

Proposal Details				
Name and address of authority or organisation promoting the proposal:		Scottish Executive		
Proposal Name Murtle Route		Name of Planner	AWPR Managing 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	£210m to £280m -
Funding sought from	Scottish Executive (81%) Aberdeen City Council (9.5%) Aberdeenshire Council (9.5%)	Amount of Application	£210m to £280n (Predicted Out-t	

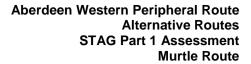






Background Information	
Geographic Context	Aberdeen is the urban centre of North-East Scotland. The existing trunk road network runs through Aberdeen, with the local road network entering the city radially. The existing highway infrastructure in many areas is significantly constrained, with the trunk road bridge across the River Dee being unable to accommodate heavy goods vehicles and the trunk road through Aberdeen having a number of traffic signal controlled junctions and at grade roundabouts. In addition, over much of its length the trunk road is on a steep vertical alignment and is closely bounded by a mix of residential, leisure and commercial premises. These various constraints result in diversion by drivers onto local 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		
	The planning objectives are detailed in the MTS and WPR STAG Part 1 Assessments. The AWPR objectives are grouped into the five Government Objectives and are detailed at the end of this Assessment Summary. These objectives are grouped into three categories below for assessment as planning objectives		
Acceptability and Participation (Objective AP1)	Public consultation was held in March/April 2005. The results of the 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 Murtle Route, being one of the closer options to the city, attracts comparable traffic flows to the Pitfodels Route. It is therefore one of the better options for providing relief to the city.		
Improve Economic Activity (Objectives EA3, EA4, IL3, IL4, IP2)	The route provides 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. This 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 route provides 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.		
Enhance Safety (SA2, SA3)	A consistent, high quality route is provided with high capacity junctions to maximise user safety. The Murtle Route provides some of the greatest reductions in traffic levels on the existing road networks thereby reducing the risk of accidents.		
Rationale for selection or rejection of proposal			





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

30.7km

Junctions (Southern Section)

All directions at Charleston All directions at A93 All directions at A944

Local Routes

Passes below B9077, beneath former Deeside Railway Line and A93, and above A944.

Earthworks

Likely surplus of 27,202 m3 of acceptable material expected.

Excavation expected in sands and gravels at Murtle (c.20m) and Hillhead (c.15m).

The main technical risk associated with this route is related to earthworks costs and the reuse or disposal of approximately 3,300,000m³ of landscape fill.

Structures

Viaduct, cable stayed or bow string arch crossing of River Dee, of total length approximately 400m with main span of approximately 110m. Crossing is approximately 11m above flood plain level. Former Deeside Railway maintained by overbridge.

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. Single tower cable stay bridge would require a main tower approximately 60m high, twin tower cable stay bridge would require towers approximately 36m high, bow string arch would be approximately 21m high.

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. Few departures from standard are anticipated although there are likely to be steep gradients approaching the A93 from the north.

Technical





Implementability Appraisal		
	It is anticipated that the earliest completion date for publication of Draft Orders will be late 2005/early 2006 and that this will enable the route to be constructed by 2010. Any 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.
		Loss of semi natural habitat on eastern edge of the tributary Murtle Den DWS.
		Crossing over the River Dee SAC upstream of Inchgarth reservoir. Potential impacts on tributaries, namely Scatterburn, Burn of Ardoe, Shanna Burn, Murtle Burn, Murtle Dam, Murtle Den Burn.
Environment		Increased surface water run-off due to impermeable road surface may result in detrimental impacts to water quality/quantity.
		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.





		s the potential for impacts or benefits prior to mitigation.
Objective	Assessment Summary	Supporting Information
	Special Needs Residential Facilities Potential for major cost or negative impact	Camphill Murtle Estate residential facility for children 100m west of the route (to the nearest building, from the A93 off merge slip road) and Camphill Newton Dee Village residential facility for adults 400m (to the nearest building) east of the route. There are approximately 40 pupils at Murtle and approximately 102 villagers at Newton Dee. Route is elevated approximately 11m above flood plain level as it crosses the River Dee and land tenanted by Newton Dee Village, and is in cutting between 10m and 20m below existing ground level as it passes between the facilities. Landtake from Camphill Murtle Estate includes its access which would be realigned and building adjacent to the A93 North Deeside Road which does not form part of the main estate. The former Deeside Railway which is used as a path between Murtle and Newton Dee will be reinstated. Potential impacts due to noise and vibration, visual impacts, air quality, water quality associated with Murtle Burn, land use and during construction. Preliminary findings from a medical assessment have been published separately indicating that impacts are manageable and mitigable. Further assessment in this area is currently being undertaken.
	Land Use (property impacts) Potential for moderate cost or negative impact	23 properties require demolition including one at Camphill Murtle (the bookshop aside the A93), indicated above. Passes between Countesswells Woods/Foggieton Woods, skirting the edge of Countesswells Woods close to the car park. Close proximity to urban areas. Impacts on agriculture along the length of the route. Please also refer to the Special Needs Residential Facilities Section.





Objective	Assessment Summary	Supporting Information
	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:
		 28 properties within 50m 73 properties within 100m 175 properties within 200m 305 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 within the city's designated Air Quality Management Zone and along Anderson Drive and other current commuter routes.
		Please also refer to the Special Needs Residential Facilities Section.





Objective	Assessment Summary	Supporting Information
	Water Quality, Drainage and Flood defence Potential for moderate cost or negative impact	Potential impacts on Murtle Dam, Murtle Den Burn and numerous small field drains.
		Potential impacts on numerous small 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 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.
		Please also refer to the Special Needs Residential Facilities Section.





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.
		Potential significant adverse short term impact on North Deeside Road corridor due to rock excavation and other works adjacent to Hillhead Road.
		During construction DMRB recognises that impacts are greatest for properties within 100m of the works. This has been estimated as:
		28 properties within 50m73 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. Passes under Deeside Railway Line DWS (moderate). Mitigation could be





Objective	Assessment Summary	Supporting Information
	Potential for moderate cost or negative impact	provided to reduce this impact.
		Route cuts through a belt of semi-native woodland at Hillhead of Heathcote near Auchlunies (moderate). Mitigation could be provided to reduce this impact.
		Skirts ancient woodland at Blacktop Loss of semi natural woodland would be restricted to small areas at the edge of woodlands resulting in involving minimal habitat fragmentation (minor). Mitigation could be provided to reduce this impact.
		Loss of semi natural habitat where road traverses Foggieton DWS(moderate). Mitigation could be provided to reduce this impact.
		Route passes near the Murtle House/Newton Dee DWS (moderate). Mitigation could be provided to reduce this impact.
		Route passes close to Hillhead Road DWS where there will be some impact on mammals moving though area to Murtle Den (minor). Mitigation could be provided to reduce this impact.
		Traverses West Hatton DWS at Kingswells (major). 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



Government's Objectives for Transport

Objective	Assessment Summary	Supporting Information
		not be able to be fully mitigated
		Passes close to the edge of Hare Moss Raised Bog (27ha total) which could result in the alteration of the hydrological regime and the vegetation supported (moderate). Mitigation could be provided to reduce this impact.
	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 an Area of Landscape Significance (in Aberdeenshire Local Plan) for approximately 0.9km.
		Approximately 30km (98%) of the route lies within Greenbelt.
		Please also refer to the Special Needs Residential Facilities Section.





Objective	Assessment Summary	Supporting Information
	Cultural Heritage Potential for major cost or negative impact	Severance of the Gatehouse from the main building at Blair's College (Grade A listed). Severance agreed with Historic Scotland.
		Passes 60m from Baillieswells farm Boundary Stone (Grade B Listed)
		Passes 70m to north east of Countesswells House (Grade B Listed)
		Demolition of the Waterwheel Inn, Milton of Murtle Farm Steadings and Milton of Murtle Doocot, (all Grade C(s) listed). Demolition agreed with Historic Scotland. (Major due to demolition)
		Passes 250m east of Quakers (Friends) Burial Ground at Kingswells. (Grade C listed).
		Passes close to Kingswells House (Grade B listed) and Kingswells Consumption Dyke SAM. This impact has been agreed with Historic Scotland.
	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.





Objective	Assessment Summary	Supporting Information
	Vehicle Travellers Potential for minor benefit	Approximately half of the route is bordered by cutting which severely inhibits views. Of the remainder, there is a good mixture of open and intermittent views across the Dee valley, open and wooded farmland with some areas enclosed by mature woodland
		Based on the traffic flows provided, driver stress is estimated to be low.
	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 dependant on groundwater.
	Policies and Plans	This route complies with the line in the draft Aberdeen City Council and
	Complies with the Local Plans	Aberdeenshire Council local plans. Both local plans anticipated that the WPR would proceed as the Murtle Route, no other route has this benefit.





Objective	Assessment Summary	Supporting Information		
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.		
		AWPR 2010 Flows A90 (S) – A93 A93 – A944 A944 – North Kingswells North Kingswells – A96 A96 – A947 A947 – A90 (N)	24000 33200 34500 39000 12300 16900	
Economy	Traffic volumes (2010 AADT)	Existing Roads King Street at Bridge of Don Market Street Bridge of Dee Auchmill Road Netherley Road	Without AWPR 33900 28100 32000 41300 3400	With AWPR 30300 (-11%) 25200 (-10%) 27100 (-15%) 34700 (-16%) 800 (-76%)
	Journey time savings (PV2) Vehicle Operating Costs (PV3) User Charges (PV4) Private Sector Revenue Impact (PV5) Public Sector Investment Costs (PV6) Public Sector Operating Costs (PV7) Taxation impacts (PV8) Present Value of Benefits (PV1+PV2+PV3+PV4+PV5)	£1,018,215,000 -£43,142,000 -£808,000 -£58,000 £208,452,000 £7,188,000 -£3,472,000		





Objective	Assessment Summary	Supporting Information
	Present Value of Costs (PV6+PV7+PV8)	£212,168,000
	Net Present Value (PVB-PVC)	£762,039,000
	Benefit to Cost Ratio (PVB/PVC)	4.6
	Overall Economy Assessment Major Benefit	Second highest BCR achieved with lowest capital expenditure.
	Transport Integration Major Benefit	The route provides access between proposed rail freight transfer depots, industrial estates and businesses, Park and Ride car parks, road and air links. 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.
Integration	National Transport Targets Complies to a greater 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 some of the higher traffic flows from the city and as such provides greater opportunities to implement other public transport improvements. However, the route does not constrain traffic growth on the trunk road corridor.
	Accessibility and Social Inclusion Major Benefit	Supports development of public transport improvements as proposed within Modern Transport System.
Accessibility and Social Inclusion	Change in Severance – Global Impact Major Benefit	Route reduces severance within city, and reduces severance between destinations currently reached via Aberdeen.
	Change in Severance – Local Impact Minor Negative Impact	Closes Countesswells Road.



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.

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.

