

Proposed Details				
Name and address of authority or organisation promoting the proposal		Aberdeen City Council and Aberdeenshire Council		
Also provide name of any subsidiary organisations also involved in promoting the proposal		NESTRANS		
Proposal Name	Western Peripheral Route – Northern Leg Central option	Name of Planner	Mr Donald Murdoch Corporate Director City Development Services Aberdeen City Council	Mr Iain Gabriel Director of Transportation & Infrastructure Aberdeenshire Council
Proposal Description	<p>A strategic route between the A90(S) in the vicinity of Charleston/Portlethen to the A90(N) in the vicinity of Blackdog. 29km of dual two lane carriageway with grade separated junctions at major intersections.</p> <p>To be constructed as an integral part of the North East's Modern Transport System and as such this STAG analysis should be read in conjunction with the MTS STAG.</p> <p>The function of the route will be to:</p> <ul style="list-style-type: none"> • Link P&R sites and provide good access to rail freight interchanges • Provide a strategic route around the city relieving congestion on existing trunk routes and local roads • Provide opportunities to re-allocate road space in the city to more sustainable forms of transport • Provide an opportunity to return the existing trunk road (constructed by local roads authorities prior to adoption as a trunk road in 1996) to local roads use as befits their layouts • Remove through traffic from the city, and in particular through HGV traffic 	Estimated costs	<ul style="list-style-type: none"> • Capital (undiscounted) £120m • Annual Fixed maintenance costs only £360,712/annum (Table 7.3 of SDG report) 	
Funding sought From (if applicable)	Scottish Executive	Amount of application (if applicable)	£120m	

Proposal background	
Planning objectives	As a key project within the Modern Transport System (MTS), the Western Peripheral Route (WPR) was assessed against the overall MTS strategy objectives. A further set of objectives specific to the WPR was also developed. As with those derived for the MTS, they were grouped under the 5 Government criteria headings of Environment, Safety, Economy, Integration and Accessibility. The derivation and final list of MTS and WPR objectives are described in chapter 2 and listed in Appendices A and B respectively of the WPR STAG appraisal.
Performance Against planning Objectives	Each of the route options for the northern section of the WPR were assessed to overall meet the planning objectives with only marginal differences. Full details of the assessment of categories against planning objectives are described in chapter 5 and contained in Appendix N of the WPR Stag Appraisal.
Alternatives to proposal considered	The MTS STAG proved that the MTS was the best alternative option for transport in the North East. As the WPR is a key component of the MTS its need is proven. Following initial environmental and engineering assessments and public consultation, 18 corridors for the WPR northern leg were identified for further comparative assessment. These 18 routes were assessed using a stage 2 DMRB assessment and were reduced to three routes to be taken forward to the next stage of public consultation. Following the consultation Central route is recommended as the preferred scheme option.
Comment on performance of alternatives	Each of the three routes performs well against the assessment criteria and objectives. A summary table has been prepared for comparative purposes. The 2 routes to the north of the airport (Central & South), circumventing all of the built up areas score best when considered against all of the assessment criteria. Environmental and engineering issues support the adoption of the Central route as the preferred scheme option.
Rationale for selection of proposal	The three routes remaining each provide a significant overall benefit to reducing congestion on the overall road network. All three provided good value for money. In traffic terms each provided similar overall benefits to the road network. Some local traffic variations were described. The main differences were in Engineering and Environmental issues. These pointed to the Central route providing the preferred scheme option.

Spatial And social information	
Area context:	The North East comprises the City of Aberdeen and Aberdeenshire. Aberdeenshire is predominantly rural with a population

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of around 228,000 and relies on primary sector and processing industries. Within the last 25 years, the emergence of the oil and gas industry and the economic development of tourism have broadened Aberdeenshire's economic base, leading to rapid population growth. Aberdeenshire is one of Europe's foremost fish landing areas with Peterhead being Europe's premier white fish landing port and Fraserburgh also a significant fishing centre. Other traditional industries include whisky distilling, paper products, forestry and timber related products. With major natural assets like the Cairngorms, Royal Deeside, extensive coastline and visitor attractions based on Aberdeenshire's heritage, tourism is of growing importance. The City of Aberdeen has a population of approximately 211,000 and is regarded as the Oil and Gas Capital of Europe. Aberdeen, known as the 'Granite City', is home to two universities and acts as the major retail and service centre for the whole of the North East region. The Western Peripheral Route is a route from the South of the City to the North of the City passing to the West of the City. It is intended to be a strategic route taking that traffic out of the city linking the A90(N) trunk road with the A96 trunk road and the A90(S) trunk road. Congestion in and around Aberdeen has been increasing such that a large volume of traffic diverts from the existing trunk road (built by the local roads authorities as a local road prior to adoption as a trunk road in 1996 by the Scottish Executive) in the city onto local roads both in and around the city causing congestion. The MTS, of which the WPR is a part, is intended to address this by reducing traffic in line with the Road Traffic Reduction Act.

Economic performance	<p>The North East is generally regarded as one of the most prosperous economies in the UK. The GDP of the North East was £7.7 billion in 1998, a rise of 6% since 1995, which is considerably less than that for Scotland and the UK over the same period, at 11.7% and 19.4% respectively. This is second only to London as the biggest contributor to the wealth of the nation (McKay, 2000). In terms of GDP per head, based on an index where the UK=100, North East Scotland had an indexed GDP per head of 123 in 1998 compared to 135 in 1996, whilst Scotland's as a whole was 97.</p> <p>Key industries with a national importance include oil and gas, fishing, manufacturing and tourism. Many are vulnerable to macro-economic pressures, such as the traditional manufacturing and processing industries, which face the challenge of securing higher added value by extending or upscaling the level of added value processing undertaken in the region.</p> <p>Aberdeen is regarded as the 'Oil Capital' of Europe and has become a centre of excellence in various elements of oil and gas exploration and production. The sector is becoming more globally focussed as operations in the North Sea slowly decline and the necessity to remain in Aberdeen for companies is decreasing. However, recent studies suggest that the decline is not as imminent as previously forecast, and that there is a 30-year supply of oil reserves still present in the North Sea. Extraction will depend on technological developments and investment.</p> <p>The expertise generated by the oil and gas sector is an important feature of recent moves towards diversification in the local economy, particularly technology and knowledge-based. The ability of the North East to continue to attract and invest in these new industries and also to encourage oil and gas related companies to remain in the area is essential to the growth of the economy.</p>
Deprivation/social exclusion	<p>Although there is relatively low unemployment in the North East, there are several communities which suffer from social exclusion. Several of these areas are covered by the Great Northern Partnership and Tillydrone Regeneration Partnership, which aim to address social exclusion issues such as employment, training, housing, environment and health.</p>
Planning and environment	<p>"North East Scotland <i>together</i>" finalised Aberdeen and Aberdeenshire Structure Plan was produced in April 2001 and is aimed at connecting communities to give people access to the services and facilities they need in a healthy and safe environment and thus enabling sustainable development throughout the area. The boundaries of the Aberdeen Green Belt and Strategic Reserve Land are currently under review by both Councils. There is currently a lack of available land for development in the North East. There is a demand for land, which suggests that implementation of a WPR would perhaps allow for the release of current Green Belt areas. An Air Quality Management Area has been declared in and around Aberdeen City Centre. The implementation of the WPR is of key importance in the delivery of the Structure Plan and AQMA aims.</p>
Spatial level of appraisal	<p>The project has been appraised at the level of the NESTRANS area, which is a combination of Aberdeen city and Aberdeenshire; it has also been appraised at the Scotland level. Where relevant, impacts at the level of those SIPS areas comprising the Great Northern Partnership have been indicated.</p>

Implementability appraisal		
Transport land-use integration	The integrated set of transport measures within the MTS, which includes the WPR, are seen as the most appropriate means of achieving the common set of objectives for sustainable development of the North East as contained within the finalised Aberdeen and Aberdeenshire Structure Plan and the policies within both Authorities emerging Local Plans. The contents of these strategy documents, which all include specific reference to the WPR, undergo extensive consultation. The objectives for both the MTS and WPR were also defined to ensure the proposals compliance with national transport related policies and advice.	
Policy integration	The WPR is in accordance with Aberdeen and Aberdeenshire's Local Transport Strategies. The objectives satisfied by the WPR and overarching MTS, of which it is a key component, ensure the proposal also addresses issues relating to the 5 Government assessment criteria of Environment, Safety, Economy, Integration and Accessibility.	
Distribution impacts	The appraisal work carried out to -date indicates that in general the WPR will bring citywide benefits across the entire local road network. There will be reduced congestion within Aberdeen City centre and on key radial routes plus less use of inappropriate routes, which also results in safety benefits and environmental benefits in AQMA and general area wide pollution reduction. This reduction will allow a re-allocation of road space for the benefit of other mode users, thereby providing the opportunity for a modal shift that leads to an improvement in general accessibility. There will also be an economical benefit impact to business trips and freight transfer due to improved journey times, reliability and access. This allows the opportunity for development.	
Technical feasibility	Each of the final three proposals had its own engineering issues. Central is slightly better than the South. Bucksburn scores badly in this category due to the engineering complexity of the rail underbridge and tunnel.	
Operational feasibility	No restrictions have been identified at this stage that could affect the operation of any of the 3 No. route options that had been taken forward to a Stage 2 Public Consultation other than the possibility of traffic problems with the Bucksburn route at A947 & A96 junctions.	
Technical risks	There may be timetable implications due to the need to obtain land and planning permission that is associated with construction of the WPR. Bucksburn carries a higher level of financial risk in terms of possible cost increases due to the complexity of the structures required.	
Other risks	There is a possibility that elements of WPR could generate substantial objection at the planning stage and any necessary land acquisition processes.	
Affordability	Funding is requested, in the main, from the Scottish Executive. There is the potential of developer contributions but this has still to be determined.	
Financial sustainability	Operating costs such as road maintenance would have to be allowed for in programme budgets.	
Public acceptability	NESTRANS Partners are fully supportive of the WPR. Extensive consultation has been carried to date. There is significant level of support for the WPR by the general public and the business community in the North East. Extensive Stage 1 and Stage 2 public consultations have been undertaken. Central was the preferred scheme option with the public in the stage two consultation.	
Objective	Assessment Summary	Supporting Information

<p>Transport: what are the transport impacts of the proposal</p>	<p>ASAM predicts that transport will benefit from a reduction in congestion on the whole road network. The reduction in congestion will allow reallocation of road space to other modes of transport, thereby encouraging attraction to modal shift.</p> <p>Major benefit (+2)</p>	<p>Test results from ASAM are listed in Appendix J and includes journey time information and select link analysis.</p>
<p>Environment: what will be the impacts of the environment</p>	<p>Each of the final three proposals would have differing impacts on the environment. These impacts are to some extent mitigable and these mitigations have been included in the assessment.</p> <p>Generally negative impact in range (-1,-2)</p>	<p>Refer to the STAG Summary Table Spreadsheet. Central has the most mitigable problems.</p>
<p>Safety: what will be the effects of the proposal on road and pedestrian safety</p>	<p>It is anticipated that providing a free flowing peripheral route that is designed and built to current standards in combination with the reduction in congestion over the network will lead to a reduction in accident levels.</p> <p>Major benefit</p>	<p>Refer to the STAG Summary Table Spreadsheet.</p>
<p>Economy: what are the impacts in terms of transport economic efficiency</p>	<p>The model runs using ASAM indicate that the WPR has a BCR in the range of between 4.7 and 5.3. This will bring an economic benefit to all users. The WPR will allow other public transport improvements to be implemented. Central has a BCR of 4.7</p> <p>Major benefit. (+3)</p>	<p>The reduction in congestion will reduce journey times throughout the network. ASAM shows the number of vehicle hours on the network is reduced. The route reduces the peripherality of the North East and will have a positive effect on the local economy. Reduction in congestion will allow reallocation of road space to other modes of transport.</p>

<p>Economic activity: what will be the impacts in terms of employment</p>	<p>The WPR project will:</p> <ul style="list-style-type: none"> • Contribute strongly towards safeguarding jobs in traditional sectors particularly paper and fish processing • Enable efficiency improvements in the oil production and exploration sector which will enhance Aberdeen's prospects in retaining and expanding employment in this sector • Assist prospects for service businesses including leisure tourism and especially for businesses located north of the city <p>In addition, the other components of the MTS will:</p> <ul style="list-style-type: none"> • Enhance efficiency within the labour market • Assist in addressing social inclusion objectives • Bring about distributional impacts for retail and similar activities, depending in part on planning issues and use of land at WPR junctions <p>Assessment:</p> <ul style="list-style-type: none"> • MTS (overall) +2 • WPR +2 <p>Other MTS elements +1</p>	<p>Potentially the WPR element of the MTS could safeguard 1000 – 1500 direct jobs plus 500 – 750 indirect and induced jobs in the paper sector and 600 - 800 direct jobs plus 300 - 500 indirect and induced jobs in the fish processing sector; both generates large demand for goods transport which is met largely by locally based businesses. Fish processing prospects are, however, especially uncertain at this time.</p> <p>Oil sector impacts difficult to quantify: sector employs 22,000 on shore plus downstream employment: a 10% uplift could therefore amount to 3,000+ jobs</p> <p>All of these impacts as stated are at the regional level. As the growth / safeguarding of employment in these sectors within the NESTRANS region does not displace employment at the Scotland level and would have further positive impacts within the rest of Scotland, the Scotland level impacts exceed the region level impacts.</p>
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Accessibility: what will be the impacts on accessibility	The WPR will improve accessibility to/from and within Aberdeen and the North East. Central/South provides better access opportunities for Dyce and the airport Major benefit	Refer to the STAG Summary Table Spreadsheet.
Transport integration: what will be the impacts in integrating transport modes and services	Central and South provide better integration possibilities with P&R and Rail Freight. Bucksburn not so effective. Benefit range (-1,+3)	The WPR will provide better links to existing and proposed Park and Ride sites. Other key route corridors within the city will benefit through the reallocation of road space to public transport and other modes of travel
Policy integration: what will be the impacts of the proposal against wider government policy	Provision of the Western Peripheral Route is a major component of the MTS. The MTS has within its objectives policy integration objectives. In the MTS STAG the MTS proved the best option.	Reference the MTS STAG and the assessment of MTS against the stated objectives.

Profile statements	
Opening year (2002)	
Subsequent year (2006)	

Environment				
Mitigation options considered (costs and benefits)				
Sub-objective	Qualitative information	Quantitative information	Magnitude of effect	Significance of impact
Noise and vibration	Addendum report to follow	Addendum report to follow		
Air quality – overall	Addendum report to follow	Addendum report to follow		
CO ₂ – global	Addendum report to follow	Addendum report to follow		
PM ₁₀ – local	Addendum report to follow	Addendum report to follow		
NO ₂ –local	Addendum report to follow	Addendum report to follow		
Water quality, drainage and flood defence	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.		
Geology	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.		
Biodiversity	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.		
Visual amenity	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.		
Agricultural and soils	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.		
Cultural Heritage	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.		
Landscape	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.	Refer to Appendix G for detailed analysis to DMRB Stage 2 level.		

Safety			
Sub-objective	Item	Qualitative Information	Quantitative information
Accidents	Change in annual personal injury accidents	This information is derived through the changes in flows on the network being applied to the national PIA rates for the various classes of road as set out in DMRB NESA Manual.	All 3 routes provide similar benefits for traffic safety by reducing traffic in the city centre and unsuitable peripheral routes. The proposed road type with grade separated junctions is the safest possible road type outwith motorway.
	Change in balance of severity	The impact of the addition of a new high standard route in conjunction with the reduced flows on less suitable routes should result in an overall reduction in the number and severity of accidents.	All 3 routes provide similar benefits for traffic safety by reducing traffic in the city centre and unsuitable peripheral routes. The proposed road type with grade separated junctions is the safest possible road type outwith motorway.
	Total discounted savings	The change in number and severity of accidents will be used to estimate the theoretical savings through the application of costs per casualty and cost per accidents as set out in DMRB NESA Manual. These are set at 1998 prices and values.	All 3 routes provide similar benefits for traffic safety by reducing traffic in the city centre and unsuitable peripheral routes. The proposed road type with grade separated junctions is the safest possible road type outwith motorway.
Security			Not assessed in detail as part of the comparison of route options

Economy			
Sub-objective	Item	Qualitative Information	Quantitative information
Transport economic efficiency	Travel time savings	Travel time savings are achieved across the network as a result of the Western Peripheral Route offering an alternative route to strategic and local traffic. Relief of key pinch points such as Bridge of Don, Bridge of Dee, Anderson Drive and A96 Auchmill Road contribute substantially to the travel time savings.	User benefits for the Central route are assessed at 807,984 1998 prices discounted to 1998 values (TEE table C1)
<i>User Benefits</i>	Travel charges	This has been assessed within the full demand trip modelling process.	See TEE table in SDG report
	Vehicle operating costs	The fixed trip matrix modelling process has identified the vehicle operating costs for private and goods vehicles.	See TEE table in SDG report
	Quality benefits	This has not been directly included in this assessment of the route options for the WPR (N) although the quality of the new route in it's broadest sense is inherent within the modelling process.	Not Included
	Reliability benefits	This has not been directly included in this assessment of the route options for the WPR (N) although the increased reliability of the new route in it's broadest sense is inherent within the modelling process.	Not Included
<i>Operator benefits</i>	Capital costs	All costs are as set out in the Engineering reports.	Approximately £120,000,000 at 2002 estimates but between £70,000,000 and £73,000,000 at 1998 prices and values.
	Operating & Maintenance costs	The additional maintenance cost associated with the new infrastructure is included in the modelling process based upon standard values from the DMRB NESAs Manual.	See TEE table in SDG report
	Revenues	Does not apply.	None
<i>Government</i>	Taxation impacts	The indirect taxation revenues associated	See TEE table in SDG report

<i>Impacts</i>		with the operation of private and good vehicles is identified in the modelling output.	
	Economic Net Present Value (NPV)	These are obtained directly from the TUBA option within the ASAM model.	The NPV values obtained for the Central option as tested within the full demand matrix model is £630,309 All at 1998 prices and values. Benefit/cost ratio is 4.7

Economy (continued)			
Sub-objective	Item	Qualitative Information	Quantitative information
Economic activity and location impacts	Spatial level of the appraisal	Part 2 assessment of WPR to follow. Appendix L details Part 1 assessment.	Part 2 assessment of WPR to follow. Appendix L details Part 1 assessment.
	GDP/output changes	Part 2 assessment of WPR to follow. Appendix L details Part 1 assessment.	Part 2 assessment of WPR to follow. Appendix L details Part 1 assessment.
	Distributional/spatial Impact – by area	Part 2 assessment of WPR to follow. Appendix L details Part 1 assessment.	Part 2 assessment of WPR to follow. Appendix L details Part 1 assessment.
	Distributional/spatial impacts by social group	Part 2 assessment of WPR to follow. Appendix L details Part 1 assessment.	Part 2 assessment of WPR to follow. Appendix L details Part 1 assessment.
	Regeneration and social Inclusion impacts	Part 2 assessment of WPR to follow. Appendix L details Part 1 assessment.	Part 2 assessment of WPR to follow. Appendix L details Part 1 assessment.

Integration			
Sub-objective	Item	Qualitative Information	Quantitative information
Transport Interchanges	Services & ticketing		
	Infrastructure & Information	Rail freight and park and ride benefit to varying degrees depending on route choice. Appendices N,O & Q refer.	
Land-use transport Integration	Transport assessment	Appendices N,O & Q refer.	
Policy integration	Fit with key policies	Appendices N,O & Q refer.	
	Social exclusion impacts	Appendices N,O & Q refer.	

Accessibility			
Sub-objective	Item	Qualitative Information	Quantitative information
Base accessibility	Within a community	Appendices N,O & Q refer.	
	Community as a whole	Appendices N,O & Q refer.	
Change in severance	Number of people affected		
	Importance of severance		
	Level of severance		