REPORT NO 664/98

ANGUS COUNCIL

ROADS COMMITTEE **11 JUNE 1998**

A92 UPGRADING PROJECT: FINAL PROPOSED ALIGNMENT NOTICE OF INTENTION TO DEVELOP

REPORT BY THE DIRECTOR OF ROADS

ABSTRACT

This Report proposes a final alignment for the upgraded A92 and associated links to the A930 for the consideration of the Committee. It further provides details of the various studies and consultations feeding into the process of designing the proposed alignment and seeks the Committee's approval to take the project into the formal planing process with the proposed alignment as detailed in the Report.

1 RECOMMENDATIONS

It is recommended that the Committee agree:-

(i) to note the results of the various studies commissioned to inform the process of designing the alignment proposed;

(ii) to note the outcome of the series of Public Information meetings recently held at venues along the route length;

(iii) to the promotion of the alignment for the proposed upgraded A92 and associated links to the A930 including the provision of a Barry Bypass (A930) all as shown on the plan drawings annexed to this report;

(iv) to instruct the Director of Roads to take the project into the formal planning process based on the alignments proposed at the earliest opportunity after this meeting of the Committee;

(v) that this Report should be further remitted to Dundee City Council for its consideration and action with respect to the required planning procedures for that section of the A92 lying within the Dundee City Council area.

2 INTRODUCTION AND BACKGROUND

Report No 453/98 forwarded to Roads Committee at the meeting of 30 April 1998 proposed an alignment for the up-graded road network and explained the change from the previous alignment (utilising the East of Monifieth link) to a preferred link alignment utilising a link at Upper Victoria between the A92 and the A930. In view of comments raised at the Public Information meetings some further adjustment has been made to the alignment of the lower, southern section of the Upper Victoria link. These revisions are shown on the amended drawings now annexed to this report.

Committee will be aware that the proposed method of procuring this upgraded road network is by means of utilising the Private Finance Initiative (PFI). In such projects previously undertaken elsewhere it has been the practice for the promoting authority inter alia to obtain the requisite planning permissions based on their preliminary or "Specimen" design. It is this Specimen design which is intended to form the basis of progressing the statutory planning process.

3 DETAILS

(i) Where the Authority requires planning permission for a project promoted by itself the procedure to be adopted is as follows:-

(a) the Authority submits a planning application which will be advertised in the Courier & Advertiser;

(b) the Authority serves all neighbour notification notices;

(c) after the expiry of the period for objections any objections are passed to the Secretary of State for his consideration. He then has the option either to grant the planning consent, or where there are substantial objections, to hold a planning enquiry.

It is proposed therefore that the Committee give consideration to instructing the Director to enter into the formal planning process for the A92 based on the alignments discussed and set out in the annexed plan drawings.

(ii) In seeking to determine the preferred alignments for the upgraded roads the Council has commissioned a number of independent studies as listed below, the results of which have been used to inform decisions on the selection of alignment. The information obtained from these studies will also be required as the project progresses beyond the planning process stage.

- Topographical Survey (Loy Surveys)
- Preliminary Geotechnical Ground Investigation (Terra Tek)
- Preliminary Archaeological Investigation (Centre for Field Archaeology)
- Environmental Assessment and preparation of Environment Statement (Ironside Farrar)
- Traffic Modelling and Economic Assessment (Oscar Faber)

Supplementing this work the detailed engineering design work has been undertaken by the staff of the Roads Department which work has included the supervision of the above studies, the collation of the results, and the assimilation of this data into the design process. These studies are described more fully in the following sections of the detail of this report.

(iii) Additionally and in part because of the relatively unusual means of procurement (in the local authority context) proposed for the project a series of public information meetings were held in Arbroath, Carnoustie, Monifieth, and

Dundee (Craigie High School) to inform the public on the Councils' intentions and the overall programme dates intended for progressing the project.

Because of the degree of local interest expressed at the Carnoustie meeting in the proposals specifically in the vicinity of the Upper Victoria link and at the west end of Carnoustie, a further meeting was held in Carnoustie (at Kinloch Primary School) to provide more detail of the engineering and environmental aspects of the proposals at this locus.

The details of these meetings and a summary of the queries raised from members of the public attending the meetings has been attached to this Report at Appendix 1.

Some of the points of detail raised have been adopted in the design and have resulted in revision to the alignment proposed in the vicinity of the Upper Victoria link at its junction with Barry Road, Carnoustie. Similarly other comments raised have resulted in minor amendments to details of the proposals at a number of other locations along the route length. These have all been incorporated in the amended plan drawings annexed to the Report.

(iv) Topographical Survey

The contract to carry out the Topographical Survey work was awarded to Loy Survey and commenced on 1 December 1997. The work was largely undertaken by means of aerial photography referred against known datum using ground control points. Permanent survey markers have been installed which will facilitate the setting out of the works during the construction phase. While there is no written report from this work all contracted information has been received in the form of electronic digital mapping and the Specimen Design has been adjusted accordingly.

(v) Preliminary Geotechnical Ground Investigation

The contract to carry out the Preliminary Geotechnical Ground Investigation work was awarded to Terra Tek and was commenced on 5 January 1998. This work involved drilling 105 boreholes, 18 boreholes in rock, 27 trial pits and 14 cores in the existing A92 carriageway construction The findings indicate no major engineering problems at the locations for the proposed bridges or other structures. A comprehensive report on the findings has been submitted by Terra Tek and a copy is available in the Members Lounge.

A considerable amount of this work was carried out on agricultural land and could not have been achieved without the co-operation of both land owners and tenant farmers.

(vi) Preliminary Archaeological Investigation

The contract to carry out the Preliminary Archaeological Investigation work was awarded to the Centre for Field Archaeology (CFA) of Edinburgh University and was commenced on 24 November 1997. The work undertaken was in two parts.

The first part was an assessment to inform the production of a Strategy Report designed to further identify and evaluate any cropmark sites or upstanding monuments likely to be affected by the proposed road upgrading both on the A92 and the A930. The results of this assessment suggested that the impact on the surviving archaeological sites within the road corridor affected by the upgrading work was likely to be considerable. This was subsequently investigated by the fieldwork comprising the trial trenching described below. The existing archaeological database, topography, soils, geology and aerial photographic evidence indicated that some significant archaeological remains may be encountered. In addition to the known cropmark sites listed in the gazetteer it was anticipated that there were likely to be associated remains which, due to unfavourable condition, were not visible on the oblique aerial

photographs and which lie directly on the road line. Having identified sites of particular interest the second phase of the investigation was undertaken. This largely took the form of trial trenching along the entire corridor but did not include any detailed excavation of known archaeological features.

Trial trenching in effect is a means of identifying archaeological remains in areas where desk studies suggest the potential for their presence. This would be followed by detailed excavation as necessary.

The results of the second phase of the investigation (i.e. the fieldwork) is that several sites have been identified as requiring detailed investigation prior to the commencement of any construction work. A copy of the report is available in the Members Lounge. The Non-technical Summary from the report has been included with this Report at Appendix 2.

(vii) Traffic and Economic Assessment - (Including Consideration of Public Transport Services)

The contract to carry out the Traffic and Economic Assessment was awarded to Oscar Faber and was commenced on 12 January 1998.

The work involved the production and validation of a traffic model based on the existing road network and using a base year of 1995. This base model was then adjusted to test the proposed road network in the year 2015 both at low and high growth using national road traffic forecasts.

The contract also required Oscar Faber to examine further public transport options for the A92 corridor. Six alternative options (or combination of options) were examined to determine the impact on the level of car demand on the A92.

The conclusion reached was that the various options would have a minimal effect on encouraging significant increase in the use of public transport. The

original decisions to improve the network by up-grading the existing road have been confirmed in this work.

Public transport measures can be expected to complement the dualling proposals and the opportunity will also be available to improve public transport provision using the higher standard of road. It should be noted that the construction of a new dual carriageway in itself provides an opportunity to improve the public transport provision by enabling improved and more reliable journey times for bus services and the provision of improved accessibility to services.

A copy of Oscar Faber's report is available in the Members Lounge.

(ix) Environmental Assessment

The contract to carry out the Stage 3 Environmental Assessment was awarded to Ironside Farrar and was commenced on 12 January 1998. This contract included the production of an Environmental Statement and the production of preliminary landscaping proposals.

The Environmental Assessment includes detailed analysis of the impact of the upgrading proposals on residents, road users, users of facilities such as schools, libraries etc, pedestrians, cyclists, horse riders, commerce, land use and agriculture.

The Assessment is based on a method prescribed by the Scottish Office in Volume 11 of the Design Manual for Road and Bridges.

Environmental Assessment (EA) is a process for identifying the likely consequences for the biological, physical and geomorphological environment and for man's health and welfare arising from development (or a range of development options), and for considering the environmental issues as an integral part of the development planning and design process. Thus, a detailed

assessment and identification of environmental impacts is required to provide information for the Council and the public to help compare the benefits to be derived from the proposed development against any environmental loss.

In June 1985 the Council of the EEC determined that an Environmental Assessment should be prepared by the promoters of certain categories of major infrastructure developments and that these should be published prior to statutory consent being given for the developments. The Directive 85/337/EEC came into effect on 3 July 1988 and is binding on all member states.

Based on the EEC Directive, the EA requirements for a wide range of major developments in Scotland are described in the Environmental Assessment (Scotland) Regulations 1988 as amended. Schedule 3 of the Regulations states that an Environmental Statement (ES) should include :-

(a) a description of the proposed development, comprising information concerning the site and the design and size or scale of the proposed development;

(b) the data necessary to identify and assess the main effects which that development is likely to have on the environment;

(c) a description of the significant effects, direct and indirect, on the environment of the proposed development, explained by reference to its possible impact on:

- human beings;
- flora;
- fauna;
- soil;
- water;

- air;
- climate;
- the landscape;
- the inter-action between any of the foregoing;
- material assets;
- the cultural heritage

(d) where significant adverse effects are identified with respect to any of the foregoing, a description of the measures envisaged in order to avoid, reduce or remedy those effects, and

(e) a summary in non-technical language of the information specified above.

The nature, scale and location of the proposed A92 upgrading project requires environmental assessment under existing and proposed guidance.

The EA process requires developers to provide information so that the likely effects of new development on the environment are fully understood by those involved in making the planning decision. Developers are required to describe objectively the main options for the project and must specify the methods used in comparing these options so as to allow independent evaluation of impact assessment.

An impact has an effect in both space and time and can be described as a change in an environmental parameter, over a specified period and within a defined area, resulting from a particular activity compared with the situation which would have occurred had the project not been initiated.

Together with the Director of Roads, Ironside Farrar, as environmental and landscape consultants, have progressed the EA as an iterative process

involving consultations with Angus Council, statutory bodies, and other agencies and individuals as appropriate.

The Environmental Statement is divided into five parts in addition to the Non-Technical Summary. All the assessment of impacts and effects are based on the *"specimen design"* for the Works. This specimen design will be progressed to a full detailed design including accommodation works, by the Contractor appointed by Angus Council. Therefore it must be noted that the mitigation measures outlined in this Environmental Statement have been designed specifically in response to the impacts arising from the specimen design.

Introduction and Background

This section of the ES is a review of the need for the scheme, the options and the preferred route. An overview of the method of scheme procurement is also included.

- Introduction
- Need for the Project
- Traffic Assessment and Economics
- Engineering Design Standards
- Environmental Overview
- Transport Options and Route Alignment Options
- Description of Preferred Route
- Scheme Procurement

Assessment of Environmental Effects

This section provides a detailed assessment of the effects of the proposed dual carriageway on the environment and the local community, under the following headings :

- Geology and Soils
- Land Use

- Agriculture
- Policies and Plans
- Landscape Effects
- Cultural Heritage
- Ecology and Nature Conservation
- Pedestrians, Cyclists, Equestrians and Community Effects
- Vehicle Travellers
- Traffic Noise and Vibration
- Air Quality
- Water Quality and Drainage
- Disruption due to Construction

Landscape Design Proposals

This section outlines the landscape mitigation proposals for the proposed dual carriageway and associated works.

Environmental Impacts Tables

This section summarises the effects of the proposed dual carriageway and compares the impacts with the "Do-Nothing" option.

Summary Schedule of Environmental Commitments

This section of the ES provides a summary of the mitigation measures which are required for the specimen design in order to minimise the adverse impacts resulting from the proposals and indicates the minimum level of mitigation required for the specimen design. These mitigation measures may be further refined or extended within the Contract for the design and construction of the Works.

Consultations

As part of the EA process and during the identification of the preferred alignment, a number of consultations were undertaken with statutory authorities and other interested agencies and individuals who are listed in the

full Environmental Statement available in the Member's Lounge. The non-technical summary has been included with this Report at Appendix 3.

4 SPECIMEN DESIGN

Introduction

Various alternatives for upgrading the A92 between Dundee and Arbroath coupled with improved linkage between the A92 and A930 and a Barry By-Pass were examined at some length by Angus Council.

After due consultation and consideration of the technical, economic and environmental merits of the alternatives the preferred route was selected.

Junction Strategy

The existing A92 from Claypotts junction in Dundee to the Westway junction in Arbroath has approximately 47 formal junctions along its 18.7km length and includes numerous field accesses. This is equivalent to one junction approximately every 400 metres.

The basic junction strategy agreed upon was based on the removal of all right-turn manoeuvres from the main carriageway.

The scheme proposed includes 5 grade-separated junctions two roundabouts and 14 restricted access (left on/left off) priority junctions giving a total of 21 junctions between Claypotts and Westway as opposed to the 47 currently existing. This has been possible by the use of existing side roads and new collector roads to distribute traffic from isolated farms and cottages to selected junctions on the main carriageway. Inevitably this will mean a longer journey from some properties to access the A92 but the safety benefits arising from a reduction in accidents and a reduction in A92 journey times is believed to outweigh these inconveniences to a relatively small number of properties.

A92 Claypotts Junction to Ardestie

This westermost section has the highest traffic flows of the road length and is particularly busy during the morning and evening commuter peaks. Three main junctions are proposed, these being a new roundabout at the junction with Balgillo Road East which serves Broughty Ferry, a grade separated junction to serve Monifieth and a further grade separation at Ardestie to connect with the B962.

In detail therefore moving east from Claypotts the first junction encountered is a new at-grade roundabout to serve Balgillo Road East and Broughty Ferry. Some 550 metres of new collector road would be constructed parallel to the northern edge of the A92 to connect Linlathan and Lilac Cottage into the new roundabout and thus delete two existing access junctions.

Continuing east across Balmossie Bridge a restricted access junction would be provided on the eastbound carriageway to service Balmossie and on the westbound carriageway to access Panmurefield Road.

Monifieth is currently accessed to the south of the A92 by the junctions of West Grange Road, Ethiebeaton and Victoria Road. These roads will be collected together and access to the A92 provided from a new grade separated diamond junction.

The next junctions encountered are minor restricted accesses, one on the eastbound carriageway to serve Ardownie Quarry and the other on the westbound carriageway to serve Ardownie Farm Cottages. Although these are left-on/left-off the detour involved for right turning traffic is minimal given the proximity of the grade separated junctions of Ardestie and Monifieth.

The final junction proposed on this length is a new grade separated junction at Ardestie which will provide access to Monifieth and Monikie by way of the B962.

A92 Ardestie to Muirdrum -

This section is rural in character as the A92 cuts across flat, open, prime agricultural land.

It is proposed to close the existing side road to Woodhall Farm south of the A92 and replace this with direct access onto the realigned B962. It is also proposed to close the side roads to Carlungie and New Downie Farm.

A grade-separated junction is proposed at Upper Victoria to serve the new access into Carnoustie.
The cottages at Upper Victoria adjacent to the A92 will be linked to the side road by a service road.

Restricted access junctions would be provided to serve Travebank for westbound traffic only. The network of existing side roads in this area will serve to distribute traffic where junctions have been closed off although there will be increased journey times for certain individual properties.

The farms at Balmachie and Lower Balmachie will be served by restricted access junctions.

The farm of Heugh-Head on the north side of the A92 would be served by a new farm access road built parallel to the new dual carriageway and connecting into the existing A92 at the western limit of Muirdrum.

It is proposed to close Panbride junction and upgrade Carlogie Road (the A930) with a new grade separated junction at Muirdrum Bypass to service the eastern end of Carnoustie.

It is intended that Muirdrum Bypass is situated in cut with the A930 Carlogie Road from Carnoustie crossing the bypass on an overbridge. Access to

Muirdrum will be provided by this junction for east and westbound traffic from the A92.

A92 Muirdrum to Arbroath -

Continuing east from Muirdrum it is proposed to serve Panlathy farm by a restricted access junction but to close the East Haven junction.

A grade-separated junctions is proposed at Salmondsmuir.

The cottages on the north side of the A92 at Salmondsmuir will be linked to the side road by a service road.
The cottages at Nether Kelly and Nether Kelly Farm will be provided with restricted access junctions as will the cottage at Cotton of Balmirmer.

The side roads to Mains of Kelly and Three Mile Wood will be closed off to eliminate a further two right turn junctions and traffic will instead use the grade separated junction at Salmondsmuir.

The proposal is to terminate the dualled A92 in a new roundabout west of Elliot and then to construct a short length of new single carriageway to the south of Elliot Bridge before rejoining the existing A92 at a new roundabout at Westway. The redundant section of A92 adjacent to the cottages in Elliot would then be used as a service road for these properties and would thus benefit the local residents.

In conclusion therefore the junction strategy proposed precludes all cross-carriageway right turn manoeuvres from the A92 from Claypotts to Westway junctions other than at roundabouts and reduces the number of formal junctions from 47 to just 26, of which a significant number are serving isolated properties and which are therefore currently very lightly trafficked.

Dualling Proposals

Introduction

The proposed dualling will utilise as much of the existing road as possible.

There are two main sections at Travebank and Muirdrum where this is not the case.

Claypotts Junction to Ardestie

From Claypotts to Balgillo Road East it is envisaged that dualling will occur to the south of the A92 with the existing A92 retained as the eastbound carriageway. The existing carriageway has wide, open verges at this point with no properties or farms adjacent and dualling does not present any significant engineering problems.

East of Balgillo Road junction the dualling moves off-line to eliminate a double bend with poor horizontal alignment before crossing Balmossie Bridge with the existing carriageway again retained as the new eastbound lanes.

The topography becomes more difficult between Grange Road and Ardownie with the new dual carriageway coming off-line to eliminate a particularly poor section of horizontal and vertical alignment at Victoria Road.

East of Ardownie Farm Cottages the dualling will be sited on the north side of the existing carriageway and remains on-line until Mains of Ardestie.

Ardestie to Muirdrum

From Ardestie east to Carlungie the dualling is on-line and will be sited on the northern edge of the existing carriageway which will be utilised where possible as the westbound lanes in the dualling. At Carlungie the new dualled

A92 diverges to the north of Inn Cottages and runs parallel but some 140m offset from the existing A92 for a distance of 1.7km, bypassing Travebank in the process. The bypassed length of A92 would be retained to provide access to properties situated along its length.

Moving east of Travebank the dualling rejoins the existing A92 and remains on-line, utilising significant lengths of the existing carriageway until it crosses Battiesden Bridge west of the village of Muirdrum.

At this point Muirdrum Bypass will diverge to the south side of the village and will be in cut to suit both the vertical profile coming off Battiesden Bridge and also the proposed grade separation with the A930 to access Muirdrum.

Muirdrum to Arbroath

Once east of Muirdrum the dualling is firmly on-line with a straight alignment over flat, open agricultural land.

The dualling proposed is on the south side of the existing single carriageway with the majority of the existing A92 being suitable for re-use as the eastbound carriageway over this length.

From Salmondsmuir to Balcathie the dualling remains on-line.

The section of the upgrading proposals from Balcathie to Elliot will take place largely on the north side of the existing carriageway but swings south of the existing road alignment as it approaches the new roundabout at Elliot.

Between Elliot and Westway it is proposed to construct a short length of single carriageway to the south of Elliot bridge before rejoining the existing A92 at a new roundabout at Westway.

A92/A930 Link - Upper Victoria

It is proposed that the A92/A930 link be constructed from the Upper Victoria junction on the A92 utilising the line of the existing road and accessing Carnoustie on the A930 at a new roundabout at Barry Road

A930 Carlogie Road

It is proposed to upgrade and improve the alignment of the A930 between the grade-separated junction at Muirdrum and Carnoustie. The alignment proposed is to the east of the property at San Malito.

A930 Barry By-Pass

Commencing at a roundabout at the junction with McDonald Smith Drive it is proposed to construct the Barry By-pass on an alignment to the south of the former manse before rejoining the existing road some 300 metres west of the entrance to the quarry.

Access to Barry for local traffic will be maintained at both the east and west end.

Access to Buddon Army Camp will be provided by the construction of a junction with Station Road.

Cycle Track/Footway

A joint Cycle Track and Footway is proposed to be constructed along the A92 between Claypotts junctions in Dundee and the Westway junction in Arbroath.

The cycle track/footway will be 3 metres in width and in general will be situated immediately alongside the verge. With the 1 metre hard strip adjacent

to the carriageway and the 2.5 metre verge the cycle track/footway will be 3.5 metres from the nearest running lane of the carriageway.

Commencing at Claypotts the cycle track/footway will be situated on the south side of the dual carriageway and will continue on that side until the agricultural underpass situated at Balmachie. This underpass permits switching to the north-side of the carriageway to utilise the by-passed section of the existing A92 at Muirdrum.

The existing carriageway will also be utilised on the by-passed section at Travebank.

At the east side of Muirdrum use will be made of the underpass to Balhousie Farm to switch back to the south side of the carriageway.

The cycle track/footway will continue on this side until Balcathie where the agricultural underpass will permit a switch to the north side.

At Elliot use will be made of the by-passed section of road and the existing footway to the Westway junction will be adapted as a joint cycle track/footway.

The full proposed alignment details are set out in the engineering plan layout drawings annexed to this Report.

5 FINANCIAL IMPLICATIONS

There are no financial implications arising as a direct consequence of this Report except for the small costs associated with the publication of the Notice of Intention to Develop. The cost of such publication can be contained within the Challenge Fund Award for the project for 1998/99.

6 CONSULTATION

The Chief Executive, the Director of Finance, the Director of Law and Administration and the Director of Planning and Transport have been consulted in the preparation of this Report.

7 CONCLUSION

The alignment of the proposed upgraded A92 and associated links to the A930 is proposed based on the design development work undertaken by Roads Department staff informed by the results of the independent studies described and the points raised at the public information meetings held in Arbroath, Carnoustie, Monifieth and Dundee.

It is recommended that the alignments thus designed be brought forward by the publication of a Notice of Intention to Develop based on the plan drawings annexed to the Report.

Dr Bob McLellan
DIRECTOR OF ROADS

NOTE

The following background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973 (and not containing confidential or exempt information) were relied on to a material extent in preparing the above Report:-

Angus Council - 30 April 1998 - Report No 453/98 - Final Proposed Alignment for A92 Upgrading, Proposed Submission of Notice of Intention to Develop.

JG/SCP
18 May 1998
REPORTS/a92.notice.dev