.

5.101 The main impacts that are predicted during the construction work are as described below:

(a) A series of severe noise impacts would be expected in relation to the work on the main motorway structures, due to general works and driven steel piling (night time exceedances in the range 21-29 dB).

(b) Daytime exceedances are predicted to be much lower (mainly 1-7 dB, but up to 17 dB at one location).

(c) At each site, piling work would be expected to last 1-3 months, and general construction work 4-9 months, with noise levels varying from day to day. The majority of the work would take place during the hours 0800-1900 Monday-Friday and 0800-1300 on Saturdays. Piling and other potentially high noise activities would be restricted to these hours wherever possible.

(d) There would be liaison with the two local councils when work would be required outwith these hours. Night time work would be required mainly in connection with bridge construction and large concrete pours. The areas most likely to be affected would be Scotland Street (West Street viaduct); Queen Street (Rutherglen Station bridge); and near the Farmeloan Road bridge. Night working at each bridge site would be likely to be required approximately one night a week over a period of up to 3 months.

(e) Vibration from piling work for bridge structures may be perceptible up to 100m from the operations. The vibration levels are expected to be unlikely to cause annoyance or to reach levels that could risk damage to structures. Where there are vulnerable buildings within 50m of locations where percussive piling is required, a prior risk analysis will be undertaken.

(f) Increased flows of heavy goods vehicles on key access routes for import and export of construction materials.

5.102 Noise mitigation measures would include adherence to the code of good practice (BS 5228); temporary noise barriers; the location of noisy plant as far as possible from sensitive receptors; and proper maintenance and operation of plant. With these measures, the TRA considers that the majority of day time noise would be kept within acceptable levels. Where buildings are expected to qualify for noise insulation once the motorway is in operation, that insulation would be installed prior to the construction work.

CHAPTER 6: AIRBORNE EMISSIONS

The Case for the Trunk Road Authority and Supporters

Air quality

6.1 The case for the TRA is based on a computer modelled research study recorded in chapter 15 of the ES and in Technical Annex K1 and Appendix K1, the study following the guidance in the DMRB. In terms of air quality, the environmental impact requires to be assessed against: -

- air quality standards and guidelines;
- air quality in the absence of the motorway, principally in the area of central and south east Glasgow;
- the methods used to evaluate changes in ground level concentrations of pollutants emitted from road traffic;
- an evaluation of the predicted concentration changes against background concentrations and relevant air quality standards and guidelines; and
- a quantification of the changes in carbon dioxide emissions resulting from the M74C.

6.2 With this type of road scheme, air quality changes cannot be identified as entirely negative, or entirely positive. Because the effects will be experienced over an extensive road network, a view of the **net** exposure to airborne pollutants for the population affected over a wide area is required.

6.3 Air pollutant concentrations change over time for reasons such as control measures or increased human activity. Over the next 10 years, concentrations of a number of road traffic related pollutants are expected to decline substantially. For this reason, it is important to define a reference year against which changes can be assessed. In this case, the year selected is 2010, because by this time the M74C (if permission is granted) will be in operation and 2010 is a key year for air quality legislation.

Air Quality Standards & Guidelines

6.4 Air quality is assessed against standards and guidelines set out in EEC Directives, incorporated into UK law, that are generally based on the need to protect human health.

6.5 The 4 sources of air quality standards and guidelines that are relevant are as follows: -

(1) The Air Quality Regulations (2000) and subsequent amendment for benzene and carbon monoxide in 2002 which incorporate the Government's objectives for air quality in the next 5 years as described in the Air Quality Strategy (2000) and its subsequent Addendum (2003).

(2) The European Commission Daughter Directives for certain revised air quality standards, which provide the basis for some of the air quality objectives set in the latest Air Quality Strategy documents.

(3) Recommendations for air quality standards proposed by DEFRA's Expert Panel on Air Quality Standards (EPAQS).

(4) The World Health Organisation (WHO), which formally published revisions to some of its air quality guidelines in November 1995.

6.6 Any assessment of air quality impacts must take account of existing concentrations of pollutants and the future air quality without the M74C. The description of existing air quality is based largely on data from (1) national networks sponsored by the DEFRA, such as the Automatic Urban and Rural Network (AURN), which has 3 monitoring stations in Glasgow; (2) monitoring carried out by GCC's Environmental Protection Section; and (3) interpolation of monitoring data and emissions data by DEFRA's sub contractor, "netcen" and available on the National Air Quality Archive web site.

6.7 Pollutant concentrations in the atmosphere are constantly fluctuating because emissions to atmosphere vary in their magnitude with time and weather conditions such as variations in wind speed. Factors such as topography and thermal mix are also influential. Examination of any recording of pollutant concentrations made by continuous analysis will show pronounced 'peaks' and 'troughs' of ambient concentrations.

1.1 The pollutants – current and predicted levels

6.8 The research study considered existing levels of nitrogen dioxide, particulate matter, lead, carbon monoxide, hydrocarbons, including polycyclic aromatic hydrocarbons, and sulphur dioxide. Concentrations of NO2 are the most critical of any pollutant in terms of the M74C, with regard to compliance with air quality objectives. In Glasgow, 76% of nitrogen oxide emissions are attributable to road transport. There are 3 monitoring regimes for NO2 levels. The 3 AURN sites in Glasgow indicate NO2 levels exceeding current objectives at 2 of these sites over the 5 year period 1997-2002. National NO2 Survey Data – part of DEFRA's diffusion tube survey – indicates, with 2 minor exceptions, compliance with annual mean objectives. Finally, GCC's own diffusion tube monitoring at a large number of sites across the city indicates compliance with objectives.

6.9 Netcen estimates of background concentrations of NO2 in the Glasgow area are as follows: -

Year	Range
2001	31-42µg m3
2005	28-38µg m3
2010	28-38µg m3

The forecasts for the years 2005 and 2010 are within the relevant standards for those years, while the top end of the forecasts for the 2001 figure slightly exceeds those standards.

6.10 As regards particulate matter, the annual average concentration of PM10 in the vicinity of the M74C corridor (without the new motorway) is 18-20 µg m-3, with highest concentrations found closest to the city centre. The currently applicable air quality objective for annual average concentrations of PM10 is 40µg m-3. Existing concentrations are easily compliant with this objective. In 2010, however, the objective for Scotland will be reduced substantially to 18 µg m-3. Predictions by netcen are that this target will be achieved in all but the centre of Glasgow by 2010. Nationally, emissions of primary particles are expected to reduce in future years, through the continued application of abatement technologies in industry and motor vehicles. With decreasing emissions of SO2 and NOx, secondary particle concentrations should also diminish. Thus, there is a justifiable expectation that future PM10 concentrations will be lower than they are today, although improving this aspect of air quality is more difficult than in the case of NO2.

6.11 As regards carbon monoxide, this is a pollutant almost exclusively associated with vehicle emissions. Consequently concentrations are highest in heavily urban areas with high traffic densities. The annual average concentration of CO in Glasgow is highest in the city centre, at approximately 600 µg m-3, declining to 300µg m-3 at the edge of the city.

6.12 In relation to hydrocarbons, vehicle emissions contain a great many hydrocarbon compounds. Two are of particular importance in the context of the Air Quality Strategy, namely benzene and 1,3 butadiene, both being carcinogens. The air quality objective for 2010 is for annual average concentrations of benzene to be less than 3.25µg m-3. Current concentrations in Glasgow are 1µg m-3 or less and therefore compliance is not a problem for this pollutant.

6.13 Concentrations of 1,3 butadiene are not measured directly in Glasgow at the present time but from knowledge of earlier measurements made by GCC and of similar urban areas, it is likely that annual average concentrations are substantially below the air quality objective value of 2.25µg m-3.

6.14 In regard to lead, measurements at DEFRA's multi element sites in Glasgow and Motherwell indicate levels well within the relevant standards for this pollutant, the impact of which has declined substantially with the shift to unleaded fuel.

6.15 The adoption of an air quality objective for PAH (benzo-a-pyrene) has stimulated more widespread measurement of PAH concentrations than was previously the case. The DEFRA 2001 AQS consultation document provides a summary of measurements of benzo-a-pyrene concentrations around the country, which shows that concentrations are declining. The annual average concentration in Glasgow in 2000 was 0.12 µg m-3.

6.16 Sulphur dioxide is associated with combustion, primarily with coal and oil burning. Whilst it was one of the major pollutants of concern before 1980, concentrations in ambient air have declined to such an extent that it is now not a significant issue in terms of general air quality. In the context of the M74C, SO2 can be ignored as a pollutant for consideration, since background concentrations are low and the scheme has no significant emissions of this pollutant.

6.17 The Environment Act 1995 required local authorities to carry out a formal review and assessment of air quality, according to guidance issued subsequently by DETR and DEFRA. The City of Glasgow has done this, in 3 stages, and reported its findings. The Stage 3 Report, published in 2002, led to the declaration of an Air Quality Management Area ("AQMA") in the city centre, bounded by the M8, the River Clyde, and an eastern boundary defined by Saltmarket Street, High Street, Duke Street, Knox Street and Wishart Street. This small area has relatively high concentrations of NO2 and PM10, and requires action to reduce concentrations in order to comply with air quality objectives. Emissions from vehicles using the M74C would not significantly affect air quality within this AQMA directly, but the scheme would have some positive implications for the AQMA by diverting traffic flows away from this more polluted area. As a consequence, emissions from road traffic within the AQMA will diminish, resulting in improvements in roadside air quality.

6.18 The existing ambient concentrations of the key substances to be emitted from vehicles using the M74C (i.e. NOx, PM10, CO and some hydrocarbons) can be estimated with a reasonable degree of confidence, using the data collected by routine monitoring programmes. In brief, existing air quality in the Glasgow area is consistent with that which might be expected in any large city. Concentrations of all pollutants will meet all air quality objectives set for 2005 (and defined in the Air Quality Regulations) for most urban background locations, but concentrations of NO2 and PM10 in the city centre are expected to be close to values defined as air quality objectives. The M74C is not to be built in the most polluted area of Glasgow, which is the city centre AQMA.

The predicted impact of the M74C

6.19 The evaluation was undertaken using complex modelling techniques described in the ES.

6.20 Because the M74C has implications for traffic flows over a very wide area, affecting roads across central Scotland and beyond, two study areas were identified for the Environmental Impact Assessment - the Wider Study Area and the Detailed Study Area - allowing evaluation at two different spatial scales.

6.21 The wider study area covered the road network across Glasgow and neighbouring towns (Figure K6.2 in the ES), extending from Strathblane in the north west, Denny in the north east, Lesmahagow in the south east and Galston in the south west. Within this area, consideration was given to those roads predicted to experience a change in road traffic flows of 10% or greater. Impacts at this scale were evaluated in terms of the proportion of residential properties at or near the roadside experiencing changes in concentrations of the key pollutants, i.e. NO2 and PM10. Specifically, properties were counted within 200m of roads. Changes to roadside concentrations were calculated using an adapted version of the DMRB spreadsheet method, an approach commonly used to assess the impacts of road schemes, as a 'screening level' tool. Usually, it is used for single road links, but ERM has created a version that is able to use the output of the traffic model for many thousands of links simultaneously. The calculation of air quality changes across this wider study area is a 'coarse' level view of the air quality changes, to allow an appraisal to be made of the net impact of

the air quality changes, as it involves the summation of a large number of small positive and negative changes in pollutant concentrations.

6.22 The second study area covered a smaller area, namely, the M74C itself and adjoining roads (Figure K6.3 in the ES). This is broadly speaking bounded on the north and west by the M8, on the east by the M73 and on the south by Cathcart, Cambuslang and Uddingston. Road traffic emissions were used as inputs to a dispersion model capable of quantifying changes in concentrations within this smaller study area, for direct comparison with existing air quality and air quality objectives. Nearest residential receptors were identified along the motorway route, as depicted in Figure 4.4 of the Environmental Statement. The diagram also shows the actual route versus the representation of the model road links. It gives a 'fine' level view of the air quality changes in the vicinity of the new motorway. The dispersion modelling exercise benefited from the availability of climate and meteorological data from the Meteorological Office at Glasgow Airport. The data obtained is considered to be representative of the M74C area. In addition, the ADMS dispersion model used in the analysis has the capability of allowing for the chemistry necessary to take account of the oxidation of nitrogen monoxide to nitrogen dioxide.

6.23 The ES presented the results of the impact assessment at the 2 spatial levels, concentrating on the 2 main pollutants of relevance i.e.NO2 and PM. Over the wider study area, it was able to show the balance of positive and negative impacts in terms of roadside properties affected. This was a semi-quantitative exercise, used to determine the broad impact in aggregate across a large area. For the smaller area, focused on the new road and immediate surroundings, the dispersion modelling produced detailed and quantified predictions of changes in concentrations.

The Wider Study Area

6.24 The EIA has predicted that in future years, the effect of the M74C on road traffic flows will result in air quality improvements at a significant number of near roadside properties, but that some properties will experience slightly higher concentrations. More properties will experience reductions in air pollutant concentrations than the number experiencing increases. These are properties within 200m of the road network. It should be noted that the result is directly dependent on the traffic model output.

6.25 Approximately 3.5 million 'properties' are accounted for in this way This is a greater number than there are actual properties, because of multiple counting in the mapping process, where a property influenced by more than one road appears as more than one entry in the calculation.

6.26 In percentage terms, the analysis shows that for the year 2010, 45% of the properties within 200m of roads considered in the wider study area would experience a reduction in NO2 concentrations, as compared with 25% that would experience an increase, with the remaining 30% experiencing no discernible change. About 56% of properties would experience a reduction in PM10, 43% an increase, and 1% no change. (Table K6.4 p.K49 of ES)

6.27 The evaluation shows that the road links causing increases in NO2 concentrations are mainly associated with the M74C itself and the roads linking to it through the Coatbridge and Paisley areas. In central Glasgow, along the M8 to the north of the city centre and along the A726, the scheme brings air quality benefits.

6.28 In relation to health issues, the assessment indicates that in 2010, as a result of the M74C, there would be a 12% reduction in the number of properties in the wider study area that would be exposed to concentrations of nitrogen dioxide (NO2) high enough to be non-compliant with relevant government air quality objective of 40µg m-3, as compared with the 2010 Do Minimum. There would be a very slight reduction in the number of properties where the annual average PM10 concentration is non-compliant with the air quality objective of 18µg m-3, as compared with the Do Minimum case. (Table K6.5)

6.29 The air quality assessment also shows that the M74C would have beneficial effects on the air quality within the Air Quality Management Area designated by Glasgow City Council for the city centre area. About 58% of the near roadside properties would experience a decrease in annual average NO2 concentrations, whereas 29% would experience an increase.

The Detailed Study Area

6.30 The detailed dispersion modelling for this evaluation was undertaken for 5 separate but contiguous areas along the length of the M74C. The ES displayed the results of these modelling exercises for each of these areas, in the form of contour plots of NO2 concentrations for the 'Do Minimum' and 'Do Something' scenarios in the year 2010.

6.31 The modelling exercise was extremely complex and the ES should be referred to for the detail. The annual average concentration of NO2 recorded in 1997 at the Glasgow City Centre site was 43.5µg m-3. The prediction by netcen is that this value will have fallen to 33µg m-3 in 2010. An initial and cursory inspection of some of the modelling results in the ES for locations next to the new motorway (Figure K4.5 or at pages K1-33-54) suggests that annual average concentrations of NO2 in some places would be in excess of 50µg m-3. Concentrations as high as this would be well above the air quality objective value of 40µg m-3.

6.32 In fact, concentrations are expected to be much lower, because of the anticipated reduction in background concentrations between now and 2010 (as set out in K4.10 of the ES). Only in the area at the junction with the M8 is it predicted that annual average NO2 concentrations would be in excess of 40µg m-3, and this is not primarily because of the new motorway but the influence of the higher traffic concentrations in the city centre and on the M8. These are not locations where the public would experience long term exposure.

6.33 The modelling has provided estimates of the concentrations at 20 locations, selected on the basis that they are the nearest locations to the new road at which members of the public are likely to be present and exposed over periods of time that are consistent with those used in defining the air quality objectives. The smallest practical unit of time in this respect is one hour. These modelling results are

summarised in Table C1 of Appendix C. The results were not identified by street names in the ES. The nearest location to the M74C route is at the junction of Eglinton Street and Devon Street, which is entered in the modelling process as a distance of 23m from the road centre. At this point, the annual average NO2 concentration in 2010 is estimated to be 39.3µg m-3. Of this total, the contribution from the M74C traffic would be approximately 3µg m-3. This would be the most affected receptor along the length of the new road. The ES shows (table K4.5) that all other receptors would experience lower concentrations, with the relatively higher concentrations at the western end of the route.

6.34 The new motorway would be expected to contribute to higher NO2 concentrations at locations within 100m, relative to current concentrations or future concentrations in the absence of the motorway. Table 5.1 of the ES (page K38) lists 231 properties within 100m of the motorway, of which 119 are residential, 87 industrial, 15 retail, 5 office, 4 community, and 1 recreation. The nature of the route is such that this would lead to relatively low increased human exposure, given the small number of residences affected. For residents within approximately 500m of the M74C, road traffic using the M74C would not be expected to affect air quality significantly, and levels would comply with air quality objectives designed to protect human health.

Greenhouse Gas Emissions

6.35 Road traffic emits quantities of carbon dioxide from petrol and diesel fuelled vehicles, which is one of the greenhouse gases thought to be responsible for climate change effects. Whilst emissions of CO2 have no implications for local air quality, a requirement of any new road scheme is a quantification of changes to emissions of CO2.

6.36 Emissions of CO2 are determined by fuel consumption and the kilometres travelled by the vehicle fleet. Lesser factors are the types of vehicles used and vehicle speeds. In the case of the M74 Completion, the emissions of CO2 are calculated using the outputs of the traffic model and the Design Manual for Roads and Bridges spreadsheet model. The ES, at pages K58 to K61, explains how the calculations were made and provides details of the results. Table 15.3 on page 208 of the ES summarises the predicted figures for each scenario and pollutant.

6.37 The "do minimum" analysis shows that CO2 emissions are likely to rise slightly for the road network considered, i.e. 8,250 road links across the wider study area, in the absence of the M74C. The predicted increase is 96,800 tonnes in the period 2001 to 2020, which represents a 4% increase. If the M74C is built, this increase would be expected to rise to 231,600 tonnes (10%). The difference between Do Minimum (no M74C) and Do Something (with M74C) is predicted to be an increase of 86,000 tonnes/year (3.8%) for 2010, and 134,800 tonnes/year (5.7%) for 2020. The whole of the Scottish transport sector in the year 2000 was responsible for CO2 emissions of 7.4 million tonnes. Accordingly, the additional annual contribution of the M74C in 2020 is estimated to be 1.8% of this total. While the increase in absolute terms is indisputable, the scale of the increase would be marginal, and there may well be an overall reduction resulting from other traffic management and transport policies.

6.38 Emissions of hydrocarbons, oxides of nitrogen, and particulate matter across the whole road network are expected to fall substantially between now and 2020, as a result of improved emissions control technology on vehicles. It could be argued that all these pollutants contribute to air pollution at a regional scale, through the formation of secondary particles, ground level ozone, or the phenomenon of acid deposition.

6.39 The presence of the M74C in 2020 would be expected to lead to very slight increases in total emissions of these pollutants over the wider study area considered, compared to the situation without the new motorway (see Table K6.8 of the ES). The differences would not be significant in the context of regional air pollution, and the TRA considers that the scale of the reductions that will be achieved over the period 2001– 2020 dwarfs the absolute values of these differences.

The Case for JAM74/FOE

6.40 In terms of air quality, the ADMS dispersion model used indicated an adverse impact on air quality within 100m of the M74C, with increases in both nitrogen dioxide and particulate matter. While these rises are small in themselves, when added to the current high pollutant levels in Glasgow city centre, the result may be non-compliance with air quality standards. About 89% of the route of the M74C lies in the area of worst pollution. At the western end, near the Kingston Bridge, there are recently built flats and flats under construction adjacent to the proposed route. The ES confirms that air quality objectives in this area are likely to be exceeded.

6.41 There is particular concern regarding pollutants and the incidence of respiratory disease, particularly asthma in children and young people. Research studies are cited to show the increasing number of asthma sufferers, and the impact in built up areas of high levels of sulphur dioxide, ozone, and nitrogen dioxide. While the causes of asthma may be open to debate, these pollutants are known to act as trigger factors. Accordingly, any increase in the level of the pollutants would result in an increased prevalence of asthma attacks.

6.42 In terms of climate change, the M74C is opposed WWF Scotland on the basis that it is inconsistent with stated UK government and Scottish Executive policies on reducing emissions. It was clear that the decision to proceed with the M74C had been taken before consideration of any scientific assessment of the likely impact of the M74C on climate change emissions. International commitments to which the government was bound include the Rio summit objective of cutting carbon dioxide levels to below 1990 levels by 2000 and the Kyoto protocol which requires a 12.5% cut in all 6 greenhouse gases to 1990 levels by the average of 2008 – 2012. Domestic commitments include a 20% cut in carbon dioxide by 2010 on 1990 levels and a 60% cut in pollution by 2050.

6.43 The UK government publication "*Climate Change: The UK Programme*" (2000) contained a section entitled the Scottish Climate Change Programme, with a Ministerial foreword. The programme presented the proposals to meet the various commitments, covering emissions from energy supply, business, transport, domestic, agriculture, forestry and land use, and the public sector. Recent analysis indicates the

need for further radical measures if the 20% reduction in carbon dioxide emissions is to be achieved. The programme indicated that, in addition to the fuel duty escalator, further measures in the transport sector should produce 5.6MtC (32%) of the 17.75MtC reduction predicted for 2010. Actions by devolved administrations were expected to produce additional reductions, and Scottish Ministers have indicated that Scotland would make an "equitable contribution to the Kyoto commitment". The fuel duty escalator has now been set at 0% - in effect abandoned. The programme also recognised the importance of action at local level by local authorities. Only the City of Edinburgh Council is actively pursuing congestion charging which is unlikely to take effect until 2006.

6.44 Recent government statistics show a reduction in greenhouse gas emissions from the road transport sector in Scotland from 2.2MtC in 1990 to 1.9MtC in 2000, a 14% reduction due almost entirely to increasing fuel efficiency. These figures represent 14.5% and 13.1% of Scotland's total net emissions of carbon dioxide. Over the same 10 year period, total Scottish emissions have fallen by 5%. The conclusion therefore is that while emissions from the transport sector have declined, the additional measures to reduce emissions have been less effective. To make the "equitable contribution", a transport policy to secure further reductions is needed.

6.45 While proponents of the M74C claim that it would have only a minor impact on climate change emissions, in absolute terms it would increase carbon dioxide emissions. The claim is based on a "do minimum" scenario as opposed to a positive package covering demand restraint, improved public transport, and freight traffic measures. The ES indicates that traffic using the M74C would produce increases in carbon dioxide emissions of 24ktC in 2010 and 37ktC in 2020. These figures respectively represent 1.2% and 2% of the total road transport emissions of carbon dioxide for the whole of Scotland in the year 2000. The 2010 increase represents 0.15% of total Scottish emissions in that year. On the assumption that the 2010 target is met, the M74C would account for 0.2% of total Scottish emissions. The CSTCS indicated that the M74C would result in a minimum increase of 20% in carbon dioxide emissions. This would result in an increase in emissions of 128ktC in 2010, equivalent to 6.5% of total road transport emissions in 2000 and 1% of all carbon dioxide emissions in 2010 if the target for that year is met. A package of alternative strategic measures in and around the M74 corridor would lead to real reductions in emissions. On climate change grounds alone, the M74C should not proceed.

The Case for SAPT

6.46 The SAPT did not lead any technical evidence in this area, choosing to rely on cross examination. The significance of the impact of the ongoing shift from petrol to diesel fuel in road transport was questioned, the TRA acknowledging that the air quality studies had taken account of this factor, the main element of which related to use by HGVs. There would have to be a significantly greater shift for any noticeable impact on air quality. Stabilisation of traffic flows at 2001 levels would be beneficial in terms of air quality, but given the limitations of the modelling exercise, it would be impossible to simulate the extent of the impact. The description of the predicted increases in CO2 emissions for years 2010 and 2020 with the M74C in place – Table K6.7 of the ES – as "modest" was disputed, the increases in absolute terms being significant and running counter to government air quality objectives.

The Case for Dr M Hersh

6.47 Dr Hersh noted that there was considerable concern over the impact of air pollution on health, and children's health in particular. The increasing incidence of asthma in young people for reasons as yet unknown, while not necessarily attributable to pollutants such as PM10, would not be helped by more traffic pollution. Despite advances in engine technology, more vehicles would inevitably mean more pollution. Any improvements in air quality would be short term as the surface road network would soon fill up again. A precautionary approach to airborne emissions should apply.

CHAPTER 7 : GEO-TECHNICAL, MINING & CONTAMINATED LAND

The Approach

7.1 The TRA evidence was based on a Ground Investigation (the GI) involving a number of consultants and liaison throughout with the design team on the planning and design of both the investigation and the emerging detailed design and route of the M74C. The details of the GI and the results are contained in chapter 7 and Technical Annex C of the ES (TRA/F/1) and Productions TRA/I/1 – TRA/I/4. The GI is an ongoing process.

7.2 The GI itself was based on desk top studies reviewing all available information, the study on contamination and mitigation measures culminating in the production of an Inception Report (TRA/I/1), indicating the results of the research and the areas where further site investigations would be necessary. For the purposes of the GI, the route was divided into 5 sections, with a further 29 discrete sub-area sites identified as major historical industrial land use sites, where contamination might be expected. As regards geology, widespread areas of thick deposits of alluvial soils and shallow mine workings were noted, along with some local areas of deep fill deposits. The exact position and condition of mineshafts required to be determined. Following these preliminary studies, a contract for the GI was drawn up and let.

7.3 The main GI, which was undertaken between August and December 2002, included 304 light cable percussive boreholes (including 36 rotary cored holes), 250 trial pits, 58 static cone penetration tests, and 24 window sample holes. A number of groundwater sampling points and 62 trial trenches were included, along with a considerable number of *in situ* tests.

7.4 Analyses carried out by specialist personnel assessed the impact of the ground conditions along the route, including the potential risk of collapse to mineshafts and mine workings and the impact of such failures on the surface. Assessments of the settlement characteristics of the fill and alluvial soils under varying load conditions of embankments were made, and the analyses helped to formulate recommendations for the design and construction of the road.

Geo-technical & Mining Issues

7.5 The general geological findings of the investigations showed that the proposed route was along a line largely within the Clyde basin. Fill deposits were widespread and generally less than 5m thick, except for deeper wastes in former clay pits, followed by alluvium. These thick alluvial deposits (mostly over 20m) generally consisted of clays, silts and sands, often laminated and inter-bedded and generally grading coarser with depth. The alluvium was followed in places by glacial till, or rockhead, at depths ranging generally between 20 – 40m. Three separate groundwater systems were identified. While artesian conditions were known to exist in the Cambuslang area, the investigations found this not to be the case at the route location in that area.

7.6 Shallow mine workings were identified at several locations along the route, specifically at Gushetfaulds (chainage 1,580) to Dixon Blazes (chainage 3,500) and

West Clyde Approach (chainage 6,700) to Fullarton Interchange (chainage 7,780). The workings were found to include the stoop and room and longwall methods of mining. Potential instability was identified at several locations along the route.

7.7 The fill was found to be mainly of general composition, except for the locations of back filled clay pits around the Rutherglen area, where chromium waste was found, and at the former Clydebridge Steelworks, where paper pulp waste and some slag material were encountered.

7.8 The concept design was for the road to be retained at an elevated level to aid crossings and maintain the route above contaminated ground. This necessitated the incorporation of several embankments and viaducts. For areas where high embankments were indicated, considerations of settlement under the imposed loading of substantial soil cover were required.

7.9 Construction techniques considered included pre-loading and surcharging of the embankment footprint, the use of lightweight fills, stage construction, accelerated settlement techniques incorporating soil drainage, basal reinforcement to the embankments, and piling. All structures would require piling. Foundation options for embankments and structures were based on minimum disturbance to contamination. Piled embankments were recommended at 5 locations, particularly in the areas of deep wastes. Elsewhere, basal reinforced embankments were recommended..

7.10 Grouting was recommended for sections of the route underlain by shallow mine workings with a potential for some collapse and surface subsidence. This would involve drilling into the mine workings and using the drilled holes to insert a cement grout for infilling. Several mineshafts in sections of the route were recommended for grouting and capping. Approximately 1.7 million cubic metres of fill may be required for the construction of embankments. Possible sources of the fill material were suggested.

7.11 As regards costs, earthworks were estimated at £30 million, piling at £13.5 million, and stabilisation works at £8.3 million. There was nothing abnormal or exceptional in either the works or costs anticipated, the works being standard and conventional activities associated with a road project.

Ground contamination

7.12 The contamination studies, recorded in the documents described above, followed the guidance in the DMRB and PAN33 (TRA/I/1).

7.13 Historical maps and photographs indicate extensive tracts of the proposed route were previously occupied by heavy industry, including iron and steel, chemical and paper manufacturing, collieries and clay pits, and associated railway land, giving the potential for significant land and groundwater contamination.

7.14 Current ground conditions typically comprise a universal layer of made ground of varying but substantial thickness, overlying the alluvial infill of the Clyde valley. Groundwater is present within each strata type, but the vertical movement between different strata is limited. Shallow groundwater flow directions are generally

controlled by topography and the location of the nearest surface watercourses. The GI included sampling of soils and groundwater from boreholes and trial pits in over 500 locations, as well as the sampling of surface waters and soil gases. Monitoring wells were installed at 261 locations to allow continued monitoring of groundwater and soil gas.

7.15 Relevant contaminated land legislation includes the Control of Pollution Act 1974, the Environmental Protection Act 1990, and the Environment Act 1995, including Part 11A and subsequent regulations, planning legislation, and the Health and Safety at Work Act 1974. Key future legislative drivers include the Water Framework Directive and the Environmental Liabilities Directive. Contamination and pollution identified along the route do not fall within any single aspect of the legislative framework. Most of the contamination is defined as "historical" in that the primary cause of the contamination happened in the past. A key feature of the new contaminated land regime and guidance is that the land should be "suitable for its current use". Changes of land use trigger controls through the planning process to ensure that the change of use will not lead to environmental damage. Where a development is subject to planning permission, the planning legislation is primary and the Part 11A secondary. Where land is not subject to planning controls, the default position is Part 11A. This is the situation for the M74C. Local authorities are the primary regulators for both planning and the new contaminated land regime, and liaison with the relevant local authorities is ongoing. The contaminated nature of the route means that compliance with the provisions of the Health and Safety at Work and Control of Pollution Acts will place significant constraints on construction work procedures.

7.16 Assessment of contamination within the corridor conformed to established current best practice, using a risk based approach on a site by site basis. Data for each site was gathered from documented information and used to create a conceptual model covering the entire route. The risk assessment approach involved identification of hazards, receptors and pathways (between hazards and receptors) for each site to determine significant pollution linkages that may result in measurable impacts on specified receptors. Possible linkages were identified, enabling impacts in terms of both likelihood and magnitude to be predicted. SEPA, the relevant departments of GCC and SLC, and the design team were consulted throughout.

7.17 Contaminants of concern identified included chromium waste, paper manufacturing sludge, steelworks slag, combustion residues, and made ground arising from general re-grading of previous development. Areas of chromium waste, chemical waste, and slag tend to exhibit the highest levels of contamination. Other sources of contamination include surface spills and fly tipped waste. Asbestos was reported at the majority of sub-area sites along the route. Chromium waste was identified on that section of the route from Dixon Blazes Industrial Estate through Rutherglen and Cambuslang.

7.18 The receptors at significant risk were identified as: -

- Local residents and construction workers in the route corridor.
- Local surface waters and the River Clyde at site drainage discharge points.

- Road structures constructed in highly contaminated made ground or groundwater.
- Maintenance personnel excavating retained highly contaminated made ground or below groundwater level.
- Shallow groundwater in direct contact with highly contaminated made ground.
- Surface water courses that intercept highly contaminated made ground or groundwater.
- New planting.
- Road structures constructed within highly contaminated made ground or groundwater, especially active drainage routes.

7.19 The remedial approach to the contamination was one of integration and iteration, the effects of the contamination being incorporated into the design process and resolved to the point where no unacceptable impacts are anticipated. The strategy adopted involved above ground construction wherever possible to minimise disturbance of contaminated materials, identification of regulatory constraints, adoption of compatible remedial solutions, and a review of all aspects of road design from a contamination viewpoint to allow for modifications as appropriate.

7.20 Final remedial options for the M74C, in general terms, include selective removal of discrete sources of contamination; prevention of any direct contact with contaminated soils by way of placement of engineered structures across the entire route corridor; restriction of infiltration of water into contaminated soils beneath the route; *in situ* treatment of contaminated soil and groundwater where contaminated soils are to be significantly disturbed by the construction process; interception of contaminated water by in situ treatment facilities, where contaminated made ground is present below normal groundwater levels; engineered protection of culverted surface waters; specification of appropriate building materials; and protection of buried services. In addition, the whole construction and operation of the road will be subject to an Environmental Management System (EMS), acting as the primary mechanism for delivering the required protection of construction and maintenance workers and the public. Contract conditions will regulate hours of working on the various activities in both the construction and operational phases, thereby minimising the impact on residential amenity.

7.21 Remedial options include well established and proven techniques. While the approach does not remove contamination, it does offer positive benefits such as minimal disturbance of contaminated materials and compatibility with the road structure and construction process. Removal can pose greater risks than bunding of contaminants. Unfortunately, bio-remediation cannot deal with the concentrated inorganic based contamination that is prevalent along the route. As regards the retention or disturbance of chromium waste residues, the affected areas have been identified and procedures developed to manage contact with the contaminated materials and prevent hazardous releases, both during construction and when the road is operational. In some areas, exposure of contamination will be necessary to allow adequate treatment to take place, but most of the road will be built without disturbing the existing contaminated material.

7.22 The M74C can be constructed in a manner that will manage the contamination impacts throughout the construction period, and planned remediation measures will mitigate long term environmental risk. Without the M74C, much of the route and adjacent sites are likely to remain in their present contaminated condition.

The Case for JAM74/FOE

7.23 No counter evidence was led by JAM74/FOE on geo-technical, mining and contamination issues and there was no cross-examination of the TRA geo-technical and mining witness. The contamination evidence, however, was the subject of extensive cross-examination, particularly in relation to the extent and nature of the contamination, the proposal to bury much of the contamination (particularly chromium waste) under the M74C itself rather than removing the contamination completely from the areas affected; the extensive earth and piling works involved and the associated noise and disturbance; the limitation of the GI to the route corridor itself, leaving the adjacent regeneration sites for treatment in due course by potential developers; and the massive costs involved in remediation works.

The Case for SAPT

7.24 Again, SAPT led no counter evidence and there was no cross-examination of the TRA geo-technical and mining witness. Cross-examination of the contamination witness focussed on the possibility of a break in the linkage between a source and a receptor; the statutory responsibilities of local authorities to deal with contaminated land; and the suggestion that containment of contamination as opposed to removal was driven by cost considerations. The cost of the SAPT alternative proposals involving tunnels at West Street and under Rutherglen Station was also raised in the cross-examination of Brian Swan, who indicated that contamination problems were likely to be encountered. While no detailed study had been carried out, costs were likely to be of the order of £100/115 million at West Street and £30/50 million at Rutherglen, with further costs of £65/80 million on the section between Farmeloan Road and Glasgow Road.

The Case for Mr T Martin

7.25 The objector is particularly concerned about the proposal to construct the M74C through areas such as Southcroft Park at Glasgow Road, Rutherglen, which is known to be severely contaminated with hexavalent chromium waste, a known carcinogen causing nasal, skin and lung cancer if ingested. Previous sites of a similar nature in Rutherglen have simply been capped over and left undisturbed on advice from the relevant authorities that the waste was too dangerous to move and disturb. Old mine workings also lie beneath Southcroft Park and previous expert reports have highlighted the dangers of piling and laying foundations on such unstable materials. The M74C is to be a Design and Build contract and accordingly the design has not been finalised. The environmental assessment has proceeded on the basis of assumptions.

The Case for Terrace Community Association

7.26 The objection is a general one, highlighting concerns at the high levels of chromium waste in the Rutherglen area and the risks to health which construction of the M74C on the line proposed might bring. The suggestion of re-routing the road to the north to an earlier line involving 2 bridges at the Cuningar Loop is suggested.

CHAPTER 8 : ECONOMIC IMPACT AND REGENERATION

Summary of case for the Trunk Roads Authority and supporters

8.1 The case for the TRA in terms of economic impact and regeneration is based on: -

- the Simmonds report commissioned by the Trunk Roads Authority (TRA/K/1)
- the EKOS report commissioned by Scottish Enterprise (TRA/U/1)
- the Outline Business Case prepared by the local authorities (TRA/L/7); and
- individual Scottish Enterprise and local authority policies and projects designed to capitalise on the M74C.

The Simmonds report

8.2 The Simmonds report appraised the impacts of the scheme in terms of employment impacts, including their spatial and social distribution issues, and with regeneration, social inclusion and land-use/transport planning integration issues.

8.3 This report is based on a computer based forecasting model using the CSTCS Land Use/Transport Interaction model, which has 4 principal components, namely, a transport model, an economic model, an urban land-use model, and a migration model. The transport model takes inputs which describe activities (different categories of residents and jobs) by zone, for a given year; forecasts travel by car and by public transport; and estimates costs and times of travel between each pair of zones, allowing for congestion caused by the forecast traffic. The economic model forecasts the growth (or decline) of sectors of the economy in the sub-regions of Scotland, with inputs including forecasts of growth in the overall Scottish economy. Forecasts by sector and sub-region are influenced by factors such as costs of transport, consumer demand, and rental values. The urban model forecasts the location of households and jobs within the urban areas of Glasgow and the Clyde Valley, locations being strongly influenced by the supply of housing and commercial floor space. The migration model forecasts migration between sub-regions of Scotland. The inputs to this model include job opportunities and housing costs, from the urban model. Job opportunities are a strong incentive to migration; housing costs are generally a weak disincentive.

8.4 Given the 4 components and the inter-action between them, complex possibilities exist for feedback between them. Thus an improvement in transport to generate economic growth might generate additional travel, which in turn may cause increased congestion and worsening transport conditions.

8.5 Assessment of impacts required assumptions on the employment and demographic scenario for Scotland; land use policy inputs; the reference case transport network, without the M74C; and other transport assumptions such as fuel costs. The model was

then run to produce the reference case forecast, i.e. a full set of results from running all the model components in sequence to 2030, without the M74C.

8.6 A second set of forecasts was then produced, adding the M74C to the transport inputs, while keeping all other inputs the same as in the reference case. Given the model's linkages from transport to economy, land-use and migration, the results from the M74C test are nearly all different, to some extent, from those of the reference case. These differences define the impact of the M74C.

8.7 Overall the results show that Glasgow and the Clyde Valley gradually gain employment as a result of the M74C, at the expense of other parts of Scotland. About one quarter of the total effect up to 2030 is the initial short-term impact. The remaining impacts are the gradual result of improvements in accessibility and reductions in transport costs affecting the distribution of investment.

8.8 The gradual gains in employment also reflect the longer-term multipliers such as improvements in employment opportunities attracting migrant households which generate further increases in employment. The impacts are small percentages but very significant absolute values. The gain in jobs in Glasgow and the Clyde Valley amounts to some 20,000 jobs by 2030. In percentage terms, this is only +2%. The local authorities confirm that there is an adequate supply of land and premises in the Glasgow/Clyde Valley area to accommodate the demand.

8.9 Since the model is constrained to a fixed economic forecast for Scotland as a whole, the gains in Glasgow and the Clyde Valley must be balanced by losses elsewhere. Displacement from other areas varies between 1% and 2%, with wide differences in the absolute impacts. These losses are greater in the Forth (-8000) and Ayrshire (-3000) areas, which are in closer competition with Glasgow and the Clyde Valley, while lower in the north (-2000). The population impacts are slight, dominated by migration following the changes in employment. The population of Glasgow and the Clyde Valley increases, with a slight loss in population in all other areas. By 2030 Glasgow and the Clyde Valley has gained some 14,000 residents.

8.10 Within Glasgow and the Clyde Valley, the predicted employment increases at 2030 are about 11,000 for Glasgow; 4000 for Renfrewshire; and around 3000 each for East Renfrewshire and South Lanarkshire. North Lanarkshire would be expected to gain about 1500 jobs, and East Dunbartonshire less than 500. West Dunbartonshire (-500) and Inverclyde (-1200) are forecast to lose slightly in employment . These impacts are due to the M74C being more useful, in general, to businesses in the west of the conurbation, as a means of travel eastwards to other parts of the conurbation, central and southern Scotland and to England, than it is to businesses in the east of the conurbation – though for the latter, it would be important as a means of better access to Glasgow Airport and the wider world. The negative impacts on West Dunbartonshire and Inverclyde are due to forecasts of increasing congestion around the Erskine Bridge.

8.11 The expression "negative impacts" simply means less positive than in the reference case. In this particular case, the negative impacts for Inverclyde and West Dunbartonshire would mean slower growth in employment, rather than absolute decline.

8.12 The positive impacts on the economies of Greater Glasgow and Lanarkshire arise mainly in the service sectors, rather than in manufacturing. The positive impacts on employment would tend to be in non-manual rather than in manual employment. The impact of the M74C in this respect involves additional non-manual jobs (and marginally more manual jobs), not a shift of jobs from manual to non-manual, an impact that will generally occur as slight increases in trends over time, rather than a major step change which might cause greater problems of adjustment.

8.13 The modest level of the population changes are consistent with the finding in CSTCS that households increasingly adjust to changes in workplace by changing their commuting habits rather than by changing their place of residence. These results are consistent with the M74C making a substantial contribution to improving the efficiency of the local economy and the attractiveness of the area for investment, with Lanarkshire's links to Glasgow being sufficiently strong that it tends to gain rather than to lose from these changes. The results already include multiplier effects, which do not necessarily occur in the same district as the initial effect.

Employment Impacts

8.14 A key issue is whether the impacts redistribute employment in Scotland in such a way as to favour the officially Assisted Areas. The areas that gain most in employment, in the South Side of Glasgow and in Renfrewshire, overlap the 20% aid limit Assisted Area. Whilst some of the positive impacts fall in non-Assisted Areas and some of the growth diverted from other parts of Scotland would be drawn away from other Assisted Areas, there would be a significant benefit from the M74C in respect of the distribution of employment within Scotland.

8.15 In regard to the overall employment impacts on Scotland, the model used the same economic scenario for Scotland in the reference case and the M74C case, with the result that the total levels of employment are very nearly constant in both cases. The overall impacts for Scotland require to be assessed outside the model itself, whilst drawing on the model analysis, particularly of accessibility. The M74C should improve the competitiveness of central Scotland and its ability to attract inward investment, with a positive net impact.

8.16 In regard to regeneration effects, social inclusion and integration, the appraisal took account of the strategies set out in the GCVSP, the conclusion being that the M74C would significantly increase demand for property in many of the development areas identified by the GCVSP, with only a limited negative impact on a smaller number of such areas. On balance, the scheme would positively assist proposals for regeneration and development.

Chapter 8 : Economic impact and regeneration

The EKOS Report

8.17 This report, commissioned by Scottish Enterprise to produce an up-to-date economic appraisal of the M74C, sets out the overall economic development case for the project and highlights the key benefits for Scotland in general in terms of national economic policy, and the Glasgow metropolitan region in particular. It covers the overarching economic rationale, place competitiveness, and support for other key initiatives.

8.18 Policies of both the UK Government and the Scottish Executive seek to achieve high and stable levels of growth and employment, ensuring that all the regions of the UK perform to their full economic potential. Currently Scotland under-performs against the UK; and within Scotland, the West of Scotland under performs against both the UK and Scotland as a whole in terms of economic activity rates. Economic activity rates within areas such as Edinburgh, and Perth and Kinross are over 10% higher than Glasgow, which remains the area with the lowest level of economic activity.

8.19 The M74C and related regeneration initiatives should increase Scotland's economic growth by raising economic activity rates in the west of Scotland, reducing the likelihood of overheating of labour and development markets in the east. In the national context, the project is a key piece of infrastructure necessary to maximise future growth and prosperity for both the Glasgow city/region and Scotland as a whole.

8.20 SE support for the M74C is based on improving the West of Scotland's economic and business competitiveness, releasing a range of new development opportunities necessary to support future economic growth, and the project being a specific piece of infrastructure necessary to support SE priority projects.

8.21 In the event of the M74C not proceeding, there is likely to be not only a loss of new investment but also the potential future loss of existing investment, as other city regions in the UK continue to invest in their transport infrastructure and improve their competitive position.

8.22 Labour markets, business locations, accessibility to customers, housing choices, tourism, the shape, density and pattern of urban areas influence and are influenced by the availability, price and speed of transport links. The M74C will support the place competitiveness of the west of Scotland by improving business competitiveness. There are around 50,000 businesses and one million workers in the Glasgow metropolitan area who will have access to an improved transport network which will also support the attraction and retention of staff, movement of goods and people, and improve reliability and efficiency. For many businesses, it is not the direct cost of transport, but the unreliability of the network that causes problems.

8.23 Economic sustainability and growth are essential to provide prosperity and quality of life for the people who live and work in the west of Scotland. The Simmonds Report forecasts a population increase of more than 13,500 by 2030 as a result of the project, increasing the total household income of the Greater Glasgow/Lanarkshire area by nearly £275 million per year.

8.24 Development of sites which will either be released or made more attractive by the M74C is a key benefit of the project. This will have a significant impact on the provision and availability of business land and property, a pre-requisite of economic growth.

8.25 The M74C runs through some of the poorest areas in Scotland with economic activity levels well below the UK and Scottish average. The project will support the regeneration of these areas through a process of physical renewal, integrated with other regeneration activity.

8.26 In particular, the M74C should lead to the following:

- reduction of around 600 hectares of vacant, derelict and contaminated land;
- increase in land and property values to help address market failure constraints;
- improved viability of future property development, through making development of key sites more attractive to the private sector thereby removing the need for higher levels of public support;
- development of key sites in areas of deprivation for future economic activity;
- development of 660,000m² of business space, which will support 25,000 (gross) new jobs.

8.27 In addition, the project will promote tourism, the international image of the Glasgow and Clyde Valley area, and the economy and efficiency of Glasgow Airport.

8.28 Support is also drawn from the Cities Review (TRA/L/2), which concludes that the cities are at the centre of Scotland's economic growth and dynamism and that, whilst each is unique and individual, the cities are central to the regions that surround them and have a key role to play in the growth and dynamism of those regions.

8.29 The Glasgow city/region economy is the largest contributor to the economic well being of Scotland, and its absolute and relative economic performance is vital to Scotland. The M74C would support and facilitate its growth and the overall place competitiveness of Scotland.

Scottish Enterprise Key Initiatives

8.30 The M74C would support a number of key SE projects, including the Clyde Waterfront Regeneration Plan; the Clyde Gateway and East End Regeneration; the development of Glasgow Airport; and the Glasgow Science Zone. It is seen as a vital prerequisite to maximise the potential for the regeneration of the Clyde Gateway and the East End Regeneration Route.

Outline Business Case

8.31 The Outline Business Case submitted to the Scottish Executive in September 2000 indicated that the M74C would "provide the improved accessibility needed to unlock the potential for economic development and regeneration of vacant and under-used sites along the south side of the River Clyde from Cambuslang in the east through to the airport and further west" (OBC, page 17).

8.32 The OBC identified the location, scale, and employment potential of 17 strategic sites which were either directly accessible to, or in close proximity to the M74/M8 corridor, of which 7 are wholly/partly in Glasgow. These included sites which were 'safeguarded' as single user inward investment sites, and sites which were identified as strategic industrial locations within the 1997-99 Western Scotland objective 2 programme. The OBC suggested that if all of these sites were fully developed, at accepted employment densities, they could accommodate 42,000 jobs.

8.33 The OBC also recognised that while only one of these sites (Cambuslang Investment Park) was within the immediate vicinity of the M74, many of the other sites would benefit from improved accessibility/journey times through relieving congestion on the existing motorway network in the city. This is particularly the case with the key sites on the west side of the city which are constrained by congestion problems on the Kingston Bridge/Charing Cross section of the M8.

8.34 The OBC indicated that the M74C would unlock substantial economic development potential within local areas accessible to the motorway itself. Within a 1.5 km corridor of the road line there were approximately 114 ha of land available for industrial or business use, excluding Cambuslang Investment Park. If fully developed, at normal employment densities, these sites could accommodate a further 12,000 jobs. (OBC, page 21-22). The sites are concentrated in key development clusters as follows:

- Cambuslang Investment Park
- Clydesmill (Westburn) (S Lanarkshire)
- Farme Cross (S Lanarkshire)
- Dalmarnock (Glasgow)
- Gorbals/Oatlands (Glasgow)
- Tradeston (Glasgow)

Regional Regeneration Context

8.35 The regional regeneration context of the M74 Completion scheme is set out in 2 key regional policy documents, namely, the GCVSP and '*Metropolitan Glasgow – a Vision for the Glasgow City Region*'.

8.36 The objectives of the Glasgow and Clyde Valley Structure Plan (Part 4, page 8, para 4.1) include:

- increasing economic competitiveness

- promoting greater social inclusion and integration
- sustaining and enhancing the natural and built environment
- integrating land use and transportation.

8.37 The means of achieving these objectives include:

- strengthening communities by focusing new development at appropriate locations within existing urban and rural settlements; and
- promoting a corridor of growth which promotes new economic development in locations which are well linked to areas of social need, and better related to the transport network.

8.38 The GCVSP identifies gaps in the strategic road network as being a major constraint on the competitiveness of the metropolitan area. The M74C is specifically identified as a crucial link which "will improve access to and from Inverclyde, West Dunbartonshire, Renfrewshire and Glasgow Airport, through Glasgow City Centre to Lanarkshire and the national motorway network of the M74/M6 (GCVSP, Part 8, page 44, para 8.21). The M74C is also seen as a key component of the Clyde Gateway Initiative where it will contribute to "…a new focus of economic development based upon the key position of the Clyde Gateway in the existing and proposed transport network." (Structure Plan, part 7, page 32, para 7.32)

8.39 The Scottish Executive Review Of Scotland's Cities (*Building Better Cities*, Scottish Executive, 2003) suggests that cities are at the centre of Scotland's economic growth and dynamism, and that efficient and effective transport connectivity are key factors in the success of cities. It concludes "…transport is central to the economic social and environmental future of Scotland's cities…" (Review of Scotland's Cities – The Analysis, page 159). In its presentation to the Cities Review 'Sounding Board', GCC identified the M74C as one of the main infrastructure 'gaps' in the city.

8.40 The Cities Review required each of Scotland's 6 cities to prepare, and submit to the Scottish Executive for approval, long term visions for the future of their city-region areas. The vision statement for Glasgow (*Metropolitan Glasgow – Our Vision For the Glasgow City region*) was approved by a wide variety of bodies including the 8 local authorities within the Clyde Valley Structure Plan area, Scottish Enterprise, the Greater Glasgow Health Board, Jobcentre Plus, and the Glasgow Chamber of Commerce (May 2003), and was subsequently endorsed by the Scottish Executive in June 2003. The Clyde Valley Community Planning Partnership has now been established to oversee its implementation

8.41 The report identifies 11 key regeneration projects and programmes where "successful delivery will make a real contribution to our overall social and economic prospects…(and which) …will unlock substantial areas of land for new business and residential development. They will improve our connectivity….offer potential for new business development and investment …and…for major labour market and re-connection programmes. (page 20)

8.42 The M74C and the Clyde Gateway are both identified as key regeneration projects which offer the potential to unlock substantial new residential and business development opportunities along the 5 mile corridor between Cambuslang and the Gorbals, with potential through the proposed linkages between the M74/the proposed East End Regeneration Route/M8 to secure major regeneration benefits for the East End of Glasgow as a whole. The realisation of these opportunities is however crucially dependent on the M74C proceeding.

The Local Regeneration Context

8.43 The 3 councils provided extensive detailed evidence relating to current development constraints, regeneration potential, economic policies and prospects for the respective administrative areas. In each area, economic forums comprising representatives of local business and industry, Scottish Enterprise and other agencies have been established. These forums have each devised economic development strategies based on the M74 completion as an essential infrastructure requirement. The project was necessary to promote the take up of industrial sites and premises; the regeneration of vacant, derelict and contaminated land; social inclusion initiatives; and the improvement of jobs potential through skills training programmes. The strategies were wholly consistent with national, strategic and local economic and land use plans and policies.

8.44 The information supplied by the councils is too detailed to be summarised in the text of this report. The various precognitions and documents produced may be referred to for their terms. Much of this information formed the basis on which the OBC, the Simmonds Report, and the EKOS Report were prepared.

8.45 **Within Glasgow**, projects of particular note are the Clyde Gateway, the East End Regeneration Route, the Clyde Waterfront project, Social Inclusion Partnerships in the Gorbals and East End, and the development of local labour training and recruitment programmes to ensure a workforce trained to capitalise on the demands of inward investment is in place.

8.46 **Within South Lanarkshire**, the economic strategy recognises the industrial and business decline in Rutherglen and Cambuslang, and regeneration initiatives, heavily dependent on the M74C, are in place for these communities. The Clyde Gateway project – a Metropolitan Flagship Initiative – also covers Dalmarnock Trading Estate, Shawfield and the Farme Cross areas of South Lanarkshire, and the initiative as a whole will benefit Rutherglen and Cambuslang and indeed a wider area. The Clydesmill Strategic Employment Site, where the council has purchased 6ha of land and has invested £4m in site servicing, would also benefit significantly from the M74C and may be a suitable site for relocation of a number of businesses on the line of the motorway extension.

8.47 **Within Renfrewshire**, the Renfrewshire Economic Strategy highlights regeneration along the River Clyde from the city centre westwards, and the promotion of Glasgow Airport and the surrounding area. RC has an Economic Development Operating

Plan, incorporating a 3 year rolling programme of activity focussing on place competitiveness, an attractive environment for inward investment, and ensuring that Renfrewshire residents are best placed to benefit from increased economic activity. Key development sites include Hillington Business Park, Phoenix Linwood, Inchinnan, and Erskine.

Impact on existing businesses/relocation

8.48 The number of businesses on the route of the M74C is estimated at 186, involving 2,500 – 3,000 employees. The TRA does not appear to have spoken directly with the businesses concerned and has assumed that all businesses would relocate. No account has been taken of businesses choosing or being forced to cease trading. Again, little has been done to ascertain the practicalities of relocation in terms of costs and timescales.

8.49 A dedicated M74 Relocation Team comprising staff from the three councils and under the control of GCC has been established to assist with business relocation, and a sum of £900,000 has been set aside to finance feasibility studies, business plans and the like. The Valuation Agency is involved in negotiating compensation and early voluntary acquisition is being actively promoted.

The Case for JAM74/FOE

8.50 The objectors' case is based on serious doubts as to the economic benefits and regeneration opportunities claimed by the TRA and proponents of the M74C. The doubts stem from criticism of the Simmonds and EKOS reports; the findings of the Commons Standing Advisory Committee on Trunk Road Assessment (SACTRA) Report on Transport and the Economy (document JAG/15, 1999); and a number of largely Scottish based academic research papers.

8.51 The objectors argue that the Simmonds report does not consider factors beyond central Scotland, and gives limited consideration to land use and transport changes elsewhere in Scotland and to the labour market. Assumptions used are too simplistic. Forecasting growth is not the issue. It is the distribution of that growth which is more important and less certain. The EKOS report lists land availability without commenting on likely uptake; expressly indicates that displacement is outwith its remit; and is all but silent on the issue of demand. The predictions of job growth in both reports are highly suspect.

8.52 The SACTRA report on Transport and the Economy was the culmination of a 3 year inquiry chaired by Eileen Mackay CB into claims of economic benefit from road schemes. The report notes (summary, page 17, paragraph 11) that the contribution of road construction to sustainable economic growth of a mature economy, with well developed transport systems, is likely to be modest. It states that the results of studies of the economic impact of completed transport projects "*do not offer convincing general evidence of the size, nature or direction of local economic impacts*". The report goes on to state that "*Our studies underline the conclusion that generalisations about the effects*

of transport on the economy are subject to strong dependence on specific local circumstances and conditions."

8.53 The SACTRA report recommends that a more rigorous approach to forecasting the economic benefits of transport schemes is adopted, in the form of an Economic Impact Report. This has been widely accepted and has established the requirement for such reports for new transport schemes in England and Wales, where regeneration benefits are claimed. Guidance on the preparation of these reports has been published (document JAG/3). It requires a range of options to be considered, with forecasts covering numbers of jobs and types of economic activity, as well as assessment of uncertainty and risk.

8.54 As regards the M74C, the objectors consider that there are 3 areas where the approach commended in the SACTRA report and the resulting guidance can assist, namely, forecasting new economic activity and job creation; reduction in journey times increasing competitiveness; and regeneration of vacant, derelict and contaminated land along the route corridor.

8.55 On the first issue, while the objectors accept that a new road could lead to job creation and inward investment, none of this is guaranteed. The SACTRA report highlighted the two way road effect, where the construction of a new road could improve accessibility so that job creation and investment is drawn away from the area where the road construction takes place to a more favourably located area, reducing local employment and competitiveness to the advantage of places elsewhere. The extent to which this might happen depends on a number of factors such as the extent of competition in the transport sectors, and land and labour markets. In its guidance on the preparation of Economic Impact Reports, the Department of Transport highlights 4 questions to be addressed which deal with the regeneration area being accessed by an external labour force; better access to jobs elsewhere increasing local wage costs; better access to retail facilities elsewhere leading to closures in the regeneration area; and identification of businesses vulnerable to external competition. The objectors consider that the TRA does not appear to have taken these possibilities into account.

8.56 While temporary jobs would be created during construction, the cost per job would be high, and other public spending would bring greater benefit. Research in Germany suggests that road construction as a job creator is inferior to rail infrastructure, while in the UK rail projects provide better value for money than road building. Other academic research indicates support for the SACTRA conclusion that economic benefits do not automatically follow from new road building, arising where, unlike Glasgow, existing infrastructure is poor and where the new road is an integral part of wider economic policy. Lower, but better targeted spending, could boost GDP more than increased transport spending. Links between road building and economic growth are weak or non-existent, depending on the particular circumstances.

8.57 Wider sourcing and marketing, while of benefit to individual firms, might not lead to growth in the national economy but simply a redistribution of economic activity.

Research suggests that the claim by proponents of the M74C that M8 congestion handicaps business in the west of Scotland is over-stated. There is no evidence that Scottish industry pays more for road transport on account of its peripheral location.

8.58 Investment in rail infrastructure should feature prominently in peripheral regions, along with road pricing which is seen as a more appropriate solution than road building. While academic research suggests that road construction to relieve bottlenecks holding back rapid economic expansion may bring benefits, this is not the situation in relation to the M74C. Investing in infrastructure in conditions of low economic growth, where infrastructure is already in place, is unlikely to boost economic activity. If the M8 is a bottleneck, other measures such as road pricing should be the initial response.

8.59 While the possibility of redistribution of economic activity away from congested areas exists, the conditions necessary for this to happen are not in place. The result is likely to be that activity will be centralised, benefiting areas least in need of economic expansion. While surveys indicate that road infrastructure has a greater impact on inward investment than for investment by Scottish firms, it is endogenous firms which should be supported for sustainable employment. Improved road access to Glasgow airport is at odds with the Scottish Executive's objective of promoting rail access to the airport.

8.60 Jobs, and particularly jobs for socially excluded communities, can be created by other methods than by building the M74C. Better management of existing road capacity by, say, electronic road pricing and more use of public transport could be bolstered by application of road toll revenues to promote public transport. While travel to work times can be an obstacle to employment, research suggests socio-economic factors such as gender, dependent children, and education are more influential in establishing travel times and employment opportunities than public transport, accessibility, and private transport. Two out of 5 job seekers find lack of transport a barrier to obtaining employment, while the average distance to work for employees on low incomes is 3 miles compared to 8 miles for the rest of the working population. Further research on this subject is necessary but the evidence suggests that a full multi-modal exercise should have taken place before the Orders were promoted, if Scottish Executive policies on environmental justice and social inclusion were to be followed. Such a study would have been unlikely to support the M74C.

8.61 As regards journey times and competitiveness, it is well established that induced traffic from new road construction can reduce or eliminate projected journey time savings. There is also the issue of suppressed demand taking up any spare road space that is created. It is not clear whether the TRA has taken account of such influences. A White Paper published by the Department of Transport in 2003 acknowledged the danger of benefits being eroded over time, and the need to lock in such benefits through traffic management measures such as ramp metering and congestion charging. This matter is also considered in the CSTCS (see paragraph 2.29 above). No such measures have been proposed for the M74C. Experience of new road construction at the M25 and in West Yorkshire, where no measures were introduced, demonstrate the point.

8.62 The SACTRA investigation also found that journey time reliability could be as important as time savings. Time savings and competitiveness should also be assessed in the wider context. Land and labour market conditions coupled with reduced congestion might encourage development at motorway junctions elsewhere in central Scotland, making Glasgow and the surrounding area less competitive. Land and labour factors are generally more significant than transport costs with the result that the impact of time savings would likely to be of a low order. In any event, economic benefits based on time savings are questionable. Logistic savings from past road building should be seen as a one off benefit arising from development of the network rather than the upgrading of individual links. The TRA has not considered other options.

8.63 As regards reclamation of vacant, derelict, or contaminated land, this could be undertaken at any time and the M74C is not a prerequisite. The TRA claim in regard to the M74C promoting the reclamation of vacant, derelict, and contaminated land has been overstated. Much of the land affected is unattractive, with little prospect of redevelopment.

8.64 The benefits of the M74C for the deprived and excluded communities is also debatable, given the two way road effect, and job opportunities being available to people from other areas. Education and skills training are regarded as more important factors in securing employment. People without access to cars will remain disadvantaged, particularly those in peripheral estates poorly served by public transport. The focus should be on improving access to activities that have most impact on life chances such as access to work, learning and healthcare. Poor communities not only lack good transport services but also suffer from the negative impacts of transport related pollution, community severance, and noise. This represents environmental injustice.

8.65 The objectors argue that a road project on its own such as the M74C is not sustainable. The Scottish Executive *Guidance on Local Transport Strategies* (2000) advised that, for a road transport project to be justified on economic development grounds, it needs to be demonstrated that devoting resources to the transport project would represent a more cost-effective means of developing the local economy than the use of other existing policy instruments. The Scottish Executive has failed to follow its own guidance. There should be a sustainable UK transport strategy, with funding from fuel tax and road charging, designed to reduce overall traffic levels while promoting economic growth and other policy objectives. An integrated policy package would give confidence to private investors, whereas the M74C on its own will not.

8.66 Support for a move in this direction is drawn from recent developments in San Francisco and Portland, Oregon, where the removal of freeways both at grade and grade separation has brought about significant transport improvements and major economic regeneration.

Chapter 8 : Economic impact and regeneration

The Case for SAPT

8.67 The SAPT did not lead any witness on this topic, choosing to rely on testing the TRA evidence through cross-examination. There was concern at the wide variations in the forecasts of jobs growth, the suggestion being that they were over optimistic. The Simmonds report was closely examined as to what had and had not been included in the modelling exercise. While the TRA claimed that the exercise had been carried out in accordance with "best practice", no audit of similar exercises had been undertaken to assess the validity of the methodology and results. While the model took account of factors such as changes in fuel costs, and walking and cycling as modes of transport, it did not take account of the costs of pollution and congestion, nor of factors such as the increase in people working from home. The suggestion was that the exercise had been designed to produce a certain result.

8.68 The TRA claim that the M74C is a key piece of infrastructure was challenged, given other constraints such as water and drainage capacities and the extent of vacant, derelict, and contaminated land, much of which appeared in the industrial land supply. While no estimates of costs for remediation of all sites affected were available, SE estimates for Clyde Gateway remediation were in the region of £50 million. The application of the M74C acquisition costs, estimated at £140 million, to address contaminated land would be a better use of public money. Many of the sites in the land supply are located some distance from the motorway network and public transport. The Cities Review (TRAL/2 at page 165) states "A poorly sited development, largely dependent on car access, will lock in problems for the long term".

8.69 Jobs would be generated irrespective of the M74C. Indeed, jobs may be lost to other parts of the central belt as a result of the M74C. While the TRA claims that SE support for flagship initiatives such as Clyde Gateway and the Waterfront Project depend on the M74C, in all likelihood the local authorities would deliver some form of package for the regeneration areas. The EKOS report (page 5) indicates that Glasgow City has out performed other areas and that has been done without the M74C. In general, job seekers do not have access to cars, hence there should be more investment in public transport.

The Case for Dr M Hersh

8.70 Dr Hersh argued that there is little evidence on the ground of any economic regeneration by the 3 councils and SE. The M74C is not needed to regenerate communities that have been largely destroyed by the threat of the new road. The TRA claim that no local shops are to be demolished is irrelevant. The fact is that demolition has already taken place, and the evidence is to be found in streets such as Aikenhead Road and Rutherglen Road.

PART 3 : STATUTORY OBJECTIONS

CHAPTER 9 : OBJECTIONS TO THE COMPULSORY PURCHASE ORDER

Introduction

9.1 The proposed compulsory purchase order embraces virtually all of the land that would be occupied by the proposed motorway extension and associated works. A small part of the route is omitted from the order, notably a parcel of derelict land to the east of Farmeloan Road and a small area close to the Fullarton Road junction.

9.2 The land where acquisition is intended comprises around 200 separate plots, though some form contiguous clusters within a single ownership. These are most conveniently seen on a series of 14 maps (reference 2NEA/13/10, dated March 2003), where the land and servitudes to be acquired are shown in colour on the topographical base, together with all plot boundaries and plot numbers.

9.3 Formal statutory objections to the order were lodged by or on behalf of 42 objectors. Continuing negotiations between the acquiring authority and these objectors has resulted in the withdrawal of a number of these objections. By the close of the inquiry at the beginning of March 2004, the number of objections not withdrawn was 29, affecting some 57 plots of land (see document TRA/V/10). Since the close of the inquiry, and up to the time of completion of this report, further objectors have withdrawn, reducing the number of statutory objections to the compulsory purchase order not withdrawn to 25. Appendix 4 of this report lists those objectors. The table below lists them on a geographical basis, moving from west to east (maps 1 to 12), as that is the arrangement that we have adopted to report on these objections. Maps 13 and 14 are extra maps showing 4 additional plots that are remote from the motorway alignment, where the compulsory acquisition of land or permanent servitudes is proposed.

9.4 For each objector, the table gives the map number and plot number; the general location of the plots; the name of the objector; the extent of the land; and (in some cases) some extra information.

9.5 For each objection, we provide :-

- a short description of the land proposed for compulsory purchase and the activities that were taking place on the land at the time of the public local inquiry;
- a summary of the main arguments put forward against compulsory purchase;
- a summary of the main points of response on behalf of the acquiring authority.

In some cases, objections have been grouped together for reporting because either they relate to the same land, or are close to nearby land where similar considerations apply. Findings of fact relating to these objections are contained in chapter 10 below.

LOCATIONS OF PLOTS WHERE STATUTORY OBJECTIONS MAINTAINED [at 1 July 2004]

Map number + plot number	Location	Name of objector	Area of plot(s) – sq m	Notes
1/30	West Street, Kingston	Noble Imports Wholesale	3,563	
1/31	Paterson Street, Kingston	Albion Chemicals	7,642	
2/40+41	West Street + Salkeld Street	First Engineering Ltd	6,837 + servitude 2,017	
3/76	Pollokshaws Road	BRB (Residuary) Ltd	20,912	
3/73	Pollokshaws Road	Land Securities/Trillium	3,392	
4/80+81	Cathcart Road/Dixons Blazes	Guthrie Scottish Nominees (No 3) Ltd	31,815 + servitude1,684	
4/94+96	Lawmoor Place	Allscot Plastics Ltd + David B Dobie	982 + 2,211	
4/100-102	Clyde river bank	Glasgow Rowing Club	252 + 636	
5/103	Lawmoor Place	Ingram Brothers (Glasgow) Ltd	4,603	
5/107	Polmadie Road (west)	BOC Ltd	39,529	
5/110	Polmadie Road (east)	Scotbeef Ltd	843	
6/119 (part)	Polmadie Avenue	Clearwater DC Ltd	13,366	(occupier)
6/119 (part) +121(part)	Polmadie Avenue	Shanks Chemical Services	as above + 4,983	(occupier)
6/119 + 121	Polmadie Avenue	Mr & Mrs Philip C Smith	as above + 4,983	(owners)
6/121 (part)	Polmadie Avenue	Philip C Smith (Commercials) Ltd	as above	(occupier)
6/123-124, 210-213	Rosyth Road	H Morris & Co Ltd	6 contiguous plots totallingapproximately 4.13 ha	
9/164	Farmeloan industrial estate	Millside Properties/McConechy's Tyre Service	2,360	

10/179	Cambuslang Road	Mr James Boyle	Re-housing objection only; property now demolished	
10/184-189 +191 +220	Cambuslang Road	MRC Pension Trust Ltd	5 plots totalling 17,108; 3 servitudes totalling 422	
10/178	Cambuslang Road	Somerville & Morrison Ltd	4,263	
10/221	Cambuslang Road	Mr B Millen	20	
10/193	Clydebridge Steel Works	Corus PLC	9,884	also plots 11/194-195
11/194 + 195	Clydebridge Steel Works	Corus PLC	71,616 + servitude 467	also plot 10/193
12/198	Cambuslang Investment Park	Hillview Developments Ltd	10,472	
14/207	Polmadie Road/Aikenhead Road	H Meanen (Electrical Services) Ltd	90	

Chapter 9 : Objections to the compulsory purchase order

Noble Imports Wholesale : Map 1 : Plot 30

Description and background

9.6 This is a 3 storey former industrial building in the southern part of the street block bounded by Paterson Street, Scotland Street, and West Street. The site of Albion Chemicals Ltd (see below) adjoins to the north. The building was originally built as the Scotland Street Engine Works, and is listed as being of special architectural or historic interest, category B (regional importance). There is a photograph of the building following page 158 of volume 1 of the EA. The building was described as partly derelict at the time that the surveys for the Environmental Assessment were carried out. At the close of the public local inquiry (March 2004), the building appeared to be partly occupied as a cash and carry outlet and for car repairs, and partly vacant/derelict.

Summary of case for Noble Imports Wholesale

9.7 The M74C is unnecessary.

Summary of case for the acquiring authority

9.8 The requirement for the completion of the trunk road network around Glasgow had been established in both the planning and transport context. The benefits of the proposed road are fully set out in the TRA evidence (see parts 1 and 2 of this report).

Albion Chemicals Ltd : Map 1 : Plot 31

Description and background

9.9 The Albion Chemicals site is situated close to the south end of the Kingston Bridge, at the western end of the proposed motorway. This is an area of mixed uses, mainly industrial, storage, and distribution. The site extends to about 7,600 square metres, occupying most of the street block bounded by Paterson Street, Gloucester Street, West Street, and Scotland Street. The company has operated from this locality since its foundation in 1841.

9.10 The site is used for the receipt, storage, blending, re-packaging, and distribution of a wide variety of chemical products, the majority of which are inherently hazardous. Incoming material is brought in by large road tankers and lorries; is stored in a variety of segregated tanks; blended as necessary in mixing installations; stored in a variety of product tanks, drums, and cylinders; and distributed to customers by means of a vehicle fleet based at the premises consisting of road tankers, lorries and vans. The site accommodates numerous specialist storage and processing facilities (approximately 60 bulk storage tanks), administrative offices, and a works canteen, shower and toilet facilities. These are accommodated in the open air, in covered storage, and in a two

storey modern office building. The site plan/overview produced by Albion Chemicals (document ACL 7) shows these features.

9.11 The specialist and hazardous nature of the materials that are stored and processed at the site means that the site is required to have various specialist operating licences, including registration under COMAH Tier 1.

Summary of case for Albion Chemicals Ltd

9.12 The company took part in the public inquiry, appearing on 26 January 2004. The main points of argument raised against the compulsory purchase order are as follows.

9.13 The company operates from a series of sites throughout the UK and also in Ireland. The company consolidated its activities in Scotland during the late 1980s and early 1990s, closing several sites. The Glasgow site is now the only company site in Scotland, and serves customers throughout Scotland. The site contains highly specialised equipment. It supplies more than 500 specialist chemical products to some 2000 industrial, utility, and leisure customers, according to customers' specifications and requirements. Albion Chemicals is currently the largest chemical distributor in Scotland, with about 30-50% of the market, and supplying some 1200 tonnes of chemical products each week. To achieve this, the company requires good access to and from the motorway and trunk road network to receive incoming bulk materials (mainly from northern England) and to distribute products to customers.

9.14 The company emphasises the important role that it plays in meeting the specialist needs of customers. It can provide a 24 hour service to customers on a very wide range of products requiring special handling and delivery. This aspect is essential, and is not suited to supply from a distant depot in England. In addition, there are important efficiency and safety benefits from having a dedicated fleet of distribution vehicles, rather than subcontracted arrangements. Albion employs about 50 staff at the site, plus 10 drivers, who have considerable knowledge and experience of this specialist activity, and without whom the company could not operate.

9.15 The company has consistently opposed the M74 extension on various occasions as part of the roads authorisation and planning procedures, including objecting to the Glasgow City Plan. It argues that the adverse effect on the company, employment, and the Scottish economy is such that an alternative route for the motorway should be found.

9.16 The company notes that the structure plan for Glasgow and the Clyde Valley, as well as supporting the principle of the completion of the M74, seeks to promote the local economy, particularly through the expansion of existing firms.

9.17 The local plan, which is intended to apply the strategic guidance contained in the structure plan, contains no exact route for the M74 extension. However the plan recognises that existing industrial areas are the focus for continuing economic activity,

where proposals for improvement and modernisation will be supported. The Albion Chemicals site lies within such an area.

9.18 The company submits that it would have great difficulty in replicating the site, together with the specialist facilities, permissions, and operating licences, at another location, and this would be a lengthy process, probably taking about 18 months to 2 years. A new facility would be likely to be twice the area of the current site, to meet current operating requirements, and would probably cost between £8 and £12 million. It would probably be located on the east side of Glasgow, convenient for deliveries from England and distribution to customers in both Glasgow and elsewhere in Scotland.

9.19 Some discussions about relocation have taken place, but nothing has come of them. To achieve a satisfactory and timeous move, it would be necessary to identify and secure a suitable site; have assistance in obtaining the necessary consents; have advance compensation to finance the new development; and construct and commission the new development. There would be only a tight window of opportunity between knowing that the move was necessary (due to confirmation of the compulsory purchase order) and having to vacate the present site for motorway construction to start. Entry to the site might be required by late 2005, but (in the event that the order is confirmed) this should be delayed to allow continuity of the business until a new facility is ready for use. The company should be given priority status, and professional and financial assistance to achieve a fast track move.

9.20 A new facility would require finance to be raised from banks, which if unsuccessful would force the closure of the Glasgow site. Scotland represents an important element (approximately 15%) of the company's chemical distribution business, and includes some large customers who have contracts for Albion to supply destinations all over the UK from their network of depots. The company estimates that the closure of the Scottish depot would mean the loss of about £16 million worth of business. The absence of a Scottish depot could thus have a serious effect on the company as a whole. In addition, it would result in a loss of specialised jobs, and the reduced competition in the Scottish market for special chemicals could reduce overall competitiveness in the Scottish economy. Distribution from northern England would be less efficient, and would increase the amount of hazardous chemicals on that route.

Summary of case for the acquiring authority

9.21 In response to these arguments, it was stated for the acquiring authority that disturbance compensation would be payable by the TRA on the basis of the statutory code for this purpose. The Valuation Office Agency had been employed by the TRA to consider each case on its individual merits. Compensation was not a valid ground for objection to the proposals.

9.22 The requirement for the completion of the trunk road network around Glasgow had been established in both the planning and transport context. The benefits of the proposed road are fully set out in the TRA evidence (see parts 1 and 2 of this report). The

local plan Proposals Map shows the new motorway passing across the Albion Chemicals site.

9.23 The TRA has carried out investigations to determine the preferred line of the new motorway, including a robust assessment of various options. The factors that constrain alignment options in this area include :

- The need to achieve satisfactory connections to the M8, with acceptable vertical and horizontal geometry
- The existing SPT subway stations at Shields Road and West Street
- The crossings of the Paisley and City Union rail lines
- The provision of on and off ramps for the M74
- Listed buildings in the area
- The surface street network in the Kingston/Tradeston area.

If the route was to be changed, these factors would present considerable problems.

9.24 Consideration was given to extending the Port Eglinton viaduct to the west to allow Albion Chemicals to remain in operation below the viaduct. However this was found to be unacceptable due to the potentially hazardous nature of the business.

9.25 For these reasons, the TRA is satisfied that the optimum alignment has been selected and the minimum land requirement identified, and that the land included in the CPO is required.

9.26 Subject to the authorisation of the various orders, the projected timetable for the motorway project is :

- August 2004 : Draft tender documents
- Autumn 2004 : Ministers' decision on Orders
- November 2004 : Design and build tenders invited
- May 2005 : tenders considered
- August 2005 : decision on contract : design and mobilisation period follows
- Late 2005/early 2006 : start of works

Some advance works might take place during the second half of 2005, mainly at the eastern end of the scheme.

9.27 A major structure was to be built in the vicinity of the Albion land, so that the TRA wished to have clear access for the contractor as soon as possible. Any delay would have cost implications. The window of opportunity to relocate the business was now less than 2 years, and was becoming critical. The TRA therefore wishes to acquire the Albion Chemicals site by voluntary agreement as soon as possible, to allow work on the relocation of the business to start as soon as possible. The TRA is prepared to take that risk in advance of the outcome of the authorisation process. However, in the event that the relocation had not occurred by the time that the site was required for the contractors, the TRA would be prepared to countenance the cessation of the business without an alternative Scottish location.

9.28 Special arrangements were in hand to provide assistance with the relocation of displaced businesses. A business relocation team had been formed within the two councils, with funds and professional expertise to identify options and carry out feasibility studies. Where council owned land could be used, priority could be given to established firms.

9.29 The TRA accepted that the potential loss of some 50 jobs at the site was a matter for the public interest, as was the contribution of the company in supplying chemicals to numerous business customers in all parts of Scotland. Overall costs were also a matter of public interest, and relocating the business would be likely to be cheaper than extinguishing the business at this site. The TRA considered that the completion of the M74 motorway was a much more important matter than the disturbance or possible loss of these jobs. The proposed motorway would affect a total of about 186 businesses with around 2500 employees, but was expected to achieve major benefits in terms of the economic return on the investment, benefits on local streets, and economic and regeneration benefits amounting to 15,000-20,000 jobs. There was thus a compelling major public interest in the scheme proceeding, which outweighed the hardship that would be caused to the objector.

First Engineering Limited : Map 2 : Plots 40 & 41

Description and background

9.30 Plot 40, extending to 6,837m², is a triangular area of land on the north east side of West Street, Glasgow, situated in an elevated position between two elevated railway lines. At the time of the inquiry, it appeared to be vacant and neglected but, because of its position, it was difficult to gain a clear view. The plot is on the line of the elevated section of the M74C between the Kingston Bridge and Eglinton Street. Plot 41 relates to a servitude right of pedestrian and vehicular access over 2,017m² of land at 34 Salkeld Street, Glasgow for constructing and maintaining the elevated structure.

Summary of case for First Engineering Limited

9.31 The objection is based on the importance of plot 40 to the ongoing operations of the objector. The plot, which is leased from Network Rail, is currently the subject of negotiations with a view to the objector buying out the landlord. The plot is the objector's principal stores facility for the whole of Scotland and services the infrastructure maintenance contracts with Network Rail. Sleepers, signalling equipment, large cabling reels and stores for the train protection warning system are among the items stored there and it is vital that there is no diminution in the size of the facility, which while clamped out of use, is nonetheless a rail connected facility. The objector requires to retain the capability of rail use of the site for stabling and maintaining track machines. The servitude right to be acquired under plot 41 will detrimentally impact on the safety and security of the objector's operations in the area. Insufficient technical information has been made available to allow a thorough assessment of the likely impact of the M74C on the objector's operations.

Summary of case for the acquiring authority

9.32 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested. There are ongoing discussions with the objector in an effort to reach agreement.

9.33 In this regard, there may be surplus land available to the objector, following the construction of the M74C, from those parts of plot 40 not affected by bridge supports.

9.34 Network Rail has confirmed that plot 40 is not connected to the rail network. While a significant portion of the plot was earlier earmarked as a future station under the Crossrail project promoted by SPT, current plans provide for the construction of the new station under the M74C at this location.

BRB (Residuary) Limited : Map 3 : Plot 76

Description and background

9.35 This plot, extending to 20,912m², forms part of a much larger, broadly triangular area of land between the WCML on the south west, Pollokshaws Road on the north west, and Cathcart Road on the north east. The plot is level and vacant and the line of the M74C passes directly across it on an embankment.

Summary of case for BRB (Residuary) Limited

9.36 The objection is based on the following grounds: -

1. Plot 76 is part of a larger land holding, the balance of which will be effectively severed by the M74C. There is no access provided under the embankment to be constructed to allow access to the balance of the land holding.
2. Network Rail has a right of access across the plot for maintenance of the WCML.
3. Negotiations regarding the redevelopment of the balance of the land holding between the objector and GCC are well advanced and it would be premature to determine the exact line of the M74C before these negotiations are satisfactorily concluded.
4. Purchase of the plot would materially affect the objector's ability to implement an extant planning permission for retail, leisure, and industrial development of the land holding.

Summary of case for the acquiring authority

9.37 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The

proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested. The issue of severance is not a competent objection as statutory provisions deal with such issues. In any event, there are ongoing discussions with both the objector and Network Rail on possible access arrangements.

Land Securities Trillium : Map 3 : Plot 73

Description and background

9.38 Plot 73, extending to 3,392m², is part of the office block known as and forming 159/181 Pollokshaws Road, Glasgow. It lies to the south east of Pollokshaws Road and is on the line of an elevated section of the M74C.

Summary of case for Land Securities Trillium

9.39 The objection is that the tenant – the Department of Work and Pensions – will require to relocate its entire operation in postal district G41, the community it currently serves. It is unlikely that it will be able to acquire a suitable site or building with planning permission in the area in the open market and accordingly may have to displace a higher value use to meet locational and space requirements. The plot represents about one half of the building, all of which is occupied by the tenant as a single entity operation. Relocation would require a similar operation. The objection would be withdrawn if the TRA gave an undertaking that compensation would be based under Rule 5 – equivalent re-instatement – and that the whole building would be acquired.

Summary of case for the acquiring authority

9.40 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested. There are ongoing discussions with the objector in an effort to reach agreement. Disturbance compensation is not a competent ground of objection and will be paid in terms of statute. Again, there are statutory provisions to deal with severance compensation when only part of a property is to be acquired. This is not a competent ground of objection and compensation will be paid if circumstances warrant.

Guthrie Scottish Nominees (No.3) Limited : Map 4 : Plots 80 & 81

Description and background

9.41 Plot 80, extending to 31,815m², is a long rectangular area of land on the north east side of the WCML, running south eastwards from Cathcart Road to properties in Lawmoor Place and Lawmoor Avenue in the Dixon Blazes Industrial Estate. It is understood that the plot was formerly railway land, being a large part of the former

Gushetfaulds junction. The land is level and undeveloped and is on the line of the M74C where it runs in a cutting between Cathcart Road and the industrial estate. Plot 81 relates to a servitude right of access for laying down and maintaining drainage apparatus over a 1,684m² narrow strip of land connecting plot 80 at right angles to Lawmoor Street on the north east. This plot is also level and undeveloped.

Summary of case for the objector

9.42 The objection is that the M74C can be undertaken without the need for these two plots.

Summary of case for the acquiring authority

9.43 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested. There are ongoing discussions with the objector in an effort to reach agreement.

Allscot Plastics Limited : Map 4 : Plots 94 & 96

Description and background

9.44 Plot 94, extending to 982m², accommodates office premises known as and forming 6 Lawmoor Place, Glasgow. The objector is tenant of part of the premises. Plot 96, extending to 2,211m² and which lies immediately across Lawmoor Place from plot 94, belongs to the objector and is the manufacturing facility for the objector's plastics business. Both are on the line of the M74C.

Summary of case for Allscot Plastics Limited

9.45 The objection is based on the damaging impact the M74C will have on the objector's business, one that has operated for 16 years. Relocation and the attendant upheaval may result in loss of customer base, while the use of hazardous materials might also make the task of finding suitable premises more difficult.

Summary of case for the acquiring authority

9.46 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested. Compensation would be payable in terms of statute.

David B Dobie (Accountants) : Map 4 : Plot 94

Description and background

9.47 This plot, extending to 982m², accommodates office premises known as and forming 6 Lawmoor Place, Glasgow. The objector is tenant of part of the premises. The plot is on the line of the M74C.

Summary of case for David B Dobie (Accountants)

9.48 The objections are to all 3 orders and are that the M74C will have a detrimental impact on the objector's business, particularly through the loss of business and upheaval which would result from relocation brought about by the impact of the M74C on the existing access.

Summary of case for the acquiring authority

9.49 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested. There are ongoing discussions with the objector in an effort to reach agreement.

Glasgow Rowing Club : Map 4 : Plots 100-102

Description and background

9.50 Plots 100 and 101, extending to 636m² and 547m² respectively, belong to GCC and are leased to the objector. Plot 102 relates to a servitude over 72m² of the bed of the River Clyde to the north east of Caledonia Road for laying down and maintaining drainage apparatus in connection with the M74C.

Summary of case for Glasgow Rowing Club

9.51 Plot 100 is situated in front of the roller shutter doors of the boathouse and is needed to allow access to both the river for boats and for removing boats from the boathouse to other locations for competitions. Boats are up to 20m long and plot 102 is the site of the steps that lead to the only access to the river. Planning permission has been granted for the extension of these steps and work should be completed in the next few months. Without access to plots 100-102, the club cannot function and would seek severance compensation.

Summary of case for the acquiring authority

9.52 On behalf of the TRA, it is submitted that issues of compensation are not competent grounds of objection to a CPO. Compensation will be paid according to circumstances and the statutory provisions relating to disturbance and severance. There are ongoing discussions with the objector with a view to reaching agreement.

The Polmadie realignment : maps 5 and 6

9.53 At Polmadie Road, the new M74 motorway would have an intermediate 4 way diamond junction. At this point, the WCML passes beneath Polmadie Road, and there are extensive railway facilities on the north side of the railway, immediately to the east of the road bridge. Objectors in this area comprise : Ingram Brothers (Glasgow) Ltd (Plot 103); BOC Ltd (plot 107); Scotbeef Ltd (Plot 110); Mr & Mrs Philip C Smith and Philip C Smith (Commercials) Ltd (plots 119+121); Clearwater DC Ltd (part of plot 119); Shanks Chemical Services (part of plot 119 +121); and H Morris & Co Ltd (plots 123-124, 210-213).

9.54 This group of objections relate to a series of industrial sites which form the greater part of a strip of land about 100-150m wide and about 1100m long to the north of the WCML and the adjacent train maintenance facilities. The latter land was previously occupied by the original Polmadie engine sheds, but has been redeveloped to form a much more modern facility, comprising 5 electrified tracks leading into a maintenance building some 400m in length. The route of the M74 extension approved in 1995, and renewed in 2001, would have passed through the railway land, avoiding most of the objectors' sites, and affecting only the southern third of the BOC site.

9.55 The route of the current motorway proposal has been modified to deflect the route to the north to avoid the railway maintenance site. It now passes through the centre of the BOC site, leaving remaining portions to north and south, and through most or all of the land held by the other objectors.

9.56 For each of these objectors, it is part of their case that the motorway route should revert to the original alignment that would avoid their properties. The TRA has provided evidence as to why the new northern alignment should be preferred. The evidence relating to this issue is reported below, bringing together the relevant submissions from the TRA and from all of the affected objectors. This is followed by separate sections for each objector, where their site specific submissions and the corresponding TRA response are reported.

9.57 The main arguments presented by the objectors as to why the southern alignment through the railway land should be preferred are as follows :

- The currently proposed northern alignment would sever a number of long established businesses.

- The original southern alignment would avoid or reduce the loss of their properties, and the consequential disruption of the various businesses. (Detailed arguments for individual businesses are reported below.)
- The realignment has come about due to representations from rail interests.
- The route of the motorway should remain on the 1995 approved route, which is straight, offering better alignment and gradients, and would be cheaper to construct and safer to operate, as it is adjacent to a motorway junction.
- The 1995 alignment would allow the motorway to pass under, not over Polmadie Road, minimising environmental and visual impact. (see also Logan Street Tenants and Residents Association objection, reported at paragraph 5.13 above.)
- Insufficient justification has been given to support the northward diversion, which would be in conflict with the objective of minimising the effects on properties.
- There is no planning permission for the northern realignment. The Scottish Executive cannot promote a CPO without first demonstrating a planning permission.

9.58 The main information presented by the TRA as to why the current proposal (the northern alignment at Polmadie) should be preferred is as follows :

- A total of 8 different alignment options at Polmadie have been examined, including environmental and engineering assessments. The options are the 1995 scheme and 7 others. All figures relate to the Polmadie section of the route encompassed by these local studies.
- For the 1995 scheme, the engineering costs of relocating the Polmadie railway facilities to the south of the WCML are derived from a study carried out by the Babtie Group (document TRA/N/1), and are estimated to be in the order of £82 million, +/- 30%.
- Following elimination of 3 clearly unsatisfactory options, the 5 remaining options were examined in terms of costs and impacts on jobs and businesses. Information for this purpose was supplied by the Valuation Office Agency and the two local authorities.
- Details of the assessments are contained in document TRA/C/7. This does not explain how the property acquisition costs and job losses have been calculated, but indicates (table 6, page 12) that the original 1995 scheme would be expected to involve property costs in excess of £100m (including relocation of the rail facilities), affecting 1630 jobs.
- The 4 other options examined in detail would involve land costs in the range £24-£33 million, and would affect between 1550 and 1930 jobs.
- The estimated engineering costs for the 1995 scheme are approximately £0.6 million less than the current scheme (excluding the cost of relocating the rail depot).
- The 1995 scheme is estimated to cost about £74 million more than the Option 1 (the current scheme) (engineering and land costs combined) while the other options would cost £2.5-£9 million more than the option 1.
- Option 1 (the current scheme) would be expected to affect 1838 jobs.
- The environmental assessment of the various options (document TRA/F/4) covers the physical and community impacts described in chapter 5 above (property

demolition, visual intrusion, noise, air quality, effect on wildlife and green spaces, etc).

- The environmental assessment does not cover impact on jobs or the local economy.
- The assessment concludes that the 1995 alignment is preferable in noise and air quality terms, but performs poorly in all other respects (partly because the railway facilities would probably be relocated to the south of the WCML, occupying additional open space land closer to residential properties in north Toryglen).
- Option 1 has slightly less impact than the other alternative options, when impacts on people and property are combined with effects on the natural environment.
- All aspects of the current proposal for the Polmadie area would comply with motorway design standards for gradient and curvature, taking account of the intended 50mph speed limit that will apply. There is no basis to argue that the 1995 alignment would be safer or more efficient than the current proposal.
- The cost of constructing the northern route has been taken into account in the overall cost assessments.
- If the 1995 alignment is retained, it would be essential to replace the railway maintenance facilities prior to vacating the existing depot. This is now estimated to take at least 6 years, including allowance for parliamentary processes.

9.59 On the basis of these various studies, the TRA has concluded that the 1995 route would be considerably more expensive than any of the alternative options, due to the cost of relocating the railway facilities, while also being more intrusive due to the relocation of the facilities closer to the north Toryglen residential area on land that forms open space/woodland habitat. The current proposed scheme is preferred to the other alternatives because the environmental assessment has shown that it would have the best environmental performance; and because it would be cheaper to build, though it would affect 200 more jobs than the 1995 route and 100-300 more jobs than options 4a and 6. For these reasons, the TRA has concluded that the current option represents the best solution, taking into account the factors assessed.

9.60 In relation to disturbance compensation, the underlying principle is to put the affected parties in the same financial position as if the property had not been acquired. Although the onus for relocation lies solely with the affected businesses, the TRA and the two local authorities have agreed to provide additional voluntary support to affected businesses. Both councils have set up teams to provide business relocation assistance in liaison with Scottish Enterprise (national, Glasgow, and Lanarkshire), to form a centralised business location team that will cover the whole corridor of the new motorway. The team will have a budget of some £900,000 to assist in feasibility studies, and will provide integrated advice on all aspects of public sector business support and property assistance. The team will have access to information on the availability of alternative sites and premises.

Ingram Brothers (Glasgow) Ltd : Map 5 : Plot 103

Description and background

9.61 This plot extends to about 0.46ha, and is situated to the east of Lawmoor Place and Lawmoor Avenue, forming part of the Dixons Blazes Industrial estate. The site comprises a two storey office building, a large single storey shed for the production and storage of specialist ingredients for the baking industry, and a yard with open air storage.

9.62 The route of the motorway would pass directly over plot 103, where the carriageway would be at grade, rising to the east on an embankment, with adjoining slip roads, to pass over Polmadie Road.

Summary of case for Ingram Brothers (Glasgow) Ltd

9.63 Ingram Brothers has been established in Glasgow for more than 100 years. It produces and supplies specialist ingredients for the bakery industry in all parts of the UK. The company moved from premises in Kinning Park to the present site in 1987, since when more than £1.5 million has been invested there. The company is one of the largest employers in the area (approximately 40 employees).

9.64 The basis of the objection is that the need for the M74 extension has not yet been established, and there is therefore no need to acquire the site; and that even if the need for the scheme is established, the acquisition of the premises is not required. An adjustment to the line of the route could be made which would avoid the need to acquire the premises without prejudicing the scheme. The company would be prepared to discuss voluntary acquisition, in order to avoid uncertainty and to relocate the business to a suitable site elsewhere in the city.

Summary of case for the acquiring authority

9.65 In response to the objection, it is stated for the TRA that the need for the M74C scheme has been established, in order to complete the trunk road network around Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested. A full and detailed design process has been undertaken, including detailed studies in the Polmadie area, which have shown that the acquisition of this site is necessary.

BOC Ltd : Map 5: Plot 107

Description and background

9.66 BOC Ltd occupies an extensive site (about 9ha) to the west of Polmadie Road immediately north of the WCML. The site is approximately square, extending northwards to Kilbride Street, and west to the Ingram Brothers site (plot 103). Access is from

Polmadie Road, where there is an office block fronting onto the road. Most of the site is used for open air storage of oxygen cylinders (full and empty). There is also covered cylinder storage, facilities for filling cylinders, administrative offices, and a large hardstanding for vehicle movements.

9.67 The land that is proposed for compulsory acquisition (approximately 4ha) forms a corridor some 100-150m wide extending east/west through the centre of the BOC site, and an access strip that would run alongside the railway line. The acquisition would take away the main current operational area, including the office block. Parts of the site would remain to the north and south of the motorway. The portion to the south of the new motorway would form a wedge between the motorway and the railway. The access strip alongside the railway would give access to this wedge, and to a building to the west that would remain between the railway line and the new motorway.

Summary of case for BOC Ltd

9.68 In support of the objection, it is stated that the company operates a major specialist LPG storage facility at Polmadie Road. It was established in 1956, and is the company's sole LPG depot in Scotland. The company is a major player in the medical, leisure, and industrial gas sectors in Scotland. Virtually all sectors of industry and society need to use gases in one form or another, so that BOC makes a fundamental contribution to Scotland as a whole, and to the local economy. The Polmadie depot distributes supplies to a network of 8 smaller BOC sites throughout Scotland, and to 30 agents, as well as directly to larger and regular customers. In all, BOC serves about 18,000 customers in Scotland. About 100 staff are employed at the Polmadie site, in skilled and semi-skilled jobs.

9.69 The original route of the M74C through Polmadie would have passed through the southern part of the site. However the revised route severs the site, requiring the demolition of all the principal office and operational buildings, as well as taking up a significant proportion of the external storage area. The company would be unable to continue operations on the much reduced site, as the remaining area would be insufficient to accommodate a bulk LPG storage facility. Even if that were possible, relocating the facilities on the northern part of the site would bring them nearer to residential and education sites to the north of Kilbride Street, requiring a new health and safety assessment.

9.70 The company concludes that the entire BOC facility will have to be relocated to an alternative site. No potential sites of a suitable size and location have been identified in the greater Glasgow area, and any new site would have to meet HSE requirements. The company is aware that the start of motorway construction work is now less than 2 years away. It needs to evaluate options as a matter of urgency, as it will take 2 years to find an appropriate site, secure the necessary consents, and construct, fit out, and commission the new facility. The company and their agent have repeatedly sought clarification of the compensation that would be payable, without which they cannot fully evaluate the options. The absence of a satisfactory response on the issue of whether Rule 5

Compensation would apply to BOC in this case is crucial to the ability of the company to assess options.

9.71 The company recognises the benefits that the M74 extension would bring to individuals and businesses in the Glasgow area, and does not oppose the principle of the new road. The primary ground of objection is that the motorway alignment should revert to the original route through the railway site.

Summary of case for the acquiring authority

9.72 The TRA states that the alignment of the M74 scheme in the vicinity of Polmadie has been subject to a thorough appraisal against a number of criteria. The alignment selected is the optimum, taking into account all the factors assessed.

9.73 Disturbance compensation would be paid on the basis of the Statutory Compensation Code, as assessed by the Valuation Office Agency. Where only part of a property is to be acquired, severance compensation would be assessed as a separate matter. The TRA would wish to explore the possibility of whether the LPG storage facility could be retained on the remaining part of the current site.

Scotbeef Ltd : Map 5 : Plot 110

Description and background

9.74 Scotbeef occupies a site of some 0.4ha used for the production and packaging of meat supplies. The site comprises a large shed used for production and storage; a 2 storey office block; and a large vehicle yard. The land to be acquired (843 square metres) is occupied by a single storey extension of the adjacent two storey office building.

Summary of case for Scotbeef Ltd

9.75 In support of the objection, it is stated for Scotbeef Ltd that although the section of land to be acquired is only part of the premises, the remaining section would be too small to accommodate the company's ongoing operations and business. The company has plans for a major extension of their main production facility on the site in response to customer demand. If it cannot be carried out, Scotbeef is at risk of losing business and existing contracts, with associated job losses. The proposed CPO thus puts at risk the continued viability of Scotbeef at this location. In addition, the proximity of the new road would have a major detrimental effect on the property.

9.76 Scotbeef Ltd note that the only reason that their property would be affected by the M74C is because of the proposed realignment of the Polmadie section of the motorway (see above).

Summary of case for the acquiring authority

9.77 The TRA has explained why it wishes to build the motorway along the northern alignment at Polmadie (see above).

9.78 Disturbance compensation would be paid on the basis of the Statutory Compensation Code, as assessed by the Valuation Office Agency. The procedures being followed are in line with the statutory provisions for a trunk road. Draft orders for the construction of the new road were promoted at the same time as the CPO, and were open to objection. If the orders are confirmed, no further planning procedures are required.

9.79 With regard to the proximity of the roadworks to the Scotbeef property, the works would be carried out in such a manner as to minimise any adverse effects. The presence of the new road would not have any significant impact on the Scotbeef operation.

9.80 The cost of construction along the revised route has been taken into account in the comparison of options.

9.81 The TRA notes that the acquisition of plot 110 is required to accommodate a drainage detention pond. If Scotbeef were to demonstrate that acquisition of this plot would put the viability of the business at risk, it may be possible to modify the design to allow the pond to be moved slightly to the north (Reporters' note : this should be south) to avoid impinging on the plot.

Mr & Mrs Philip C Smith; Philip C Smith (Commercials) Ltd : Map 6 : Plots 119+121; Clearwater DC Ltd : part of plot 119; Shanks Chemical Services : part of plot 119 + plot 121.

Description and background

9.82 These contiguous plots are located to the north of the Polmadie railway depot, taking access from Polmadie Avenue. Philip C Smith (Commercials) Ltd are the owners of plot 119, while Mr and Mrs Philip C Smith are owners of plot 121. The total area of the two plots is about 1.8ha, and total acquisition is proposed. Philip C Smith (Commercials) Ltd are occupants of part of plot 121 (see below).

9.83 Different parts of the land are occupied by Philip C Smith (Commercials) Ltd, Clearwater DC Ltd, Shanks Chemical Services (trading as Shanks Waste Solutions), and Jobmaster Cleaning (Polmadie) Ltd (who are tenants but not an objector).

9.84 A small part of plot 121 is occupied by Philip C Smith (Commercials) Ltd for open air vehicle storage. At the time of the formal accompanied site inspection during the inquiry, these vehicles were mainly elderly and dilapidated plant hire vehicles, such as drain cleaning and refuse collection vehicles, forming part of a fleet of such vehicles available for hire from Philip C Smith (Commercials) Ltd.

9.85 Most of plot 121 and about one third of plot 119 is occupied by Shanks Chemical Services for the receipt and disposal of a variety of chemical waste products. The facilities include open air and covered storage of chemical products and wastes; some processing and repackaging installations; and office premises for the administration of the business. The central third of plot 119 is occupied by Clearwater DC Ltd, who receive liquid wastes for disposal. Some of these are cleaned up and put into a sewer on the site, while others are despatched elsewhere for specialist disposal. Finally, the western third of plot 119 is occupied by Jobmaster Cleaning (Polmadie) Ltd. This comprises a large shed within which commercial vehicle liquid tankers are cleaned out prior to re-use.

9.86 Apart from the disposal of liquid waste down the sewer, all materials processed at these sites arrive and depart by road. At the time of the site inspection, there appeared to be little functional interaction between the various businesses, although they are all involved in the cleaning up and disposal of liquid wastes. But Jobmaster Cleaning (Polmadie) Ltd could provide vehicle cleaning services for road tankers and other vehicles that have visited the other 3 sites.

Summaries of case for the objectors

9.87 The main points put forward in support of these objections were :

- The acquisition of this land is not necessary to carry out the scheme which was granted planning permission in 1995, subsequently renewed in 2000/2001.
- Some of these objectors do not oppose the principle of the new road, but the alignment should revert to the 1995 route.
- The deviation from the approved line now proposed, which would pass through the objectors' land, was adopted by the Scottish Executive and the local authorities without any proper investigation, discussion, or consideration, and is now regarded by them as final. This was a secretive, improper, and unlawful process.
- The decision was made prior to any consideration of the activities carried on at the objectors' sites, and the implications of seeking to relocate them, including costs.
- There have been no discussions of these matters between the TRA and these objectors, unlike other objectors nearby. The TRA has acknowledged that it had no knowledge of the activities at these sites when the decision to re-route the motorway was made.
- There had been no TRA check on the valuation roll to ascertain property interests.
- The Polmadie waste disposal sites, and their activities, are not mentioned in the Environmental Statement produced for the TRA, nor in any of the TRA inquiry documents. These omissions have led to a flawed conclusion in the ES, which cannot be remedied without further investigation.
- The assessment of loss of jobs by the TRA is inaccurate, being based on incomplete information.
- The valuation of the sites for the assessment of options at Polmadie appears to have been based on historical costs, which is taken to mean recorded purchase prices.
- The assessment of the comparative costs of the options is flawed, being based on incomplete information.

- The uses at the sites are highly specialised, and of major national environmental importance. They bring together several licensed operators on the same site, almost uniquely suitable for the purpose.
- The sites have Waste Management Licences and a Discharge Consent from SEPA; and a Trade Effluent Discharge Consent from WoSWA.
- The site has a direct pipeline to the Greengairs waste disposal site. (Reporters' note : This could not be confirmed during the site inspection, and appears to be incorrect.)
- The specialist installations on the sites have cost £4-5 million.
- The objectors estimate that the total cost of relocating or replacing the existing facilities would be in the order of £28 million, including land purchase.
- There are only 2 other similar facilities in Scotland : a small chemical facility in Paisley, and a facility in Aberdeen dealing solely with oil industry waste.
- It would not be in the national interest to attempt to disperse these activities to different sites elsewhere.
- It would be virtually impossible to find sites that are as well located, and there would be considerable difficulty and protest.
- Finding a suitable alternative site is inhibited by limitations of sewerage capacity in North and South Lanarkshire, and flooding problems in the east of Glasgow. The west and south of Glasgow are areas of dense residential development with limited industrial opportunities.
- There would be a double negative environmental impact, due to the closure of the present site and the impact of the activities in the new location.
- Some international business would be lost.
- There would be a direct impact on some 68 jobs at the site, having an adverse effect on the local economy.
- Although the relocation of the rail facility might delay the motorway project by up to 4-6 years, a similar delay could result from the need to relocate the waste disposal facilities, taking account of the need to find a site; gain all the necessary consents; and design, build, and commission the new facilities.
- There should be full, proper, and open consultation, investigation, discussion, and consideration of these matters before any decision is made.
- There are errors in the details of the description of the extent of the various ownerships and tenancies.
- The objectors believe that the 1995 route at Polmadie should be preferred to the current proposal, when all of the costs, environmental, and economic implications of the two options are taken into account.

Summary of case for the acquiring authority

9.88 The main points made by the TRA in response to these objections are as follows :

- The TRA has explained the reasons why the northern alignment is now preferred to the 1995 alignment through the railway land (see paragraphs 9.58-9.59 above).
- Disturbance compensation will be payable on the basis of the Statutory Compensation Code. The Valuation Office Agency will consider each case on its merits.

- Estimates of the total compensation that would be payable for the proposed scheme and various local alternative options were provided by the Valuation Office Agency during 2002.
- As is usual in such cases, to avoid causing concern, no contact was made with the potential claimants. Instead, based on standard professional practice, estimates were based on records held by the agency and from other sources, but without inspections of the land and property or information from the businesses concerned.
- These estimates assumed that as most of the businesses were manufacturers or wholesalers, that the vast majority would relocate, and that disturbance costs would include removal costs, loss or adaptation of fittings, and temporary loss of profits.
- The underlying principle of compensation is that affected parties should be in the same financial position as if the property had not been acquired.
- It is up to the affected parties to use compensation to locate and move to a suitable alternative property. In addition, other funds such as Regional Selective Assistance may be available to assist with business relocation.
- The environmental impact of relocating displaced businesses is not assessed at this stage, as this is an issue for consideration once relocation sites have been identified.
- SEPA has stated that the agency does not entirely agree with the assertion that the activities undertaken at these sites are of national importance. The fundamental aspect of handling special waste is able to be carried out at a number of alternative locations. The agency notes that Clearwater DC Ltd has more specialised infrastructure on its site, but there are alternative firms who perform similar activities.
- The TRA acknowledges that there are potential difficulties in attempting to relocate the waste disposal activities currently carried on at the Polmadie sites.
- The TRA and the local authorities and local enterprise companies are working together to assist in such relocations, including assistance in obtaining permissions, consents, and licences. It is recognised that this is a sensitive issue. However the TRA considers that the potential difficulties do not justify any change in the assessment of options, nor a change in the decision to adopt the current alignment.

H Morris & Co Ltd : Map 6 : Plots 123-124 and 210-213

Description and background

9.89 This company makes furniture in a factory complex running parallel to and to the north of the Polmadie railway depot. Access is from Rosyth Road (from the northwest), which serves the main entrance, reception, and administrative offices, as well as most of the production buildings; and from Southcroft Road (from the east) which provides a large manoeuvring area for HGV deliveries and uplifts.

9.90 The 6 plots to be acquired total approximately 4 ha, largely forming a contiguous site which accommodates virtually all of the production facilities, but excludes some of the vehicle parking and manoeuvring area at the Southcroft Road entrance. Plots 124 and 210 are very small areas detached from this larger site. In addition, the company occupies additional premises on the west side of Rosyth Road.

Summary of case for H Morris and Co Ltd

9.91 In support of the objection, it is stated for the company that it is a leading European furniture manufacturer, with its manufacturing headquarters at Rosyth Road. It employs some 500 staff at these premises in a range of skilled and semi-skilled jobs offering opportunities to a wide spectrum of the Glasgow population. The company has a distribution fleet of some 70 vehicles.

9.92 The revised route for the M74C would wholly sever the premises, requiring the demolition of a significant portion of the main manufacturing facility, a 480,000 square foot elongated factory directly in the path of the motorway. Detailed investigations have shown that it would not be possible to re-route the motorway through the premises or re-arrange the premises on the reduced site without wholly unacceptable detriment to the business.

9.93 There is no ready supply of 500,000 square foot manufacturing units of the type and specification required for furniture production and distribution at this scale in the Glasgow area. Following an extensive search, two alternative sites in the area have been assessed, but the cumulative costs of a complete relocation to either of the sites were shown to be excessive and unviable. Thus no viable options yet exist for relocating the enterprise within the greater Glasgow area.

9.94 The motorway proposal thus raises a number of significant economic considerations. It threatens the headquarters and production facilities of a major specialist manufacturing business, having a devastating effect. This outweighs any advantage of the revised route.

9.95 The company considers that insufficient justification has been given to support the decision to divert the motorway route to the north of the railway land (see paragraphs 9.57-9.59 above).

Summary of case for the acquiring authority

9.96 The TRA has explained the reasons why the northern alignment is now preferred to the 1995 alignment through the railway land (see paragraphs 9.58-9.59 above). Disturbance compensation will be payable on the basis of the Statutory Compensation Code. The Valuation Office Agency will consider each case on its merits. Where only part of a property is included in the compulsory purchase order, severance compensation may be payable. Again each case is considered on its merits.

[note : this ends the section on the Polmadie diversion]

Millside Properties Limited/McConechy's Tyre Service Limited : Map 9 : Plot 164

Description and background

9.97 This plot, extending to 2,360m², is part of Unit 7B, Farmeloan Industrial Estate, Rutherglen, which lies to the rear of Rutherglen railway station. It is currently occupied

by a large asbestos shed and car parking. The plot is on the line of the M74C, forming part of the east embankment of the elevated structure over the railway station.

Summary of case for the objector

9.98 The objection is that the CPO will result in the closure of the business and the need for relocation.

Summary of case for the acquiring authority

9.99 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested.

James Boyle : Map 10 : Plot 179

Description and background

9.100 This plot, extending to 3,286m², was the site of the houses known as and forming 2/4 Gray Street and 134/136 Cambuslang Road, Rutherglen, owned by SLC and now demolished. It lies close to the Cambuslang Road interchange and is affected by the connecting roads to the M74C which crosses Cambuslang Road at this point by a bridge.

Summary of case for Mr Boyle

9.101 The objection relates to issues of compensation, re-housing, and related matters.

Summary of case for the acquiring authority

9.102 The issues raised by the objector do not constitute a competent objection to the CPO.

MRC Pension Trust Limited : Map 10 : Plots 184-189, 191, & 220

Description and background

9.103 The eight plots relate to areas of ground forming part of the Clyde Industrial Estate, Rutherglen, which are required to facilitate the construction of the M74C on ramp south at the Cambuslang Road Interchange and an alternative access to the estate using Duchess Place and Cunninghame Road, Rutherglen. Plot 184, extending to 272m², is part of an open area of car park, fronting a private lane. This land is understood to be required for the formation of a hammerhead adjacent to the private lane. Plots 185 and 186, extending to 61m² and 342m² respectively, are contiguous immediately to the south of plot 184 and relate to servitude rights of access over the same car park for the construction of a turning area, for installation and maintenance of drainage apparatus, and

for access in connection with the M74C construction. Plot 187, extending to 1,312m², is part of the same car park and lies immediately south of plot 186 on the line of the on ramp, while plot 188, extending to 1,339m², is part of the *solum* of Cunninghame Road, again on the line of the on ramp. Plot 189 relates to a servitude right over 19m² of land lying to the east of Cunninghame Road to lay down and maintain drainage apparatus. Plot 191, extending to 13,960m², is part of the former Clydebridge Steel Works, Rutherglen, to the north east of Cambuslang Road. Again, it is on the line of the M74C. Plot 220, extending to 225m², is part of the *solum* of Cunninghame Road required to link Cunninghame Road and Duchess Place to Cambuslang Road, some 125m west of the on ramp.

Summary of case for MRC Pension Trust Limited

9.104 The objection is in the following terms: -

" 1. The Order, if confirmed, would result in the loss to our client of a substantial part of its land holding at Clyde Industrial Estate, Rutherglen.

2. The Order, if confirmed, would disrupt the operation of our client's business at Clyde Industrial Estate aforesaid.

3. Insufficient detail has been provided in the draft Order and on the Map (as defined in the draft Order) to enable our client to ascertain the full extent of the proposals."

9.105 The objector owns the Clyde Industrial Estate ("the Estate") which lies between Cambuslang Road on the south west and the River Clyde on the north west. Access to the Estate is gained from Cambuslang Road and Cunninghame Road. The TRA proposes to stop up Cunninghame Road and to provide an alternative access via the Cambuslang Road/Duchess Place junction, some 300m to the west of the Cambuslang Road /Cunninghame Road junction. The current access to the M74 from the Estate is 800m south eastwards along Cambuslang Road, turning left into Bogleshole Road from where, by using Cambuslang Road, Cambuslang and 3 roundabouts, Fullarton Road junction is approximately 1.6km distant.

9.106 In amplification of the objection, the Estate currently houses 3 industrial buildings sub-divided into units, the anchor tenant being Business Post, a freight oriented organisation. The Estate also contains 2 vacant plots. In September 2003, planning permission was granted for the erection of a distribution warehouse (Class 6), ancillary offices, and car parking on part of the southern plot, the prospective occupant of the 1,475m unit being Business Post and the intention being that access would continue to be taken from Cambuslang Road via Cunninghame Road. Business Post and a similar company, Scotmail, occupy the largest unit on the Estate which has a large yard between it and Cambuslang Road, a considerable area of which is to be compulsorily acquired for the M74C.

9.107 Considerable importance is placed by the objector on the recent history of the Estate and the proposed motorway, reference being made to the 1995 motorway proposal for which planning permission was granted for a scheme which included a virtually identical junction arrangement at Cambuslang Road as that now being proposed and the grant to the then owner of the Estate, on appeal against non-determination in 1997, of outline planning permission for a direct connection between the Estate and that junction. A subsequent application to renew this permission, which SLC was minded to grant, was called in and dismissed by Scottish Ministers in 2002.

9.108 Notwithstanding the objection lodged to the CPO, the objector in July 2003 forwarded to the TRA a proposal entitled "Indicative Grounds for Objection & Alternative Proposals" (Production MRC 18) and a meeting took place the following month, although no agreement was reached. This was confirmed by letter of 9 September 2003 from the TRA (Production MRC 19), the reasons being severe engineering difficulties and road safety concerns. The objector's agent, who had been present at the meeting, understood that the TRA nonetheless gave a commitment at the meeting to consider a roundabout arrangement.

9.109 The objector supports the principle of the M74C and a junction at Cambuslang Road. The objection is to the stopping up of Cunninghame Road and the closure of its junction with Cambuslang Road. The proposed alternative access via Duchess Place is tortuous and involves additional mileage. It involves passing through the neighbouring Farme Castle Industrial Estate and using roads that have no parking restrictions and are unsuitable for the passage of HGVs. A mobile snack bar currently sits in Duchess Place and is understood to have the benefit of planning permission. The TRA alternative requires the acquisition of land, the construction of 230m of an alternative access road, and considerable additional cost when compared to a more direct access from Cambuslang Road.

9.110 The objector provides a comprehensive review of the development plan to conclude that its proposed access accords with that plan. It is not accepted that it technically contravenes policies TRA1 and 8 of the local plan. Furthermore, the proposed access is supported by SPP1, SPP2, NPPG17, its Addendum (SPP17), PAN66, and SEL document "Changing Gear Towards 2010". The TRA has failed to meet its responsibilities under PAN58 in that it has not properly assessed the objector's alternative access proposal.

9.111 In the absence of further information from the TRA, the objector engaged a traffic consultant in October 2003 to review traffic flow data at the Cambuslang junction with a view to preparing a proposal providing for the retention of an access to the Estate from Cambuslang Road. A request was made to the TRA for the traffic flow information it had used. The output data for a traffic prediction model for the design years 2010 and 2020 was supplied by e-mail towards the end of October 2003. There was no information however on the Duchess Place/Cambuslang Road junction. Based on the incomplete information which was still being worked on to build a computer based TRANSYT model of the TRA's proposal, the consultant prepared a preliminary report on the traffic

aspects of the junction, outlining 2 possible options (options 1 and 2) for retaining access (Production MRC 01 – October 2003). The consultant then used the TRANSYT model to compare his alternative proposals with that of the TRA. On 10 December 2003, the TRA, on its own initiative and at its own expense, had a traffic survey of the junction conducted by survey contractors Count on Us. The results of the survey were sent to the objector in early January and copies were made available to the consultant within a day or two later. The consultant then required to re-work his model on the updated information and prepare a fresh report that was made available in mid February 2004 (Production MRC 01 – February 2004). This effectively became the traffic consultant's precognition for the inquiry, the official precognition of October 2003 having largely been overtaken by events. At the inquiry, it became apparent that the objector had been unaware of further traffic survey information obtained by the TRA for a Road Safety Audit of its proposal, a pre-requisite in terms of the DMRB before promoting the Orders.

9.112 The December 2003 actual count data was extrapolated to the design year 2020 using the national road traffic high growth forecast, and the results compared with the side road traffic flows using the earlier data. The comparison highlighted major differences, with the earlier data showing 471 vehicles entering Duchess Place in the morning peak hour and 460 leaving in the evening peak hour. In contrast, analysis of the actual count data produced corresponding figures of 246 and 241 vehicles. For this reason, the TRA proposal was tested against Transyt model analysis of both sets of data. The objectors indicative options 1 and 2 of October 2003 were found to be virtually identical in terms of Transyt network specification and only one test was carried out to cover the 2 options. For modelling purposes, the assumption was made that there would be a pedestrian crossing cycle at every second traffic signal cycle at the junction. The signalling system would be phased so that all lights were red at the one time, eliminating the need for button controlled crossings. There was little pedestrian traffic at the junction in any event. No account was taken of the possible expansion of business on the Estate. The results indicated that the objector's proposed access would work as well or marginally better than the TRA proposal, with the performance index being better in all cases under the objector's arrangement. On further study of the 2 options, a variation of option 1 (option 1A) emerged as the better option because of constructional and operational difficulties associated with differences in ground level and the steep gradient needed to access the Estate. The total volume of traffic using either Duchess Place or the objector's access remains the same, the only difference being the access point. No increase in traffic delay should result from the objector's access, which can be developed in accordance with the DMRB.

9.113 At the inquiry, it was accepted that option 1A as set out in Appendix 12 of Production MRC01 (February 2004), involved the acquisition of a lane and commercial premises fronting it from a third party who was himself an objector to the CPO in respect of another plot and that the commercial premises were the subject of a number of tenancies. This would require a fresh CPO and entail further delay. Option 1A was no more tortuous than the TRA alternative. It was not accepted that the introduction of the objector's access at an already busy junction would give rise to safety implications, making it more complex and confusing for motorists. Appropriate map signage would

warn motorists of the access into the Estate and in all likelihood there would be a similar arrangement at Duchess Place with the TRA scheme. It was not accepted that motorists following traffic entering the objector's access would assume that the signal from the vehicle in front showed the intention to use the east bound on ramp, giving rise to the risk of collision or sharp braking movements. Again, there was no difference in this respect between the objector's access and Duchess Place. The objector maintained that all the options were merely indicative and that an option 1B, not involving additional land take, could possibly be achieved. The objector did not accept that a fully worked up option 1B should have been produced for the inquiry. The objector's responsibility was simply to provide an alternative engineering solution, which had been done. Traffic from the west using the objector's access (option 1A) would require to travel a safe and convenient distance down the lane, possibly some 25/40m, before taking a 90 degree right turn into the objector's storage yard, proceeding across the yard, and taking another 90 degree left turn into Cunninghame Road. This would entail the use of land currently allocated for industrial use. It was accepted that, while the maximum additional travel distance under the TRA scheme would be 750m, the average would be in the region of 140m.

Summary of case for the acquiring authority

9.114 On behalf of the TRA, it was submitted that, prior to the promotion of the CPO and Roads Orders, an outline design, in sufficient detail to determine the minimum land requirement for the M74C had been prepared, which established the need for the land which the TRA seeks to acquire from the objector. Compensation will be paid in accordance with statute and the issue of compensation itself is not a valid ground of objection to the CPO. The TRA has met with the objector's agent but no evidence has been produced to show that a direct access to the Estate from Cambuslang Road is possible. The report on the called-in application of 2002 (Production TRA/A/15) is of critical significance. As regards the meeting with the objector's agent in September 2003, it is strongly denied that the TRA gave a commitment to consider a roundabout option. This option had been examined and ruled out before. Furthermore, the letter of 9 September 2003 from the TRA (Production MRC18) sets out at some length and in some detail what was discussed at that meeting and does not record the commitment claimed. There was no challenge to the terms of the letter at the time. The objector's proposal – option 1A - is entirely different to what the objector had previously proposed. The proposal now is to take an access via the privately owned lane and no longer from the slip road, an apparent acceptance of the impracticality of the original proposal.

9.115 Option 1A as now proposed would require a further CPO, a new Roads Order and would cause uncertainty and delay. The owner of the lane and the commercial premises fronting it (Mr Millen) is himself an objector to the CPO in respect of plot 221. Negotiations are underway with Mr Millen in regard to accommodation works, which hopefully will see the closures of both the lane at its junction with Cambuslang Road and the pend lane a few metres to the west of the lane, with alternative access from the rear using the new road proposed by the TRA to access the Estate. Mr Millen is understood to favour Option 2 on drawing 474000/Sk135 of Production TRA/C/14, which would be wholly incompatible with option 1A. The objector's proposed access would be unlikely

to find favour with the various tenants of Mr Millen's commercial premises. The lane itself is sub-standard being narrow and having a poor surface, lacks footpaths, and is unsuitable for HGVs. Option 1A adds another junction to an already busy and complex junction. The number of junctions should be minimised to avoid confusing drivers. This view is supported by the DMRB which highlights the danger of indecision on the part of drivers. It is important to ensure correct motorway signage and the map signage proposed by the objector could simply add to driver confusion. Map signage at Duchess Place would be 300m away from the Cambuslang interchange. Further criticisms of option 1A include east bound traffic on Cambuslang Road not being opposed by traffic lights and west bound traffic from Rutherglen/Cambuslang seeking to access the east bound on ramp having to cross over the path of east bound traffic. The proposed stop lines are not considered effective. The TRA alternative access arrangement has been the subject of a road safety audit. The same cannot be said of the objector's alternative. The new access proposed by the TRA is shown in Production TRA/C/14 with traffic lights at the Duchess Place junction linked to the traffic signals at the M74/Cambuslang Road junction. The proximity of the Cambuslang Road junction will greatly enhance accessibility to the Estate. While the average additional travel distance is of the order of 140m, delays at junctions could represent more of a problem to road users. As regards the mobile snack bar in Duchess Place, information from SLC indicates that there is no planning permission for this use but that a street trader's licence exists. While SLC has responsibility for traffic regulation on adopted streets such as Duchess Place, there is no reason to believe that SLC, as a project partner, would not exercise its powers to control parking should a problem arise.

9.116 As regards the traffic flow data, the TRA supplied the objector's traffic expert with all the information requested. The DMRB requires a Road Safety Audit with traffic flow data and the expert would have been aware of this requirement.

9.117 The TRA used higher growth figures to create a worst case scenario in order to prove that the alternative access arrangement, particularly at the Duchess Place/Cambuslang Road junction, would work satisfactorily and to take account of future development of both the Estate and Farme Cross Estate. The Performance Index /Saturation Flows in excess of 90% as shown in Appendices 7 and 8 of Production MRC01 (February 2004 version) are not accepted, based on detailed analysis undertaken by the TRA over many years. Option 1A has not been tested using the TRA high growth forecasts.

Somerville & Morrison Limited : Map 10 : Plot 178

Description and background

9.118 This plot, extending to 4,263m², is part of the property known as and forming 130 Cambuslang Road, Rutherglen. It lies to the south west of Cambuslang Road, adjacent to Rutherglen rail depot and takes its access directly from Cambuslang Road through land belonging to the objector but not included in the CPO. The plot contains a number of

dilapidated buildings still in use as a paper processing business. The office and car park of the business are outwith the plot.

Summary of case for Somerville & Morrison Limited

9.119 The objection is that, without adjusting the land take or agreeing an exchange of land, the objector's specialist protective paper processing business – the only one of its kind in Scotland – will be lost. This family business, established in 1873, has a substantial order book, particularly in the export market, and has 21 employees.

Summary of case for the acquiring authority

9.120 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested. There are ongoing discussions with the objector in an effort to reach agreement.

Mr B Millen : Map 10 : Plot 221

Description and background

9.121 This plot, extending to 20m², is an area of land forming the entrance to a private lane fronting Cambuslang Road, Rutherglen. The lane serves a number of commercial properties owned by the objector. The plot lies at the start of the on ramp to the M74C south at the Cambuslang Road interchange.

Summary of case for Mr B Millen

9.122 The objection is based on the M74C effectively cutting off the objector's existing accesses from Cambuslang Road to his properties on the west side of the private lane he owns and to the pend through other property belonging to him fronting Cambuslang Road. The proposed traffic lights at the junction adjacent to his property will mean that traffic from the east would no longer be able to turn right into the pend, while traffic from the west would likely to be hindered by traffic queues at the lights and the tight space available for turning into the pend. The objector's premises are currently let to a number of tenants. Access from the Cambuslang Road frontage to the premises at the rear will no longer be possible, access having to be taken from Duchess Place. Additional costs are anticipated. In the last 18 months, 7 tenants have vacated these premises due to the derelict and vacant nature of the surrounding area attributable to the prospect of the M74C. This has resulted in a significant loss of revenue, a situation that is likely to continue through the construction period. The objector is also unclear as to any obligations he may have in respect of the proposed hammerhead on the other side of the lane close to its junction with Cambuslang Road.

9.123 In a supplementary submission to the response from the TRA, the objector suggests that the TRA has misunderstood his objection to some extent. His concern is that traffic moving towards the Cambuslang junction from the city may back up at the traffic lights, restricting access to the pend for vehicles approaching from either direction wishing to enter his land via the pend. A meeting with the TRA to discuss the objection took place in August 2003, as a result of which the objector was provided with drawings of 3 possible solutions. Only the second solution, namely, drawing 474000/Sk135, showing access from his private lane through a building to be demolished, would be acceptable to him.

Summary of case for the acquiring authority

9.124 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested. There are ongoing discussions with the objector in an effort to reach agreement. Plans of possible solutions have been supplied to the objector and the TRA is confident that an acceptable arrangement can be agreed. The TRA does not intend to purchase any of the adjacent commercial properties.

Corus plc : Maps 10 and 11 : Plots 193-195

Description and background

9.125 These plots are contiguous and are situated in the grounds of the Clydebridge Steel Works, Rutherglen, lying to the north east of Cambuslang Road, Rutherglen and to the south west of the River Clyde. While the steel works remains in operation, the surrounding land including the plots is vacant semi-derelict scrubland. Plot 193 extends to 9,884m², while plot 194 extends to 71,616m². Both plots are on the line of the M74C which would run on an embankment. Plot 195 is a rectangular area of ground extending to 467m² over which a servitude right for drainage to the River Clyde is sought.

Summary of case for Corus plc

9.126 The objection is based on the extensive amount of land being acquired and severance of existing operational and potential development areas, including the main access and a number of internal roads integral to the operation of the Clydebridge Works. The operation of the works will be severely disrupted with a large area to the north of the M74C being severed. If the M74C goes ahead, it will be essential to maintain a minimum ground clearance of 3m from the existing main access at Ballochmill Road up to the western edge of the works plant at the very least, and the objector would wish to be advised if the M74C is to come closer than 40m from the works. A further requirement would be the retention of a continuous access from Ballochmill Road for HGVs and other vehicles, including access to the weighbridge, which may require to be relocated. Again, continuous access will be required to the land to the north of the M74C, in particular to

the electricity sub-station and outfall pipe to the Clyde, which too may require to be relocated.

Summary of case for the acquiring authority

9.127 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested. There are ongoing discussions with the objector in an effort to reach agreement.

Hillview Developments Limited : Map 12 : Plot 198

Description and background

9.128 This plot, extending to 10,472m², is an area of open land to the north east of the River Clyde, forming part of the Cambuslang Investment Park. It lies south west of London Road and to the west of Fullarton Road. The plot is close to the Fullarton Road junction and is on the line of the M74C and associated side roads.

Summary of case for Hillview Developments Limited

9.129 The objection is that the route of the M74C dissects the objector's land holding in such a way as to have a detrimental environmental impact.

Summary of case for the acquiring authority

9.130 In response to the objection, it is stated for the TRA that the need for the M74C has been established, in order to complete the trunk road network across Glasgow. The proposed motorway would provide a new high quality strategic link through Glasgow, and would offer an alternative to the M8, which is often heavily congested.

H Meanen (Electrical Services) Ltd : Map 14 : Plot 207

9.131 This company occupies premises at the convergence of Polmadie Road and Aikenhead Road, some 800m to the south of the motorway route. At present, this junction is blocked off to give a free flow of traffic along Aikenhead Road. Under the M74 proposals, the junction would be reconfigured to open up Polmadie Road as the main route to and from the motorway junction. Aikenhead Road would then meet Polmadie Road at a T junction. This rearrangement requires the acquisition of a small (90 sq m) triangle of land from the objector. This is currently open land forming part of the property, not affecting the building itself.

Summary of case for H Meanen (Electrical Services) Ltd

9.132 In support of the objection, it is stated that the firm employs 8 people at the site involved in electrical contracting work throughout west central Scotland. The business is dependent on the use of 4 vans and two cars, which are parked, unloaded, and loaded in the stopped up part of Polmadie Road. Expansion of the firm would require further vehicles.

9.133 If this section of Polmadie Road is re-opened, it can no longer be used as it is at present. This would have a very serious impact on the operation of the business, and preclude expansion. This also applies to various neighbouring businesses.

9.134 The TRA has proposed using part of the land owned by the company and off the new highway for some vehicle parking. This would provide 3 parking spaces. However this would be insufficient for the operational needs of the business. The solution is to have assistance to relocate the business to a site where adequate parking would be available.

Summary of case for the acquiring authority

9.135 The TRA has offered to provide a turning head within the objector's site so that vehicles can turn round before leaving. There should be no difficulty entering Polmadie Road as the traffic flow will be regulated by new traffic lights nearby.

PART 4 : REPORTER'S FINDINGS AND CONCLUSIONS

CHAPTER 10 : FINDINGS OF FACT

I make the following findings of fact :

Chapter 1 : Description of scheme and procedural history

A1 The description of the proposed motorway scheme and the setting into which it would be placed are as described in paragraphs 1.1 - 1.7 above, which are incorporated herein.
A2 The history of the project is as described in paragraphs 1.8 - 1.14 above, which are incorporated herein.
A3 The partnership agreement in respect of the M74C is as described in paragraph 1.15 above, which is incorporated herein.
A4 The legislative framework underpinning the Orders is as described in paragraphs 1.16 - 1.19 above, which are incorporated herein.
A5 The public consultation undertaken in respect of the M74C is as described in paragraph 1.20 above, which is incorporated herein.

Chapter 2 : Current policy context

B1 The description and summary of current policy, and associated reasoning, set out in chapter 2 above is incorporated here.
B2 There is a policy commitment to complete the M74 motorway on the part of the Scottish Executive; Glasgow City, South Lanarkshire, and Renfrewshire Councils; and in the statutory development plan (see below), in order to complete a perceived gap in the strategic road network, and to alleviate congestion on the M8, and in particular on the Kingston Bridge.
B3 There is policy support for the proposed motorway on the part of various economic development agencies, and to maximise the local benefits of the new road.
B4 There is also widespread policy support for improvements to public transport, including a high level commitment by the Scottish Executive that by the year 2006, 70% of transport expenditure should be for public transport; and to improve social, economic, and environmental conditions for local communities.
B5 There is widespread policy support for sustainable development and sustainable solutions to problems, including transport and traffic.
B6 There are numerous proposals for new economic development which would be expected to benefit from improved accessibility due to the new road.
B7 There is widespread policy support for promoting social inclusion, and to assist disadvantaged communities, including those without the use of cars.
B8 There are policies to reduce the amount of travel in road vehicles (to return to 2001 levels by 2021); to reduce the use of trunk roads for short local journeys; and to make better use of road space through management.
B9 There are policies to give higher priority to walking and cycling.

Chapter 10 : Findings of fact

B10 The statutory development plan for the M74 Completion corridor comprises the *Glasgow and the Clyde Valley Joint Structure Plan* (approved 2002), the *Glasgow City Local Plan* (adopted 2003), and the *Cambuslang/Rutherglen Local Plan* (adopted 2002). Thus there is up to date structure and local plan coverage for the area.

B11 All 3 plans give explicit support to the M74 Completion project, and the proposed route is safeguarded in the two local plan Proposals Maps. The current proposed route for the new motorway generally conforms to the safeguarded routes, except for the northward deviation to avoid the Polmadie rail maintenance facility

B12 All 3 plans promote the improvement of the local economy and the regeneration and re-use of brownfield vacant and derelict land. The M74 completion scheme is expected to make an important contribution to meeting these objectives.

B13 All 3 plans recognise the importance of completing the strategic road network, to improve accessibility, ease congestion on the M8, and improve local conditions.

Chapter 3 : Transport : strategic issues and mode share

C1 The Scottish Executive, as initiator of these Orders, has demonstrated its wish that the M74 Completion be constructed.

Transport spending and mode share

C2 The estimated cost of the M74 Completion project at the time of the public local inquiry was £375-500 million, plus £4.9 million for additional works to the existing motorways where the M74/M8/M77 converge.

C3 The cost of the project would be increased due to loan charges that may be incurred on the local authority components of the scheme, and would be considerably higher (in the order of £800 million) if a PPP is used. However this would spread the expenditure over a much longer period.

C4 On the basis of the projected transport infrastructure spending plans presented to the inquiry, spending on public transport projects in the west of Scotland during the period 2004-2008 would represent about 35% of the total, compared with 65% on road projects. This would be at variance with the intention that public transport spending (in Scotland as a whole) should account for 70% of the total by the end of 2006. Given the large proportion of spending that would occur in the west of Scotland, it would be unrealistic to expect the 70% target to be achieved by a much higher proportion of public transport spending in the rest of the country.

C5 The position would be worsened if there is a contractual commitment to the expenditure on the M74 Completion, but public transport spending is hindered by spending reductions or delays in delivering projects.

C6 Given the probable global limit on transport spending in Scotland, this reversed balance of expenditure between roads and public transport, or increased cost of the M74 if it becomes a PPP project with charges spread over a longer period, would be likely to reduce the scale and effectiveness of the delivery of attractive public transport improvements, contrary to stated intentions.

C7 No full multi-modal study of options for the M74 corridor has been carried out because the M74 Completion project was accepted as a commitment that had reached an advanced stage of planning and was considered to be fully justified on traffic, road safety, and economic grounds.

C8 The draft Scottish Transport Appraisal Guidance (STAG : document TRA/C/16) states (page 4-3, paragraph 4.2.9, third bullet point) that "Simply retro-fitting existing proposals or those with a planning history, to objectives may be tempting but is clearly not the way to proceed".

C9 The M74 Completion project is an existing proposal with a long planning history. Planning permission was issued for the new road in 1995, and was subsequently renewed. The current scheme generally follows the same alignment, except at Polmadie.

C10 Given the fundamental changes in transport policies that have emerged since 1995, especially in respect of the strategies for public transport and new road building, it is desirable that the implications of the project for public transport and other transport objectives should be considered. The current inquiry has allowed that to take place.

C11 It is a Government commitment to strive to reduce traffic levels in Scotland, so that they are brought back to 2001 levels (in terms of vehicle/kilometres) by the year 2021.

C12 According to the traffic predictions presented to the inquiry, the M74 Completion project would be likely to result in 1.5-2.5% additional vehicle trips in the Glasgow area, and it is estimated that there would be approximately 5% additional vehicle kilometres due to these additional vehicle trips.

C13 Although traffic levels within Glasgow appear to be stable, vehicle flows across the city boundary cordon are increasing at around 2.3%, due largely to flows on the motorways.

C14 Facilitating greater use of the motorway network for vehicle trips by increasing motorway capacity would be likely to continue and perhaps increase this trend. This would be at variance with the policy objective to reduce overall traffic levels, and would require even greater efforts to reduce non motorway vehicle trips to offset this growth if the overall target is to be achieved.

C15 There are no plans to introduce road user charging in Glasgow, but the City Council keeps the matter under review. Such a scheme could have the potential reduce traffic flows into the city, including traffic leaving the M74 off ramps, and the other radial routes that it would relieve.

C16 The introduction of tolls for the use of motorways and trunk roads would require new primary legislation.

Traffic congestion

C17 The existing road network in the vicinity of Glasgow city centre suffers from severe traffic congestion during peak periods, notably on the M8 west of the city centre (junctions 18-19); on the M8 westbound approach to the Townhead junction during the morning peak; on the M77 northbound approach to the M8 during the morning peak; on major radial routes such as Edinburgh Road, Tollcross Road, Duke Street, Rutherglen Road, Glasgow Road, and Cambuslang Road; and on the surface streets leading to

motorway access points. Congestion can last up to 2-3 hours, and extend for 4-7 kilometres, even without an incident.

C18 The M74C would reduce the loss of time due to traffic congestion, and road accidents, within a context of increasing traffic flows.

C19 Traffic predictions for 2010 and 2020, based on assumed traffic growth, indicate increased use of the trunk road network for long distance commuter trips, leading to a generally more congested network, even with the extra capacity of the M74C, with much of the road network in the M74C corridor operating close to capacity for long periods of the day.

C20 The CSTCS (document TRA/A/16 and JAG/7) recommends various measures to "lock in" the benefit of road improvements, notably congestion charging, high occupancy lanes, trunk road tolls and ramp metering, but recognises that some of these measures are very unlikely to be publicly and politically acceptable.

C21 Evidence from continental cities indicates that effective integrated public transport with attractive fares can result in much higher levels of rail usage than Scotland, even where car ownership levels are higher.

Benefits on surface streets

C22 The M74 would reduce traffic levels on various surface streets (see chapter 4), notably Rutherglen Main Street, Cambuslang Road, Dalmarnock Road, and Calder street. These reductions would be in the order of 9–24%. This would make these streets more pleasant and safer for other users and adjacent occupiers, and would allow more space to be devoted to pedestrians, cyclists, local deliveries, and bus lanes. Improvements of this kind are already taking place, but there would be likely to be continuing and worsening traffic congestion on the general traffic road space if the M74C does not proceed.

Objectors' alternatives

C23 The objectors have put forward some alternatives to provide improved transport facilities in place of the M74 Completion, as set out in paragraphs 3.23-3.24 above. Taken together, they do not offer a clearly feasible and more effective approach. Rather they offer a menu of possibilities that would each require more detailed investigation to determine the balance of costs and benefits, and the selection of an appropriate set of complementary proposals. However there is some potential for a more focussed approach to tackling specific problems such as traffic relief on Rutherglen Main Street; avoiding delays to freight traffic and buses; and improving public transport services for the general public, especially those without access to cars.

C24 It is evident that constructing sections of the new road below ground level would involve much more expensive engineering work and, in some places, more disturbance of contaminated land; but would reduce the impacts of visual intrusion, noise, and severance.

Chapter 4 : Traffic implications

D1 The description of the methodology of the traffic prediction studies and results, as described in paragraphs 4.1-4.19 is incorporated here. The *Paramics* traffic modelling package has been demonstrated to give effective results through numerous successful projects that have been carried through to completion.

D2 The work on the CSTCS M74 Corridor, although more strategic and less focussed on the effects of the M74C, provides a useful overview of the wider context of the probable traffic effects. The description of the findings and conclusions of the corridor study contained in paragraphs 2.23-2.32 above are incorporated here.

D3 The introduction of the M74C scheme would be likely to ease severe existing peak hour congestion on the section of the M8 to the west of Baillieston and to the west of the M80, and to a lesser extent on the Kingston Bridge.

D4 It is not suggested that peak hour congestion on the city centre section of the M8 (between junctions 15 and 19) would be eliminated. No traffic predictions are available for this section, but there are only 2 through lanes in each direction, and queuing would remain here (and in various other locations) according to the predictions contained in CSTCS.

D5 The reductions in journey times across and through Glasgow (in the order of 5-10 minutes at peak times) would be of benefit to drivers and businesses.

D6 The introduction of the M74C scheme would be likely to ease severe existing peak hour congestion on the braided eastbound lanes on the southwest approach to the Kingston Bridge.

D7 The provision of two motorways serving the east side of Glasgow would allow traffic to be diverted between them (by means of the driver information system) in the event of severe temporary congestion caused by roadworks, accident, or vehicle breakdown.

D8 These reductions in traffic congestion would contribute to the Scottish Executive's vision for 2021 that road traffic on all parts of the network will be flowing smoothly without congestion. However congestion would not be eliminated, and the position would deteriorate if traffic levels are not curbed, or continuing traffic growth is not matched by corresponding increases in capacity.

D9 The completion scheme itself would generate a 1.5-2.5% increase in vehicle trips in the Glasgow area, leading to an increase of about 5% in vehicle kilometres.

D10 The transfer of westbound trips from the M80/M8 to the M73/M74 would be likely to lead to congestion on the westbound approach to the M74C from the east at the Fullarton junction from the year of opening, becoming progressively worse due to general traffic growth.

D11 In theory, this queue could be as long as 1800m (about one mile) spread across all 3 lanes. However in practice it would probably be less, as drivers would seek to avoid it by changing route (including reverting to the local street network), changing time, changing destination, or changing their mode of travel.

D12 Congestion on the eastbound approach to the M74C from the west would be largely restrained to the local roads approaching this part of the motorway system.

D13 Due to capacity limitations on the eastern approach and in the vicinity of the western approach, the M74C itself would have adequate capacity to carry the traffic flows that are predicted to reach it.

D14 The section of the M8 between the M74/M8 and M8/M77 interchanges would require additional running lanes, to be provided by converting sections of the hard shoulders.

D15 Although some emergency lay-bys may be provided as a substitute for the hard shoulders, it is likely that the absence of hard shoulders would exacerbate congestion occurring in this location due to accidents, vehicle breakdowns, and roadworks.

D16 Traffic flows would increase on various streets serving the motorway junctions, although this would be offset to some extent by reductions in existing through traffic that has transferred to the motorway at other locations. The roads affected by these increases would be Cambuslang Road (in part), Polmadie Road, and Aikenhead Road. (For predicted figures, see paragraph 4.11 above. The environmental implications of these increases are described and discussed in other chapters that follow.)

D17 Various streets in the Dumbreck and Kingston areas would also experience traffic increases. Those at Kingston are partly due to traffic using the surface streets to pass between the M74 and the Kingston Bridge and other Clyde bridges because of the absence of direct connections between the M74 and the Kingston Bridge. About 20-27% of traffic at the western end of the Completion scheme is predicted to leave or join the motorway at the Kingston ramps.

D18 Traffic flows would be expected to decrease on various main roads parallel to the new motorway route that currently carry heavy commuter and other traffic, due to the transfer of trips to the new road. The roads that would benefit most from these reductions are expected to be Dalmarnock Road, Cambuslang Road (in part), Main Street Rutherglen, and Calder Street (for predicted figures, see paragraph 4.18 above).

D19 Where traffic is reduced on main roads, it would allow more space to be devoted to bus lanes, cycle lanes, pedestrians, and safer road crossing facilities, to the benefit of local residents and other road users. Some of these improvements are intended with or without the M74C scheme.

D20 There would also be road safety and environmental benefits where there are traffic reductions, in terms of noise and air emission reductions.

D21 The completion scheme would be likely to lead to approximately 760-975 fewer road accidents across the network during the 20 year period following the opening of the road.

D22 If the M74C is not built, the congestion on the M80, M8, and M77 is likely to become worse than if the completion scheme is built, due to continuing traffic growth, but the congestion on the westbound approach to the M74 Fullarton junction would be less, as traffic would remain on the M80/M8 routes towards the city centre.

D23 Congestion and environmental intrusion on the streets benefiting from reduced traffic if the completion scheme is built would also become worse if it is not built, as existing traffic would be retained, and levels would increase due to traffic growth.

D24 As some of these surface routes already carry bus lanes, or are intended to have them irrespective of whether the M74 Completion is built, traffic congestion would be exacerbated if the completion scheme is not built, as general traffic would be confined to a reduced road area. The probable driver responses to this increasing congestion would be

a combination of re-routing (possibly along local rat runs); re-timing; and possibly modal shift to the improved public transport services.

D25 The absence of direct motorway links between the M74C and the Kingston Bridge means that traffic wishing to pass between the city centre/west end and the M74C would have to use surface streets. This would lead to longer journeys and more adverse environmental effects (airborne emissions, noise).

D26 The provision of direct motorway links between the M74 and the Kingston Bridge, as advocated by Mr George Baillie, would involve extra construction costs (in the order of £10-£20 million) and probably some extra land acquisition. No traffic analysis has been made available to the inquiry, but it is evident that direct connections would increase traffic levels on the Kingston Bridge (compared with not having direct connections) with a corresponding reduction of traffic using the surface network to cross the Clyde on the other bridges. The direct connections would also be likely to attract more traffic with origins or destinations north of the river to use the M74C in preference to other routes, and probably to greater use of the M74C for commuter trips.

Chapter 5 : Physical, environmental, and community impact

Land take and property demolition

E1 The general alignment of the new motorway, land uses along the route, and the land use context of the wider motorway corridor are described in paragraphs 1.1-1.7. Much greater detail is given in the Environmental Statement, notably technical annexes B, E, and H (Land Use and Property, Ecology and Nature Conservation, and Cultural Heritage). The properties directly affected are as listed at paragraph 5.21 above.

Green areas, wildlife habitats, and water quality

E2 The new motorway would result in a net reduction of about 9ha of natural and semi-natural habitats along the route.

E3 Existing watercourses crossing the motorway route are mainly already in culverts, and these culverts would be extended to pass under the motorway.

E4 Surface run-off from the motorway would pass to SUDS retention ponds, before discharge to the River Clyde.

E5 Surface run-off from the motorway would be expected to increase the volume of a 1 in 10 year flood event on the River Clyde by approximately 1%.

Community severance

E6 The new motorway would pass close to residential communities at Rutherglen, Farme Cross, north Toryglen, and Govanhill, and through a mixed use area at Eglinton Street where there are residential uses.

E7 The new motorway would add to community severance on the section between Cambuslang Road and Polmadie Road, despite proximity to the west coast main rail line, as it would increase the width of the corridor occupied by transport uses to 200-300m, and due to the visual obstruction of the motorway embankments, and community

concerns about passing under the motorway bridges on foot and by bicycle. Substantial severance is predicted for pedestrians and cyclists passing through the 3 motorway junctions, and slight/moderate severance at other places where community routes would pass below motorway bridges and viaducts.

Listed buildings, scheduled monuments, and archaeological interest

E8 The motorway would require the demolition of 4 listed buildings, all category B, as described in paragraph 5.33 above. Other listed buildings would be retained in close proximity to the route, as described in paragraph 5.34 above.

E9 The overall adverse effects on cultural heritage sites predicted to result from the construction of the motorway are as described in paragraphs 5.35-5.39 above: 3 severe adverse; 9 major adverse; 49 moderate adverse; and others minor.

Visual impact

E10 The new motorway is predicted to have a major visual impact on the landscape and townscape through which it would pass.

E11 Although the design philosophy has been to keep the road as low as possible, some 5500m of the route (approximately 70% of the total) would be elevated on embankments, bridges, and viaducts.

E12 Adverse visual impacts predicted for the opening year are as summarised in paragraph 5.53 above : 11 slight; 13 moderate; and 8 substantial. These would reduce to 10 slight, 5 moderate, and 4 substantial 15 years after opening, due to landscape planting becoming effective.

E13 The new motorway embankment would be located about 100m from the residential terraces of the Farme Cross Conservation Area, with the nearest point of the motorway carriageway at a distance of about 130m.

E14 The carriageway or slip roads of the new motorway would be within about 100-150m of residential areas on the north side of Rutherglen between Cambuslang Road and Glasgow Road, a distance of approximately 1500m. This area is occupied by two storey houses to the east, and predominantly 4 storey flats in the centre and west. The facades facing the motorway route in the vicinity of Rutherglen town centre are mainly renovated traditional sandstone tenements.

E15 The motorway viaduct passing over Rutherglen Station would introduce a major engineering structure above the station platform, cutting out daylight and bringing traffic noise, although it would provide shelter from rain and perhaps a degree of interest for those awaiting trains.

Noise

E16 Predicted noise impacts from the new motorway are as summarised in paragraph 5.68 above. These take account of proposed mitigation measures (mainly noise barriers) which are expected to reduce noise levels by up to 14 dB. If these mitigation measures prove to be less effective than predicted, resulting noise impacts at the receptors would be correspondingly worse.

E17 Adverse noise impacts are predicted to be moderate at 4 locations, totalling some 180 dwellings; and major at two locations, totalling some 200 dwellings.
E18 The predicted traffic reductions on Rutherglen Main Street (13-22%) would not result in a perceptible reduction in traffic noise, as they are expected to be below 3 dB, the lower limit of perceptibility.
E19 The River Clyde walkway and cycleway near Auchenshuggle woodland has not been treated as a receptor in the noise assessment, so no quantitative figures are available. However this semi-rural area remote from main roads is likely to have low or moderate ambient noise levels, so that the noise of motorway traffic crossing the new elevated bridge over the river would be likely to be a very noticeable intrusion.

The Oatlands project

Note : Although the Bett Homes objection has been withdrawn, the objection from the Logan Street Tenants and Residents Association remains, relating to the potential visual and noise impact of the elevated motorway on the Oatlands redevelopment area.
E20 The Oatlands project is an important regeneration scheme intended to provide improved residential conditions in this area.
E21 At Oatlands/Polmadie, the elevated motorway would be expected to have a slight to moderate adverse visual impact in the year of opening, reducing to slight adverse/slight beneficial after 15 years.
E22 In assessing the noise impacts of the motorway in the Oatlands area, it is appropriate to take account of the re-aligned Rutherglen Road in the environmental assessment, as it is an essential and integral element of the Oatlands redevelopment that would affect the local environment, even if the M74 Completion is not built.
E23 The realigned Rutherglen Road would be an important source of noise affecting the new dwellings along the southern perimeter of the new development.
E24 The motorway is predicted to add to ambient traffic noise in the Oatlands area, to the extent described in paragraphs 5.76-5.79 above.
E25 Although not strictly necessary for noise mitigation purposes, the addition of a noise barrier along the north side of the motorway in the Oatlands section, including the motorway bridge over Polmadie Road, and possibly including the slip roads on the north side of the Polmadie Road motorway junction, would have a beneficial effect on residents of the new houses, by reducing ambient levels within the development and providing subjective relief, especially in the early years before intervening planting reaches maturity.
E26 The noise assessment for Oatlands carried out on behalf of the TRA conforms to national guidance on the assessment of traffic noise from new roads. However it does not provide any quantitative assessment of night time noise levels, as recommended in PAN56.
E27 Placing the Polmadie section of the motorway at ground level, with Polmadie Road crossing over rather than under the motorway, would incur extra engineering costs due to the additional work required to cope with ground contamination, drainage/flooding, and underground services.

Local air pollution

E28 Overall levels of air pollution are expected to fall, thanks to improvements in engine technology.
E29 The new road would be expected to increase local air pollution levels compared with the future situation without the new road, with the highest concentrations being found at the western end of the route.
E30 The net result of these changes would not exceed the recommended standard of 40μg m-3, and this is not primarily because of the new motorway but the influence of the higher concentrations in the city centre and the M8 traffic. These are not locations where the public will experience long term exposure.

Disruption during construction

E31 There would be disruption of road traffic, including motorway traffic, where M74 construction activities would require road closures and diversions. The worst affected locations are those where construction work will last for longer periods (up to 6 months) or affect roads carrying heavy traffic flows and subject to peak hour congestion.
E32 Construction traffic is predicted to require approximately 213,000 HGV loads, causing noticeable increases on some routes, and some loss of amenity where sensitive receptors are close to routes that would carry increased flows for long periods, eg Cambuslang Road where there would be around 131 additional HGV movements per day for nearly a year. These figures would be doubled if (as appears to be the case) the return journeys have been omitted from the calculations (see paragraph 5.94 above).
E33 There would be some night time rail track possessions to allow major structural work to take place.
E34 The noise assessments for the construction work are based on worst case scenarios with no mitigation. Mitigation measures should improve some of the noise impacts.
E35 Where necessary, and unlike the operational traffic noise assessment, the assessment of construction noise is based on a more stringent standard for noise at night.
E36 Night working on major bridge and viaduct structures is likely to be required, for approximately one night per week over a period of up to 3 months at each bridge location.
E37 Piling and general construction work on major structures at night is predicted to result in noise exceedances in the range 21-29 dB. As an increase of 10 dB is regarded as a severe impact, these much higher levels must be regarded as very severe.
E38 Day time working would take place on 5.5 days per week, 11 hours per day.
E39 Day time noise is likely to last 4-9 months at each site, with piling work lasting 1-3 months. Day time exceedances are predicted to be mainly 1-7 dB, but up to 17 dB at one location. These would give rise to some moderate impacts.
E40 Vibration from piling may be perceptible up to 100m from the operations. Though this would be unlikely to affect the integrity of sound buildings, there could be risk to older or unsound buildings, and noticeable vibration could be a source of concern to property owners and occupiers.

E41 Noise mitigation measures would reduce some of these impacts, but will in some cases depend on vigilant adherence to good practice.

E42 Construction work would increase the difficulties for pedestrians and cyclists passing across the motorway route on existing streets, and would increase community severance further than that predicted for the operational phase (see findings above).

Summary of local environmental impacts as assessed in Environmental Statement

E43 The accompanying table is a summarised compilation of the assessments of the impacts of community severance, visual impact, and noise (during construction and when the motorway is in use) contained in the Environmental Statement.

RESULTS OF ENVIRONMENTAL ASSESSMENT : ADVERSE IMPACTS AT LOCATIONS ALONG ROUTE

Location	Community Severance	Visual impact	Traffic noise	Noise during construction daytime	night time
Kingston				severe	severe
Eglinton/ Pollokshaws Road	moderate (at night)	substantial		moderate/severe	severe
Oatlands/ Polmadie	substantial	slight/ moderate (slight by year15)		moderate	
north Toryglen		moderate (slight by year15)		major	
Rutherglen west/central	moderate severe (at night)	substantial		moderate	moderate
Farme Cross	moderate (at night)	substantial		moderate	moderate
Rutherglen east	substantial	substantial		moderate	moderate
River Clyde Crossing		substantial			
Fullarton	substantial				major

Chapter 6 : Airborne Emissions

(Note : references in brackets are to pages in Technical Annex K)

F1 Air quality standards and guidelines, current and proposed are as described in paragraphs 6.4 - 6.6 above, which are incorporated herein.

F2 The principal pollutants and their current and predicted levels are as described in paragraphs 6.8 - 6.18 above, which are incorporated herein.

F3 An air quality assessment impact study has been carried out for the M74C.

F4 The methodology for the study is as described in Chapter 15 of the ES and in Technical Annex K1 and Appendix K1, all of which are incorporated herein.

F5 The methodology is summarised in paragraphs 6.1–6.3, 6.19-6.23, and paragraphs 6.30- 6.31 above, which are incorporated herein.

F6 In assessing the impact of a road scheme, most emission forecasts use traffic forecasts, because emissions of pollutants are directly related to vehicle use.

F7 The results of the study are not disputed, the challenge being limited to interpretation of the results e.g. percentage increases in certain pollutants.

F8 The results are based on two spatial areas, namely, a Wider Study Area and a Detailed Study Area.

F9 The two spatial areas are as described in paragraphs 6.21-6.22 above, which are incorporated herein.

F10 The pollutants of concern are NO2 and PM10. All other pollutants are within the objectives and guidelines. (K31)

F11 Traffic related pollution decays rapidly with distance from the road. (K47) Air quality impact is only effective within 200m of the motorway.

F12 Both spatial areas are based on predicted changes in traffic flows on road links greater than 10% brought about by the M74C. (K41/2)

F13 The Wider Study Area relates to properties within 200m of a road link, the measurement being from the centre of the road link. (K47) In this area, the majority of properties are predicted to experience an improvement or no change in NO2 concentrations, while a large number of properties are expected to experience a reduction in roadside PM10 concentrations as a result of the M74C.(Table 15.1 ES p.206) More residential properties are expected to benefit (46%) than to suffer (25%), while the balance are unaffected. This arises from the relocation of traffic from local roads to the strategic road network.

F14 In the Wider Study Area, the M74C is predicted to give 12% and 0.4% reductions in the number of properties exceeding NO2 and PM10 objectives respectively in 2010. (table 15.2)

F15 In the Detailed Study Area, the greatest impact on NO2 concentrations are expected to occur at the eastern end of the M74C, on the new motorway itself. (ES p.207) Within 100m of the M74C, slight increases in concentrations of NO2 and PM10 are predicted.

F16 Within 100m of the M74C, there are 119 residential properties, 87 industrial, 15 retail, 5 office, 4 community, and 1 recreational property. (K38)

F17 In the Detailed Study Area, total maximum annual NO2 concentrations at the most affected receptor i.e. Eglinton Street for 2010 are estimated at 39.3µg m-3, just under the assessment criterion of 40µg m-3. Short term NO2 concentrations are also predicted to fall below the criterion. (ES p.207)

F18 In the Detailed Study Area, maximum incremental concentrations of PM10 at the most affected receptor are predicted to be 1.1µg m-3 as an annual average and 3.8µg m-3 as a 24 hour average, compared with present background concentrations of 27 and 64.5 µg m-3 respectively.(ES p.207)
F19 In the Detailed Study Area, further modelling at a greater spatial scale indicated that NO2 concentrations in 2010 would exceed the 40µg m-3 criterion in the vicinity of the Kingston Bridge. All other sections of the area would be below the criterion in that year. Long term average NO2 concentrations on and within 100m of the M74C and at the west end closest to the city centre may be just above or below the criterion, given the uncertainties inherent in the modelling exercise.(ES p208) Air quality objectives are likely to be met except at the Kingston Bridge end of the M74C, where the effect of the M8 itself, coupled with the high level of city centre pollution, and not the M74C, may result in the threshold being exceeded. (K63)
F20 Table 15.3 of the ES (page 208) predicts a significant decrease in emissions of CO, THC, NOx, and PM10 from the Base 2001 to Do Minimum 2010. Do Minimum CO2 (2010) shows a marginal decrease on Base 2001 (-11,600 tonnes/year, = 0.5%) The introduction of the M74C is predicted to increase emissions of CO2, NOx and PM10, while emissions of CO and THC show a decrease. The increase in CO2 emissions attributable to the motorway is predicted to be 86,600 tonnes/year, or 3.8%.
F21 The same table shows that for the year 2020, the Do Minimum predicted figure is 2,366,800, an increase of 96,800 tonnes/year above the Base 2001 figure (4.3%), while the Do Something 2020 figure is 2,501,600, an increase of 134,800 tonnes/year (5.7%) due to the introduction of the M74C. These figures reflect the higher traffic levels that are predicted, and the additional effect resulting from the introduction of the new motorway.
F22 The Scottish Climate Change Programme (2000) seeks to reduce greenhouse gas emissions in Scotland to help deliver the UK contribution to the Kyoto Agreement to reduce 1990 emissions by 12.5% by 2008-2012. (ES page 209) The Do Minimum prediction for 2010 (see above) would be lower than the 2001 Base, while the introduction of the new motorway would result in the higher levels and percentage increases noted above, both for 2010 and 2020.
F23 Improvements in air quality for the benefit of all, and those with respiratory problems in particular, are an important part of government policy.
F24 An overall improvement in air quality within the AQMA covering the city centre, along with a decrease in the number of non-compliant properties in the AQMA, is predicted. Properties on the M8 northern flank should also benefit.
F25 The assessment study is based on a “high growth” scenario and no account is taken of any possible traffic reduction interventions. Should growth be lower and/or traffic reduction measures introduced, the impact on air quality would be less.
F26 There appears to be no proven link between new road construction schemes and the incidence of asthma.

Chapter 7 : Geo-technical, mining and contaminated land

G1 The Ground Investigation (GI) represents a comprehensive scientific appraisal of ground conditions (including hydrogeology, mining and contamination issues) along the route corridor.

G2 For the GI, the route was divided into 5 sections, with 29 sub-area sites where contamination was understood to be present, as described at paragraph 7.2.1 of the ES.
G3 The number of boreholes and other tests carried out in the fieldwork of the main GI are described at paragraph 7.3 above.
G4 The GI indicates no particular difficulties on geological, hydro-geological, and mining issues.
G5 The contamination studies have been based on a site by site risk assessment in accordance with the guidance in paragraphs 21-23 of PAN 33.
G6 The challenge to the contamination evidence did not extend to the technical data but was limited to practicalities such as health risks, costs, noise from piling operations, and the like.
G7 The key contamination problems are as described at paragraphs 7.17 above.
G8 The receptors at significant risk are as described at paragraph 7.18 above.
G9 The remedial options are as described at paragraph 7.20 above.
G10 The broad remediation strategy proposed is to bury the contaminated materials (largely chromium waste) beneath the embankments and elevated structures which will carry the road surface, with a range of other remediation options (TRA/I/3) for contamination which cannot be treated by this method.
G11 Containment is a long established and accepted method of remediation and is one of the methods of site restoration described in Annex 1 of PAN 33.
G12 Paragraphs 18-20 of PAN33 confirm the "suitable for use" approach as forming part of national guidance.
G13 Paragraph 19(iii) of PAN33 identifies one of the elements of the "suitable for use" approach as "limiting requirements for remediation to the work necessary to prevent unacceptable risks to human health or the environment in relation to the current use or future use of the land …..".
G14 The route of the M74C has been selected using the GI data to optimise the best value for money option on all issues, including the treatment of contaminated land.
G15 The EMS and the GI studies are of an ongoing nature, the intention being to reduce the risk of exposure during the construction and operational phases of the road.
G16 Given the length of the M74C and the extensive contamination, the estimated costs for earth works, piling, and stabilisation do not appear disproportionate.
G17 The remediation works do not involve any exceptional or unique engineering works.

Chapter 8 : Economic impact and regeneration

Employment forecasts

H1 The methodology for the Simmonds Report is as summarised at paragraphs 8.3-8.6 above.
H2 The Reference Case in the Simmonds report shows an increase in total employment for Scotland of 298,000 between 2005 and 2030 (Table 6-1 p.15), with Glasgow and the Clyde Valley making up about half of this total.
H3 The Simmonds report predicts an increase of 20,000 jobs in Glasgow and the Clyde Valley by 2030 directly attributable to the additional competitiveness for some

areas conferred by the M74C. The main beneficiaries would be Glasgow (+11,000) and Renfrewshire (+4,000), with smaller benefits for East Renfrewshire and South Lanarkshire (around 3000 each), North Lanarkshire (about +1500 jobs) and East Dunbartonshire (+500).

H4 Given the use of a fixed economic forecast for Scotland as a whole, these would not be new jobs for Scotland, but transfers of predicted new jobs from elsewhere in Scotland. These job transfers would be at the expense of the Forth (-8000) and Ayrshire (-3000) areas, and North Scotland (-2000), and within the Glasgow and the Clyde Valley area, from West Dunbartonshire (-500) and Inverclyde (-1200).

H5 Some of the additional jobs are predicted to be located in Assisted Areas in Glasgow and Renfrewshire, and some will be drawn from existing Assisted Areas elsewhere.

H6 As a result of this transfer of jobs, the Simmonds report predicts an additional 14,000 residents in Glasgow and the Clyde Valley by 2030, contributing to the area economy.

H7 The scope of the Ekos report is as summarised at paragraph 8.17 above.

H8 The Ekos report predicts an additional 25,000 jobs (gross) directly attributable to the M74C over the period up to 2030. This study is based on area forecasts of employment demand, and the potential supply capacity of prospective development sites. Assumptions are made as to what proportion of the predicted growth can be attributed to the completion of the M74, as a key factor leading to the successful regeneration and redevelopment of sites.

H9 On the demand side, table 4.6 of the Ekos report indicates an annual growth in jobs of the order of 10,000 between 1995 and 2002. Figures show increasing demand in service sector activities, continuing decline in manufacturing, and a move towards science and technology activities. (Ekos report, pages 25 - 27)

H10 On the supply side, table 4.2 of the Ekos report identifies strategic development sites in the west of Scotland capable of providing 2.3 million m² of business space, with a potential capacity of 95,000 jobs (table 4.4) over the next 20 years. There appears to be a lack of information on the extent of contamination on a number of the sites.

H11 The range of employment forecasts reviewed in the Ekos report at tables 4.7, 4.8, and 4.9 demonstrate the wide differences between various forecasts of essentially the same or related matters.

H12 Objectors' criticisms of the Simmonds report include limited consideration of land use and transport elsewhere than central Scotland; failure to take account of issues such as business failures and the costs associated with pollution and congestion; and over simplistic assumptions.

H13 Objectors criticise the Ekos report as simply listing land availability and failing to address issues such as likely uptake, demand and displacement.

H14 Objectors doubt the validity of predicted jobs growth in both reports and, without providing alternative figures, suggest that the M74C might have a negative impact on employment prospects due to the 2 way road effect, and the fact that local labour may not be suitable for the new jobs created.

H15 The GCVSP identifies 1,245 ha of marketable business and industrial land in the plan area, with past take up rates of 60 ha per annum and projected rates of 69.5 ha until 2010 and 75 ha from 2010 to 2020.

H16 There is approximately 114 ha of land available for industrial or business use within 1.5km of the M74C, excluding Cambuslang Investment Park.

H17 Paragraphs 11 and 12 of the SACTRA report summary (August 1999; document JAG15) state that :

- empirical evidence of the linkage between road improvements and economic growth is "*weak and disputed*";
- none of the claimed effects can be guaranteed;
- "*any contribution to the sustainable rate of economic growth of a mature economy, with well developed transport systems, is likely to be modest*."
- results of studies of the economic impact of completed transport projects "*do not offer convincing general evidence of the size, nature or direction of local economic impacts*"; and that
- "*Our studies underline the conclusion that generalisations about the effects of transport on the economy are subject to strong dependence on specific local circumstances and conditions.*"

H18 In the light of these warnings, the forecasts contained in the Simmonds and Ekos reports relating to the creation of jobs in the west of Scotland directly attributable to the construction of the M74C must be treated with caution, especially as they cover a long period and there are internal inconsistencies.

H19 Given the express limitations and caveats in both the Simmonds and Ekos reports, the wide variations in forecasts, the lack of a robust causal effect between new transport projects and economic growth highlighted in the SACTRA report, a precautionary approach to assessing the impact of the M74C in terms of economic development and regeneration is advisable.

H20 In the context of all the evidence and caveats noted above, it would appear that the most optimistic estimate of additional jobs in the west of Scotland area directly attributable to the M74C would be the figure of 25,000 (for 2030) contained in the Ekos report. However the figure of 20,000 contained in the Simmonds report would consist largely of transfers of potential new jobs from other areas of Scotland. Thus, on the basis of these two reports, the net additional jobs for Scotland due to the motorway would be 5,000 at the most. Given the uncertainties of forecasting over such a long period, the numerous other factors at work, and the cautionary approach commended in the SACTRA report, the figure seems likely to be lower, rather than higher. The figure then requires to be offset by potential losses of jobs from existing businesses along the motorway route who may fail to survive the relocation process, or deciding to relocate outwith the west of Scotland or even outwith Scotland.

Other economic benefits

H21 Economic activity rates are low in the M74C corridor.

H22 The perception of better transport links could enhance the attractiveness of the area to potential developers, leading to increased economic activity rates.

H23 The M74C is regarded as critical to Scottish Enterprise funding of projects including the Clyde Waterfront, Clyde Gateway and the EERR.

H24 The long history of the M74C has sterilised a considerable area of land, generally former heavy industrial land, along the route corridor, a situation made worse by the possible presence of contamination.
H25 Apart from contamination, a further development constraint in this corridor may be the lack of infrastructure.
H26 The M74C could act as a catalyst for the regeneration of such land. Alternatively, the land could be released for development by abandoning the motorway proposal (removing the blight) and by providing alternative access arrangements where required.
H27 Industrial land unaffected by ground conditions along the corridor, at the Clyde Waterfront along to the airport and beyond, may well benefit in the early years following construction, through improved road links, reliability on the network, and reduced journey times.
H28 In the absence of traffic reduction measures, benefits to the economy would be progressively eroded by traffic growth.

Economic impact and regeneration : transport aspects

H29 The M74C would benefit businesses to the west of Kingston Bridge by providing an improved transport link, but would increase congestion at the Erskine Bridge, giving less benefit to West Dunbartonshire and Inverclyde.
H30 Households increasingly adjust to workplace change by changing commuting habits rather than their place of residence.
H31 The SIAS traffic modelling indicates that improvements to the motorway and trunk road network would facilitate more long distance commuting.
H32 The 2 way road effect described in the SACTRA report (JAG15) could act as a disbenefit in that businesses may choose to locate outside the Glasgow area due to the increased accessibility to it afforded by the extended motorway. In addition, jobs created locally may be taken by long distance inward commuters.
H33 While easing a genuine bottleneck on a trunk route may promote economic growth, the purpose of the M74C is to complete a major new radial motorway into Glasgow from the southeast.
H34 Car ownership rates in the M74C corridor are low with the result that the new motorway would do little to assist those currently excluded from the mainstream economy due to the lack of personal transport.
H35 The M74C would improve vehicular access to and from Glasgow Airport from the south east of Glasgow and from the north east by reducing M8 congestion.
H36 The proposed rail access to Glasgow Airport should provide a more reliable mode of access to the airport, serving a wide catchment area through the rail network.

Effects on businesses displaced by the new motorway

H37 The TRA estimated that 189 businesses would be directly affected along the route of the new motorway, affecting about 2,800 employees. However the employment estimate was prepared without inquiry being made of the businesses themselves and must be viewed with caution. The Morris furniture factory alone has some 500 employees.

H38 The TRA assumed that all businesses affected would relocate. No account appears to have been taken of the possibility of businesses choosing or being forced to cease trading, or choosing to relocate outwith the area.

H39 There must be doubt as to the prospect of successful relocation of a number of these businesses within the TRA timescale for commencement of construction. It is noted that the TRA is prepared to enter sites even where the occupying business has not yet relocated. (see paragraph 9.27 above)

H40 Given the number of businesses affected along the route, the jobs involved, and the services that some of them provide to other components of the Scottish economy, the disruption, relocation or cessation of trading would be likely to have a severe impact on the existing local economy and the individual employees concerned, and to some extent on the wider Scottish economy.

Chapter 9 : Objections to compulsory purchase order

Note : For several of the objections proceeding on the basis of written submissions, the grounds of objection/submissions are short, and the response from the acquiring authority is a short standard reply. These are of necessity reflected in short findings for these cases as recorded below.

General

At the time of concluding the writing of this report, some 25 objections to the proposed compulsory purchase order remain not withdrawn, out of an original 42. These relate to 36 plots out of the approximately 200 separate plots covered by the order as a whole. There is some overlap between objectors and plots, and between plots and objectors. Details of remaining objections are listed in the table on pages 9-1 and 9-2. Findings follow the same sequence as chapter 9, following the motorway route from west to east.

Noble Imports Wholesale : Map 1 : Plot 30

Noble 1	The submissions for the parties are as summarised in Chapter 9.
Noble 2	It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.
Noble 3	The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.
Noble 4	There was no alternative route before the inquiry.
Noble 5	Plot 30 is on the line selected and required for the construction of the M74C.
Noble 6	If the Special Road Scheme is approved, the acquisition of the plot is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

Albion Chemicals Ltd : Map 1 : Plot 31

Albion 1	The legal submissions summarised in appendix 6 below are a matter for consideration by Scottish Ministers and their advisers.
Albion 2	The description and background information contained in paragraphs 9.9 - 9.11 above is incorporated here.
Albion 3	The line of the proposed motorway indicated on the local plan Proposals Map passes across the Albion Chemicals site.
Albion 4	There are severe constraints on the horizontal and vertical alignment of the new motorway in this locality. Any deviation sufficient to avoid the Albion Chemicals site would be likely to involve severe difficulties, and to affect other businesses in the locality.
Albion 5	Albion Chemicals Ltd provides specialist chemicals to numerous business and public sector customers all over the UK and Ireland, through a network of regional distribution depots.
Albion 6	The premises at Paterson Street/West Street are the only company depot in Scotland. It makes an important contribution to the Scottish economy by supplying up to 500 different chemical products to about 2000 customers in Scotland. It also makes an important contribution to the Albion Chemicals business by accounting for about 15% of the company's chemical distribution activity, and by providing part of the complete coverage of the UK, necessary for some contracted supplies to nationwide business customers.
Albion 7	It would not be possible for the company to provide a competitive comparable level of service from a depot in northern England, in terms meeting customers' requirements for the supply of small quantities of special products within 24 hours.
Albion 8	The withdrawal of Albion Chemicals Ltd from the Scottish chemicals market would reduce effectiveness and business competitiveness as Albion Chemicals has a large share of the market, and there are only two other suppliers in Scotland. In addition, about 60 specialist jobs would be lost.
Albion 9	For these reasons, it would be undesirable for the company to cease operations in Scotland.
Albion 10	There is no specific locational need for the Albion Chemicals business to be sited at Paterson Street. The business could operate successfully from a specialist industrial site on the east side of Glasgow, provided that it has close access to a motorway and is sufficiently close to Kingston to retain most of the current employees.
Albion 11	Any new site for the depot would be likely to be more extensive than the current site, to provide for current space and safety requirements, and to allow more space for manoeuvring and parking the distribution vehicle fleet and employees' cars.
Albion 12	It would take about two years to set up the business at an alternative site, largely because of the need to find and obtain a suitable site and then to

obtain a number of specialist authorisations. Time would also be needed to construct and commission the new facilities.

Albion 13 As the TRA hopes to have access to the site to start motorway construction by around the end of 2005, the window for this relocation is already too small. Either the business would have to be extinguished before alternative premises are available, or the programme for the motorway construction would have to be postponed.

First Engineering Limited : Map 2 : Plots 40 & 41

First 1 The submissions for the parties are as summarised in Chapter 9.

First 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.

First 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.

First 4 There was no alternative route before the inquiry.

First 5 Plots 40 and 41 are on the line selected and are required for the construction of the M74C.

First 6 If the Special Road Scheme is approved, the acquisition of the plots is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

First 7 Plot 40 is not connected to the rail network.

Land Securities Trillium : Map 3 : Plot 73

Trillium 1 The submissions for the parties are as summarised in Chapter 9.

Trillium 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.

Trillium 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.

Trillium 4 There was no alternative route before the inquiry.

Trillium 5 Plot 73 is on the line selected and required for the construction of the M74C.

Trillium 6 If the Special Road Scheme is approved, the acquisition of the plot is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

BRB (Residuary) Limited : Map 3 : Plot 76

BRB 1 The submissions for the parties are as summarised in Chapter 9.

BRB 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.

BRB 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.

BRB 4 There was no alternative route before the inquiry.

BRB 5 Plot 76 is on the line selected and required for the construction of the M74C

BRB 6 If the Special Road Scheme is approved, the acquisition of the plot is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

Guthrie Scottish Nominees (No 3) Limited : Map 4 : Plots 80 & 81

Guthrie 1 The submissions for the parties are as summarised in Chapter 9.

Guthrie 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.

Guthrie 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.

Guthrie 4 There was no alternative route before the inquiry.

Guthrie 5 Plots 80 and 81 are on the line selected and required for the construction of the M74C.

Guthrie 6 If the Special Road Scheme is approved, the acquisition of the plots is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

Allscot Plastics Limited : Map 4 : Plots 94 & 96

Allscot 1 The submissions for the parties are as summarised in Chapter 9.

Allscot 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.

Allscot 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.

Allscot 4 There was no alternative route before the inquiry.

Allscot 5 Plots 94 and 96 are on the line selected and required for the construction of the M74C.

Allscot 6 If the Special Road Scheme is approved, the acquisition of the plots is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

David B Dobie (Accountants) : Map 4 : Plot 94

Dobie 1 The submissions for the parties are as summarised in Chapter 9.

Dobie 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.

Dobie 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.

Dobie 4 There was no alternative route before the inquiry.

Dobie 5 Plot 94 is on the line selected and required for the construction of the M74C.

Dobie 6 If the Special Road Scheme is approved, the acquisition of the plot is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

Glasgow Rowing Club : Map 4 : Plots 100-102

GRC 1 The submissions for the parties are as summarised in Chapter 9.
GRC 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.
GRC 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.
GRC 4 There was no alternative route before the inquiry.
GRC 5 Plots 100-102, while not on the line selected, are required for the construction of the M74C as part of essential drainage infrastructure.
GRC 6 If the Special Road Scheme is approved, the acquisition of the plots is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.
GRC 7 The rowing club has a specific locational need to retain their facility on the river bank, and to have unimpeded access to use the boatshed for the storage of long boats.

Polmadie realignment and affected businesses (maps 5 and 6) : Plots 103, 107, 110, 119, 121, 123-124, 210-213

Polmadie 1 The current proposed route would affect the following plots where objections to the compulsory purchase order are maintained, that were not affected by the scheme approved in 1995 : Ingram Brothers (Glasgow) Ltd (Plot 103); BOC Ltd (plot 107)*; Scotbeef Ltd (Plot 110); Mr & Mrs Philip C Smith and Philip C Smith (Commercials) Ltd (plots 119+121); Clearwater DC Ltd (part of plot 119); Shanks Chemical Services (part of plot 119 +121); and H Morris & Co Ltd (plots 123-124, 210-213). (* The BOC site was affected by the 1995 scheme, but the requirement of the current scheme is much more significant.)
Polmadie 2 The description of the locality (paragraph 9.53-9.55) and the various individual sites (paragraphs 9.61-62, 66-67, 74, 82-86, and 89-90) are incorporated herein.
Polmadie 3 The current proposed route would require the relocation of the activities on these objectors' plots, in most cases the complete relocation of the businesses to new sites.
Polmadie 4 The number of jobs on the sites affected by the realignment would be at least 600, out of a total of some 1800 jobs affected by the current scheme on sites between the Dixons Blazes Industrial Estate and Glasgow Road, Rutherglen. (document TRA/C/7, table 6).
Polmadie 5 The number of jobs that would be displaced along the corresponding section of the 1995 route would be about 1630. (same source document; rail depot jobs are not included).

Polmadie 6 The relocation of the railway depot would add about £75 million to land costs, compared with the current proposal, and broadly similar amounts compared with other options considered.

Polmadie 7 Relocating the rail depot to the south of the WCML would bring it close to the Toryglen residential area, where part of it would occupy some of the amenity open space situated between the housing and the existing railway land.

Polmadie 8 Replacing the railway depot would be a complex and lengthy undertaking, possibly requiring parliamentary powers and a period of up to 6 years.

Polmadie 9 The estimated engineering costs of the 1995 scheme and the current scheme are very similar, the estimated difference being in the order of £0.6 million on a total of about £20 million.

Polmadie 10 Most of the businesses in this locality provide specialist supplies and services to a very wide area, extending well beyond the west of Scotland and in some cases well beyond Scotland. They make an important contribution to the local and wider Scottish economy, both in providing jobs locally and providing important services to other businesses.

Polmadie 11 Relocating some of the displaced businesses would be lengthy and complex, due to their size and complexity (eg Morris Furniture), and the need to find suitable sites and obtain safety and pollution authorisations for activities with specialised requirements (eg BOC Ltd, Clearwater DC Ltd, and Shanks Chemical Services).

Polmadie 12 The TRA estimates of land costs used in assessing options have been based on historical data rather than specific appraisal of the facilities and activities on each of the affected sites.

Polmadie 13 There is a very wide disparity between the TRA estimates of land costs (including compensation), which are in the order of £31 million for the whole section of route between Dixons Blazes Industrial Estate and Glasgow Road, Rutherglen, and those of the objectors, where plots 119 and 121 alone are said to require a combined expenditure of some £28 million. This suggests that there could be difficulties in reaching mutually acceptable compensation settlements.

Polmadie 14 The timescale for relocation of the more complex businesses (probably some 2 years) would be well over the period of a little more than a year that would remain after the decision is expected, before it is hoped that construction would commence around the end of 2005.

Polmadie 15 If the displaced businesses are unable to relocate before construction commences, due to the timescale required to find suitable new sites, gain necessary authorisations, and build and commission new facilities, or because compensation and other financial assistance is insufficient to set up new facilities meeting modern requirements, these jobs and businesses services would be lost to the local and Scottish economy, with devastating effects locally and serious wider implications.

Polmadie 16 A motorway route below Polmadie Road would be less visually intrusive than the current proposal which would pass over Polmadie Road on an elevated embankment and bridge.

Millside Properties Limited/McConechy's Tyre Service Limited : Map 9 : Plot 164

Millside 1 The submissions for the parties are as summarised in Chapter 9.

Millside 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.

Millside 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.

Millside 4 There was no alternative route before the inquiry.

Millside 5 Plot 164 is on the line selected and is required for the construction of the M74C.

Millside 6 If the Special Road Scheme is approved, the acquisition of the plot is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

Somerville & Morrison Limited : Map 10 : Plot 178

S&M 1 The submissions for the parties are as summarised in Chapter 9.

S&M 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.

S&M 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.

S&M 4 There was no alternative route before the inquiry.

S&M 5 Plot 178 is on the line selected and is required for the construction of the M74C.

S&M 6 If the Special Road Scheme is approved, the acquisition of the plot is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

James Boyle : Map 10 : Plot 179

James Boyle 1 The submissions for the parties are as summarised in Chapter 9.

James Boyle 2 The objector has now been re-housed and the building demolished.

James Boyle 3 The objection is not competent.

MRC Pension Trust Map 10 : Plots 184-189, 191, & 220

MRC 1 The legal submissions for the motion for an award of expenses against the TRA are set out in Appendix 7, along with a recommendations to hw the matter should be determined. The request is now a matter for consideration by Scottish Ministers.

MRC 2 The description of the various plots to which the objection relates is as set out in paragraph 9.103 above.

MRC 3 The recent planning history relating to direct access to the Estate from Cambuslang Road is as described in paragraph 9.107 above.

MRC 4 The TRA promoted the Orders in March 2003.

MRC 5 The objector commissioned its traffic expert in October 2003.

MRC 6 Given this sequence of events, the Environmental Assessment could not embrace an alternative proposal that did not exist at the time.

MRC 7 The requirements of PAN58 have not been breached.

MRC 8 The TRA believed the objection to be a re-run of the 2002 called in planning application.

MRC 9 That application was refused.

MRC 10 The TRA supplied the objector's traffic expert with all information requested and without any undue delay.

MRC 11 Option 1A was put forward in February 2004 as part of a revised production MRC01 in the mistaken belief that the access lane was in public ownership. The fact that it was in private ownership only came to the objector's attention at the inquiry.

MRC 12 Option 1A would entail a fresh CPO and further delay.

MRC 13 Option 1A is in direct conflict with a proposed solution to an objection lodged by the owner of the access lane.

MRC 14 In any event, option, 1A using land in private ownership, would be contiguous with the start of the slip road forming the on ramp southbound to the M74C at the Cambuslang interchange.

MRC 15 This would be contrary to the advice in paragraph 62 of NPPG17 which states that direct access to a motorway or a motorway slip road is not allowed from any private development other than a motorway service area.

MRC 16 Option 1B, mooted for the first time at the inquiry, must inevitably take any access back to the slip road.

MRC 17 The provision of a private access roadway immediately adjacent to a motorway slip road would be both confusing and inherently dangerous.

MRC 18 Road safety considerations are paramount in this matter. Additional signage close to a busy interchange would be likely to add to driver confusion, contrary to advice in the DMRB.

MRC 19 The proposed access via Duchess Place, albeit possibly more expensive and involving longer travel distances, provides a safer vehicular access to the Estate.

MRC 20 Traffic regulations could be introduced if necessary to assist the free flow of traffic on Duchess Place.

Mr B Millen : Map 10 : Plot 221

Millen 1 The submissions for the parties are as summarised in Chapter 9.

Millen 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.

Millen 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.

Millen 4 There was no alternative route before the inquiry.

Millen 5 Plot 221 is on the line selected and is required for the construction of the M74C.

Millen 6 If the Special Road Scheme is approved, the acquisition of the plot is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

Millen 7 If the M74C is carried out as intended, the access in question will immediately abut a traffic light. Vehicles waiting at the light when it is red will prevent other vehicles from leaving or entering the site.

Corus plc : Maps 10 & 11 : Plots 193-195

Corus 1 The submissions for the parties are as summarised in Chapter 9.
Corus 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.
Corus 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.
Corus 4 There was no alternative route before the inquiry.
Corus 5 Plots 193-195 are on the line selected and are required for the construction of the M74C.
Corus 6 If the Special Road Scheme is approved, the acquisition of the plots is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

Hillview Developments Limited : Map 12 : Plot 198

Hillview 1 The submissions for the parties are as summarised in Chapter 9.
Hillview 2 It is government policy to complete the M74 from Fullarton to the M8 as part of the national road network.
Hillview 3 The proposed line and design details of the M74C have evolved over a number of years and following a comprehensive technical appraisal of options.
Hillview 4 There was no alternative route before the inquiry.
Hillview 5 Plot 198 is on the line selected and is required for the construction of the M74C.
Hillview 6 If the Special Road Scheme is approved, the acquisition of the plot is necessary. Conversely, if the Special Road Scheme is not approved, acquisition is unnecessary.

H Meanen (Electrical Services) Ltd : Map 14 : Plot 207

Meanen 1 The description of the site and operation is as set out in paragraph 9.131 above.
Meanen 2 If acquisition takes place, less off street parking will be available for the business, causing some difficulties because of the number of vehicles operated.
Meanen 3 There may be some opportunity for on street parking.

CHAPTER 11 : CONCLUSIONS AND RECOMMENDATION

Introduction

11.1 As will be evident to anybody who has looked at the previous chapters of this report, the M74C Fullarton to Kingston project would be likely to have complex and far ranging implications if it is built. It would be the largest urban motorway built in Scotland since the M77, and one of the most complicated and expensive engineering projects currently contemplated, comparable in general cost to the new building for the Scottish Parliament.

11.2 This public local inquiry has taken place because of the number of general and specific objections to the various line and side roads orders, and the objections by affected proprietors to the proposed compulsory purchase order.

11.3 The Reporters' remit has been to consider the objections, to report upon them, and to make a recommendation based on that material. To consider these objections, we have had the benefit of information from a number of sources, notably :

- The Environmental Assessment prepared for the scheme, as required under the appropriate regulations.
- The considerable number of inquiry documents lodged by the trunk road authority (TRA) and the objectors.
- The statements of case and witness precognitions supplied by those who participated in the inquiry.
- The evidence and cross examination that took place at the inquiry.
- The objections, letters of support, and further written statements from those who wished to make representations but who did not wish to take part in the public inquiry.
- A series of accompanied and unaccompanied visits to the locality, including conducted tours of a number of affected business premises along the route.

We have already expressed our appreciation (in the preamble to this report) for the helpful cooperation and clear information that we have received from all of those involved in the matter, including from those who did not take part in the inquiry.

11.4 As a result of all this effort by so many people on both sides, and our immersion in the subject for several months, we have been able to bring together a great deal of information which has greatly clarified the issues and implications of the scheme. This has been set out in the preceding topic oriented chapters, leading to extensive findings on each topic, compiled for convenience in chapter 10. Inevitably there are some areas of uncertainty, and conflicts of view where different parties will put different weight or interpretation on the same material.

11.5 The provisions of the inquiries procedure rules preclude the questioning of Government witnesses on the merits of Government policy. However that rule does not prevent objectors from presenting arguments about the expected disadvantages of the

road, the cumulative effect of which could be to suggest that the public interest would be served better if the road was not built.

11.6 The discussion that follows starts with the material from chapters 3-9 which cover the probable impacts and implications of carrying out this project. The conclusions flowing from this discussion are then assessed in the context of the policy background described in chapter 2.

11.7 It comes as no surprise to find that a major motorway inserted through a 5 mile corridor of dense urban development would be likely to have some significant adverse local impacts, both during the long construction period and then due to the volume of attracted traffic once the road is in use. The new road would have widespread effects on traffic patterns – some positive and some negative – as well as important implications for transport strategy, largely but not wholly negative. The benefits of the project would occur largely in traffic relief and improvement of vehicle journey times, and the benefits to the economy of the west of Scotland in terms of more efficient road communications and an enhanced perception of the qualities of the area as a location for successful business, both for existing and new enterprises. It is this general framework that provides the structure for this chapter.

Chapter 3 : Transport : strategic issues and mode share

11.8 The first issue to be addressed under this heading is the effect of the overall cost of the project on the Executive's transport strategy. It is not within the inquiry remit to consider whether the proposal represents good value for money. That is ultimately a political decision based on objectives and competing priorities. However those opposed to the project have challenged the cost of the project on the basis that expenditure of some £375-500 million during a period of some 3-4 years, or a much larger sum (in the order of £800 million) spread over a longer period if the scheme becomes part of a public/private joint venture, would prevent the Executive from achieving its stated high level commitment of allocating 70% of all transport spending to public transport by the end of 2006.

11.9 As noted in finding C4, the projected transport spend in the west of Scotland during the period 2004-2008, which embraces the above target date and also the intended construction period for the new road, would be split approximately two thirds to roads and one third to public transport. This would virtually reverse the balance that is intended. The distortion of the intended policy would be even greater if the M74C goes ahead and there is then a cut back in the transport budget, or the cost of the road increases due to the use of a public/private project, as this would be likely to deplete the funds available for public transport even further. No TRA witness attempted to dispute this evidence.

11.10 Similarly, given that the west of Scotland accounts for such a large proportion of the Scottish population and such a large share of public investment, it would be unrealistic to expect the overall balance of 70/30 in favour of public transport to be

restored by a much higher proportion of spending on public transport in the rest of Scotland.

11.11 On this basis, it must be concluded that the large cost of the M74C proposal would be in fundamental conflict with the stated high level commitment of the Executive to give a 70/30 priority to spending on public transport rather than roads by the year 2006. In addition, as the underlying purpose of the intended split is to give a disproportionate improvement to public transport, in order to provide an alternative to increasing traffic congestion, to curb greenhouse gas emissions, and to assist the social inclusion of the majority of households who do not have cars, the shift in the balance of transport expenditure would also have potentially serious effects on the achievement of other important policies and commitments.

11.12 One of these important transport commitments is to curb traffic growth, so as to stabilise vehicle use and then reduce it so that by 2021, traffic levels are back to the position in 2001 (finding C11). In this context, objectors have criticised the basis of the traffic modelling, which assumes a high growth scenario increase of some 25% by 2010. The new motorway has been designed to accommodate this level of growth. It would provide a large increase in capacity, affording relief to the congested urban section of the M8. The extra capacity thus created is predicted to lead to an increase in vehicle trips, and to longer trips, representing an increase in vehicle trips of some 1.5-2.5% in the Glasgow conurbation, and a rather larger increase (perhaps about 5%) in the number of vehicle kilometres in that area. It is the latter measure that forms the basis of the government commitment. It appears that traffic levels within Glasgow are stabilising, and that the main component of increase is flows into and out of the city, due largely to flows on motorways. Thus the addition of more radial motorway capacity would be likely to exacerbate this element. This would include the M74C, where about a quarter of the traffic at the western end of the new road would be expected to leave or join at the Kingston ramps. Additional traffic would also enter the city surface network at other motorway junctions.

11.13 It is therefore evident that the completion of the M74 would be in fundamental conflict with the policy commitment to reduce vehicle use, as it would add to traffic growth which would then have to be clawed back to return to 2001 traffic levels, making achievement of the commitment even more challenging. Again no TRA witness attempted to dispute this position, accepting that it was a very challenging task, and pointing instead to the Executive's policies to complete the M74 to improve motorway links to England and Europe, to overcome key blockages in the trunk road network, and to have free flowing traffic on the motorway network.

11.14 The merit of these objectives is recognised. However the M74C proposal is rather more than a local improvement to ease a key blockage. It would provide a new major radial motorway from the edge of Glasgow to the centre, inducing traffic growth and reducing congestion on the M8 which in turn is predicted to attract more local trips onto that part of the M8. There is already a continuous motorway route to England via the M8, M73, and existing M74. While the completion of the M74 would provide a more direct

route for trips to and from locations on the south side of the Clyde, and would reduce congestion to some extent, it would not provide free flowing conditions on the Glasgow motorway network. Some congestion would remain on the M8, and there would be morning peak congestion on the westbound approach to the new section of the M74 motorway from the year of opening. Conditions would deteriorate if traffic continues to grow as anticipated. As suggested by the SAPT, it is perhaps unrealistic to seek to provide free flow conditions on major urban radial motorways during peak periods, as that simply encourages more drivers to choose to use these roads for commuting, whereas a degree of peak hour congestion appears to be an important element in encouraging the use of public transport.

11.15 These strategic transport choices are intended to be guided by multi-modal transport corridor studies. Such studies were carried out for central Scotland, the final report on the M74 corridor study being produced for the Scottish Executive in May 2002. Objectors lodged part of the report as an inquiry document (document JAG/7) and the TRA subsequently lodged the whole document.

11.16 For the purpose of the corridor studies, the M74 completion project was accepted as a commitment, rather than as an option to be considered alongside others. Objectors have criticised this approach, noting that the Scottish Transport Appraisal Guidance (document TRA/C/16) makes it clear that a full range of options should be considered, and that simply retro-fitting the analysis to existing proposals or those with a long planning history, might be tempting, but is clearly not the way to proceed.

11.17 It is evident that the M74C route into Glasgow has a long planning history, having been included in various road and development plans for many years. However this criterion alone should not justify acceptance, as long standing proposals are less likely to be fit for purpose in a changing situation than those that are in line with current policies. At the time of the multi-modal study, the final section of the M74 had planning permission. Given the strong political commitment in central and local government to complete the road, it is understandable why the decision to accept the road at that time was made. However, given the massive scale of the project; its wide implications for transport policy; and the important changes in transport policy that have emerged in recent years, it is not surprising that it would be likely to be potentially in conflict with some more recent transport policies.

11.18 The multi-modal study report on the M74 corridor contains a number of revealing insights as to the predicted effects of completing the M74. Among other things, the report notes that the motorway would facilitate increased long distance commuting. The report also seeks ways to "lock in" the benefits of the new road, to avoid cumulative congestion due to continuing traffic growth. The possible options are noted in paragraph 2.29 and finding C20 above, and include control of development in the vicinity of trunk road junctions, congestion charging, ramp metering, priorities for high occupancy vehicles, and tolls for selected trunk road entry points. The authors of the report recognise the political difficulties in introducing measures of this kind. Instead, they accept that road widening and traffic management would have to be used to reduce congestion. The TRA

witnesses at the inquiry confirmed that there are no plans to introduce congestion charging in Glasgow, or to introduce ramp metering or tolls to enter trunk roads.

11.19 In the absence of such measures, it appears likely that traffic growth will continue, with drivers seeking to use all main road space up to and beyond capacity at peak periods. Maintaining and improving public transport for the general public will therefore depend on promoting dedicated mass transit facilities such as railways and bus lanes, where general traffic will not obstruct the movement of public transport. This again emphasises the importance of the policy to give financial priority to public transport improvements.

11.20 The M74C would facilitate such bus lane improvements along the parallel surface radial routes in the east of the city that would be relieved of through traffic, such as Rutherglen Main Street, Cambuslang Road, and Dalmarnock Road. However there are already extensive proposals and a financial programme for such facilities, and a bus lane is already in place on Rutherglen Main Street. These bus corridor proposals are generally not dependent on reducing general traffic to acceptable levels, although that gives increased opportunities for pedestrians and cyclists.

Chapter 4 : Traffic implications

11.21 Findings on traffic matters are set out at D1-D26 in chapter 10 above. Some of the transport strategy issues discussed above touch upon traffic volumes and changes.

11.22 The most important positive traffic benefits of the M74C scheme would be :

- Easing congestion on the M8 on the north and west side of the city centre.
- Reducing journey times across the city centre by 5-10 minutes.
- Easing congestion on the southwest approach to the Kingston Bridge, where the eastbound M77 merges with the M8.
- Providing two motorway options on the east side of the city, as alternatives when one is disrupted by roadworks, vehicle breakdowns, or traffic accidents.
- Reducing traffic flows on various surface streets.
- Reducing the number of traffic accidents.
- Easing future congestion on existing motorways caused by continuing traffic growth.

11.23 The most notable negative traffic effects of the proposal would be :

- Accommodating additional traffic that would add to traffic growth, contrary to the Government commitment to reduce traffic to 2001 levels (see above).
- Some congestion would probably remain on the M8 and in various other locations.
- Some peak hour congestion would be transferred to the westbound approach to the new section of the M74C at Fullarton. This would cause 3 lane queues potentially up to about one mile in length from the year of opening, becoming progressively worse as traffic increases, although some drivers would take evasive action.

- Congestion would remain on surface streets at the southwest approach to the new section of motorway (Dumbreck).
- Potential disruption of the motorways in the Kingston area due to the removal of hard shoulders to accommodate additional running lanes to cope with additional traffic, including M74C traffic.
- Some surface streets serving new motorway junctions would carry increased traffic flows.

11.24 In evaluating these pros and cons for traffic, it is noted that although traffic is expected to flow freely on the new section of motorway, congestion would remain on some other parts of the network, and would be introduced westbound at Fullarton under some conditions. The benefit to the M8 is the removal of about 20,000 vehicles per day, and a reduction in cross centre journey times in the order of 5-10 minutes at peak times.

11.25 It is difficult to assess the real benefit of these changes. There is no screen line prediction on the M8 between junction 13 (the M80 junction) and the Kingston Bridge, and thus no explicit traffic figures to show how the sections of the M8 along the north and west sides of the city centre would perform in the years to come. These are the critical areas for congestion, as there are effectively only 2 through lanes, in contrast to the much wider sections to the east and southwest.

11.26 Existing peak hour congestion on the M8 is described by the TRA as occurring regularly for periods of 2-3 hours with traffic queues tailing back along the motorway for some 2-3 miles. The predicted traffic figures to east and west appear to indicate a probable continuing overload in the city centre section, while the congestion predictions contained in the corridor study indicate continuing severe congestion on parts of the M8, including the Kingston Bridge. Accordingly a reduction in journey times of 5-10 minutes may be scarcely discernible to drivers involved in delays lasting much longer, or may be negated by a perception that there is still severe congestion on a regular basis. The same may hold for those businesses to the west of Kingston who rely on the motorways for business journeys, and are expecting the M74C to result in a radical improvement. Furthermore the position will continue to deteriorate unless traffic growth is curbed. For these reasons, it is considered that little weight can be attached to the relief of traffic from the M8, especially as those diverting to the new section of the M74C may well encounter peak period congestion on the westbound approach to Fullarton from the opening year or soon afterwards.

11.27 These traffic aspects can be distinguished from real or perceived benefits to the economy, especially for the area to the west of Kingston, which are covered in chapter 8 (economic impact) and related findings. However the motorway is also calculated to yield important financial benefits in its own right, in terms of reduced accidents and time savings for users. The great benefits of accident reductions are acknowledged. Financial benefits for road users are more problematic. Objectors have called into question the basis of the time valuations, and the benefit to society of providing a road that would allow people to make more and longer car journeys faster, contrary to other public policies.

11.28 The SACTRA report (see above) recognised the difficulties of attributing differential values to different types of journey. The contradiction of the valuation methodology is illustrated by the fact that the new road has been planned to provide capacity for more vehicle journeys to be made. If the traffic restraint objective were to be achieved, there would be fewer vehicle trips, so even more vehicle time would be saved. But some of the journeys might then be made by public transport instead. While these journeys might take more time, the policy commitment to giving priority to public transport suggests that this is held to be in the public interest.

11.29 The benefits of the option to use one of two motorways on the eastern side of the city would be very significant, although that would not avoid congestion if there is a severe temporary capacity restriction. Accident reductions and traffic reductions on some surface streets would also provide important benefits. There would be an improvement in congestion on the southwest approach to the Kingston Bridge compared with the present situation, due to the more balanced split in traffic flows between the inner and outer braids and the provision of extra running lanes in place of the hard shoulders. However the proposed interventions west of Kingston would be a mixed blessing, as the absence of hard shoulders, and the provision of only a limited number of emergency laybys, would be likely to lead to severe disruption in this critical area if there are roadworks, road accidents, or vehicle breakdowns. This locality (including the local approach roads) is likely to continue to be a heavily used focal point of the motorway network vulnerable to delays. There would also be considerable disruption here during construction of the new link roads to the M74 extension.

11.30 In the absence of traffic predictions, it is difficult to assess the implications of providing direct links between the M74C and the Kingston Bridge, as argued by one objector. The concept has a superficial attraction, as it would accommodate longer distance trips between the north and south sides of the river, with a corresponding reduction on the surface network and other Clyde bridges. But it seems likely that such links would increase the traffic volumes on the Kingston Bridge, as most of the drivers with destinations on the other side of the Clyde would probably prefer to stay on the motorway/expressway system than to use the other Clyde bridges and become involved in the circuitous circulation system on the surface streets in the Kingston area. The better accessibility between the M74C and the north side of the river would be likely to attract more traffic to use the M74C, including commuter traffic with destinations in the city centre and west end. Thus the concept has traffic and environmental advantages, but would be likely to be undesirable from a transport strategy point of view, and in terms of safeguarding the capacity of the Kingston Bridge.

Chapter 5 : Physical, environmental, and community impact

11.31 The comprehensive and thorough environmental assessment has provided a great deal of information on these topics, reported extensively in chapter 5 and leading to many detailed findings. Some of the key adverse impacts identified in the Environmental Statement are summarised in the table at page 10-12 of the findings on environmental

matters. Considerable professional expertise has been applied to assessing the probable impacts of the new motorway, and in refining the proposed design and remedial measures to minimise the adverse effects.

11.32 The direct destruction of physical property, recorded in paragraph 5.21 above, is relatively modest for a project of this size, especially residential property where less than 10 dwellings remain on the route. This partly reflects the long period of gestation of the proposal, which will have deterred most new development for a considerable period, and the prior acquisition and clearance of some buildings by mutual agreement. The exception proves the rule, as perhaps the most significant single property to be affected is the Morris furniture factory at Polmadie (about 500,000 square feet and employing around 500 people), which was developed on the expectation that the motorway would follow the 1995 approved route, but is now affected because of the decision to re-align this section to avoid having to relocate the Polmadie railway depot. The new road would involve the destruction of properties, discussed in more detail below, and would pass close to densely populated residential areas.

11.33 The main adverse environmental and community effects that would be expected (as noted in more detail in the corresponding findings in chapter 10, and not in order of importance) would be as follows :

- Loss of about 9ha of natural and semi-natural habitats along the route.
- Intrusion into the relatively quiet and semi-natural landscape at Auchenshuggle, where the pedestrian and cycle route follows the bank of the Clyde, but would have to pass below a new motorway bridge over the river.
- Adverse effects on cultural heritage sites : 3 severe; 9 major; and 49 moderate.
- Substantial community severance at the 3 motorway junctions, and moderate severance at other places, due to the combined width of the railway line and the motorway (in the order of 200-300m); the necessity for pedestrians and cyclists to pass beneath the motorway and to cross slip roads at the 3 junctions; and the elevation of much of the motorway on embankments and high structures.
- Visual intrusion at various locations : 8 substantial; 13 moderate; and 11 slight; reduced somewhat after 15 years due to screen planting becoming established.
- Noise intrusion at about a dozen sensitive locations, after allowance for noise barriers : these impacts are judged to be major at Toryglen and Dalbeth, affecting about 110 low rise dwellings, a 20 storey tower block, an adult education centre, and a homeless peoples' shelter; and moderate on the northern and eastern perimeter of Rutherglen (approximately 180 dwellings and a primary school) and at Farme Cross (about 22 dwellings).
- Localised increases in air pollution within about 100m of the motorway.
- Construction disruption, involving work for 11 hours a day, 5.5 days a week, for 4-9 months at each location; piling work for 1-3 months at various locations; road closures and diversions, causing community severance and traffic difficulties; very large numbers of HGV movements for construction work (over 200,000 and perhaps double that); very severe noise due to night time work on major structures, lasting for about one night a week for 3 months at various locations;

and building vibration due to piling work (within 100m) causing concern although probably not new damage.

11.34 As shown in the summary table on page 10-12, the majority of the adverse effects relating to cultural heritage sites, community severance, visual intrusion, noise, air pollution, and construction disruption would be mainly concentrated in 4 locations where there are residential uses: Eglinton/Pollokshaws; Toryglen; north and east Rutherglen; and Farme Cross. Each of these areas would suffer from a combination of several of these negative impacts. In addition, Farme Cross and North Rutherglen are conservation areas. It is these communities that would be most affected by the severe and prolonged impact of construction work (including very noisy piling work and night time work), construction traffic, and community severance.

11.35 The combined and cumulative effect of these various adverse impacts on these communities and their residents would be likely to be very severe, particularly during construction, and then permanently after the road opens due to continuing community severance, traffic noise, visual intrusion, and air pollution. These impacts would be highly undesirable, and the concerns expressed by and on behalf of local residents are understandable.

11.36 A limited number of environmental improvements would result from the construction of the new motorway, where the outlook from nearby properties would be improved due to landscape treatments on land currently in a derelict condition. (This excludes benefits from treatment of contaminated sites and regeneration issues which are covered below.)

Chapter 6 : Airborne emissions

11.37 It is noted that the levels of air pollution resulting from road traffic are generally improving, thanks to better emission control technology. These improvements are generally sufficient to offset the assumed increases in traffic, although this appears to be a further reason why traffic growth should be curbed.

11.38 Within this improving situation, changes in the distribution of air pollution resulting from traffic will (obviously) reflect the changing distribution of traffic. The traffic changes predicted to result from the construction of the M74 extension, as described in chapter 4, are thus a proxy for the predicted changes in traffic air pollution. The principal pollutants are NO2 and PM10.

11.39 As the new road would attract a considerable volume of traffic, and would free up space on other motorways for more traffic, it would result in a shift of some traffic from the main surface roads (eg Rutherglen Main Street) and local streets to motorways. It would thus reduce the traffic, and hence the air pollution, in many local surface streets, but increase it along a limited number of main routes, including motorways and the surface roads serving motorway junctions. The overall effect on air pollution would therefore be to redistribute it from many local streets to a limited number of main roads

and motorways. That is why a majority of residential properties (about 46%) would benefit from lower air pollution levels if the new road is built, and only a minority (25%) would suffer.

11.40 Pollution arising from road traffic decays rapidly with distance from the road and impact on air quality is only effective within 200m of the road. For those properties within 100m of the new road, the predicted effects are slight increases in concentrations of NO2 and PM10 and minor impacts from construction dust (TAK38). There are 119 residential properties, 87 industrial, 15 retail, 5 office, 4 community, and 1 recreational property within 100m of the new road.

11.41 An overall improvement of air quality in the city centre and the AQMA is predicted, while in the Wider Study Area there should be a reduction in the number of properties exceeding NO2 and PM10 objectives. NO2 concentrations in the vicinity of the Kingston Bridge may exceed objectives but this is not attributable to the M74C but to the M8 and the generally high pollution levels in the city centre.

11.42 The health concerns expressed by Dr Hersh and her witnesses are noted. It is accepted that, in the absence of traffic reduction measures, traffic on the surface road network will increase, adding to the volume of pollution. Broader issues of contemporary lifestyle are outwith our remit.

11.43 With regard to greenhouse gases, the M74C is predicted to lead to increases in CO2, PM10 and NOx by 2010, with decreases in CO and THC. By 2020, there will be increases in all pollutants assessed (TA pages K58-61). For CO2 emissions, the predictions in the ES (page 208) are that the new road would be likely to result in an annual increase of about 86,600 tonnes (3.8%) in 2010 compared with the do minimum situation, and an increase of 134,800 tonnes by 2020 (5.7%). Given the Government policy commitment to reduce greenhouse gas emissions, the increased emissions resulting from the extra traffic that would be generated by the new road would be a significant step in the wrong direction, requiring an even greater effort to be made if international accords such as the Kyoto protocol are to be achieved.

11.44 With the exception of the CO2 emissions noted above, the proposed motorway would be unlikely to result in unacceptable air pollution problems.

Chapter 7 : Geo-technical, mining and contaminated land

11.45 There appear to be no particular problems along the route corridor from a geological, hydro-geological and mining viewpoint. The main issue is ground contamination.

11.46 Objectors are very concerned about the potential impact of motorway construction work on existing ground contamination, and the potential risks to health and watercourses. The investigations carried out for the M74C have provided a great deal of information on these matters.

11.47 The main contamination problems relate to chromium waste, chemical waste, and slag which are present in large sections of the route and show the highest levels of contamination.

11.48 The detailed studies have resulted in remedial proposals for each site, designed on the basis of the specific conditions at each site. The broad remediation strategy is to bury contaminated materials beneath the embankments and elevated structures, with a range of other options where contamination cannot be treated by this method. The total cost of remedial work is expected to be in the order of £51.8 million.

11.49 It is evident that there are extensive ground contamination problems along the motorway route, with further problems on adjoining land and elsewhere in the area. The motorway investigations and (if approved) construction work would provide best practice treatment to deal with the sites directly affected. The importation of considerable quantities of fill for embankment construction would provide the means to contain and insulate polluted ground.

11.50 It is accepted that this treatment of contaminated land, as an ancillary feature of motorway construction, would be a desirable benefit. There is no reason to expect the remedial work to be any better or any worse if it is carried out in connection with motorway works or as part of a general programme. However it would leave other nearby land not affected by the motorway still requiring treatment.

11.51 If the motorway is not built, the information resulting from the ground investigations would no doubt be useful to others seeking to improve ground conditions in this area. However the probability is that considerable funding would have to be found to commence the remedial works, and also to continue the investigations on land outwith the motorway route. The motorway funding would probably not be available for this purpose, as it would form part of the transport budget, and (if preceding arguments are accepted) should be re-assigned to public transport improvements. If fill material is required for ground treatment, it would have to be brought in specifically for that purpose, so that doing this work as part of the motorway construction would be likely to be more cost effective.

11.52 If this extra funding is not forthcoming, the likelihood is that many of these sites would remain in their current neglected condition. It is not part of the Reporters' remit to assess the potential risks arising at these sites. However any such risks would remain, with the possibility of adverse impacts on the local environment and those living or working nearby.

11.53 For these reasons, it is concluded that the proposed motorway construction would deliver useful spin off benefits for the treatment of contaminated land, and that there is no evidence to suggest that the motorway works would increase the contamination risks to local residents and the local environment. In contrast, in the absence of a substantial programme of dedicated remedial works, any current risks arising from ground

contamination on the motorway route would be likely to remain, with the potential to become more serious unless treatment occurs.

Chapter 8 : Economic impact and regeneration

11.54 The proposed road scheme would represent a significant investment which would be likely to lead to considerable local benefit through short term job opportunities in the construction and supply industries. The route corridor has effectively been blighted for many years, with many industries closing and people leaving the area.

11.55 Proponents of the M74C claim that the road would be a catalyst for economic growth and regeneration at various major development locations along the route and further to the west. It is argued that improved journey times, reliability of the network, and better accessibility should bring substantial benefit in terms of new investment and job creation. Better accessibility would open up job opportunities for people over a wide area, to the possible disadvantage of local people.

11.56 Long term economic forecasting is notoriously difficult, and the SACTRA report findings recorded in chapter 8 warn of the need for a thorough economic impact study, and a cautionary approach when seeking to forecast the economic benefits of transport improvements.

11.57 In this case, 2 reports have been provided by the TRA which seek to forecast the economic benefits of the proposal. The EKOS report predicts that the new road would act as a catalyst leading to developments that would provide about 25,000 jobs (see paragraph 8.26 above). The Simmonds report predicts that the new road would give certain areas (notably Glasgow, Renfrewshire, East Renfrewshire, and North and South Lanarkshire) a more competitive position in attracting new economic development, in comparison with other locations such as the Forth valley, the north of Scotland, Ayrshire, West Dunbartonshire, and Inverclyde. This would be expected to lead to about 20,000 jobs locating in the favoured parts of the Glasgow and the Clyde Valley area, at the expense of the less favoured areas (see paragraphs 8.8-8.10 above).

11.58 There is no suggestion that the jobs attributable to the construction of the M74C in these two forecasts are mutually exclusive, and should be added together. It is the potential development sites identified in the EKOS report that would be expected to benefit most from the construction of the new road, and to which the jobs forecast in the Simmonds report would be most likely to migrate. Thus it would seem that the most optimistic conclusion that can be drawn from these two reports in relation to the economic benefit of the M74C is that 20,000 jobs would be drawn to the area at the expense of other parts of Scotland, and that 5,000 jobs (at the most) might be genuinely new jobs for Scotland. However the forecasts have to be treated with considerable caution, for the reasons given in the SACTRA report and by objectors, such as the weak link between transport improvements and economic growth when dealing with a mature economy with well developed transport systems (which clearly applies to Glasgow) and the 2 way road effect; and then offset by job losses along the route.

11.59 The TRA has estimated that the businesses along the route that would be directly affected by the new motorway have about 2,800 employees. This estimate was based on indirect sources and without seeking information from the companies concerned.

11.60 Some businesses no doubt will have relocated elsewhere in advance of the long awaited road and some new businesses may have chosen to relocate close to the M74C in anticipation of its construction, relying on the development plan and transport planning. However the re-alignment at Polmadie has come as a surprise to the businesses now affected by the altered line. Some businesses, particularly those subject to heavy regulatory controls, are likely to require more time to relocate than the TRA timetable allows (see findings 10.38-10.40, Albion 12 and 13, and Polmadie 14 and 15, all within chapter 10 above). Thus there is a risk that a significant number of jobs (possibly about 750) would be permanently lost to the Glasgow area, and possibly to Scotland, if the scheme proceeds. As noted in finding Polmadie 15 above, the loss of so many existing jobs in such a disadvantaged area would be likely to have devastating results on the local economy, as well as the personal problems for the households directly affected. In addition, interruption in the provision of supplies and services from these firms to other businesses could result in closures elsewhere, thus affecting the wider Scottish economy. These potential job losses should perhaps carry more weight (job for job) than the uncertain prospect of attracting new jobs to the Glasgow area from other parts of Scotland.

11.61 Regarding the potential redistribution of job prospects from one part of Scotland to another, the Simmonds report notes that some of the jobs attracted to the Glasgow and the Clyde Valley area will come to locations that have Assisted Area status; and that some will be drawn from locations that have Assisted Area status. The largest draw (approximately 8,000 jobs) would be expected to be from the Forth area. Although this includes Lothian, where only West Lothian has assisted area status, it also includes Fife where part of the area has assisted area status. Around 2,000 jobs are expected to be drawn from the north area. Stirling (and perhaps Clackmannan) is included in this category, both of them having assisted area status. Within the Glasgow and the Clyde Valley area, the new road would have a small negative effect on the competitiveness of Inverclyde and West Dunbartonshire, due to the differential impact of the changes in accessibility and traffic effects.

11.62 Thus the overall economic impact of the proposed road in terms of employment appears to be largely a redistribution of jobs from other parts of central Scotland to the areas in closest proximity to the corridor of the new road, primarily Glasgow and South Lanarkshire, with benefits extending northeast to North Lanarkshire and westwards to East Renfrewshire and Renfrewshire, but not as far west as Inverclyde and West Dunbartonshire, and with only a marginal benefit for East Dunbartonshire.

11.63 Despite these doubts about the overall benefit of the new road to the Scottish economy as a whole, and the negative effects on other areas (which the SACTRA report states should be taken into account), it is evident that the new motorway would increase

accessibility and economic competitiveness in a corridor extending from Cambuslang to Renfrew. It is therefore understandable that the new road should have widespread support among the local authority and economic development organisations responsible for those areas.

11.64 The construction of the new motorway may well lead to an early uptake of readily developed sites, with the result that there may be more jobs created in the early years than later. Given the amount of contamination in the route corridor itself, sites to the west of Kingston Bridge may be developed ahead of others. The links to the M8 and M77 may well make sites adjacent to these routes more attractive, leaving the more difficult sites to develop until later. Travel to and from Glasgow Airport for areas to the east of Glasgow would benefit from the road, as well as from the proposed rail access. Thus, despite the doubts about the overall employment prospects, it seems likely that the M74C would be of some economic benefit to Glasgow and the Clyde valley. But these perceived benefits would be progressively eroded if the motorway becomes congested through traffic growth, and takes on the characteristics of the city centre section of the M8 and other congested parts of the strategic network. In this context, the TRA's prediction that traffic around the Fullarton junction will be at or near capacity of the motorway from the early years is likely to undermine the favourable perception that the new road currently enjoys among supporters.

11.65 In relation to regeneration proposals and projects, these are in the main at an early stage of development and are heavily dependent on external funding from agencies such as SE. That organisation has indicated that funding will only be made available for the Flagship Initiatives if the M74C proceeds. In the absence of SE funding, these initiatives may be delayed, reduced, or abandoned. SLC has undertaken site restoration works at Clydesmill but expects restoration of much of the contaminated land in the Rutherglen/Cambuslang area to be carried out by developers themselves, funded by the resultant increase in land values which sites readily accessible to the network would be expected to attract. Local authorities are under considerable financial constraint. Thus it is likely that much of the site restoration that is needed will largely be left to developers. The land regeneration process would be likely to greatly assisted by the perceived improvement in accessibility that would be afforded by the new motorway, and if SE gives assistance to restoration. If the new motorway does not proceed, regeneration prospects in the corridor would be likely to be harmed by the poorer perception of road accessibility, and the reduced enthusiasm of SE for projects in this area. On the other hand, if the road is judged not to be in the overall public interest, it must be assumed that SE would continue to give as much assistance as possible to the important regeneration projects in the locality.

Chapter 9 : Formal objections to the proposed compulsory purchase order

11.66 The inquiry has also considered the objections to the proposed compulsory purchase order lodged by those with an interest in the land where acquisition is proposed. Although the property impact of the new road (and especially the direct impact on homes) would be surprisingly small for a project of this scale, due largely to the

safeguarding of the proposed route for many years, a substantial number of properties (around 190) would be affected. Many of these plots have been acquired by voluntary agreement, and the number of objections to the CPO has progressively reduced, to the extent that (at the time of writing) only 25 objections to the order have been maintained. These are listed in the table on pages 9-2 and 9-3. These all relate to business premises or vacant land; none relates to residential property. Further details are given in chapter 9, and the corresponding findings in chapter 10.

11.67 These objections are different in procedure and nature from the vast majority of objections to the principle of the new section of motorway and its impact on the environment. Here, the main concern is about the impact of removal and possible relocation of existing businesses directly affected by construction works, or by related wayleave matters. The test to be applied is whether acquisition is necessary in the public interest, in the context of the counter arguments put forward by or on behalf of the various objectors.

11.68 Each of these objections requires to be considered individually on its merits, on the basis of the relevant material reported in chapter 9 and the corresponding findings in chapter 10. In addition, given that the proposed road would affect all these properties if it is approved and proceeds, or none of them if it is rejected, it is also desirable to consider the collective impact on all affected properties where objections have been maintained.

11.69 In assessing the significance of the impacts on these businesses, the following considerations are noted:

- Each business contributes to a greater or lesser extent to the local and wider Scottish economy, in providing employment; providing services to other businesses or customers; and in bringing income from other areas by the "export" of goods and services.
- The extent of the contribution will vary according to the size and nature of the firm. A small firm supplying a standard service to the local market (eg vehicle maintenance) would be likely to contribute much less than a large specialist firm employing many people locally, and serving a wide market.
- The TRA hopes that if the road is authorised, construction work would commence towards the end of 2005 or early in 2006, around 18 months after the submission of this report. This window of opportunity to move would reduce further up to the time that a decision on the road is published, leaving little time for firms to relocate if the decision is to go ahead.
- Small firms with standard building requirements would probably be able to find alternative premises and commence operations at the new site within a matter of months. However a large firm, or one with specialised building and site requirements, or requiring specialist authorisations from licensing bodies, would probably require a much longer period (probably around 2 years) to identify a suitable site, obtain the necessary authorisations, build and equip the new facility, and shift operations from the existing site. The relevant TRA representative at the inquiry stated that, if the CPO is confirmed, the acquiring authority would not be prepared to delay entry to acquired sites to allow this period for relocation.

- The objective of the compulsory purchase compensation arrangements is to leave affected parties no worse off than if acquisition had not occurred, as far as practicable.
- Thus in principle, it would be desirable for all affected businesses to relocate successfully within the local area, so that all existing jobs are preserved for existing employees, and the contribution to the local economy is continued.
- Some of the affected firms provide specialist products and services, where it would be more difficult or more expensive to source the service from another supplier. The disruption or increased cost of the service could have a wider impact on the Scottish economy.
- Another issue is that some of the firms are operating in older premises, where capital costs have long since been written off, and which (in some cases) do not meet modern standards or requirements in terms of access arrangements, safety zones, equipment, etc. For these firms, the compensation payable for the loss of the existing facilities may fall well short of what is needed to build and equip a new facility meeting current requirements. They would probably require assistance from the local enterprise organisations, but each case and business plan would have to be considered on its merits.
- Finally, some of the firms may be in a financially precarious position and would not survive upheaval, while others might well decide that a location well removed from the current site would suit them much better. In either event, these jobs and services would be lost to the local economy.

11.70 Having reviewed the evidence and the results of the site inspections for each objection and the corresponding plot(s), it is concluded that each of the various sites falls into one of 3 categories.

11.71 In the first category are those sites where the evidence and our site inspections indicate that the land could be appropriated for motorway construction or ancillary purposes without significant hardship to the owner/occupiers. Some of these plots are vacant or little used. In others, acquisition of only part of the land is proposed, but we consider that the usefulness of the remaining land would not be compromised. Further sites in this category are occupied by fairly small users with straightforward site and building requirements, easily available or replicated elsewhere, such as vehicle maintenance workshops and small scale storage and distribution. For these, relocation should present no serious difficulties.

11.72 In the second category are plots where the dislocation of existing uses would be likely to cause some hardship to the businesses concerned, and some potential loss of business activity and employment to the local economy, but where the scale of individual hardship is not sufficient to outweigh a compelling case for acquisition in the public interest for motorway construction.

11.73 Finally, in the third category, are plots where the scale or specialised requirements of the current users would be likely to result in serious relocation difficulties. The scale and/or specialised site and authorisation requirements of these businesses are such that

successful relocation is likely to take around two years (see findings above). If the CPO is confirmed, the TRA has made it clear that it intends to take possession of the land at the end of 2005 or early in 2006, and that it is not prepared to countenance some delay to the intended timetable to allow time for businesses to relocate. The period between the announcement of the decision on whether the M74C project is to proceed (and hence that the compulsory purchase order is to be confirmed) and the end of 2005 is likely to be well under the two years required for the successful relocation of these larger and more complex businesses. Thus there is a serious risk that these businesses will be extinguished, and the services that they provide to the wider Scottish economy would be interrupted or lost; that significant local employment would be lost; and that important business activities would be threatened. These potential disadvantages must be considered in the context of the degree of public interest in securing the construction of this section of motorway.

11.74 The objectors/plots that are considered to fall into the first category (no significant hardship) are as follows :

Noble Imports Wholesale : Plot 30 : The building is partly derelict; no evidence has been supplied to justify the objection; there is no evidence of any probable difficulty in relocating the cash and carry and vehicle repair businesses.
BRB Residuary Ltd : Plot 76 : Part of a large vacant site; there is no evidence that the remaining land would become incapable of suitable redevelopment.
Guthrie Scottish Nominees (No 3) Ltd : Plots 80 and 81 : A large vacant site; no evidence has been supplied to justify the objection; there is no evidence that any remaining land would become incapable of suitable redevelopment.
David B Dobie (Accountants) : Plot 94 : Objector is the tenant of a small rented office space. No evidence has been supplied to show that relocation would be difficult. There should be no difficulty in securing replacement office accommodation.
Glasgow Rowing Club : Plots 100-102 : This site is on the bank of the River Clyde, well removed from the motorway route. The land to be acquired in connection with the M74C is open ground to the southeast of the clubhouse, to be used for in connection with surface water drainage arrangements. The rowing club clearly has a specific locational need for the existing facilities on the riverbank. Relocation would be problematic. However most of the club property, including the parking area and the clubhouse, would not be affected. It is accepted that the club will have to retain access for long rowing craft to be taken in and out of the clubhouse, using the storage area door on the southeast elevation. There should be no difficulty in setting up an arrangement that allows the acquiring authority to install the facilities that are required for the motorway in a manner that leaves unimpeded access to the boat store for the use of the club.
Scotbeef Ltd : Plot 110 : Plot to be acquired is a small part (843 sq m) of a larger site, accommodating a single storey extension of an adjacent office building. The office building and the other activities on the remainder of site can continue in use. There is no evidence that the loss of this small area would cause significant difficulty to the overall operation.

Philip C Smith (Commercials) Ltd : Plot 121 : There is no evidence to suggest that it would be difficult to secure an alternative site for the parking/storage of these commercial vehicles awaiting hire.
Millside Properties Ltd/McConechy's Tyre Service Ltd : Plot 164 : No evidence has been supplied to justify the objection. There is no evidence to suggest that it would be difficult to secure an alternative site for this use.
James Boyle : Plot 179 : The objector wishes to be re-housed. The property has already been demolished.
Mr B Millen : Plot 221 : It is accepted that the proposed acquisition would cause some difficulty to the objector. However the greater part of the premises would remain available to him, and it seems likely that a workable rearrangement of the access can be implemented.
Corus plc : Plots 193-195 : This is a very large site, mainly unused scrubland. Acquisition of the strip of land through the scrubland for the motorway would not prevent continuing use of the large shed for steel plate fabrication.
Hillview Developments Ltd : Plot 198 : Open unused land. No evidence has been supplied to justify objection. No evidence that acquisition of land would hinder activities on the remainder of holding.
H Meanen Electrical Services (Ltd) : Plot 207 : At present, this small business premises has the benefit of ample on street parking because it is located at the end of the cul de sac where the south end of Polmadie Road has been blocked off. The proposed re-opening of this road as a main through route will lead to traffic passing the premises, and reduced opportunities for on street parking. It is accepted that the loss of part of the site combined with the reduction in on street parking would be likely to cause difficulties for the business, especially if expansion takes place. However there should be no difficulty in finding suitable replacement premises elsewhere, with adequate parking

11.75 The plots in the second category, where there would be likely to be some hardship, are as follows :

First Engineering Ltd : Plots 40 and 41 : This is little used land but adjacent to large premises used for rail maintenance supplies. Operator would require access to rail network but this is currently not available at this site. Relocation could cause some difficulties, and could hinder important railway maintenance activities.
Land Securities Trillium : Plot 73 : Part of a site occupied by a modern office building. Proposed acquisition would affect part of the office building and most of the associated car park. Clearly very problematic as to how the remainder of the building would be retained, and what parking facilities it would have.
Allscot Plastics Ltd : Plots 94 and 96 : A mid sized industrial and office premises. There should be little difficulty in finding suitable replacement premises, but the hazardous nature of materials in use may delay the process.
Ingram Brothers (Glasgow) Ltd : Plot 103 : This is a mid sized industrial and office premises producing and distributing specialist baking supplies throughout the UK. It employs about 40 people. The relocation of the industrial process facilities site should not be difficult, but may not be possible in the limited period available. It would be undesirable for this specialist business service to be lost.

MRC Pension Trust Ltd : Plots 184-189, 191, 220. The acquisition proposed by the TRA would require the vehicular access to the objector's industrial estate to be provided by a less obvious and more circuitous route, approaching from the side/rear of the estate. It is understandable that the objector wishes to preserve the more direct and obvious access from the front, by adjusting the layout of the proposed road junction abutting the site. Various alternative arrangements have been devised and debated. It is evident that each of these suffers from difficulties and deficiencies, in that they would require access to be taken on or close to the new motorway eastbound on ramp or the traffic light controlled junction, where the additional industrial estate access would be likely to lead to confusion, hesitation, and incorrect manoeuvres by vehicle drivers, with a potential hazard to road safety. To minimise these problems, it would be necessary to acquire further land belonging to another objector to the proposed compulsory purchase order, leading to a fresh set of problems to be solved. Thus, although undesirable from the objector's point of view, the arrangement proposed by the TRA is workable and reasonable.

11.76 The plots in the third category, where there would be likely to be serious relocation difficulties, are as follows :

Albion Chemicals Ltd : Plot 31 : This is a long established chemical supply business, forming the Scottish distribution depot as part of a nationwide operation. It produces and supplies a very wide range of specialist products to a large number of business customers. There are numerous chemical process facilities on the site. About 60 staff are employed. The site is cramped, and any comparable replacement would have to be larger. It would take about 2 years to procure a replacement site. The loss of this service would be damaging to the wider Scottish economy, as well as the loss of jobs locally.

BOC Ltd : Plot 107 : This is an extensive facility which supplies gas to about 18,000 outlets throughout Scotland, including numerous business, medical, and leisure establishments. About 100 people are employed at the site. The procurement of a comparable suitable replacement site would take about 2 years. Any dislocation of supplies would have adverse implications for a considerable number of customers, as well as for the local economy.

Mr & Mrs Philip C Smith; Clearwater DC Ltd; and Shanks Chemical Services : Plots 119 and 121. The activities at these sites, like the BOC site, provide specialist services to business customers. About 70 people are employed. The procurement of comparable and suitable replacement sites would be likely to take at least two years because of the need to obtain various specialist authorisations, and to install specialist process facilities. The dislocation of these services would have adverse implications for numerous business customers, as well as for the local economy.

H Morris & Co Ltd : Plots 123-124 and 210-213 : This is the largest business affected by the proposed motorway, both in the size of the premises (approximately 500,000 square feet) and the number of employees (about 500). It is a major furniture manufacturing operation, exporting to many areas, with a distribution fleet of some 70 vehicles. The firm occupies a large complex of buildings at the Polmadie Industrial Estate. Virtually all of the manufacturing and storage buildings would be acquired, leaving it impossible to operate the business at this location. To procure alternative

premises would be a major operation, involving major upheaval of the business and requiring a long lead time, all due to the scale of the operations. The disruption and potential loss of this business would be a devastating blow to the local economy.
Somerville and Morrison Ltd : Plot 178 : This is a small but very specialised firm manufacturing waterproof paper for packaging, the only one of its kind in Scotland. It has a substantial order book, and successfully exports to home and overseas markets. The firm was established in 1873, and some of the buildings on the site are of historic interest. Although only a handful of jobs would be lost, it would be very undesirable for this long established and successful firm to cease operations. There should be no difficulty in finding suitable alternative premises, but a package of business and financial assistance is likely to be required. This may take some time to arrange.

11.77 For several of the above businesses, inclusion in the proposed CPO has resulted from the decision to divert the motorway northwards to avoid the Polmadie rail facilities. Those affected by the diversion are BOC Ltd (much more significant land take); Scotbeef Ltd; Mr & Mrs Philip C Smith and Philip C Smith (Commercials) Ltd; Clearwater DC Ltd; Shanks Chemical Services; and H Morris & Co Ltd. The first line of objection for these firms is that the motorway route should revert to the original alignment approved in 1995. The findings on this matter are set out at Polmadie 1-13 above.

11.78 It is evident that the removal of these businesses would affect a large number of jobs; would create major disruption for most of the firms involved; would threaten the continuity of important business services that are used by many customers; and that the most important of the businesses probably cannot relocate within the timescale intended by the acquiring authority. Collectively, the potential disruption and loss of these businesses would be severely damaging to the local and Scottish economy. On the other hand, it is also evident that there would be very severe cost, operational, and environmental problems in reverting to the 1995 alignment.

11.79 The inescapable conclusion is that both of these scenarios would be very undesirable. But if a decision has to be made, then the additional cost of the rail alterations (estimated at some £75 million) would be likely to be considerably more expensive than providing the displaced businesses with new premises.

Performance against Scottish Executive and local government commitments, objectives, and policies

11.80 A project of this size and cost should be expected to make an important contribution towards the achievement of public objectives. Relevant central and local government policies have been described in chapter 2. The results of the assessment of the various probable implications of the proposal, culminating in the findings contained in chapter 10, now allow an assessment to be made of how the proposal would perform in relation to central and local government commitments, objectives, and policies.

11.81 Construction of this road forms part of the Scottish Executive transport policy and roads programme, within the context of the broad strategic policies set out in *Working*

Together for Scotland – A Programme for Government and *A Partnership for a Better Scotland*. The completion of the M74 motorway is a long standing component of the development plan for the area (the *Glasgow and the Clyde Valley Joint Structure Plan (2000)*, its predecessor Strathclyde Structure Plan, and the two adopted local plans covering the route (the *Glasgow City Local Plan* and the *Cambuslang/Rutherglen Local Plan*).

11.82 Construction of the new road would implement these policy commitments.

11.83 The new road would contribute to the policy on easing congestion on Scotland's trunk road network to some extent, but there is a strong risk that congestion would exist from the opening year on the westbound approach to the new section of road, and elsewhere on the network. The benefits of the new road would be progressively eroded by the continuing traffic growth which would be facilitated and induced by the new road.

11.84 *A Partnership for a Better Scotland* also contains the high level commitment that 70% of the Scottish transport budget should be spent on public transport projects by the year 2006. The expenditure of about £375-£500 million on building the M74C to the intended timescale would prevent this commitment being met in the west of Scotland, as proposed public transport projects in that area would amount to only 35% of total projected transport spending in the area during the period 2004-2008.

11.85 Similarly, the objective to reduce traffic levels to 2001 levels by 2021 expressed in *Scotland's Transport : Delivering Improvements* would be breached by the proposal, as it makes provision for considerable traffic growth (about 25% for the high growth scenario). The new road itself is expected to increase vehicle trips in the Glasgow area by a further 1.5-2.5%, and vehicle kilometres (which form the basis for assessing progress towards the target) by about 5%. This major contribution to traffic growth, and the corresponding failure to contribute to traffic reduction, would also be at variance with the executive's policies for a sustainable approach to transport and planning (as set out in *NPPG 17 : Transport and Planning*), where the intention is to discourage the use of cars, and the use of trunk roads for short local journeys.

11.86 Regarding the numerous public policies in support of economic development, despite the doubts about the probable level of employment increase that can be reliably attributed to the existence of the new road, the proposal can be expected to make a positive contribution to the economy, and would thus be supportive of those policies. It would improve access to the area to the west of Glasgow south of the Clyde, and the perception of the business competitiveness of that area, although access benefits would be progressively lost through traffic growth, in the absence of measures for traffic restraint. Most of the jobs that the new motorway would be expected to attract to the area would be drawn away from other locations in Scotland, at the expense of those areas.

11.87 Regarding the various policies in support of social inclusion, as noted above the proposed road would be likely to assist the local economy, and thus provide more job opportunities in an area where participation rates are low. However car ownership is also

low, so that the new road would be of little assistance to those suffering exclusion, and would be likely to worsen travel opportunities for this section of the population by undermining progress towards major public transport improvements. The presence of the new road, largely elevated on embankments and viaducts, would increase community severance for those living along the route.

11.88 Policies for environmental protection and improvement would be breached along various sections of the route, where some adjacent and nearby areas would be affected by increased noise, visual intrusion, and airborne emissions, and severe noise and disruption during construction, as described in chapter 5 and summarised in the table on page 10-12. There would be some offsetting benefits elsewhere, due to reduced traffic levels, although these would be thinly spread and generally not discernible.

11.89 The new road would reduce traffic levels on various main roads in the locality. This would result in some environmental benefits, and would facilitate improvements for pedestrians and cyclists. There would be greater opportunities for the provision of bus lanes and corridors, although these are already in place in some cases.

11.90 The policy in support of environmental justice would be breached by the proposed road, as those living along the route would suffer from the adverse environmental impacts, with little benefit, while the main advantages of the new road would accrue to non-resident vehicle users passing along the new motorway, and to businesses located mainly outwith the area.

11.91 Public policies on curbing airborne emissions are described in chapter 6. The new road would be expected to have little adverse impact, as emissions would be largely within the recommended thresholds, except for a limited area at Kingston which is not mainly attributable to the M74C. However the one exception is CO2 emissions, which are an important component of greenhouse gas emissions. For this pollutant, the new road is predicted to increase emissions by about 135,000 tonnes a year (an increase of 5.7% in the study area), compared with the Do Minimum case, for the year 2020. This would be a significant setback to the achievement of the Government's commitment to reduce greenhouse gases.

11.92 Objectors have cited the following quotations from various publications produced by the Scottish Executive. The implications of the proposed road described above call into question whether it would be consistent with these aspirations.

"We want to see new roads built only where it makes sense to do so: that is, after a thorough appraisal of the costs and benefits associated with any proposed scheme and any possible alternative modes which might serve the same route." (Scottish Transport White Paper 1998)

"Our transport system should be sustainable, minimising impacts on our environment, particularly by greater use of public transport." (Scottish Executive Partnership Agreement)

"Before including major [road] schemes in their strategy, local authorities should be able to demonstrate that they have looked at alternative or complementary solutions……and that the

road scheme is consistent with an integrated transport strategy." (Scottish Executive guidance on Local Transport Strategies, 2000)

Where a transport project is to be justified on economic development grounds *"..it needs to be demonstrated that devoting resources to the transport project would represent a more cost effective means of developing the local economy than the use of other existing strategy instruments."* (Scottish Executive guidance on Local Transport Strategies, 2000)

"We want a Scotland that delivers sustainable development; that puts environmental concerns at the heart of public policy and secures environmental justice for all of Scotland's communities." (Scottish Executive Partnership Agreement)

11.93 Drawing these elements together, it is evident that the proposal would be supportive of some central and local government commitments, objectives, and policies, such as the completion of the M74 and the promotion of economic development, but would be likely to be in serious conflict with others, such as traffic restraint, the priority to improve public transport, CO2 emissions, and some local environmental protection policies. Thus it is inevitable that the recommendation contained in this report will be at variance with some public objectives and policies, whether it is for or against the proposal.

Synthesis

11.94 This brings this report to the crucial question of considering where the balance of advantage lies in this matter. This is principally a matter for the public interest, but also for those who would be directly affected by the result, for better or for worse, be they local residents along the route of the new road, persons with an interest in businesses that would be displaced by the new road, freight operators, users of public transport in the Glasgow area, business and employment interests in Renfrewshire and other areas that would benefit from the new road, or drivers of vehicles who would be able to pass through the city centre 5-10 minutes quicker. This is a no win situation, as the new motorway has the potential to bring both significant advantages and major disadvantages.

11.95 Some of these impacts (both positive and negative) would be immediate or in the early future, and can be predicted with a reasonable degree of confidence, while others would be some years hence, where it is more difficult to be confident about the outcomes.

11.96 Drawing these numerous elements together, the evidence has shown that the proposal would be likely to :

- seriously hinder the achievement of important Scottish Executive commitments and objectives for traffic reduction, public transport improvements, and CO2 emissions;
- have very serious adverse impacts on the environment of communities along the route, both during construction and in operation;
- be at variance with policies to promote social inclusion and environmental justice;
- temporarily ease traffic congestion, to the benefit of car commuters and road freight transport, but that these benefits would be progressively lost due to

continuing traffic increases, in the absence of measures to restrain and reduce traffic; and

- make a positive contribution to the local economy in Glasgow, South and North Lanarkshire, Renfrewshire, and East Renfrewshire, at the expense of the Forth valley, the Stirling area, Ayrshire, Inverclyde, and West Dunbartonshire.

11.97 Drawing these various strands together, and looking at all the policy, transport, environmental, business, and community disadvantages of the proposal as a whole, it must be concluded that the proposal would be very likely to have very serious undesirable results; and that (in the context of the advice in the SACTRA report, the transfer of jobs from other parts of Scotland, and the potential harm to existing businesses along the route) the economic and traffic benefits of the project would be much more limited, more uncertain, and (in the case of the congestion benefits) probably ephemeral.
.

11.98 In this context, it cannot be concluded that the public benefits of the proposal would be sufficient to outweigh the considerable disadvantages that can be expected, nor that it is necessary in the public interest to acquire compulsorily all of the properties where objections to the CPO have been maintained.

11.99 Accordingly, on the basis of the consideration of the material put forward by objectors, the TRA, and those who support the project, the conclusion is that this proposal should not be authorised, and that the compulsory purchase order should not be confirmed.

11.100 Inevitably this recommendation will be subject to considerable criticism by those who support the road. The opposite recommendation has been considered with equal care. It is concluded that a recommendation to approve the construction of the road and the compulsory purchase of the affected properties would depend on setting aside the very serious disadvantages of the proposal in terms of objectives for the improvement of public transport and traffic reduction, CO2 emissions, the very serious environmental impacts along the route, and disregarding the potentially devastating effects on the local and wider economy due to the dislocation of existing businesses and services; and placing an unreasonable degree of confidence in employment forecasts that have not been demonstrated to be robust, and which at best would bring a relatively small number of new jobs to Scotland, the vast majority of the prospective new employment being transferred from other areas of Scotland, including other parts of the Clyde valley area. Even if a more positive view of the economic benefits were to be accepted, it would still be doubtful if this aspirational and uncertain prospect would justify the acceptance of so many negative effects.

11.101 If the recommendation against the new road is not accepted, it is considered essential to minimise the adverse effects of the road and maximise the benefits by ensuring that the responsible public authorities take all possible steps to :

- institute measures to control and reduce traffic volumes using the motorway/trunk road system in the area, in order to preserve the traffic benefits and to assist in the objective of reducing traffic to 2001 levels;

- provide additional funding for public transport improvements during the period of construction of the new road, so that the high level commitment to a 70/30 balance of transport expenditure in favour of public transport is maintained;
- adopt of all the remedial measures covered in the environmental assessment and inquiry evidence;
- adhere to most (if not all) of the conditions imposed on the 1995 planning permissions;
- assure the owners of all properties to be acquired compulsorily that a minimum period of 2 years will be available between confirmation of the order and entry into any plot, except where those with an interest in the property to be acquired compulsorily agree to a shorter period;
- assist affected businesses to relocate in the Glasgow/South Lanarkshire area through professional and financial assistance, even on a "new for old" basis where this is necessary to meet current statutory requirements; and
- give special assistance to residents of properties that are shown by the environmental assessment to be seriously adversely affected by the construction or operation of the new road, to reduce or avoid the impacts, in the interests of environmental justice.

11.102 It is recognised that these recommended safeguards are onerous, but it is considered that they are the minimum that is necessary to avoid or remedy the serious policy and environmental implications of this proposal, and to maintain progress towards the various aspirations and commitments that have been expressed.

11.103 In addition, attention is drawn to 7 requests included in their closing submissions by Friends of the Earth Scotland and JAM74. These are that the Scottish Executive should :

- Put the project into abeyance until a full and independent multi-modal study has been carried out, covering the full range of road traffic demand management measures available as well as interventions aimed at improving the range, price, and quality of public transport services. The study should include a detailed accessibility planning exercise.
- Submit alternative proposals as part of a coherent package for policy delivery following conclusion of the multi-modal study.
- Review the M74 road proposal under Strategic Environment Assessment.
- Carry out new traffic modelling of the M74 proposal in the light of new cost estimates and increased traffic and environmental impacts revealed during the inquiry.
- Carry out new economic modelling of the M74 proposal in the light of flaws revealed during the inquiry in the work carried out for the current proposal.
- Make routine the carrying out of post construction "after studies" of all new road projects in order to assess whether the traffic, environment, and economic justifications given are met once construction is complete.

11.104 It should be noted that the findings and conclusions in this report concerning HGV movements for the construction of the road are based on the evidence available to the inquiry. No account has been taken of the possibility that the number of HGV trips occurring during the construction phase may be double those forecast in the environmental assessment. If Scottish Ministers are minded to authorise the road, it would be necessary to clarify the position on the probable numbers of HGV construction trips, and to consider the implications of any increase in the forecasts.

Recommendation

For these reasons, it is recommended that this proposal should not be authorised, and that the various orders should not be confirmed; and that if this recommendation is not accepted, that the steps suggested in paragraph 11.101 above should be pursued to minimise the adverse effects and maximise the beneficial effects of the proposal.

R M Hickman
Inquiry Reporter

July 2004