

Proposal Details				
Name and address of authority or organisation promoting the proposal:		Scottish Executive		
Proposal Name	Peterculter / Stonehaven Route	Name of Planner	AWPR Managin	g Agent
Proposal Description	Dual two lane carriageway Special Road with grade separated junctions forming a key component of the Modern Transport System as identified in the MTS STAG Part 1.	Estimated Total Public Sector Funding Requirement	Capital Cost Annual revenue support Present Value of costs	£295m to £405m - -
Funding sought from	Scottish Executive (81%) Aberdeen City Council (9.5%) Aberdeenshire Council (9.5%)	Amount of Application	£295m to £405n (Predicted Out-t	





Background Information		
Geographic Context	Aberdeen is the urban centre of North-East Scotland. The existing trunk road network runs through Aberdeen the local road network entering the city radially. The existing highway infrastructure in many areas is signific constrained, with the trunk road bridge across the River Dee being unable to accommodate heavy goods vel and the trunk road through Aberdeen having a number of traffic signal controlled junctions and at grade roun In addition, over much of its length the trunk road is on a steep vertical alignment and is closely bounded by residential, leisure and commercial premises. These various constraints result in diversion by drivers onto loop	
	roads, causing further congestion across the network. The study area straddles the Aberdeenshire/Aberdeen City Council boundary and comprises primarily of Aberdeen's rural hinterland although it passes close to or through several built up areas within the city boundaries. The study area crosses the River Dee Special Area of Conservation and River Don (District Wildlife Site). The study area passes close to Aberdeen Airport and crosses the Aberdeen to Inverness railway line.	
Social Context	The study area comprises farmland and urban areas which are primarily industrial or residential. The radial routes which the study area crosses are primarily commuter routes connecting the urban areas to the west of the city centre and west of Aberdeen with the city. The main trunk roads are the A90 which runs from north to south and the A96 which heads west.	
Economic Context	Congestion within Aberdeen has become of increasing concern, in terms of both environmental impacts associated with congested traffic and with the economic impact on areas north of Aberdeen. Economic activity within the study area is primarily agricultural. There are industrial estates at Tullos and Altens in the south, Westhill and Kirkhill on the western fringes and Bridge of Don and Blackdog in the north. Aberdeen Airport is located adjacent to Kirkhill Industrial Estate at Dyce in the west of the city. In built up areas, the main economic activity is that associated with residential areas, such as shops, restaurants and hotels. Economic activity is adversely affected due to complex journeys and increasing and unreliable journey times through the city. This affects both Aberdeen City and Aberdeenshire.	





Planning Objectives		
Objective	Performance against planning objective	
	G Part 1 Assessments. The AWPR objectives are grouped into the five Government mary. These objectives are grouped into three categories below for assessment as	
Acceptability and Participation	Public consultation was held in March/April 2005. The results of the	
(Objective AP1)	consultation are contained in a separate public consultation report.	
Deliverability (Objective D1)	Refer to the Implementability Appraisal and Government Objectives for Transport in this STAG Assessment.	
Reduce Congestion (Objectives EV3, EV4, EA4, IT3, IT4, IT5, AB4)	The Peterculter/Stonehaven Route attracts the lowest traffic flows of all the options. It does not connect to Charleston and does not provide access to the industrial/residential areas at Tullos and Altens or provide the benefits to traffic from this area. Also, being located further westwards of the city, it is not as good at providing relief to the city.	
Improve Economic Activity (Objectives EA3, EA4, IL3, IL4, IP2)	The route does not provide a connection between proposed rail freight transfer depots, industrial estates and businesses and Park and Ride car parks. The route provides a more direct link to the south and reduces travel times and costs for this journey. However, the route does not connect to Charleston with traffic wishing to travel from the north or west to the industrial/residential areas at Tullos and Altens remaining on the existing roads. The lowest volume of traffic on the route results on the lowest reduction in journey times and costs. Although route will facilitate the reallocation of road space to more appropriate priority forms of transport and integration with other public transport measures proposed in the MTS, the residual volume of traffic on the existing roads is generally greater than with all of the other options. The route provides an attractive link from residential areas on the periphery of Aberdeen and Aberdeenshire to the industrial estates and main employment areas in the north, but not to the Charleston/Portlethen area.	
Enhance Safety (SA2, SA3)	A consistent, high quality route is provided with high capacity junctions to maximise user safety. The route reduces traffic levels on the existing road networks thereby reducing the risk of accidents, although this is not as great as with the other options.	





Implementability Appraisal	
	The scheme length and earthworks information are provided for the entire route. The other information is provided for the Southern and Western Section where options are being considered.
	Scheme Length 39.7km
	Junctions (Southern Section) All directions at A90 at Stonehaven All directions at A93 All directions at A944
	Local Routes Passes below B9077, above former Deeside Railway Line and below A93, and above A944.
Technical	 Earthworks Likely surplus of 876,362m3 of acceptable material expected. Embankments Kennerty (c.15m), North Lasts (c20m). Excavation expected at Coneyhatch (c.17m), Hill Brae (c.25m), Newmill Hill (c.35m), South Lasts (c.20m), Backhill (c.15m). The main technical/financial risk associated with this route is related to earthworks costs as no ground investigation information is available for the section between Stonehaven and Kingswells. It is estimated that approximately 5,200,000m³ of landscape fill requires to be disposed of or reused within the works.
	Structures Viaduct crossing of River Dee, of total length approximately 250m with main span of approximately 110m. Crossing is approximately 12m above flood plain level. Former Deeside Railway maintained by underpass (60m). Bridge over Aberdeen-Dundee Railway Line at Stonehaven. The key technical challenge will be the design and construction of the River Dee crossing in order to avoid impact on the River Dee SAC. No temporary or permanent supports are permitted within the SAC boundary.
	The route is a reasonably conventional greenfield route interfacing with key existing roads at junctions and other roads with access maintained over or under the route, where possible, with bridges.
	There is a risk relating to programme as the route has not been developed to the same level as the Murtle Route. It is anticipated that this will add at least one year to the programme with the earliest completion date being 2011. Any





Implementability Appraisal		
	delay beyond this date will affect the scheme cost estimate due to additional construction inflation.	
Operational	Operation of the route will be undertaken through the Scottish Executive term contract for management of the trunk road network or by a PPP concession company.	
Financial	The scheme is likely to be procured as a Design and Build or Public Private Partnership (eg DBFO) project. Funding of the capital costs will be split between the funding partners Scottish Executive (81%), Aberdeen City Council (9.5%) and Aberdeenshire Council (9.5%). The route will be maintained through the Scottish Executive term contract for management of the trunk road network or by a PPP concession company.	
Public	Public consultation was held in March/April 2005. The results of the consultation are contained in a separate public consultation report.	





Objective	Assessment Summary	Supporting Information
	River Dee SAC Potential for major cost or negative impact	Crosses the Dee SAC with qualifying species including salmon, otters and the endangered freshwater pearl mussel.
		Route skirts the tributary Culter Burn DWS which would result in habitat fragmentation and simplification.
		Crossing over the River Dee SAC upstream of Inchgarth reservoir. Potential impacts on tributaries, namely Crynoch Burn and Culter Burn.
Environment		Increased surface water run-off due to impermeable road surface may result in detrimental impacts to water quality/quantity.
Livioiment		Potential for groundwater impacts through or surface water discharges.
		Potential for pollution to reach the SAC as a result of runoff from accidental spills.
		Potential impacts through noise and vibration, increased sediment flow and potential pollution associated with construction activities.
		Mitigation will include adopting measures and design solutions to control noise and vibration and sediment run off during construction; and ecological mitigation and sustainable drainage systems during operation.
	Special Needs Residential Facilities Potential for moderate cost or	Voluntary Service Aberdeen residential facility for children and young adults - Linn Moor School 250m west of the route. There are approximately 30
	negative impact	children at Linn Moor. Route is in cutting approximately 8m below existing ground level. Potential impacts due to noise and vibration and during construction.





Objective	Assessment Summary	Supporting Information
	Land Use (property impacts) Potential for major cost or negative impact	15 properties require demolition. Passes through Peterculter Golf Course. Approximately 40m from Rob Roy Park, residential caravan homes, adjacent to Linn Moor School. Close proximity to urban areas Impacts on agriculture along the length of the route.
	Noise and Vibration Potential for moderate cost or negative impact	During operation, traffic movement along the route would result in an increase in traffic noise to properties. This has been estimated as:
		 46 properties within 50m 139 properties within 100m 340 properties within 200m 595 properties within 300m
		Noise reductions along Anderson Drive and other current commuter routes and city streets due to reduced traffic volumes.
		Mitigation such as low noise surfacing, bunds and noise barriers will be employed where appropriate.
		Please also refer to the Special Needs Residential Facilities Section.
	Air Quality Potential for minor cost or negative impact	Potential for localised air quality impacts for some properties along the route, once operational.
		Potential for localised air quality improvements along Anderson Drive and other current commuter routes.





Objective	Assessment Summary	Supporting Information
	Water Quality, Drainage and Flood defence Potential for major cost or negative impact	Potential impacts on Cairnie Burn, Red Moss, Burn of Monquich, Burn of Muchalls, Back Burn, Ord Burn, Silver Burn, Leuchar Burn, Gormack Burn, Megray Burn and numerous field drains. Increased surface water run-off due to impermeable road surface may result in detrimental impacts to water quality/quantity. Soil compaction, realignment of field drains and ditches, culverting of burns and other construction works may potentially affect local drainage systems. Potential for groundwater impacts through soakaways, disturbance of contaminated land or surface water discharges. Potential for pollution to reach local waterways as a result of runoff from accidental spills. Run-off from road drainage may reach local waterways and may result in detrimental impacts to water quality/quantity. Proposed crossings for all affected watercourses may result in changes to local water quantity/flows. Mitigation such as sustainable drainage systems will be employed.





Objective	Assessment Summary	Supporting Information
	Disruption Due to Construction Potential for major cost or negative impact	Potential for temporary localised minor decreases in air quality due to dust, plant and equipment during construction.
		Potential for temporary localised increases in noise due to plant, equipment and works during construction.
		Short term potential significant adverse impact on North Deeside Road corridor.
		During construction DMRB recognises that impacts are greatest for properties within 100m of the works. This has been estimated as:
		46 properties within 50m139 properties within 100m
		Construction of bridge and smaller proposed crossings could result in short term impact through increased sediment flow and potential pollution associated with construction activities.
		Short term impacts on landscape and visual amenity during construction.
		Mitigation will include adopting measures and design solutions to control noise, vibration and sediment run off during construction.
	Biodiversity	Please also refer to the Special Needs Residential Facilities Section. Crosses over Deeside Railway Line DWS (moderate). Mitigation could be





Objective	Assessment Summary	Supporting Information
	Potential for major cost or negative impact	provided to reduce this impact.
		Red Moss of Netherley SSSI falls within the route corridor which may affect the hydrological regime and result in direct habitat loss (major). It may not be possible to fully mitigate this impact.
		Small fragments of ancient woodland along the route would be destroyed including woodland near Newmill Hill (minor/moderate). Mitigation could be provided to reduce this impact.
		Skirts Megray ancient woodland and Limpet Wood which will be impacted (minor). Mitigation could be provided to reduce this impact.
		Skirts western edge of South Lasts DWS, potentially affecting hydrological regime (moderate). Mitigation could be provided to reduce this impact.
		Passes close to the edge of the Moss of Auchlea DWS, with potential to affect the hydrological regime (moderate). Mitigation could be provided to reduce this impact.
		Traverses West Hatton DWS at Kingswells (major). Not entirely- compensatory planting would offset, but loss of mature woodland will not be able to be fully mitigated.
		New A96 junction at Craibstone will also result in severe habitat fragmentation for red squirrels and the loss of mature woodland and this will not be able to be fully mitigated.





Objective	Assessment Summary	Supporting Information
	Visual Amenity and Landscape Potential for major cost or negative impact	Construction within a landscape which has a generally high sensitivity and quality.
		Traverses through Area of Landscape Significance (in Aberdeenshire Local Plan) for approximately 1.4km.
		Approximately 28.1km (71%) of the route lies within Greenbelt.
	Cultural Heritage Potential for minor cost or negative impact	Passes 500m to east of Ury House (Grade B Listed)
	Inpact	Passes 310m to east of Netherly Bridge (Grade C (S) Listed)
		Passes 350m to south of Maryculter House, Church and Burial Ground (SAM) and Grade B Listed
		Passes 140m to north east of Normandykes Roman Camp (SAM)
		Passes 360m to north of Maryculter Kirk (Grade B Listed) and Maryculter Manse (Grade C Listed)
		Passes 250m to west of Kennerty House (Grade B Listed)
		Passes 340m to west of Waulkmill Bridge (Grade B listed)
		Passes 320m to north west of Brotherfield Boundary stone (Grade B Listed)
		Passes 250m south east of Boundary stone No 26 (Grade B Listed) and





Objective	Assessment Summary	Supporting Information
		310m south east of Boundary stone No 27 (Grade B Listed)
		Passes 90m west of Quakers (Friends) Burial Ground at Kingswells. (Grade C Listed)
		Passes approximately 435m west of West Hatton Long Cairn (SAM)
		Passes 700m to west of Kingswells House (Grade B listed) and 225m west of Kingswells Consumption Dyke SAM.
	Pedestrians, Equestrians, Cyclists and Community Effects Potential for moderate cost or negative impact	On the basis of currently available information, there is potential for recreational pathways (including bridleways and cycleways) to be directly impacted through severance or indirectly affected through visual and noise disturbance. There is also potential for pedestrian and cycleway access to community facilities to be disrupted. The design will maintain pathways as far as practicable.
	Vehicle Travellers Potential for minor benefit	The route passes through an even mix of cutting and embankment south of the river and travellers experience a variety of views with a number of marked focal features along the route. North of the river, travellers experience a broad range of views, passing through a large open valley, mature woodland and open countryside with a rolling topography.
		Based on the traffic flows provided, driver stress is estimated to be low.





Objective	Assessment Summary	Supporting Information
	Geology and Soils Potential for moderate cost or negative impact	There are no sites of geological interest identified and although some rock cutting will be required the associated impact would be considered as negligible.
		The potential for made ground contamination is expected to be restricted to the numerous infilled sand pits scattered across the relevant areas of drift deposits beneath the route. The significance of any impact will depend mainly on the specific nature of the infill at each pit.
		The route is known to cross peat deposits and the integrity of these may be affected by impact on the quality and /or quantity of their water, if not appropriately mitigated by road construction design.
		Groundwater is expected to be at shallow depth in the vicinity of significant watercourses and below other areas of low lying ground. Where road cutting is required in these areas, such that the water table is intercepted, there will be a local reduction in water table levels. This may be significant if local vegetation and habitat, or private water supplies, are dependent on groundwater.
	Policies and Plans Does not comply with Local Plans	This route does not comply with the line in the draft Aberdeen City Council and Aberdeenshire Council local plans. Both local plans anticipated that the WPR would proceed as the Murtle Route, no other route has this benefit.
Safety	Accident Savings (PV1) Minor Benefit	There are slight differences between the routes but the order of savings across all routes is approximately £4m per annum at 2025.





Objective	Assessment Summary	Supporting Information		
Economy		AWPR 2010 Flows A90 (S) – A93 A93 – A944 A944 – North Kingswells North Kingswells – A96 A96 – A947 A947 – A90 (N)	11700 23000 29700 37100 11900 16200	
	Traffic volumes (2010 AADT)	Existing Roads	Without AWPR	With AWPR
		King Street at Bridge of Don Market Street Bridge of Dee Auchmill Road Netherley Road	33900 28100 32000 41300 3400	31300 (-8%) 26000 (-7%) 29300 (-8%) 39700 (-4%) Access traffic only
	Journey time savings (PV2)	£943,305,000	3400	Access traine only
	Vehicle Operating Costs (PV3)	-£23,801,000		
	User Charges (PV4)	-£5,000		
	Private Sector Revenue Impact (PV5)	-£1,852,000		
	Public Sector Investment Costs (PV6)	£272,031,000		
	Public Sector Operating Costs (PV7)	£8,544,000		
	Taxation impacts (PV8)	-£12,354,000		
	Present Value of Benefits (PV1+PV2+PV3+PV4+PV5)	£917,647,000 (Note: Accident Savings PV1 are not included)		
	Present Value of Costs (PV6+PV7+PV8)	£268,221,000		
	Net Present Value (PVB-PVC)	£649,426,000		
	Benefit to Cost Ratio (PVB/PVC)	3.2		





Objective	Assessment Summary	Supporting Information
	Overall Economy Assessment Moderate Benefit	Lowest BCR achieved. Capital expenditure exceeds lowest by £85m - £125m.
Integration	Transport Integration Minor Benefit	The route does not provide a connection between proposed rail freight transfer depots, industrial estates and businesses and Park and Ride car parks as it does not connect to Charleston with traffic wishing to travel from the north or west to the industrial/residential areas at Tullos and Altens remaining on the existing roads. The route is further from Kingswells Park and Ride (over 1km) than the Pitfodels and Murtle Options. The route will facilitate the reallocation of road space to more appropriate priority forms of transport and integration with other public transport measures proposed in the MTS. The level of integration will be lower than on all other options due to the lower volumes of traffic using the route and lower reduction of traffic levels on existing roads.
	National Transport Targets Complies to a lesser degree	The AWPR is a key element in an integrated set of transport measures called the Modern Transport System (MTS). The objectives of the MTS endeavour to ensure that the package of measures proposed comply with National Transport Policies. The AWPR is in accordance with Aberdeen and Aberdeenshire's Local Transport Strategies. The route attracts lower traffic flows from the city and as such provides fewer opportunities to implement other public transport improvements. However, the route does not constrain traffic growth on the trunk road corridor.
Accessibility and Social Inclusion	Accessibility and Social Inclusion Moderate Benefit	Supports development of public transport improvements as proposed within Modern Transport System to a lesser degree than the route options which are located further east towards the city.





Objective	Assessment Summary	Supporting Information
	Change in Severance – Global Impact Minor Benefit	Route reduces severance within city, and reduces severance between destinations currently reached via Aberdeen.
	Change in Severance – Local Impact Minor Negative Impact	Route bypasses majority of built up areas.





Aberdeen Western Peripheral Route Objectives

Acceptability and Participation

AP1 The strategy will be developed through public participation and be endorsed by the Community.

Deliverability

D1 The strategy will be achievable, both practically and financially, and demonstrate best value.

Environmental Objectives

EV3 - To reduce the impact of traffic, including in particular HGV traffic, on Aberdeen and the surrounding area whilst incurring minimal damage to the natural environment.

EV4 - To contribute towards reducing air pollution problems, particularly in the city centre where the problems are greatest.

Economic Objectives

EA3 - To provide access between proposed rail freight transfer depots, industrial estates and businesses, Park and Ride car parks, road and air links, to ensure journey times and costs are minimised.

EA4 - To reduce congestion and remove the bottleneck in the Trans European Network thereby increasing the reliability of journey times through and around the City, helping to limit the effects of peripherality nationally and internationally.

Safety Objectives

SA2 - To provide a consistent, high quality, efficient and effective route with a minimal number of high quality, high capacity junctions to maximise user safety.

SA3 - To reduce the traffic levels on the existing road networks thereby reducing the risk of accidents.

Integration Objectives

IT3 - To produce a consistent standard of route that will bypass the city from A90 (North) to A90 (South) and attract nonessential traffic away from Aberdeen and inappropriate minor routes.

IT4 - To allow the reallocation of road space to more appropriate priority forms of transport.

IT5 - To provide access between proposed Park and Ride car parks.

IL3- To provide good accessibility to the land required for the sustainable development of Aberdeen

IL4- To provide an attractive link from residential areas on the periphery of Aberdeen and Aberdeenshire to the industrial estates and main employment areas on the periphery of Aberdeen and Aberdeenshire, reducing the need to travel through the city centre.





Aberdeen Western Peripheral Route Alternative Routes STAG Part 1 Assessment Peterculter/Stonehaven Route

IP2- To produce a route which will improve access to employment and generate job opportunities thereby contributing to the social inclusion policies of both Councils.

Accessibility Objectives

AB4- To significantly reduce the level of traffic in Aberdeen without reducing accessibility to or within the city.

