Proposal Details			
Proposal Name:	Inshes to Smithton Link Road Option 1		
Proposal Description:	The Inshes to Smithton Link Road Option 1 is a single carriageway local distributer road. It would start at the secondary access junction to new UHI campus at Caulfield Road North and run in a north-easterly direction to connect to the southern roundabout forming the proposed A96 Smithton junction as part of the A96 Inverness to Nairn dualling scheme. 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.	Estimated Total Public Sector Funding Requirement:	Capital costs/grant £7 million (2012 prices excluding VAT)
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. 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. 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.		
Social Context:	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).
Economic Context:	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.
Planning Objectives	
Objective:	Performance against planning objective:
L1: Improve journey time and increase opportunities to travel, particularly by public transport, between Aberdeen and Inverness.	**L1 – Moderate Benefit** This option reduces local and strategic traffic from South to East and East to South movements at Raigmore Interchange and in doing so improves the performance of Raigmore Interchange. 7% during AM peak and 34% in PM peak of the trips using the new link road pertain to be long distance traffic. As a result of the operational improvements, journey times through the interchange between the A96 and the Milburn Road / Harbour Road junction are 42% lower the AM and 11% lower in the PM. In the reverse direction from Milburn Road / Harbour road to the A96 journey times are 6% lower in the AM and 12% lower in the PM. These journey time reductions should have a positive impact on public transport trips travelling between Aberdeen and Inverness.
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	**L2.1 – Minor Benefit** 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. This option facilitates East to South and South to East movements and results in a transfer of traffic from the A96 and removes completely Barn Church Road traffic from A96/A9 movement. As indicated by a reduction in traffic on the A9 Southbound Merge at Raigmore (45% in both peaks) and on the A96 between Raigmore and Smithton (10% in the AM and 12 % in the PM). The increase in traffic across the Culloden Road overbridge also indicates that the trips are to South Inverness not the A9 South. The links road therefore helps separate a degree of local traffic from longer distance traffic using the A96 and A9. The new link road is predominantly used by traffic originating or terminating in Inverness; therefore it reduces the conflict of local and strategic traffic at Raigmore Interchange.

	It should be noted that potential delays at the connection to the local road network at the southern end of the link may be restricting the benefits in terms of the transfer of traffic from the trunk road network.
L2.2: Reduce conflicts for longer distance and local traffic for planned development areas to the east.	**L2.2 – Moderate Benefit** 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 local and strategic traffic.
L3: Improve connectivity, particularly by public transport and active travel, between Inverness city centre and the growth area to the east including Inverness Airport	**L3- Neutral** This option provides a new link which could create opportunities for the development of new public transport routes and active travel between Inverness and the growth area to the East. However it also severs a core path and a national cycle route in this area. 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.
L4: Improve safety for motorised and non-motorised users by reducing the accident rate at Trunk Road junctions	**L4- Minor Benefit** This option will reduce congestion and flow at the links around Raigmore Interchange which should lower accident rates at the junction itself. 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 benefits may also be partially offset by increased traffic on the Culloden Road overbridge in the AM peak, as it forms the link between the northbound and southbound slip roads at the A9 Inshes junction.

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.	**L5.1- Moderate Benefit** This option should improve the operational performance of the A96 from Smithton to Raigmore Interchange as it removes some traffic travelling to Inshes and Culloden areas from the A96. Journey times through Raigmore Interchange are reduced between A96 and Culloden Road by 40% in the AM peak and 28% in the PM peak. In the opposite direction traffic from Culloden Road to Burn Church Road and A96 indicates significant saving in the travel time (approx. 60%). The reduction in traffic is also evident at Raigmore Interchange and this option will provide an improvement to the operation of the junction. Traffic modelling shows that the option improves journey times between the A96 and Inverness through improved junction performance and reduced traffic between Smithton and Raigmore Interchange. A small increase in the journey time has been noted between Sir Walter Scott Drive and A9 South of Milton of Leys (5% in the PM peak). 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 small increases in journey times between Milton of Leys and Kessock bridge; 7% in the AM peak and 20% in the PM. In the reverse direction this option has no impact on Journey times.
L5.2 Improve the operational performance of the secondary network and junctions where this may improve the operation of the Trunk road network	**L5.2- Neutral** 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. This option puts additional pressure on the Culloden Road/UHI Campus junction especially on the westbound movement on Culloden Road during the AM peak.
Implementability Appraisal	
Technical:	The new link road would be implemented using proven methods and technology.
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**
Environment: *Note – all STAG ratings for individual assessment areas are expressed without mitigation.* *Overall STAG Rating – Moderate Negative*	Global and Local Air Quality – Small Minor Negative / Minor Benefit	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, Ashton Farm is likely to experience air quality impacts, with other residential receptors alongside 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 to air quality are likely to be experienced within the consented New Town application in Stratton East Inverness when it is developed. It is likely that potential impacts can 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.
	Cultural Heritage – Major Impact	The option will result in the partial removal of the Aston Farm Cottages Ring Ditch and Pit Circles Scheduled Monument and impacts are also seen on the setting of the unaffected area of this monument to the west of the alignment. There is also high potential for impact on unknown archaeological remains in this area. Scheduled Monument Consent would be required for the direct impacts on the scheduled monument and where preservation in situ is not viable, preservation by record is likely to reduce the impact. It is unlikely that mitigation will significantly reduce the potential impact on the setting of the scheduled monument.
	Noise & Vibration – Small Minor Impact	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 be an impact at Ashton Farm. During operation, Ashton Farm, along with residents nearby to Caulfield Road North are likely to experience an increase in noise due to an increase in traffic, with other residential receptors alongside Tower Road experiencing a reduction 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 application in Stratton East Inverness when this is developed. It is likely that potential impacts could be reduced through standard mitigation, such as adherence to construction best practice, noise barriers and through the use of lower noise road surfacing.

	Habitats and Biodiversity – Moderate Impact	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) 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.
	Agriculture and Soils – Moderate Impact .	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 standard 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.
	Landscape & Visual Amenity – Moderate Impact	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)). This has the potential to erode 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, Smithton (to a lesser extent), Ashton and Beechwood Farm cottages, the National Cycle Route and the 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 where possible realignment of the Core Path/NCR.

	Water, Drainage and Flood Defence. • Water Quality – Moderate Impact • Flood Risk – Moderate Impact	Construction of this option has the potential to alter existing drainage patterns and there is potential for increase fine sediment supply and chemical pollution. In addition temporary increases in peak runoff and volume have 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 may 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).
	Geology – Small Minor Impact	Contaminated land within the vicinity of the route option includes the Inverness to Aberdeen Railway Line, Inshes Boarding Kennels, Ben View Pet Cemetery, Stratton Farm Petrol Tank and Smithton Junction Made Ground. 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 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.
	Social Inclusion & Integration – Major Impact / Moderate Benefit.	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 expected at the junction between Culloden Road and the new 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.

	Planning and Policies* **Due to the stage of the development proposals it is not possible to identify a STAG rating for planning and policies. The key policies where potential conflicts may occur have been identified.*	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.
Safety:	Neutral	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 new grade separated Junction at Longman would improve the safety of the junction. 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.

Economy:	Minor Benefit	This option has shown good journey time savings between the A96/ Barn Church Road Area and Culloden Road, due to the new link bypassing Raigmore Interchange and the delays it currently experiences. The following journey time savings were modelled in the AM peak: • A96 East of Smithton to Culloden Road east of B9177 (40%) • Barn Church Road to Culloden Road east of B9177 (44%) • Culloden Road east of B9177 to A96 East of Smithton (61%) • Culloden Road east of B9177 to Barn Church Road (65%) The journey times modelled for the PM peak were slightly lower: • A96 East of Smithton to Culloden Road east of B9177 (28%) • Barn Church Road to Culloden Road east of B9177 (36%) • Culloden Road east of B9177 to A96 East of Smithton (57%) • Culloden Road east of B9177 to Barn Church Road (62%) There are also journey time savings from the A96 through Raigmore to Inverness (42% in the AM peak and 11 in the PM peak) all of which will have economic benefits. There are a number of journey time increases associated with this option, particularly for journeys originating in the Culloden Road east area and travelling through the Culloden Road/UHI Campus Junction in the AM Peak. There are also increases in journey times travelling through Longman Junction from the south in the PM Peak as a result of additional traffic using the junction. The indicative economic appraisal (based on TUBA only) shows that the option would provide sufficient economic benefits to justify investment with a Benefit to Cost ratio (BCR) of 1.1.
Integration:	Minor Benefit	<u>Transport Integration</u> 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. <u>Transport & Land Use Integration</u> 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.

		Policy Integration 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. 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. 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.
Accessibility and Social Inclusion:	Social Inclusion & Integration – Major Impact / Minor Benefit.	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 expected at the junction between Culloden Road and the new 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 respectfully.

Rationale for Selection or Rejection of Proposal:	This option performs well against the transport planning objectives and the appraisal criteria and integrates well with the Highland Council development plan aspiration. It is recommended for selection in preference to the Inshes to Smithton Link Road Option 2 since it provides a direct connection to the proposed A96 junction at Smithton.