Aberdeenshire Council
A90 South Development Options – Comparative Appraisal of Major Sites
Development Management Transport Appraisal Inception Report

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1 INTRODUCTION

1.1 Background

SIAS Limited (SIAS), under the North East Framework Agreement has been requested by Aberdeenshire Council (AC) to provide a Proposal for the A90 South Development Options, Comparative Appraisal of Major Sites study. SIAS will be assisted by MVA who will provide strategic transport model support to the study.

The *Main Issues Report* in support of the emerging Aberdeenshire Local Development Plan was published for consultation in May 2009. The Report, which is available on line at http://www.aberdeenshire.gov.uk/planning/localplan_new/index.asp, gives details of currently preferred (blue) sites across Aberdeenshire; although this may change as the document moves towards becoming the draft Local Development Plan (LDP) on considering the results of the consultation and further study work.

Transport Scotland has written in response to the *Main Issues Report* consultation expressing concern over the settlement strategy being proposed for the A90 south corridor with the proposed strategy having significant consequences for the strategic road network. To be able to reach a conclusion on which approach is to be supported, a more detailed comparative appraisal is needed which considers the consequences of a range of major development options along the A90 south corridor in both a site specific and cumulative context.

1.2 Updates

The Inception Report was produced as a draft *(Ref. 71873, 24 September 2009).* Subsequently, the Inception Report has been updated further to contain input from the Steering Group workshop. The key updates included in this Report are:

- Further definition of land use scenario tests
- Clarity on employment assumptions
- Further definition of SMART objectives
- Transport options outlined
- Housing numbers data outlined

- Workshop notes on key issues

1.3 Proposed Study

It is proposed to carry out the comparative appraisal of the A90 south corridor major development sites identified in the *Main Issues Report;* particularly those at Banchory Leggart, Marywell, Portlethen, Elsick Estate (Newtonhill), Stonehaven and Laurencekirk. The impact of development proposed in settlements along the A92 coast road should also be taken into account where the A92 meets the A90 south of Stonehaven. This area of Aberdeenshire is administered under the name of Kincardine and Mearns.

The study should be an objective led appraisal using Transport Scotland's emerging DPM – TAG methodology, which is closely allied to the principles of STAG. This appraisal method, specifically aimed at assessing future development plans, will effectively be trialled on the new Aberdeenshire Local Development Plan. Close partnering with both Transport Scotland and Aberdeenshire Council will be needed to ensure the study outcomes meet the objectives of each organisation.

A Consultative Draft version of *Transport Planning Appraisal Guidance for Developing Planning and Management DPMTAG Version 8 (Transport Scotland, 13 August 2009)* was made available to SIAS so that the influence of this methodology could permeate the study.

The study area is shown in Figure 1.1. The study area includes the areas of Aberdeenshire aligned to the A90 south of Aberdeen and the A92. The study area also includes areas of the City of Aberdeen up to the River Dee crossings to evaluate any cross border transport impacts.

Figure 1.1 : Study Area

1.4 Scenario Options

The major sites scenario tests for the study were agreed with Aberdeenshire Council, Transport Scotland and Nestrans at a pre-inception meeting on 21 August 2009. The housing sites were further confirmed by the Steering Group as:

1. Preferred MIR strategy (blue allocations) Banchory Leggart (K121) & Schoolhill (K125)(and K73, K122)
2. Banchory Leggart (K121) & Portlethen (K90)(and K73, K122)
3. Elsick (K142,)(and K73, K122)
4. Stonehaven South Sites (K89 & K101)(and K73, K122)

The location of these potential major *housing* sites is shown on diagrams in Appendix A. There are also a few minor sites in this area that will not be reviewed (K13, K59 and K71).

The preferred MIR stand alone *employment* sites will be assumed to be unchanged between each Land Use Scenario. These stand alone employment sites (K135, K136, K45, K36, K67, K15 and K44) are also shown in Appendix A. Potential internal employment sites within the proposed major site areas are also being taken into consideration in this study. The assumption for each site will be that one hectare of employment land would be brought forward per 200 houses. This is based on Structure Plan allocations as advised by Aberdeenshire Council. The proportion of internal trips will be based on the characteristics of areas adjacent to the potential sites:

- Banchory Leggart & Schoolhill will be represented by Cove characteristics
- Portlethen sites will be represented by Portlethen characteristics
- Elsick sites will be represented by Portlethen characteristics
- Stonehaven site will be represented by Stonehaven characteristics

The plans shown do not include all the MIR preferred strategy for the areas south of Stonehaven. It is assumed that the preferred MIR *housing* and *employment* allocations for areas south and south-west of Stonehaven (in Aberdeenshire) will be included in each of the above Option Scenarios, unless otherwise instructed. Cross-border travel growth will need to be considered via TMfS/LATIS in ASAM4.

The potential line of the proposed Aberdeen Western Peripheral Route (AWPR) has been included on the plans in Appendix A, for ease of reference. The outcome of the AWPR public inquiry is still pending at the time of writing.

2 PART A: STUDY TASKS

2.1 Tasks

There are a series of tasks to be undertaken for the comparative study:

Task 1	Briefing
Task 2	Defining Objectives
Task 3	Transport Option Generation and Sifting Steering Group Workshop
Task 4	People Trip Generation
Task 5	Accessibility by Active travel and to public transport (Rail and Bus)

Task 6	Appraisal of Cumulative Impact – ASAM4
Task 7	Appraisal of local impact – selected sites using S-Paramics
Task 8	A Matrix Comparison
Task 9	Presentation to Steering Group
Task 10	Final Report

Figure 2.1 illustrates the process proposed. It was found that the option generation and sifting element would be best undertaken early in the process to enable a people trip generation exercise to take place, as this may vary between modes with differing potential transport options.

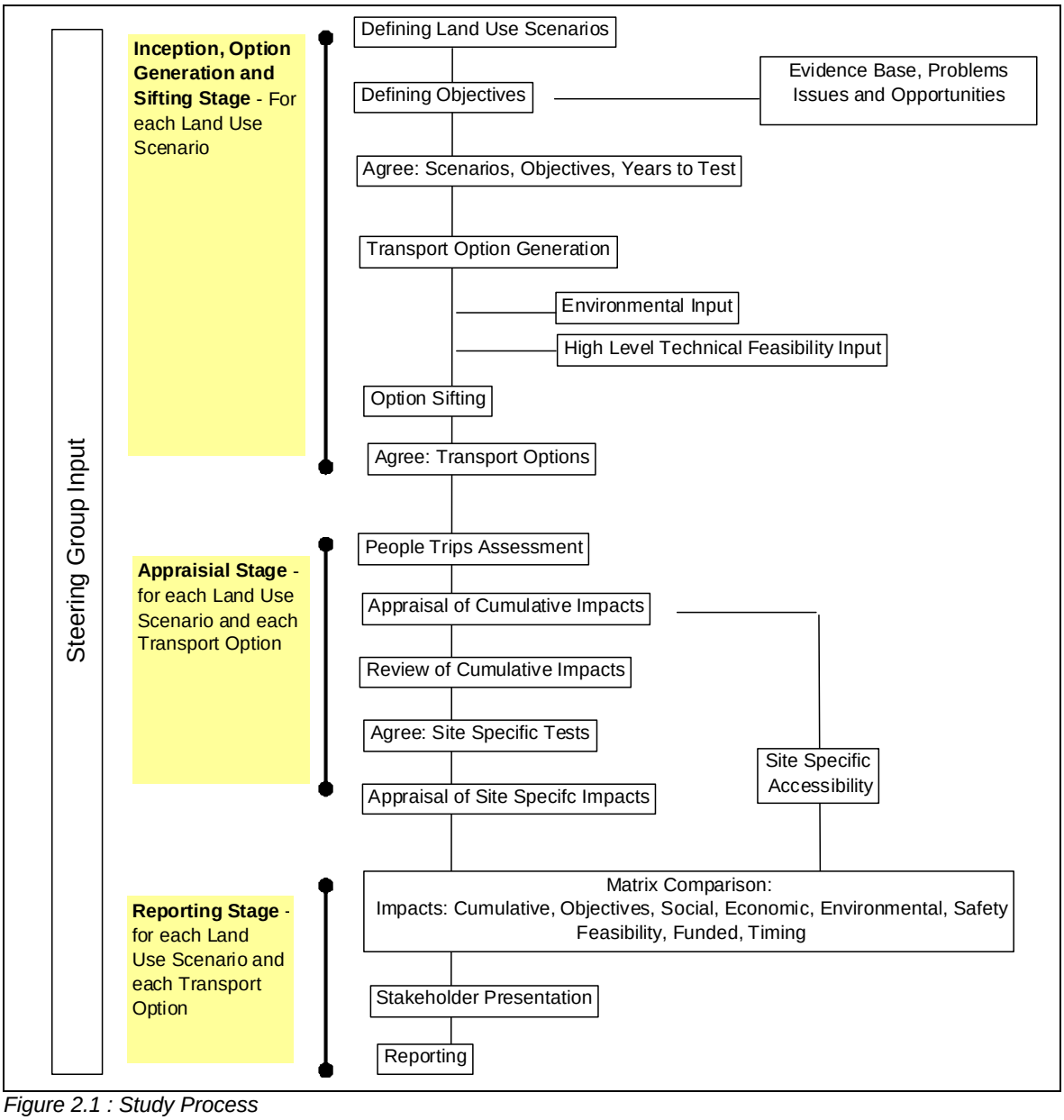

Figure 2.1 : Study Process

2.2 Task 1: Briefing and Land Use Scenarios

An initial meeting was held on 21 August 2009 that established the Steering Group for the study and discussed the Brief. The Steering Group is established as:

- Aberdeenshire Council – Peter MacCallum and Piers Blaxter
- Transport Scotland and Representatives – Alison Irvine (TS) and John Milligan (JMP)
- Nestrans – Rab Dickson
- Aberdeen City Council – Joanna Murray

The details of land use scenarios are being developed in consultation with Aberdeenshire Council.

2.3 Task 2: Defining Objectives

2.3.1 Local Development Plan Vision and Aims

Aberdeenshire Council has adopted the vision and aims of the finalised Structure Plan for the Aberdeenshire Local Development Plan and will develop objectives for the plan based on those aims. These are to:

- *provide a strong framework for investment decisions which help to grow and diversify the regional economy, supported by promoting the need to use resources more efficiently and effectively; and*
- *take on the urgent challenges of sustainable development and climate change.*

To support these main aims, the LDP also aims to:

- *make sure the area has enough people, homes and jobs to support the level of services and facilities needed to maintain and improve the quality of life;*
- *protect and improve our valued assets and resources, including the built and natural environment and our cultural heritage;*
- *help create sustainable mixed communities, and the associated infrastructure, which meet the highest standards of urban and rural design and cater for the needs of the whole population; and*
- *make the most efficient use of the transport network, reducing the need for people to travel and making sure that walking, cycling and public transport are attractive choices.*

The transport study under consideration requires comparing the site specific and cumulative impacts and best fit of a series of land allocations against the objectives of the Local Development Plan and make sure that these also meet the overall objectives of Local, Regional and National Transport Strategies. At the moment there are not specific objectives associated with the LDP, but the *vision* and *aims* that exist can be used to develop over arching transport objectives that can be given indicators on which to evaluate performance.

2.3.2 Key Questions Answered by Transport Appraisal

At the start of the study there are key questions that require answered in order to provide an evidence base for any future decisions on land allocations. The questions will assist in developing the study:

- What is the relationship between demand and supply of transport networks and how will this affect the Strategic Transport Network?
- What is the cumulative impact of the plan proposals on travel demand?
- What options best meet Local Development Plan objectives?
- What are the wider policy impacts (social, economic and environmental)?

It is proposed to address these questions in a strategic but quantitative way in this current study.

For the proposed plan there will also have to be additional questions answered:

- Are the interventions technically feasible?
- How will they be funded?
- When are they required?

It is proposed to address theses questions in a strategic qualitative way in this current study. More detailed appraisal will be subsequently required.

Some local transport appraisal work has already been undertaken in the study area for the towns of Portlethen and Stonehaven. Capacity studies assessed traffic capacity and sustainable accessibility and are available at the following location.

http://www.aberdeenshire.gov.uk/transportation/TrafficCapacityStudies.asp

2.3.3 DPMTAG Transport Appraisal

DPMTAG Transport Appraisal procedures suggest that it would be useful to set out broad objectives for the transport networks in the context of the overall vision and planning objectives.

The aims of the Aberdeenshire LDP are not solely transport related; they encompass improving quality of life and protecting and improving assets in additional to sustainability and transport issues. The purpose of objectives for this study are to comparatively appraise transport issues to allow decisions to be made on that perspective of the plan, without loosing sight of the overall vision and planning objectives. The objectives will be outcome focused relating transport issues to the overall quality of life in the Aberdeenshire area and beyond.

Broad Objectives for this studies transport networks were drafted by the consultants and then refined by the Steering Group and are established as follows:

- Objective 1 – **Make the most efficient use of the transport network** – by movement of people and goods using existing and committed networks; locally, across boundaries, and strategically
- Objective 2 – **Reducing the need for people to travel** – in terms of communities being able to operate locally for some journeys and by reducing distance to other facilities
- Objective 3 – **Making sure that walking, cycling are attractive choices** – by taking cognisance where sites are accessible to facilities within an active travel range and that any natural or manmade barriers to walking or cycling movement are considered

- Objective 4 – **Making sure that public transport is an attractive choice** – by making best locational use of existing public transport networks and identifying where additional measures can be effectively provided

The objectives are SMART (specific, measurable, attainable, realistic and timed). Timing is set by the period of the LDP.

2.3.4 Broad Objectives Cross Examination

A matrix check will be undertaken as part of this study to demonstrate that these objectives accord with the Aberdeenshire Council Local Transport Strategy, the Nestrans Regional Transport Strategy and the Scottish Government's National Transport Strategy.

2.4 Task 3: Transport Option Generation and Sifting Steering Group Workshop

2.4.1 Steering Group Workshop

It was proposed to undertake one Steering Group workshop to address problems and issues, objectives, assumptions, option generation and initial sifting. This was undertaken on 8 October 2009

2.4.2 Problems and Issues

In the Steering Group workshop an overview was given of transport related problems and issues based on the framework of land use options already proposed by Aberdeenshire planning Department. A listing of key issues from the Steering Group is shown in Appendix B.

2.4.3 Objectives

DPMTAG requires a broad set of objectives to be identified. At the workshop the Steering Group refined and approved the broad objectives of the study.

2.4.4 Assumptions

At the workshop a series of assumptions were discussed. These include the detail of Land-Use scenarios and those assumptions applicable to the Aberdeen Sub Area Model (ASAM), such as:

- Application of ASAM4 in areas other than the southern corridor
- Aberdeen City LDP alterations within ASAM4
- Aberdeenshire LDP alterations outwith the A90 corridor within ASAM4
- Land Use Scenarios for the A90 South corridor within ASAM4
- Forecast Years 2023

Further consideration of detailed allocation issues are being undertaken by Aberdeenshire Council.

2.4.5 Transport Options Generation

A number of outline strategic access transport options have identified to provide sufficient information for further assessment as discussed at the Steering Group workshop.

The problems, issues and constraints with each site were the starting point for addressing access options. The access options were based on input from the Steering Group, environmental constraint information (from Aberdeenshire Council), and engineering judgement. Transport options included public transport and roads based options, including any relevant documented representations from major site developers on potential access solutions. Each land use scenario had a series of transport options which were sifted to two access strategies for appraisal purposes. Given the high level nature of the study, the public transport options will be approved by the Steering Group, but consultation with bus Operators will be required in more detailed development planning stages. Where developer consultations with bus Operators have already taken place then this information can be utilised in the study. Details of the transport options as developed by the Steering Group are shown in Appendix B.

2.5 Task 4: People Trip Generation for the A90 South Corridor

2.5.1 Methodology

The people trip generation for the land use scenarios of the A90 South corridor will be developed within ASAM4. ASAM uses household, population and employment information to calculate the level of trip movements across Aberdeen and Aberdeenshire. This includes forecasting future traffic levels and public transport patronage. Mode share is determined by the travel characteristics of a particular area (i.e. time to travel to/from other origins/destinations), so it is important that an appropriate representation of access strategies (for both road based and public transport modes) is included at an early stage of the appraisal process. Where a transport option has an intensification of public transport availability this will have impacts modelled by ASAM.

2.5.2 ASAM4 Inputs

At the initial stages, ASAM4 requires the following specific information (at a geographical or zonal level) to generate forecasts relating to people trip generation associated with particular developments:

- Household Estimates
- Population estimates
- Employment Estimates

Where relevant, ASAM also requires information relating to road and public transport access strategies for new development areas (i.e. general information anticipating how each development would be connected to the transport system.

Further consultation with Aberdeenshire Council will be undertaken to verify the assumptions for the sub-area model.

2.5.3 ASAM4 Outputs

Using these inputs ASAM4 can forecast changes in the level of travel movements based on car ownership levels:

- Car owning trip productions
- Car owning public transport trip productions
- Non-car owning PT trip productions
- Total Trip Attractions (Car and PT)

ASAM4 can also generate forecasts at a more detailed time period level, producing overall levels of Road and Public Transport Demand in the morning, inter peak and evening peak time periods:

- Change in Cars and Light Goods Vehicle Demand
- Change in Heavy Goods Vehicle Demand
- Change in Public Transport passenger Demand

ASAM4 can generate travel statistics for each modelled time period: (AM, IP, PM):

- Change in Vehicle Kilometres Travelled
- Change in Vehicle or Public Transport Travel Time
  - Along specific sections of the road network
  - Between key origins and destinations (i.e. to/from key employment locations or transport interchange points)
- Identify congestion pinch points
- Evaluate changes in road vehicle based Carbon emissions

ASAM4 can output strategic road based link flows and changes in public transport patronage.

2.6 Task 5: Accessibility by Active Travel and to Public Transport (Rail and Bus)

Issues of accessibility cover a number of the broad objectives in the study. It is proposed to undertake some Accession accessibility assessments to determine indicators in relation to objectives of making sure that walking and cycling are attractive choices and making sure that public transport is an attractive choice. An initial general review of current public transport accessibility will also be beneficial in identifying current accessibility issues at major sites.

It is acknowledged that major sites will have planning frameworks that encourage certain community facilities in the developments to encourage short journeys that can be undertaken by walking or cycling. The focus of the assessment in this study will be outward looking to give an indicator as to what other travel destinations are available within an active travel range of major sites.

In relation to major sites for Active Travel modes it is proposed to:

- Assess the existing weight of employment opportunities within active travel ranges (Data from Census)
- Comment on potential future weight of employment within active travel ranges (Data from Main Issues Report)
- Assess active travel access to key Public Transport nodes (rail, bus stations, future Park & Rides)

In relation to major sites for Public Transport modes it is proposed to:

- Comment on the location of existing public transport networks
- Indicate existing rail and bus journey times
- Review bus access issues and potential for measures

The assessment of future public transport indicators will be also undertaken using ASAM4. 'Heat mapping' will be used to indicate where there may be capacity issues in the rail network.

2.7 Task 6: Appraisal of Cumulative Impact – ASAM4

ASAM4 contains a representation of several transport infrastructure schemes that are anticipated to be introduced in the short to medium term. These assumptions currently include the following Do-Minimum committed Structure Plan infrastructure proposals – this requires confirmation:

- AWPR including the Fastlink
- A90 Balmedie to Tipperty dualling
- Union Street Pedestrianisation
- Third Don Crossing
- Haudagain A96/A90 Improvements
- Berryden Improvements
- A90 & A96 South Park & Rides

A Reference case may also include:

- HOV lane on the A90 northbound
- Basic transport access strategies for proposed sites

The confirmed Do-Minimum scenario would form the basis to appraise the proposed land use strategies in the A90 South corridor.

2.8 Task 7: Appraisal of Local Impact – Selected Sites Potentially Using S-Paramics

The Brief for the study states that both a 'site specific' and 'cumulative' comparative appraisal should be undertaken to be able to reach a conclusion on the consequences of a range of major development options along the A90.

In this respect it is likely that some detailed assessment will be required over and above the wider ASAM transport modelling. It is proposed that options for these be assessed using microsimulation. It is not proposed to undertake a detailed STAG on the access options for any site, this will have to take place in due course to support a business case including elements, such as benefits due to safety improvements. The transport appraisal work proposed could be used to provide evidence for any future STAG assessment.

It has already been identified in the MIR that the operation of junctions at Laurencekirk may need review. This proposal takes account of a detailed set of junction assessments at that location. Aberdeenshire have survey data already available to inform this assessment. The detail of any assessment requires to be discussed.

ASAM results will need to be reviewed to assess if microsimulation modelling is required to determine the differences between access options at other locations.

Link capacity will be reviewed in the context of *Design Manual for Roads and Bridges (DMRB)* Volume 5, such as, TA46/97 and TA79/99. The outline form of generated junction options will be informed by reference to *DMRB* Volume 6, such as, TD42/95.

Time constraints on the project may reduce the amount of testing that can be undertaken and key decisions on which junctions may require testing will be necessary. If more time was available then site specific assessments could be undertaken for all land use scenarios and all transport options. Allowance is given in this proposal for appraisal of key junctions associated with the preferred MIR alone. These arrangements can be reviewed once cumulative impacts are known.

2.9 Task 8: A Matrix Comparison

A matrix assessment will be required to enable each of the four land use options to be considered, as identified in Section 1.4 and illustrated in Appendix A. For each scenario option there may be a number of access related options, where appropriate. The outline framework for the matrix indicators are shown in Table 2.1. These will be developed during the course of the study to provide a mechanism for the Steering Group to compare the relative impacts of the land use scenarios and the transport options for each scenario.

Table 2.1 : Framework for Matrix Indicators

Impacts	Description	Indicators
Cumulative Impact	Link based assessment of the cumulative impact on the trunk road network and rail network	ASAM4 indicators (e.g. traffic flow, rail passenger capacity)
Objective 1	***make the most efficient use of the transport network***	
	Efficiency of Road Network	ASAM4 indicators (e.g. journey times, capacity)
	Efficiency of Public Transport Network	ASAM4 indicators (e.g. journey times, capacity)
Objective 2	***reducing the need for people to travel***	
	Overall distances travelled	ASAM4 indicators (e.g. Demand and Vehicle Kilometres travelled)
	Consideration of impact of technology	Qualitative Assessment (e.g. ASAM4/LATIS assumptions)
Objective 3	***making sure that walking, cycling are attractive choices***	
	Destination facilities within active travel range	Accession indicators (e.g. to existing employment). Comment on potential new facilities.
	Assessment of physical barriers to active travel	Qualitative Assessment
Objective 4	***making sure that public transport is an attractive choice***	
	Public Transport network location	Review access to rail, bus networks and Park & Rides
	Public Transport opportunities to Aberdeen City Centre	Existing rail and express bus frequency and journey times.
	Public Transport measures	Comment on potential for effective bus provision
Social	General comment on the level of social accessibility impact	Qualitative Assessment
Economic	General comment of economic efficiency related to journey times	ASAM4 data to key locations.
Environmental	General comment on environmental constraints	Qualitative Assessment by Aberdeenshire Council
	Carbon Emissions Impact	ASAM4 data
Safety	General comment on safety of access strategies	Qualitative Assessment
Feasibility	High Level Technical Feasibility	Qualitative Assessment
Funded	Significance of cost, evidence based input from Aberdeenshire Council	Qualitative Assessment, potentially informed by local appraisal
Timing	Discussion of timing issues	Qualitative Assessment

2.10 Task 9: Presentation to Steering Group

A presentation will be made to the Steering Group summarising the assessment of options and matrix development. Steering Group feedback will be noted for development of the Final Report.

2.11 Task 10: Final Report

A Final Report will be written incorporating the findings of the study.

3 STANDARDS

The study will be undertaken in accordance with the relevant documentation, including the *DMRB,* STAG and draft DPMTAG guidance.

4 TIMESCALES

It is understood that the study would need to be completed by end of November 2009 (to be confirmed).

It is proposed to have a matrix comparison available in this timescale but that full reporting would not be available until the end of December 2009.

Key milestones are:

- Briefing 21 August 2009
- Transport Options Workshop 08 September 2009
- Progress Meeting 18 November 2009
- Progress Meeting 15 December 2009
- Steering Group Presentation (To be confirmed)
- Report (To be confirmed)

5 IDENTIFICATION OF RISKS

There is potential risk to the programme from the following factors:

- Delay in obtaining data from the Client/Council
- Delay in arrangement of scoping meetings/responses from the Council
- Delay from third parties

SIAS will inform the Client in writing of any potential new risks to the programme as the project progresses. SIAS will specifically identify risks that may have implications for the potential deliverability in terms of timescales and additional costs.

The supply of 3rd party data and agreeing the scope of the study with the Client are the main risks to the anticipated programme for the study.

A APPENDIX A

A.1 Major Sites – Scenarios

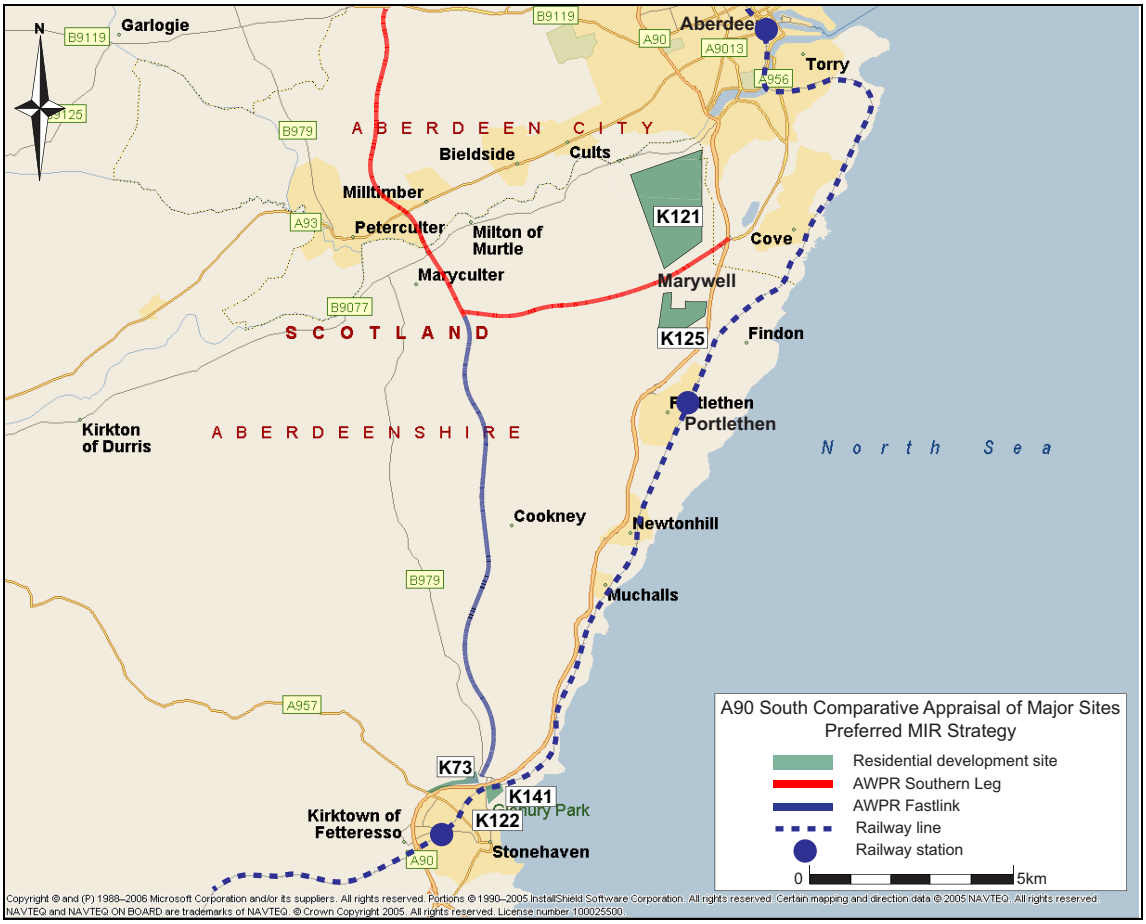

Figure A.1 : Scenario 1 – Preferred MIR Strategy Major Housing Sites

Table A.1 : Scenario 1 – Preferred MIR Strategy Housing Test Data

Scenario	Area No.	Description	Housing figure to achieve Structure Plan Allocation of 4,600 Houses by 2023
1	K121	Banchory Leggart	2,544
	K125	Schoolhill	1,626
	K73	North Stonehaven	230
	K122	North Stonehaven	200
Total Households			4,600

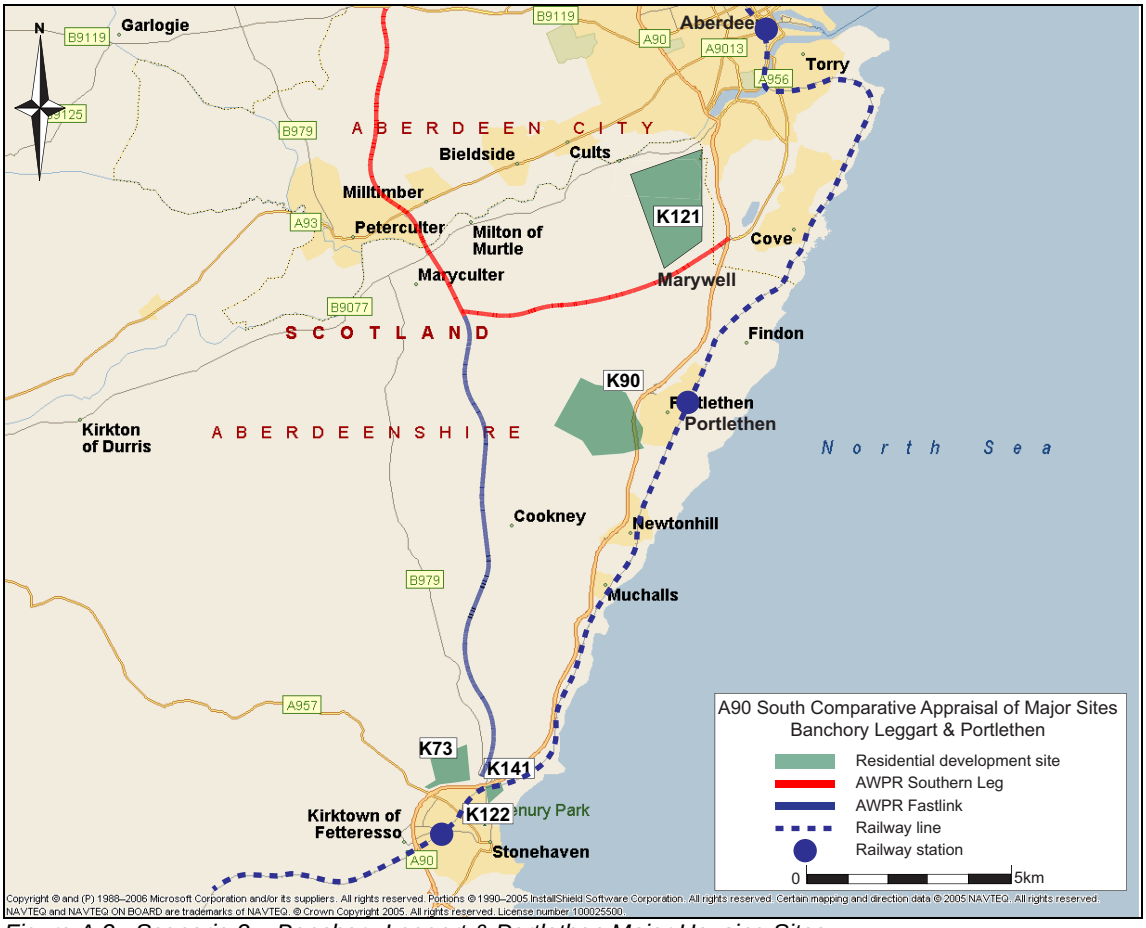

Figure A.2 : Scenario 2 – Banchory Leggart & Portlethen Major Housing Sites

Table A.2 : Scenario 2 – Banchory Leggart & Portlethen Housing Test Data

Scenario	Area No.	Description	Housing figure to achieve Structure Plan Allocation of 4,600 Houses by 2023
2	K121	Banchory Leggart	2,544
	K90	West Portlethen	1,626
	K73	North Stonehaven	230
	K122	North Stonehaven	200
Total Households			4,600

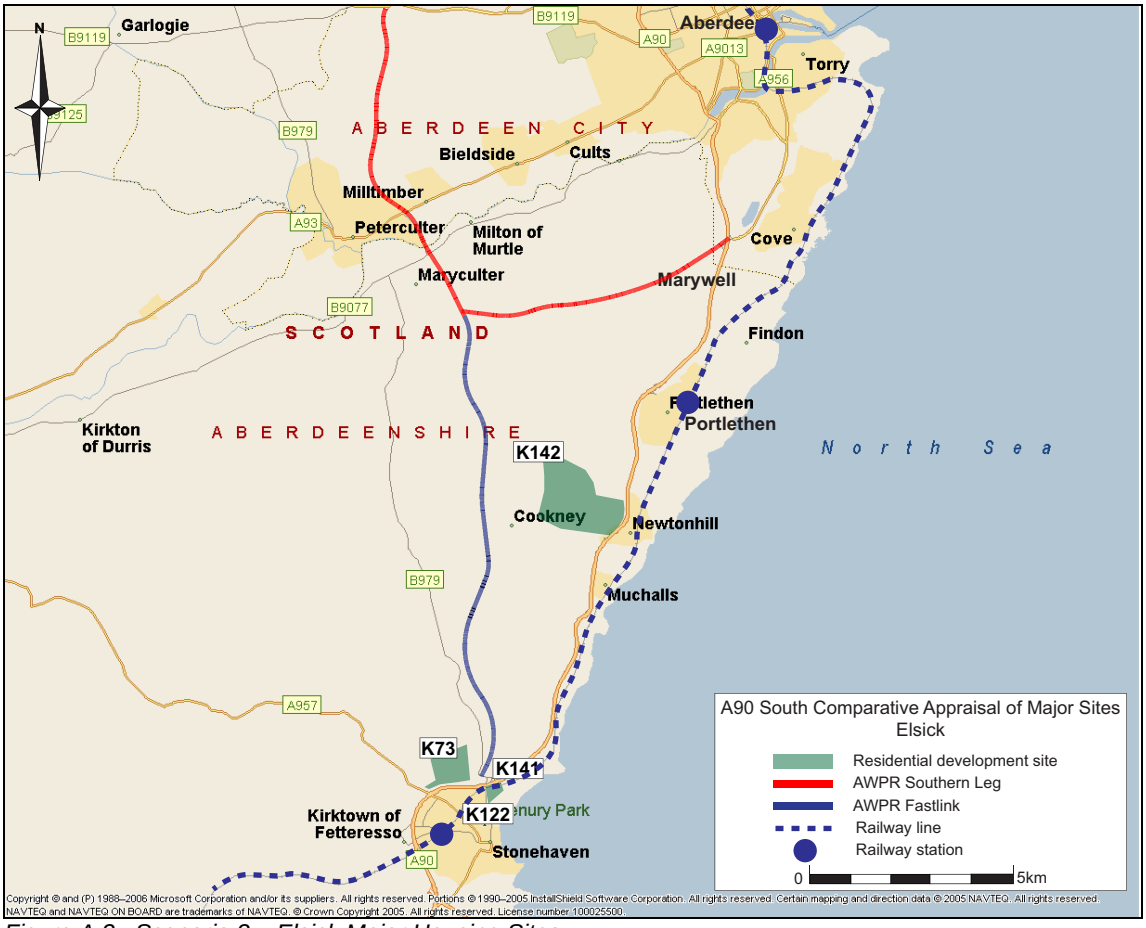

Figure A.3 : Scenario 3 – Elsick Major Housing Sites

Table A.3 : Scenario 3 – Elsick Housing Test Data

Scenario	Area No.	Description	Housing figure to achieve Structure Plan Allocation of 4,600 Houses by 2023
3	K142	Elsick	4,170
	K73	North Stonehaven	230
	K122	North Stonehaven	200
Total Households			4,600

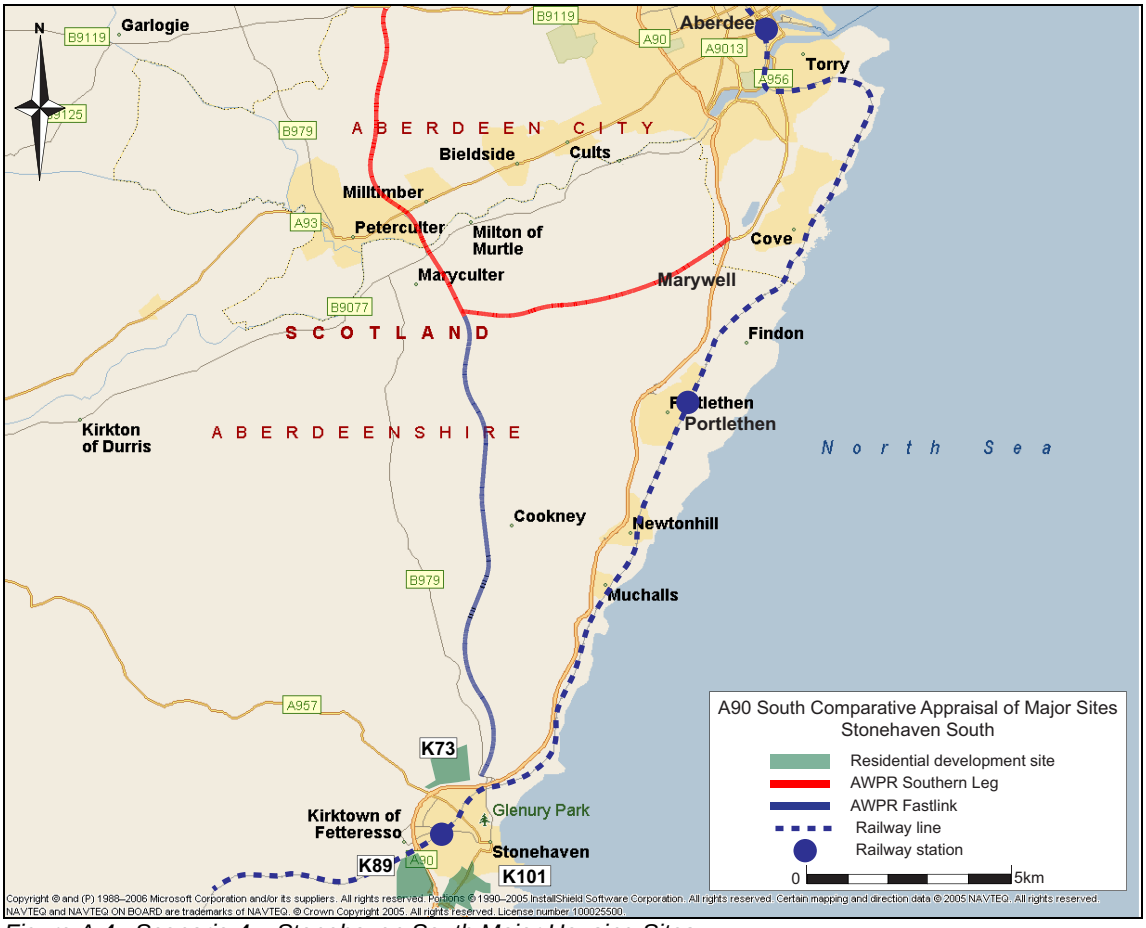

Figure A.4 : Scenario 4 – Stonehaven South Major Housing Sites

Table A.4 : Scenario 4 – Stonehaven Housing Test Data

Scenario	Area No.	Description	Housing figure to achieve Structure Plan Allocation of 4,600 Houses by 2023
4	K73	North Stonehaven	230
	K122	North Stonehaven	200
	K89	South Stonehaven	2,085
	K101	South Stonehaven	2,085
Total Households			4,600

A.2 Corridor Accumulation

The assumptions for the A90 South corridor will generally follow the housing allowances stated on page 27 of the Structure Plan document, including:

- 4,600 additional houses in the Portlethen to Stonehaven corridor by 2023, the location of which would change between scenarios, but the total number of houses would remain constant.
- A further 982 houses will be included in the Portlethen to Stonehaven corridor to represent the current Effective Housing Land Supply (EHLS) – The level and location of the EHLS allocation will be consistent for every scenario.
- South of Drumlithie to Laurencekirk would have 900 additional houses to 2023 and an additional 235 houses to represent the current (EHLS) in this area. The level of housing within this part of the corridor would be consistent for every scenario.
- The total number of additional houses in the A90 South corridor would be 6,717, with 4,600 of which would change location between scenarios.
- The A92 Coast is not strictly located within the A90 South corridor and therefore the future housing allocation would be covered by a proportion of the housing 'requirement', in line with that allocated for the 'Local Growth (RHMA)'.

A.3 Employment Assumptions

Employment sites in the study area include those illustrated in Figure A.5, and are as follows from north to south:

- K135 Mains of Cairnrobin North, Marywell
- K45 Mains of Cairnrobin South, Marywell
- K136 Extension of Badentoy Industrial Estate, Portlethen
- K67 Redcloak, North Stonehaven
- K36 Redcloak South, Stonehaven
- K15 Inverbervie South, Inverbervie
- K44 Extension of Linton Business Park, Gourdon

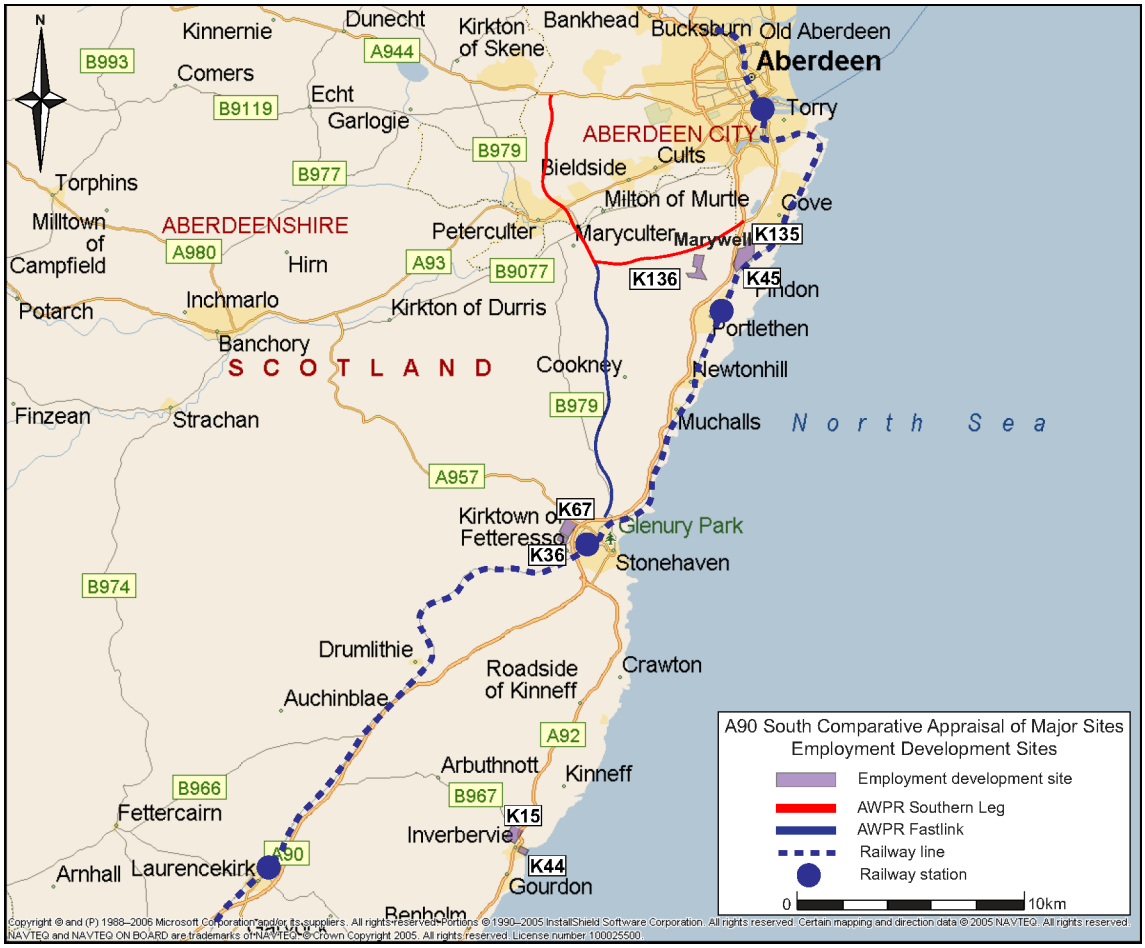

Figure A.5 : Employment Development Sites (applicable to all tests)

B APPENDIX B: STEERING GROUP WORKSHOP NOTES 08.10.09

B.1 Issues and Opportunities

B.1.1 Key Transport Issues in the Study Area

There are a number of key existing transport problems issues and constraints in the study area and these were discussed and detailed by the Steering Group. These have been grouped below into Council area considerations of rail and road based transport issues. The Steering Group undertook an appreciation of these issues prior to refining objectives and developing transport options.

Aberdeenshire Rail Based Issues:

- Rail Capacity between Stonehaven and Aberdeen City (overcrowding at peak times)
- Car Parking capacity at Stonehaven Rail Station (demand does not meet supply)
- Portlethen has a rail service frequency issue

Aberdeenshire Road Based Issues:

- Bus destinations in and around Aberdeen are limited
- Rural areas have low frequency of buses
- Badentoy junction is constrained
- Portlethen to Charleston is congested at peak times
- Safety at A90 dual carriageway at-grade junctions
- Rat running on the B979

Aberdeen City Rail Based Issues:

- No train station in the study area (and no prospect as new stations at this location not supported by government policy)

Aberdeen City Road Based Issues:

- Buses and HGVs restricted at Bridge of Dee (max. width 7’00”)
- Bridge of Dee is an ancient monument
- No bus priority measures on the A90
- Limited bus lanes on A956
- River Dee Bridge Crossings put a constraint in the road network
- Congestion at Bridge of Dee roundabouts has an extended peak
- Leggart Terrace congestion at peak times
- Air Quality Issues A956 Wellington Road
- Rat running on Cove Road and Cairngorm Road

B.1.2 Key Transport Opportunities in the Study Area

There are a number of key recent or committed transport opportunities in the study area and these were discussed and detailed by the Steering Group. These have been grouped under the timescale in which they are anticipated.

Recent/Short Term Transport Opportunities:

- Findon Interchange (opened 2008) – provides another access for Portlethen traffic
- A956 dualling (opened 2008)
- Train Service improvements (December 2008)
- Laurencekirk rail Station re-opens (May 2009)
- Portlethen Train Service improvements (December 2009)
- Souterhead roundabout signal enhancement (scheduled for 2010)

Medium Term Transport Opportunities:

- AWPR (scheduled for opening 2012) provides:
  - Alternative routes in an out of the study area
  - Window of Traffic Reduction on A90
  - Reduces tendency to rat run
  - De-trunking A90 Charleston – Bridge of Dee
- Park & Ride/Choose A90 and A96 (scheduled for opening 2012)
- Badentoy-Schoolhill Link road (developer led)
- Stonehaven Train Station car parking enhancement (developer led)
- Stonehaven Train Station access enhancement – one-way working on rail bridge (developer led)
- Wellington Road junction improvements (ACC)
- Potential HOV pilot project on A90 (ACC)

Long Term Transport Opportunities:

- Additional River Dee crossing capacity

The Steering Group undertook an appreciation of the above issues and opportunities prior to refining objectives and developing transport options. The Steering Group were reminded that the key drivers of the Local Development Plan are not all transport related. The LDP aims include the importance of Assets (rail, road and harbours/ports) and achieving outcomes related to the general quality of life and the environment. The objectives for the study were set in this context, with the knowledge that general government objectives would also be reviewed in a STAG based approach including the environment, safety, economy, integration and accessibility and social inclusion.

B.2 Objectives

Broad Objectives for this studies transport networks were drafted by the consultants and then refined by the Steering Group at the workshop and are established as follows:

Objective 1 – **Make the most efficient use of the transport network** – by movement of people and goods using existing and committed networks; locally, across boundaries, and strategically

Objective 2 – **Reducing the need for people to travel** – in terms of communities being able to operate locally for some journeys and by reducing distance to other facilities

Objective 3 – **Making sure that walking, cycling are attractive choices** – by taking cognisance where sites are accessible to facilities within an active travel range and that any natural or manmade barriers to walking or cycling movement are considered

Objective 4 – **Making sure that public transport is an attractive choice** – by making best locational use of existing public transport networks and identifying where additional measures can be effectively provided

B.3 Transport Option Tests

At the Steering Group workshop transport options were discussed. Most land use scenarios have two possible main options these result in seven transport options being considered in this study. The options include walking, cycling and public transport elements require some further development. There are also minor vehicular links that require confirmation. The differences in terms of key vehicular access links between the tests are detailed as follows:

Test 1. [Land Use Scenario 1] Banchory Leggart & Schoolhill :

- One new access onto A90 north of Charleston (Leggart Terrace as bus gate)
- Link road access between the Banchory Leggart & Schoolhill sites (grade separated from the AWPR)
- Access via Findon Interchange

Test 2. [Land Use Scenario 1] Banchory Leggart & Schoolhill:

- Two new access points onto A90 north of Charleston (Leggart Terrace as bus gate)
- Link road access between the Banchory Leggart & Schoolhill sites (grade separated from the AWPR)
- Access via Findon Interchange

Test 3. [Land Use Scenario 2] Banchory Leggart & Portlethen:

- One new access onto A90 north of Charleston (Leggart Terrace as bus gate)
- Link road access between the Banchory Leggart & Portlethen sites (grade separated from the AWPR)
- Upgrade Portlethen junction (grade separated interchange)

Test 4. [Land Use Scenario 2] Banchory Leggart & Portlethen:

- Two new access points onto A90 north of Charleston (Leggart Terrace as bus gate)
- Link road access between the Banchory Leggart & Portlethen sites (grade separated from the AWPR)

- Upgrade Portlethen junction (grade separated interchange)

Test 5. [Land Use Scenario 3] Elsick:

- Upgrade Portlethen junction (grade separated interchange)
- Use existing Newtonhill junction

Test 6. [Land Use Scenario 3] Elsick

- Upgrade Portlethen junction (grade separated interchange)
- Use existing Newtonhill junction
- New grade separated interchange onto Fastlink (northbound)

Test 7. [Land Use Scenario 4] Stonehaven South Sites

- Access onto A90 via secondary links

The smaller Stonehaven sites (K73 and K122) that are included in each scenario have access strategies already defined.