

Proposal Details			
Proposal Name:	Inshes to Smithton Link Road Option 4		
Proposal Description:	<p>The Inshes to Smithton Link Road Option 3 is a single carriageway local distributor road. It connects to the eastern leg of an existing roundabout at Inshes Retail Park with a link road connecting to a grade separated junction to the south of the current A9 Inshes Junction. The road runs east and North-East, to a new roundabout at Caulfield Road North. The new link runs in a North-East direction to connect to the southern roundabout forming the proposed A96 Smithton junction as part of the A96 Inverness to Nairn dualling scheme.</p> <p>The new junction at Inshes provides access to and from the A9 southbound carriageway only. The existing southbound slip roads at Inshes Junction would be closed under this proposal. The northbound slip roads would be retained</p> <p>The alignment generally follows the existing topography except for the crossing of the Inverness to Perth railway with approach embankments approximately 6m high. A new junction with Caulfield Road North would be required at a point around 200m from the Culloden Road junction</p>	Estimated Total Public Sector Funding Requirement:	Capital costs/grant Costs not available at the time of appraisal
Background Information			
Geographic Context:	The A96 is a strategic trunk road which connects Inverness to Aberdeen, and the A9 is a strategic trunk road between the Central Belt and Northern Scotland. The A96 is single carriageway as it approaches Inverness but becomes to a dual carriageway on approach to the Inverness Retail Park roundabout. The A9 on approach to and around Inverness is dual carriageway.		

	<p>Culloden Road (B9006) is located to the south east of Inverness and to the east of the A9. It provides an important connection between the settlements to the east of the A9 and Inverness. As a result the Culloden Road/B8082 junction at Inshes experiences high levels of traffic and traffic is subject to delays especially during peak periods.</p> <p>The A9 and A96 are subject to the national speed limit. Culloden Road is urban in nature, has a speed limit of 40 mph until it's junction with the B8082 at Inshes.</p>
<p>Social Context:</p>	<p>The areas which would be affected by the East Link Road element are Inshes, Smithton, Culloden, Westhill and Cradlehall as well as the proposed future developments to the East of Inverness. These areas are characterised by a higher proportion of economically active residents (77% as per 2011 census) than the Scottish average (69% as per 2011 census). Unemployment levels in the area are lower than both the Scottish national average and across the Highland region as a whole. Residents of these areas earn on average more than the national and regional average. The option does not pass through or lie in close proximity to any datazone areas that are ranked in the top 15% of the Scottish Index of Multiple Deprivation (SIMD 2012).</p> <p>The Inshes to Smithton Trunk Link Road may have a wider impact on the area than other options due to the scale and location of the new link road.</p>
<p>Economic Context:</p>	<p>The proposed Inshes to Smithton Link Road would provide additional opportunities for access to the proposed developments identified for the Inverness East area which would likely have a positive economic impact on Inverness. A reduction in congestion and journey times on the A96 and the local road network around Smithton and Culloden would also be economically beneficial.</p>
<p>Planning Objectives</p>	
<p>Objective:</p>	<p>Performance against planning objective:</p>
<p>L1: Improve journey time and increase opportunities to travel, particularly by public transport, between Aberdeen and Inverness.</p>	<p>L1 – Moderate Benefit</p> <p>Introduction of the new Smithton to Inshes link removes South to East and East to South movements from Raigmore Interchange and in doing so improves the performance of Raigmore Interchange and reduces the level of queuing on the A96 approach.</p> <p>Traffic Modelling of this option has shown an improvement in journey times from the A96 into Inverness; the largest benefits are in the AM peak where journey times from the A96 through to Millburn Road (at the junction with Harbour Road) reduce by 54% , and movements from the A96 to A82 Harbour Road experience journey time savings of 27%. In the PM in the reverse direction there are more modest journey time savings from Millburn Road to the A96 of 11%.</p>

	<p>This option will also provide the opportunity for a new route for public transport from the South of Inverness to the developments to the East of Inverness and beyond to Nairn and Aberdeen. Reductions in journey times through Raigmore Interchange and potential for improvements in journey time reliability will contribute to more opportunities to travel by public transport between the two cities.</p>
<p>L2.1: Improve the effectiveness of the road network hierarchy in addressing the conflict between longer distance and local traffic through rationalisation of local movements' use of Trunk Road junctions</p>	<p>L2.1 Moderate Benefit</p> <p>The road network hierarchy is improved through the additional secondary roads for local traffic between Sir Walter Scott Drive, Culloden Road and Barn Church Road. The addition of new southbound merge and diverge slip roads on the A9 at Inshes, connecting the link road to the A9, may introduce a degree of conflict between longer distance and local traffic at this location.</p> <p>This option facilitates local traffic travelling East to South in the morning peak and South to East in the evening peak. The link road removes a degree of local traffic from the A96 and A9, reducing traffic levels at Raigmore Interchange and on the A96 and the A9, and contributes to reducing the conflict between longer distance and local traffic movements.</p>
<p>L2.2: Reduce conflicts for longer distance and local traffic for planned development areas to the east.</p>	<p>L2.2 – Moderate Benefit</p> <p>This option provides a link for local traffic movements for the proposed new developments to the East of Inverness and long distance traffic between A96 and South Inverness. It could provide further access to the Inverness East development area, and would provide an alternative access to the development areas to the East from the Inshes area. This would remove local traffic from the A9 and A96 which would improve the operation of Raigmore Interchange, and reduce the conflict between longer distance and local traffic.</p>
<p>L3: Improve connectivity, particularly by public transport and active travel, between Inverness city centre and the growth area to the east including Inverness Airport</p>	<p>L3 – Minor Benefit</p> <p>This option provides a new link which will provide opportunities for new public transport routes and active travel between Inverness and the growth area to the East.</p> <p>The journey time savings through Raigmore Junction will have a positive effect on public transport travelling between Inverness city centre and the growth area to the East of the city.</p>
<p>L4: Improve safety for motorised and non-motorised users by reducing the accident rate at Trunk Road junctions</p>	<p>L4 – Minor Benefit</p> <p>This option reduces traffic levels passing through Raigmore Interchange and therefore will result in a reduction in the accidents numbers at the trunk road junction. However this benefit may be partially negated by the increase in speeds approaching the junction which may result in a higher severity of accident. The introduction of the new southbound slip roads at Inshes, which will be built to modern standards, should improve safety at this junction, particularly compared to the existing southbound slip road arrangement which will be closed.</p>

	The option may partially offset these accident benefits through the creation of the additional link road.
L5.1: Improve the operational performance of the Trunk road network and junctions on the A9 and A96 as they approach Inverness from the Kessock Bridge; south of Inshes and the Smithton Roundabout.	<p>L5.1 – Moderate Benefit</p> <p>This option improves the performance of Raigmore Interchange, and reduces the journey times between the A96 and Inverness. Journey times through Raigmore Interchange are reduced as are journey times from the A96 to the Kessock Bridge (27%) and to Milton of Leys (47%) in the AM peak. In the PM peak there is an increase in journey times to the Kessock Bridge (11%) and a reduction to Milton of Leys (8%). In the reverse direction there is no significant impact on the journey time between the Kessock Bridge and the A96 in AM peak (3%), however there is an 8% reduction in the PM Peak. Journey Times between the A9 Milton of Leys and the A96 reduce by 8% in the AM peak and 12% in the PM peak. .</p> <p>The improved operation at Raigmore Interchange has resulted in increased traffic levels approaching Longman Roundabout from the A9 South resulting in an increased level of delay at this location. As a result there are increases in journey times between Milton of Leys and Kessock bridge; 4% in the AM peak and 21% in the PM. In the reverse direction this option has no significant impact on journey times.</p>
L5.2: Improve the operational performance of the secondary network and junctions where this may improve the operation of the Trunk road network.	<p>L5.2 – Minor Benefit</p> <p>This option provides an alternative route for local traffic travelling between Smithton and Culloden, and Inshes and the areas to the South of Inverness via Sir Walter Scott Drive. This leads to an improvement of the operational performance of the local road network through the reductions in traffic on Culloden Road (east of Tower Road), Tower Road, Harbour Road, Milburn Road and Sir Walter Scott Drive, and would reduce traffic levels passing through the local Inshes roundabout junction.</p> <p>This option puts addition pressure on the Culloden Road overbridge eastbound movement at Culloden Road during the AM peak.</p>
Implementability Appraisal	
Technical:	The road and junction improvements would be implemented using proven methods and technology. Disruption during construction is likely and temporary works and traffic management would be required in order to mitigate the impact.
Operational:	Future development in the Inverness East area and specifically at Ashton Farm may result in new junctions proposed on this link road to serve future development.
Financial:	The implementation of this option would be subject to funding availability and other competing throughout Scotland such as Scottish Government, developers or The Highland Council.

Public:	This proposal is in the public domain since a similar proposal is included in the Highland Local Development Plan. Implementation of this proposal should be taken forward in consultation with those parties who have an interest in the master-planning of future development at Ashton Farm.	
STAG Criteria		
Criterion	Assessment Summary	Supporting Information
<p>Environment:</p> <p><i>Note – all STAG ratings for individual assessment areas are expressed without mitigation.</i></p> <p><i>Overall STAG Rating – Moderate Negative</i></p>	<p>Global and Local Air Quality – Minor Impact / Minor Benefit</p> <p>Cultural Heritage – Moderate Impact.</p>	<p>The route alignment goes through an area of mainly agricultural land, crossing within close proximity of Ashton Farm. Key residential areas close by are Smithton and Cradlehall. During operation, there is potential for a decrease in air quality at Ashton Farm with other residential receptors along Tower Road experiencing benefits to air quality due to a reduction in traffic on this road. Traffic is also reduced on Barn Church Road and therefore benefits are likely to result for receptors within the consented New Town in Stratton East Inverness. It is likely that potential impacts could be reduced through mitigation, such as designing the route to minimise distance from receptors and adherence to construction best practice to limit dust creation and dispersal.</p> <p>This option has the potential to impact on the setting of Aston Farm Cottages Ring Ditch and Pit Circles Scheduled Monument. There is also high potential for impact on unknown archaeological remains in this area. It is unlikely that mitigation will significantly reduce the impact on the setting of the scheduled monument.</p>
	<p>Noise & Vibration – Minor Impact.</p>	<p>The route alignment goes through an area of mainly agricultural land, crossing within close proximity of Ashton Farm. Key residential areas close by are Smithton and Cradlehall. There is potential for short-term noise impacts during construction activities such as piling, earthworks and vehicular movements. This is most likely to have an impact on Ashton Farm. During operation, Ashton Farm, along with residents nearby to North Caulfield Road are likely to experience noise impacts due to an increase in traffic, with other residential receptors alongside Tower Road experiencing benefits in noise due to a decrease in traffic on this road. Traffic is also reduced on Barn Church Road and therefore benefits are likely to be experienced within the consented New Town in Stratton East Inverness when developed. It is likely that potential impacts could be reduced through mitigation, such as adherence to construction best practice, noise barriers and through the use of lower noise road surfacing.</p>

**A9/A96 Connections Study
Appraisal Summary Tables**

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	<p>Biodiversity and Habitats - Moderate Impact.</p> <p>Agriculture and Soils - Moderate Impact.</p> <p>Landscape & Visual Amenity - Moderate Impact.</p>	<p>Although the route option is located to the south of the Moray Firth (SAC), Inner Moray Firth (SPA) and Longman and Castle Stuart Bays SSSI there is still the potential, as a result of construction and any changes to lighting regimes, to impact on these sites through loss of foraging habitat and disruption to foraging patterns and flightlines of SPA qualifying species. Further to this as the area supports the habitats suitable for European Protected Species (Cairnlaw Burn for otters, ponds for Great Crested Newts and broadleaved and mature woodland for bats) and impacts could arise through loss and severance of habitat. There are also potential impacts on badgers through fragmentation and loss of habitat or direct mortality. It is likely that potential impacts could be reduced through mitigation such as adherence to SEPA’s Pollution Prevention Guidelines, the erection of mammal proof fencing along the boundary of the carriageway, provision of suitable habitat for protected species (e.g. bat boxes), and sympathetic design of any lighting. In light of the proximity of the SPA, potential impacts on foraging areas used by qualifying species may require more specific mitigation.</p> <p>Land-take of ‘Prime Quality’ agricultural land and potential for severance may reduce the viability of farm units. In particular for Ashton Farm, Stratton Farm and Beechwood Farm. It is likely that potential impacts could be reduced through mitigation such as refined design of the route option to minimise land-take, review of the opportunities to return surrounding land to agriculture and financial compensation for land owners, where land is being lost.</p> <p>There are impacts in relation to landscape character due to the introduction of road and traffic (on embankment and bridge over the railway) into an open, relatively flat landscape Enclosed Farmed Landscapes Landscape Character Type (LCT), which erodes the rural character of the agricultural buffer between settlement and the Moray Firth. There are also direct effects on landscape character from the severance of minor watercourses and field patterns and loss of field boundary, riparian trees and scrub vegetation. This has potential visual impacts on nearby settlements such as Cradlehall and Smithton, Ashton and Beechwood Farm cottages, and the National Cycle Route and Core Path. These are likely to experience an interruption of their views to the Moray Firth. The National Cycle Route and Core Path are also severed by this option. It is likely that potential impacts could be reduced through mitigation such as sensitive design of the alignment and associated infrastructure (e.g. grading out of embankment slopes), landscape planting and realignment of the Core Path and NCR.</p>
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	<p>Water Quality, Drainage and Flood Defence</p> <ul style="list-style-type: none"> • Water Quality – Moderate Impact. • Flood Risk – Moderate Impact. <p>Geology – Minor Impact.</p> <p>Social Inclusion & Integration – Major Impact / Moderate Benefit</p>	<p>Construction of this option has the potential to alter existing drainage patterns and there is potential for increased fine sediment supply and chemical pollution. In addition temporary increases in peak runoff and volume has the potential to increase flood risk. During operation the increase in impermeable area may result in a permanent alteration to the hydrological regime; increasing flood risk. Any future increase in traffic volumes are likely to result in increased volume of contaminated runoff and risk of accidental spillages as a result of vehicular collision. It is likely that potential impacts could be reduced through mitigation, such as adherence to SEPA's Pollution Prevention Guidelines and construction best practice, the provision of Sustainable Drainage Systems (SUDS) and compensatory flood storage (where required).</p> <p>Contaminated land within the vicinity of the route option includes the Inverness to Aberdeen Railway Line, Inshes Boarding Kennels and the Ben View Pet Cemetery. None of these are directly disturbed as a result of the construction of the route option, with the exception of the railway line, where an overbridge will be constructed. There is the potential to impact on groundwater quality during construction due to increased fine sediment supply, chemical pollution and potential exposure/disturbance of contaminants from contaminated land sites. In addition potential impacts may arise from direct interaction and potential off-site removal of made contaminated material. It is likely that potential impacts could be reduced through mitigation such as adherence to construction best practice and establishment of appropriate health and safety measures for working with contaminated land.</p> <p>As the route passes mainly through land which is currently undeveloped, minimal impacts during construction are likely. The route option is likely to improve journey times and therefore connectivity between Inshes, Cradlehall and Smithton. Delays are likely at the junction between Culloden Road and the UHI Education Campus, which is likely to impact on communities being able to access the Education Campus. A Core Path and National Cycle route are severed as part of this option at Ashton Farm and North Caulfield Road respectively. It is likely that potential impacts on the National Cycle Route and Core Path could be reduced through realignment or provision of infrastructure to allow these paths to cross the route option.</p>
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<p>Safety:</p>	<p>Minor Benefit</p>	<p>A reduction of traffic on the secondary road network around Smithton, Culloden and Inshes should have a positive impact on the accidents in the area. It would also reduce traffic levels and congestion in and around Raigmore Interchange and improve accident rates there. The introduction of new southbound slip roads at Inshes, which will be built to modern standards, should improve safety at this junction, compared to the existing southbound slip road arrangement which would be closed.</p> <p>The creation of the new link road between Smithton and Inshes may partially offset the accident benefits as the additional road space increases traffic flows and therefore opportunities for accidents to occur.</p>

<p>Economy:</p>	<p>Minor benefit</p>	<p>This option has shown large journey time reductions along on both the trunk road and local road networks in the peak periods.</p> <p>The following journey time savings were modelled in the AM peak:</p> <ul style="list-style-type: none"> • A96 east of Smithton to the Kessock Bridge (20%) • A96 east of Smithton to the A9 Milton of Leys (47%) • A96 east of Smithton to Old Perth Road (32%) • A96 east of Smithton to Millburn Road (53%) • A9 Milton of Lays to the A96 east of Smithton (8%) • Barn Church Road to Culloden Road east of B9177 (617%) • Barn Church Road to Sir Walter Scott Drive (60%) • Culloden Road east of B9177 to A96 East of Smithton (60%) • Culloden Road east of B9177 to Barn Church Road (15%) • Old Perth Road to the A96 east of Smithton (15%) <p>The journey times savings modelled for the PM peak were:</p> <ul style="list-style-type: none"> • A96 east of Smithton to the A9 Milton of Leys (8%) • A96 east of Smithton to Old Perth Road (35%) • A96 east of Smithton to Millburn Road (14%) • A9 Milton of Lays to the A96 east of Smithton (12%) • Barn Church Road to Sir Walter Scott Drive (40%) • Barn Church Road to Culloden Road east of B9177 (38%) • Culloden Road east of B9177 to A96 East of Smithton (47%) • Culloden Road east of B9177 to Barn Church Road (16%) • Old Perth Road to the A96 east of Smithton (17%) <p>There are a number of journey time increases associated with this option, particularly for journeys travelling through Longman Junction from the south in the PM peak. This is a result of additional traffic using the junction.</p> <p>This option emerged relatively late in the initial option generation/appraisal phase of the study. As a result, its design has not evolved to the same standards as the other options and this included the calculation of potential scheme costs. As a result an economic assessment has not been undertaken. However, the construction cost for this option is likely to be less the Option 3 as it does not contain a full grade separated junction. This option provides significant journey time savings and may represent value for money.</p>
<p>Integration:</p>	<p>Minor Benefit</p>	<p><u>Transport Integration</u></p>

	<p>The reduction in traffic and subsequent reduction in delays at Raigmore Interchange will have a positive effect on the journey times and reliability of the buses passing through this junction. More reliable bus times will allow for connections to other routes to be made with more certainty and would encourage multi modal travel. The new link also provides the opportunity for new bus services and active travel links to encourage non-motorised transport.</p> <p><u>Transport & Land Use Integration</u></p> <p>This option is well integrated with the Highland Council’s proposed developments to the East of Inverness. The new link road would facilitate access to the developments as well as remove some of the additional traffic from the A96.</p> <p><u>Policy Integration</u></p> <p>This option does not conflict with national, regional or local transport policy. The option will contribute to the National Transport Strategy Key Strategic Outcomes through improving Journey Times and Connections between Aberdeen and Inverness, and Inverness and the central belt. It is likely to have a benefit in Reducing Emissions as a result of the reduction in congestion at the trunk road junctions, although this may be partially offset by increases in average speeds due to reduced congestion and delays. The option may overall have a minor impact on Quality, Accessibility and Affordability as it will improve public transport opportunities, although the option will have some severance impacts on active travel routes without suitable mitigation.</p> <p>The option will support and compliment Scotland’s Cities: Delivering for Scotland and enhance the Connected Cities objective through improving the transport infrastructure on the A9 and A96 trunk road accesses to Inverness.</p> <p>Impacts on Aston Farm Cottages Scheduled Monument introduces a potential for conflict with Policies 57 of the HWLDP. Impacts on the Core Path and National Cycle Route could introduce a potential conflict with Policy 77 of the HWLDP and Policy 34 of the INLP.</p>
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<p>Accessibility and Social Inclusion:</p>	<p>Social Inclusion & Integration – Major Impact / Moderate Benefit.</p>	<p>As the link road passes mainly through land which is currently undeveloped, minimal impacts during construction are likely. During construction of the new A9 southbound slip roads at Inshes, there are likely to be impacts due to congestion and increased journey times for the residential areas. This will impact on communities in their ability to access local facilities and services.</p> <p>The route option is likely to improve journey times and therefore connectivity between Inshes, Cradlehall and Smithton. A Core Path and National Cycle route are severed as part of this option at Ashton Farm and North Caulfield Road respectfully.</p>
<p>Rationale for Selection or Rejection of Proposal:</p>	<p>This option performs well against the transport planning objectives and the appraisal criteria and integrates well with the Highland Council development plan aspiration. This option provides a connection to Caulfield Road North to the east of the A9 allowing for residents in this area to access the link road. It is therefore recommended that this option be selected for detailed appraisal in preference to the Inshes to Smithton Link Road Option 3</p>	