

Proposal Details				
Name and address of authority or organisation promoting the proposal:		Scottish Executive		
Proposal Name	Milltimber Brae 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	£265m to £365m -
Funding sought from	Scottish Executive (81%) Aberdeen City Council (9.5%) Aberdeenshire Council (9.5%)	Amount of Application	£265m to £365n (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	
	TAG Part 1 Assessments. The AWPR objectives are grouped into the five Government ummary. These objectives are grouped into three categories below for assessment as planning	
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 Milltimber Brae Route attracts good traffic flows but less than the Pitfodels and Murtle options. Being located further westwards of the city, it is not as good at providing relief to the city as the Murtle and Pitfodels options.	
Improve Economic Activity (Objectives EA3, EA4, IL3, IL4, IP2)	The route provides a longer connection between proposed rail freight transfer depots, industrial estates and businesses, Park and Ride car parks, road and air links, than the Murtle and Pitfodels options, with a lower reduction in journey times and costs. This makes the route less attractive and is highlighted in the lower volumes of traffic using the route. Although 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 residual volume of traffic on the existing roads is generally greater than with the Murtle and Pitfodels 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 on the periphery of Aberdeen and Aberdeenshire, reducing the need to travel through the city centre, albeit less attractive than the Murtle and Pitfodels options.	
Enhance Safety (SA2, SA3)	A consistent, high quality route is provided with high capacity junctions to maximise user safety. There is a reduction in traffic levels on the existing road networks thereby reducing the risk of accidents, although this is not as great as with the Murtle and Pitfodels options	
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

33.2km

Junctions (Southern Section)

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

Local Routes

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

Earthworks

Likely import of 1,545,745m3 of acceptable material required.

Embankments at Hare Moss (c.15m), Craigingles Wood (c.15m), Milltimber Brae (c.15m), Foggieton (c15m) and North Westfield (c.30m).

Excavation expected at Hill of Blairs (c.20m), Hill of Milltimber (c.17m), Upper Beanshill (c.25m) and Craiglug (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 Banchory Devenick and Countesswells. It is estimated that approximately 3,400,000m³ of landscape fill requires to be disposed of or reused within the works.

Structures

Viaduct crossing of River Dee, of total length approximately 310m with main span of approximately 110m. Crossing is approximately 16m above flood plain level. Former Deeside Railway maintained by underpass (c.95m). 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. Few departures from standard are anticipated although there are likely to be steep gradients approaching the A93 from the north.

There is a risk relating to programme as the route has not been developed to the same level as the Murtle Route. It is

Technical





Implementability Appraisal	
	anticipated that this will add at least one year to the programme with the earliest completion date being 2011. 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. Crossing over the River Dee SAC upstream of Inchgarth reservoir. Potential impacts on tributaries, namely Crynoch Burn (approximately 200m from route at closest point), Murtle Dam which is downstream of the route, Shanna Burn, Burn of Ardoe and Milltimber Burn. Increased surface water run-off due to impermeable road surface may result in detrimental impacts to water quality/quantity.
Environment		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 major cost or negative impact	Camphill Estate residential facility for children 230m west of the route at Milltimber Brae. There are approximately 60 pupils at Milltimber. Route is elevated approximately 10m high located immediately east of Milltimber Brae. Potential impacts due to noise and vibration, visual impacts, air quality and during construction.





Objective	Assessment Summary	Supporting Information
	Land Use (property impacts) Potential for major cost or negative impact	35 properties require demolition including 18 at Milltimber. Approx 200m from Storybook Glen. Approx 100m from the International School. Close proximity to Kippie Lodge. 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: 49 properties within 50m 88 properties within 100m 163 properties within 200m 240 properties within 300m Sensitive receptors include the International School. (360 Pupils) 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.





Objective	Assessment Summary	Supporting Information
	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.
	Water Quality, Drainage and Flood defence Potential for moderate cost or	Potential impacts on Silver Burn and numerous small field drains.
	negative impact	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





Objective	Assessment Summary	Supporting Information
		local water quantity/flows.
		Mitigation such as sustainable drainage systems will be employed.
	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 tern 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:
		49 properties within 50m88 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





Objective	Assessment Summary	Supporting Information
		noise, vibration and sediment run off during construction.
		Please also refer to the Special Needs Residential Facilities Section.
	Biodiversity Potential for major cost or negative impact	Crosses over Deeside Railway Line DWS (moderate). Mitigation could be provided to reduce this impact.
		Route severs connection between two large areas of ancient woodland (total 170ha) Craigingles and Cleanhill wood resulting in habitat loss and profound habitat fragmentation (major). Severe habitat fragmentation and the loss of mature woodland will not be able to be fully mitigated.
		Also bisects long established woodland at Culterhouse Road (north of International School) (major). Habitat fragmentation and the loss of mature woodland will not be able to be fully mitigated.
		Route would result in direct habitat loss of ancient woodland to the west and north of Milltimber (major). Loss of mature woodland will not be able to be fully mitigated.
		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
		Skirts southern edge of Hare Moss for 100m which could result in the alteration of the hydrogeological regime and thus 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 Area of Landscape Significance (in Aberdeenshire Local Plan) for approximately 1.4km.
		Approximately 31km (93%) of the route lies within Greenbelt.
		Please also refer to the Special Needs Residential Facilities Section.
	Cultural Heritage Potential for minor cost or negative impact	Passes 270m to north east of Eastland House, (Grade C listed).
		Passes 90m east of Kingcausie House (Grade B listed) and sundials(Grade B & C Listed respectivley)
		Potential for direct impact upon Beanshill March/Boundary Stone (Grade B listed)
		Passes 215m west of Westfield Boundary Stone (Grade B Listed)
		Passes 90m west of Quakers (Friends) Burial Ground at Kingswells. (Grade C listed).



Government's Objectives for Transport

Objective	Assessment Summary	Supporting Information
		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	Over half of the route is bordered by cutting which severely inhibits views. Elsewhere, there is an attractive mixture of open and enclosed views south of the River Dee with a greater variety of long-, medium- and short range views north of the river. North of the river, views are enclosed for the majority of the route by extensive roadside cutting with limited intermittent views restricted to medium-range by mature woodland.
		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 dependant 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		
		AWPR 2010 Flows		
		A90 (S) – A93	20100	
		A93 – A944	27000	
		A944 – North Kingswells	30000	
		North Kingswells – A96	38900	
		A96 – A947	11200	
_		A947 – A90 (N)	16000	
Economy	Traffic volumes (2010 AADT)			
		Existing Roads	Without AWPR	With AWPR
		King Street at Bridge of Don	33900	31200 (-8%)
		Market Street	28100	25800 (-8%)
		Bridge of Dee	32000	28500 (-11%)
		Auchmill Road	41300	36500 (-12%)
		Netherley Road	3400	1700 (-50%)
	Journey time savings (PV2)	£1,015,151,000		
	Vehicle Operating Costs (PV3)	-£29,722,000		
	User Charges (PV4)	-£351,000		
	Private Sector Revenue Impact (PV5)	-£711,000		
	Public Sector Investment Costs (PV6)	£249,701,000		
	Public Sector Operating Costs (PV7)	£7,525,000		
	Taxation impacts (PV8)	£2,456,000		
	Present Value of Benefits			
	(PV1+PV2+PV3+PV4+PV5)	£984,367,000 (Note: Accident Savings PV1 are not included) £259,682,000		
	Present Value of Costs			
	(PV6+PV7+PV8)			
	Net Present Value (PVB-PVC)	£724,685,000		
	Benefit to Cost Ratio (PVB/PVC)	3.8		





Objective	Assessment Summary	Supporting Information	
	Overall Economy Assessment Moderate Benefit	Third highest BCR achieved. Capital expenditure exceeds lowest by £55m - £85m.	
	Transport Integration Moderate 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. The level of integration will be lower than on the Murtle and Pitfodels options due to the lower volumes of traffic using the route and lower reduction of traffic levels on existing roads.	
Integration	National Transport Targets Complies to a lesser degree	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. 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 Moderate Benefit	Supports development of public transport improvements as proposed within Modern Transport System to a slightly lesser degree than the Murtle or the Pitfodels options.	
Accessibility and Social Inclusion	Change in Severance – Global Impact Moderate Benefit	Route reduces severance within city, and reduces severance between destinations currently reached via Aberdeen.	
	Change in Severance – Local Impact Moderate Negative Impact	Introduces severance at Milltimber, and creates severance at 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.

