

<b>Proposal Details</b>			
Proposal Name:	Combined Option C (Inshes to Smithton Link Road Option 4a+ Longman Grade Separation Option 1)		
Proposal Description:	<p><b>The Inshes to Smithton Link Road Option 4a</b> is a single carriageway local distributor road. It connects to the eastern leg of an existing roundabout at Inshes Retail Park and runs east and North-East, crossing the A9 dual carriageway on an overbridge to a new roundabout at Caulfield Rd 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. The existing A9 southbound slip roads at Inshes remain open.</p> <p><b>Longman Option 1</b> is a two-bridge roundabout grade separated junction. The existing roundabout is enlarged at ground level, with approaches from the A82 and Stadium Rd altered. Slip roads are constructed to the side of the existing A9 dual carriageway and the A9 is raised on embankment over the new roundabout.</p> <p>The A9 between Raigmore Interchange and Longman Junction is widened to three lanes in each direction providing a lane gain/lane drop arrangement between the noses of the slip roads.</p> <p>Note that in accordance with the option sifting process Longman Option 3 has also been assessed in combination with the Inshes to Smithton Trunk Link Road. As</p>	Estimated Total Public Sector Funding Requirement:	Capital costs/grant £60 to £90 million (2014 prices excluding VAT)

	<p>the results of the traffic modelling assessment for this grade separated option were shown to be very similar to Longman Option 1 it has not been subject to a separate appraisal or the production of a specific AST. The appraisal process at this stage confirms the principle of Longman Grade separation rather than the absolute junction form.</p>		
<p><b>Background Information</b></p>			
<p>Geographic Context:</p>	<p>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 a dual carriageway on approach to the Inverness Retail Park roundabout. The A9 on approach to and around Inverness is dual carriageway.</p> <p>Longman Junction is an at-grade roundabout to the North of Inverness on the A9 which connects the A9 to the A82 and Stadium Road. It is often subject to congestion as commuters from the North and East of Inverness, via Kessock Bridge and the A96, make their way to/from Inverness City Centre.</p> <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 which is subject to delays especially during peak periods.</p> <p>The A9 and A96 are subject to the national speed limit, as is the A82 until approximately 100m from the junction. Stadium Road, which connects to Longman junction from the East, has a speed limit of 30 mph. Stevenson Road and Culloden Road are urban in nature, and Culloden Road (B9006) has a speed limit of 40 mph until it's junction with the B8082 at Inshes, and Stevenson Road has a speed limit of 30 mph.</p> <p>The area between Raigmore Interchange and Longman junction, to the west of the A9, is a mixture of industrial estates and railway yards, with the industrial estate extending north beyond Longman junction to the shore. Inverness Caledonian Thistle football stadium is located to the east of the A9, as is a landfill site that extends from Stadium Road south east along the foreshore towards the A96. To the south east of Raigmore interchange, there is a retail park and a business park. The new UHI campus that is currently under construction, is also located in this area, and accessed from Culloden Road and Caulfield Road North. The large residential areas of Balloch, Smithton, Culloden, Cradlehall and Westhill lie to the east of Raigmore Interchange, bounded by rural tracts of countryside. The area to the south and west of Inshes roundabout is predominantly residential, along with the major employment and amenity sites of Raigmore Hospital, Beechwood Business park, the Police Headquarters and a retail park, including a food supermarket also located in the area.</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 of 77% (Scotland’s Census 2011) than the Scottish average of 69% (Scotland’s Census 2011). 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>Longman junction is surrounded by Longman industrial Estate. There are no residential properties nearby. To the North of Longman Junction, on Stadium Road, is Inverness Caledonian Thistle football stadium. Longman is an important junction for commuters travelling across the Kessock Bridge to Inverness. The option is located within the boundary of the Inverness Central, Raigmore and Longman datazone that is ranked in the most deprived 15% of the SIMD.</p>
<p>Economic Context:</p>	<p>The economic sectors in Inverness are largely focused in the city centre and the large-scale Inverness Retail Park. Elsewhere, the city's manufacturing and light industries can be found across a number of major business and industrial parks throughout the city, including Dalcross Industrial Estate, Beechwood Park, Longman Industrial Estate and Smithton Industrial Estate. The main economic sectors in Inverness relate to Life Sciences, Renewable Energy, Digital Media and Electronics.</p> <p>Economic growth and development within Inverness and the surrounding area is potentially restricted due to the level of congestion at key junctions including the trunk road junctions at Longman (connecting the A9 and A82) and Raigmore Interchange (connecting the A9 and A96), and local road network junctions including Inshes roundabout. The A96 is a key route for accessing Inverness from the East, with congestion experienced at Raigmore Interchange and Longman Junction during peak periods. Longman junction is also the main junction for traffic travelling between areas North of Inverness via the A9 Kessock Bridge and Inverness City Centre, and at the same time is of importance to long distance traffic between the North of the country and the central belt. Culloden Road is also an important commuter link between the Balloch, Smithton and Culloden areas to the City Centre, and connects to Inshes roundabout on the west side of the A9, leading to Sir Walter Scott Drive and south Inverness. Culloden Road provides the only non-trunk road crossing over the A9 in the area and this key route is also frequently subject to congestion.</p>
<p><b>Planning Objectives</b></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><b>L1 – Moderate Benefit</b></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>Journey times between the A96 East of Smithton and the A82 via Longman Junction are reduced by 42% in the AM peak and 26% in the PM peak. In the opposite direction, journey times are reduced by 6% in the AM peak and 12% in the PM peak.</p> <p>Journey times between the A96 East of Smithton and the Milburn Road / Harbour Road junction are reduced by 41% in the AM peak and 16% in the PM peak. In the opposite direction, journey times are reduced by 8% in the AM peak and 12% in the PM peak.</p> <p>Whilst this option does not directly increase the opportunities to travel by public transport, it will provide an improvement in journey times for bus services accessing Inverness via the A96.</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><b>L2.1 – Moderate Benefit</b></p> <p>The road network hierarchy will be improved through the provision of grade separation at Longman, and the additional link between Smithton and Inshes that will also provide additional access to the Inverness East area.</p> <p>At Longman, longer distance A9 traffic is separated from local traffic accessing Inverness via the A82 and Stadium Road. Between Inshes and Smithton, the new single carriageway link reduces the East to South and South to East movements passing through Raigmore Interchange and contributes to improving the operation of the junction.</p> <p>In both peak hours the secondary road network through Smithton sees a reduction in traffic flows as local trips transfer onto the new link road to access South Inverness and the A9. As a result the transport modelling assessment indicates that local traffic levels on the A96 passing through Raigmore Interchange reduce in the westbound direction during the AM Peak by 18%, and in the eastbound direction in the PM peak by 24%.</p> <p>The transport modelling results indicate an increase in local traffic using Longman Junction travelling via the A82 in the westbound direction in the AM peak (53%), and in the eastbound direction in the PM peak (35%). Whilst local traffic levels using Longman Junction increase, overall the level of conflict between local and longer distance traffic is reduced as there is a reduction in the number of conflict points under the grade separation between longer distance and local traffic movements.</p> <p>Creation of the additional crossing over the A9 between Inshes Retail Park and Culloden Road reduces the level of westbound local traffic passing through the Inshes trunk road junction (via Culloden Road) by 33% in the AM peak and 64% in the PM peak.</p> <p>The cumulative level of local traffic passing through the trunk road junctions at Longman, Raigmore and Inshes results in a net decrease of 10% in the AM peak for westbound traffic, and 21% in the PM peak for eastbound traffic.</p> <p>For further details of the supporting analysis refer to Appendix 1 – Select Link Analysis at the end of the AST.</p>

<p>L2.2: Reduce conflicts for longer distance and local traffic for planned development areas to the East.</p>	<p><b>L2.2 – Minor Benefit</b></p> <p>This option provides a link for local traffic movements for the proposed new developments to the East of Inverness. The level of local trips passing through Raigmore interchange would reduce by 184 trips (18%) on the A96 westbound AM peak and by 192 trips (24%) on the A96 eastbound during the PM Peak. Therefore the conflict between the longer distance traffic and local traffic on A96 approach to Raigmore Interchange will be reduced. The new link road provides an alternative access to the development areas to the East from the Inshes area. This would remove local traffic with origins or destinations in Inverness East from the A9 and A96 which would improve the operation of Raigmore Interchange, and reduce the conflict between local and strategic traffic.</p> <p>The new link and crossing over the A9 between Inshes Retail Park and Culloden Road provides a new route that attracts local traffic away from the existing congested route via Culloden Road overbridge. Overall traffic on the northern section of Sir Walter Scott Drive and its approach to Inshes roundabout is reduced in both directions thereby reducing the conflict between local traffic travelling between Inverness East and South, and longer distance A9 traffic accessing Inverness via the Inshes trunk road junction.</p> <p>The reduction in travel costs on the A96 approaching Raigmore Interchange encourages slightly more traffic travelling between the development areas further to the east, including Dalcross Industrial Estate, and Inverness to use the A96 rather than using the local road network.</p> <p>For further details of the supporting analysis refer to Appendix 1 – Select Link Analysis at the end of the AST.</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><b>L3- Minor Benefit</b></p> <p>The reduction in traffic passing through Raigmore will result in an improvement in bus journey times travelling to and from Inverness via the A96, and would have a positive impact on opportunities for public transport services connecting Inverness and the growth area to the East.</p> <p>This option provides a single carriageway link road which would provide opportunities for new public transport routes, and opportunities to expand active travel links between Inverness and the growth area to the East including the University of the Highlands and Islands Beechwood campus.</p> <p>The new link road between Smithton and Inshes will provide the potential for additional junctions to access the planned areas of development in Inverness East either side of the new link, and provide additional opportunities for enhanced public transport connections and active travel links to the development area. Active travel modes are also likely to benefit from the nature of the new single carriageway links and the lower speeds limits applied.</p> <p>The new Smithton to Inshes link would sever a core path and a national cycle route in the area, although this could be mitigated (at least partly) through the provision of crossing facilities between the areas lying either side of the new link road.</p>

<p>L4: Improve safety for motorised and non-motorised users by reducing the accident rate at Trunk Road junctions</p>	<p><b>L4- Moderate Benefit</b></p> <p>This option reduces the level of conflicting traffic travelling through the new Longman Junction by separating the A9 through traffic from local traffic accessing Inverness via the A82 and Stadium Road. The new grade separated junction will be built to modern standards and so should improve safety and reduce accident rates compared to the existing junction. As the option is grade separated, traffic that remains on the A9 has been removed from the junction. This results in a reduced number of vehicles using the roundabout and would therefore provide a safer facility for non-motorised users. The option also allows for the provision of additional traffic control measures such as signal control to further reduce exposure to conflicting traffic movements.</p> <p>The option will reduce traffic levels and queuing on the A9 and A96 at Raigmore Interchange and thus lead to a reduction in accident numbers. Due to the reduced level of congestion at Raigmore Interchange there may be potential for a change in the number of occurrences of different accident types as a result of the increase in vehicle approach speeds.</p> <p>The reduction in traffic levels crossing the A9 via Culloden Road at Inshes will also serve to reduce accident numbers, as this section of Culloden Road links the A9 northbound and southbound slip roads. The reduced traffic levels on Culloden Road will also provide a safer environment for non-motorised users.</p> <p>The benefits may be partly offset as the new link may lead to a slight overall increase in vehicle kilometres travelled and therefore opportunities for accidents to occur.</p>
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<p>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>	<p><b>L5.1- Moderate Benefit</b></p> <p>This option will contribute towards improving the operational performance of the A9 Inshes Junction by providing a new crossing over A9 for local movements travelling East to West and West to East across the A9. There is a significant reduction in the level delay experienced at Longman junction as a result of the grade separation of straight through A9 traffic from traffic accessing Inverness via the A82 and Stadium Road. The reduction in traffic levels passing through Raigmore Interchange reduces the level of delay and leads to an improvement in the overall operation of the interchange.</p> <p>From the transport modelling assessment, the results indicate the following journey time savings for selected key movements:</p> <ul style="list-style-type: none"> <li>• A9 Kessock Bridge to A96 East of Smithton (45 % in AM peak and 21 % in the PM peak)</li> <li>• A9 Kessock Bridge to Culloden Road east B9177 (48 % in AM peak and 25 % in the PM peak)</li> <li>• A9 Kessock Bridge to A9 South of Milton of Leys (40 % in AM peak and 9 % in the PM peak)</li> <li>• A96 East of Smithton to A9 Kessock Bridge (51 % in AM peak and 45 % in the PM peak)</li> <li>• A96 East of Smithton to Culloden Road east of B9177 (61 % in AM peak and 45 % in the PM peak)</li> <li>• A96 East of Smithton to A9 South of Milton of Leys (36 % in AM peak and 6 % in the PM peak)</li> <li>• Culloden Road east of B9177 to A9 Kessock Bridge (38 % in AM peak and 23 % in the PM peak)</li> <li>• Culloden Road east of B9177 to A96 East of Smithton (62 % in AM peak and 60 % in the PM peak)</li> <li>• A9 South of Milton of Leys to A9 Kessock Bridge (39 % in AM peak and 27 % in the PM peak)</li> <li>• A9 South of Milton of Leys to A96 East of Smithton (4 % in AM peak and 12 % in the PM peak)</li> <li>• A96 East of Smithton to Milburn Rd (41 % in AM peak and 16 % in the PM peak)</li> <li>• Milburn Rd to A96 East of Smithton (8 % in AM peak and 12 % in the PM peak)</li> </ul> <p>A full set of journey time analysis results are presented in Appendix 2 at the end of the AST.</p>
<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>	<p><b>L5.2- Minor Benefit</b></p> <p>This option provides an alternative route for local traffic travelling between Smithton and Culloden, Inshes and the areas to the South of Inverness through the provision of the new link road. This leads to an improvement in the operational performance of the local road network through the reductions in traffic on Culloden Road, Harbour Road, Milburn Road and Sir Walter Scott Drive, and reduces traffic levels passing through the local Inshes roundabout junction. The reduction of traffic on the Milburn Road and A96 approaches to Raigmore Interchange contribute to an improvement in the operation of the junction itself by reducing the level of conflicting longer distance and local movements, leading to reductions in journey times for movements passing through the interchange.</p>

<b>Implementability Appraisal</b>		
Technical:	<p>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.</p> <p>There are significant utilities in the vicinity of Longman junction, in particular a high pressure gas main and a Inverness – Lossiemouth fuel pipeline in the verges of the A9. Each would require protection or diversion as part of this proposal.</p>	
Operational:	<p>Future development in the Inverness East area and specifically at Ashton Farm may result in new junction proposals on to the Inshes to Smithton link road to serve future development.</p>	
Financial:	<p>The implementation of this option would be subject to available funding being confirmed from appropriate budgets.</p>	
Public:	<p>Grade separation of Longman junction is not currently in the public domain. While it may be acceptable in the wider community, opposition from local residents and landowners is possible. This proposal would require land acquisition beyond the current road boundary.</p> <p>The Inshes to Smithton Link Road 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 in the area. This option would require compulsory purchase of properties in the Inshes area.</p>	
<b>STAG Criteria</b>		
<b>Criterion</b>	<b>Assessment Summary</b>	<b>Supporting Information</b>
<p>Environment:</p> <p><i>Notes – all STAG ratings for individual assessment areas are expressed without mitigation.</i></p> <p><i>The impacts of the individual options are presented, not the cumulative impacts.</i></p>	<p>Minor Negative Impact / Minor/Moderate Benefit</p>	<p><b>Inshes to Smithton Link Road Option 4a</b></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, 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. This option connects the residential communities of Inshes and Cradlehall and as such there are a number of residential receptors located at either end of the option. Likely to be significant</p>



Global and Local Air Quality		impacts for resident within 20m of the route option. Impacts at other residential dwellings may also be experienced.
	Minor Benefit	<p><b>Longman Option 1</b></p> <p>This is mainly an industrial area, with only a few residential dwellings, located mainly near to the Caledonian Thistle football ground, with some to the South of the option near the Raigmore Interchange. During operation there is a potential benefit to residents close to Stadium Road as traffic along this road is decreased with this option</p>
Cultural Heritage	Major Negative Impact	<p><b>Inshes to Smithton Link Road Option 4a</b></p> <p>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. 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.</p> <p>This option would have the potential impact on the setting of one Category B Listed Building – Castlehill.</p>
	No Benefit or Impact.	<p><b>Longman Option 1</b></p> <p>There are no impacts on known cultural heritage assets and there is limited potential for the presence of unknown archaeological remains.</p>
Noise & Vibration	Minor Negative Impact	<p><b>Inshes to Smithton Link Road Option 4a</b></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 be an impact at Ashton Farm. During operation, Ashton Farm, along with residents nearby to North Caulfield Road 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.</p>

	<p>Minor Benefit</p>	<p><b>Longman Option 1</b></p> <p>This is mainly an industrial area, with only a few residential dwellings, mainly located near to the Caledonian Thistle football ground, with some to the South of the option near the Raigmore Interchange. There is potential for short-term noise and vibration impacts during construction activities such as piling, earthworks and vehicular movements. During operation there are potential benefits to residents close to Stadium Road as traffic here is decreased through this option. It is likely that potential impacts during construction could be reduced through adherence to construction best practice.</p>
<p>Habitats and Biodiversity</p>	<p>Moderate Negative Impact</p>	<p><b>Inshes to Smithton Link Road Option 4a</b></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) 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>There are additional potential impacts due to the removal of scattered broadleaved woodland (construction of the online element of road adjacent to the Superstore to the west of the A9), which could provide suitable foraging/roosting habitat for bats. There are also additional potential impacts on badgers through fragmentation and loss of habitat or direct mortality.</p>

	<p>Moderate - Major Negative Impact.</p>	<p><b>Longman Option 1</b></p> <p>Construction activities have the potential to impact on the Moray Firth (SAC), Inner Moray Firth (SPA) and Longman and Castle Stuart Bays SSSI through disruption to foraging patterns and flightlines of qualifying species. Construction within the former Longman Landfill has potential to release contaminants which may impact on the internationally important sites (SAC/SPA). The route option, at its closet point, is within 400m of the Moray Firth SAC. However, as the new junction would lie mainly within the existing road the impacts associated with this option on this internationally important site are potentially moderate to major (in comparison to the other Longman options where there is a much larger footprint within the boundary of the former Longman landfill site). In addition there is potential for loss of bat habitat and trees with bat roost potential and loss of species listed in the National and Local Biodiversity Action Plans. 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. However, as the construction of the option is within close proximity to the former landfill site and the SAC/SPA, SSSI and Important Bird Area, it has the potential to require more specific mitigation.</p>
<p>Agriculture and Soils</p>	<p>Moderate Negative Impact</p>	<p><b>Inshes to Smithton Link Road Option 4a</b></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 standard mitigation such as refined design of the route option to minimise land-take.</p> <p>The construction of the route option to the west of the A9, will result in land-take and severance of ‘Moderate Quality’ agricultural land, and severance of a small farm unit at Inshes smallholdings.</p>
	<p>No Benefit or Impact.</p>	<p><b>Longman Option 1</b></p> <p>Land is not used for agriculture.</p>

Landscape & Visual Amenity	Moderate Negative Impact	<p><b>Inshes to Smithton Link Road Option 4a</b></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)). 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. 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 or the creation of crossing points.</p> <p>There are potential visual impacts on residents of Inshes/Dell of Inshes from a new road on an embankment and the A9 overbridge, and at Smithton Garden Centre and Inshes smallholdings from the addition of an overbridge at Culloden Road and the A9 and the proposed road on an embankment.</p>
	Minor - Moderate Negative Impact.	<p><b>Longman Option 1</b></p> <p>Impacts on landscape character will result from alteration to the landform through the introduction of additional carriageway width, gyratory, two new underbridges, slip roads and embankment (up to approximately 8m high) associated with grade separation, and through loss of existing roadside woodland and scrub planting.</p> <p>The increased height of the carriageway, traffic and road lighting has the potential for visual impacts on adjacent light industrial areas and Inverness Caledonian Thistle football ground. 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) and landscape planting.</p>

Water, Drainage and Flood Defence	Water Quality – Moderate Negative Impact  Flood Risk – Moderate Negative Impact	<p><b>Inshes to Smithton Link Road Option 4a</b></p> <p>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).</p> <p>This option has additional crossing points at Cairnlaw, Scretan and Inshes Burn, resulting in potential additional channel realignment and impact on the hydrological regime.</p>
	Water Quality – Moderate Negative Impact  Flood Defence – Minor Negative Impact.	<p><b>Longman Option 1</b></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 have the potential to increase flood risk. There is also potential for the exposure/disturbance of contaminants and/or leachate from the former Longman Landfill and this would pose a Moderate risk to localised water quality in the Moray Firth SAC and Inner Moray Firth SPA/Ramsar site. During operation the increase in impermeable area may result in permanent changes 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 and the provision of Sustainable Drainage Systems (SUDS). However, the construction of the option within close proximity to the former landfill site and SAC/SPA has the potential to require more specific mitigation.</p>

Geology & Soils	Minor Negative Impact	<p><b>Inshes to Smithton Link Road Option 4a</b></p> <p>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.</p> <p>This option potentially contaminated land sites including the Tesco filling station, laundry, works/depot near Inshes retail park, sheep wash, Smithy 1, Inshes WwTW, and the Canstore at the Inverness retail park. In relation to direct disturbance of contaminated land there is the potential for this at the Tesco filling station.</p>
	Moderate Negative Impact	<p><b>Longman Option 1</b></p> <p>Contaminated land within the vicinity of the route option includes an Inverness – Lossiemouth fuel pipeline, the former Longman Landfill and the Aberdeen to Inverness Railway Line. There are potential impacts on groundwater quality from increased fine sediment supply, chemical pollution and potential exposure/disturbance of contaminants from contaminated land sites during construction. In addition there are potential impacts 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. However, the construction of the option within close proximity to the former landfill site and SAC/SPA has the potential to require more specific mitigation.</p>

<p>Safety:</p>	<p>Moderate Benefit</p>	<p>Grade separating Longman Junction will remove the conflict between A9 through traffic and turning traffic which will have a positive impact on the safety at the junction. The option would allow for improved crossing facilities at Longman Junction as a result of the grade separation. The Smithton to Inshes link would also provide an additional crossing of the A9 and reduce traffic levels on the existing Culloden Road crossing, and would therefore facilitate safer routes for non-motorised users wishing to travel across the A9 trunk road.</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. The option will reduce traffic levels and congestion in and around Raigmore Interchange and improve accident rates there. The creation of the new link road between Smithton and Inshes may partially offset the accident benefits as this may result in additional vehicle kilometres, which may increase the number of accidents. This option may increase the traffic passing Inshes Primary school, which may have a negative impact on safety.</p>
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<p>Economy:</p>	<p>Moderate Benefit</p>	<p>The transport modelling shows that significant benefits are derived for traffic travelling between the A96 area and the South of Inverness, traffic travelling on the A9, and traffic travelling between the A9 Kessock Bridge and the A96.</p> <p>The model results shows the following journey time reductions during the AM peak and PM peak:</p> <ul style="list-style-type: none"> <li>• A96 to Sir Walter Scott Drive (47% AM peak and 43% PM peak)</li> <li>• A96 to A9 South of Milton Leys (36% AM peak and 6% PM peak)</li> <li>• A96 to Kessock Bridge (51% AM peak and 45% PM peak)</li> <li>• Sir Walter Scott Drive to A96 (38% AM peak and 31% PM peak)</li> <li>• A9 South of Milton Leys to A96 (4% AM peak and 12% PM peak)</li> <li>• Kessock Bridge to A96 (45% AM peak and 21 PM peak)</li> </ul> <p>A full set of journey time analysis results are presented in Appendix 2 at the end of the AST.</p> <p>The indicative economic appraisal (TUBA only) shows that the option would provide moderate economic benefits in relation to the investment with a Benefit to Cost Ratio (BCR) of approximately 1.9<sup>1</sup>.</p> <p>The option provides additional access into the retail park, via a new link connecting the link road to the back of the retail park, and would provide further opportunities for connections to access Inverness East development area. This is likely to encourage wider economic growth in the area.</p> <p>Note (1) The TUBA appraisal software requires a single cost as input so for the purposes of the economic appraisal a capital cost estimate of £59.1m has been used.</p>
<p>Integration:</p>	<p>Moderate Benefit</p>	<p><u>Transport Integration</u></p> <p>The reduction of delays at Raigmore Interchange and Longman junction will have a positive effect on the journey times and reliability of the bus services passing through the junctions. 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 road links provide additional opportunities for new bus services and active travel links to encourage non-motorised transport and interchange.</p> <p><u>Transport &amp; Land Use Integration</u></p> <p>This option is well integrated with the Highland Council’s proposed developments to the East</p>



	<p>of Inverness. The new link road between Smithton and Inshes would facilitate access to the Inverness East development area as well as reducing traffic from the A96. The new road would also provide a connection to the Inverness Retail and Business Park, and would facilitate future connections to the Inverness East development area. The option compliments the policy requirements contained in the Highland Wide Local Development Plan (HWLDP), and is of particular relevance to the Beechwood Campus (HWLDP Policy 10), the Inverness Retail and Business Park (HWLDP Policy 11) and Stratton (HWLDP Policy 12).</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 benefit 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>The new link provides an additional crossing opportunity over the A9 and will complement Policy 56 of the HWLDP on Travel, and will help facilitate the encouragement of cycling and walking modes between the communities lying either side of the A9. The option may also partly contribute to HWLDP Policy 7 (Inshes and Raigmore) where it may help with enhancing public transport and active travel connectivity.</p> <p><b>Inshes to Smithton Link Road Option 4a</b></p> <p>This option provides a link between the development area to the east of Inverness and Inverness City centre. The link road will facilitate access to the Inverness East area and will complement the development allocations identified in the Inner Moray Firth Local Development Plan (IMFLDP), specifically allocations IN80 to IN83.</p> <p>Impacts on Aston Farm Cottages Scheduled Monument introduces a potential for conflict with Policies 57 of the Highland Wide Local Development Plan HWLDP. Impacts on the Core Path and National Cycle Route could introduce a potential conflict with Policy 77 of the HWLDP.</p>
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		<p>The section of the route option from the roundabout near Cradlehall Business Park to Culloden Road goes through land designated as 'open space'. Potential conflict with this land allocation.</p> <p><b>Longman Option 1</b></p> <p>Potential for conflict with Highland Wide Local Development Plan (HWLDP) Policy 5 which states that future supplementary guidance on the development of the Former Longman Landfill Site may include the requirement that developers will provide a 30 metre undeveloped corridor to safeguard the high pressure gas pipeline. Impacts on Moray Firth SAC, Inner Moray Firth SPA and Ramsar introduce a potential for conflict with Policies 57 and 58 and 72 of the HWLDP.</p>
<p>Accessibility and Social Inclusion:</p>	<p>Minor Benefit.</p>	<p><b>Inshes to Smithton Link Road Option 4a</b></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. 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. The link road will provide opportunities for public transport and non-motorised users to access the development areas to the east of Inverness.</p> <p><b>Longman Option 1</b></p> <p>A temporary increase in congestion and journey times during construction for roads in the study area is predicted. This is likely to impact communities and their ability to access local facilities and services. There are likely to be benefits to communities to the North and the South in accessing facilities and employment in Inverness as journey times on the A9 are likely to significantly decrease. There is the potential to impact on the National Cycle Route during construction. It is likely that potential impacts during construction could be reduced through the use of traffic management systems and adequate signage of diversions. The potential impacts on the National Cycle Route could be reduced through temporary diversion of the route.</p> <p>This option is not anticipated to have an impact on comparative accessibility.</p>

<p>Rationale for Selection or Rejection of Proposal:</p>	<p><b>Included post workshop</b></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. The option would directly contribute towards the objectives of improving the effectiveness of the road network hierarchy, improving safety for motorised and non-motorised users by reducing the accident rate at trunk road junctions, and improve the operational performance of the trunk road network and junctions on the A9.</p> <p>The improvements at Longman Junction provide journey time savings for all movements through the junction. The inclusion of the Inshes to Smithton Link Road results in journey time savings between the A96 East and Inverness South and the A96 East and Inverness Centre, whilst also improving the operation of Raigmore Interchange by reducing traffic levels approaching the junction from the east. Traffic levels also reduce on the A9 between Raigmore and Inshes southbound.</p> <p>This option provides a continuous link from Smithton Roundabout over the A9, with a connection to Caulfield Road. The continuation of the link road over the A9 alleviates traffic congestion Culloden Road Overbridge, particularly in the PM peak.</p> <p>As the new Inshes to Smithton Link Road is a single carriageway local distributor road, it will allow crossing opportunities for pedestrians and cyclists alike, encouraging active travel. The options should also improve the opportunities for active travel from the development areas to the east of Inverness by providing new links into Inverness. The option is therefore deemed to provide a minor benefit to accessibility and social inclusion and provide moderate benefits to the economy and integration.</p> <p>The option results in a smaller reduction in traffic flows on the trunk roads (A96 and A9) and Inshes Overbridge when compared to Options A and D, and retains the existing A9 southbound slip roads at Inshes. There are some moderate negative impacts associated with this option under the environmental criteria.</p> <p>On balance, it is recommended that this option be taken forward for further appraisal.</p>
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## A9/A96 Connections Study Appraisal Summary Tables

### Appendix 1 Select Link Analysis

#### Do Min 2031 AM Peak – Select Link Analysis A82 Westbound

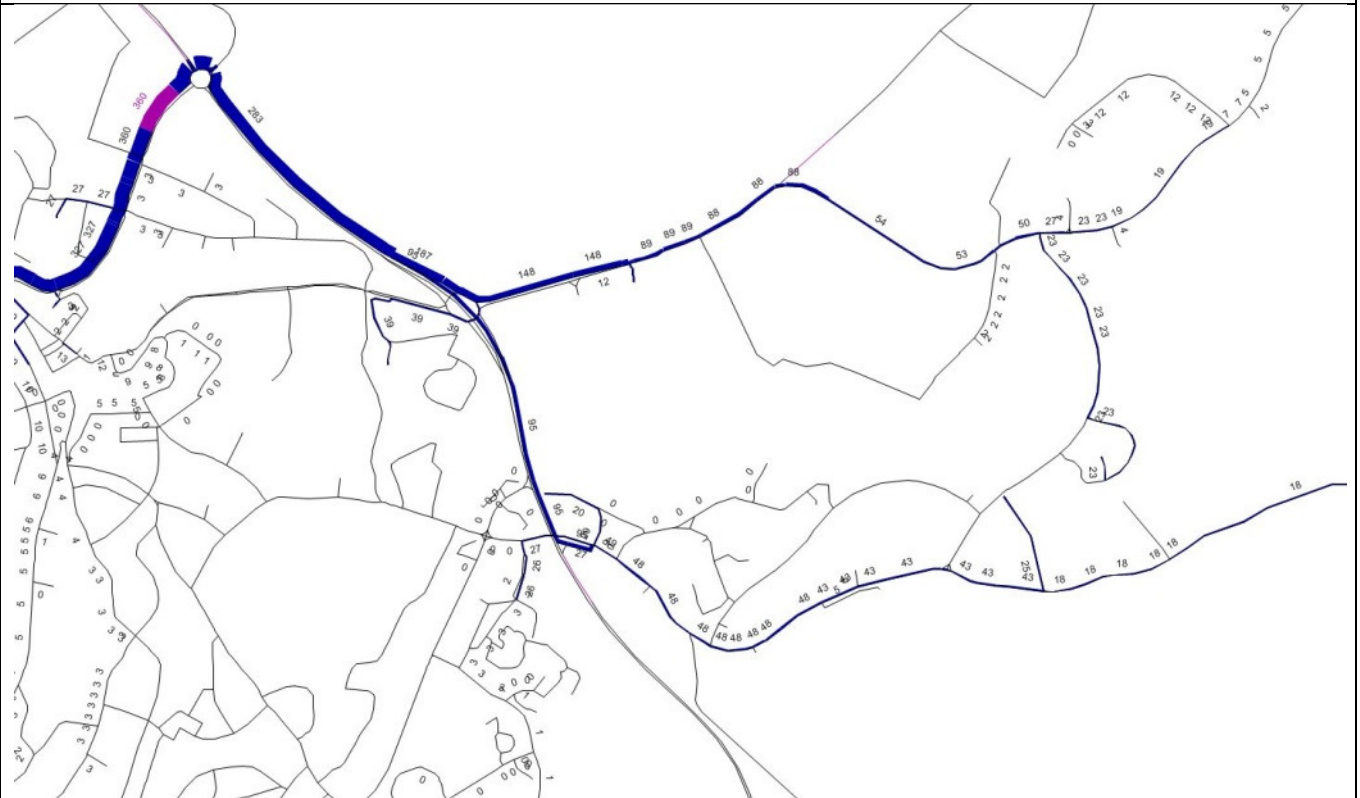


#### Opt C 2031 AM peak – Select Link Analysis A82 Westbound



## A9/A96 Connections Study Appraisal Summary Tables

### Do Min 2031 PM peak – Select Link Analysis A82 Eastbound



### Opt C 2031 PM peak – Select Link Analysis A82 Eastbound



## A9/A96 Connections Study Appraisal Summary Tables

### Do Min 2031 AM peak – Select Link Analysis A96 Westbound

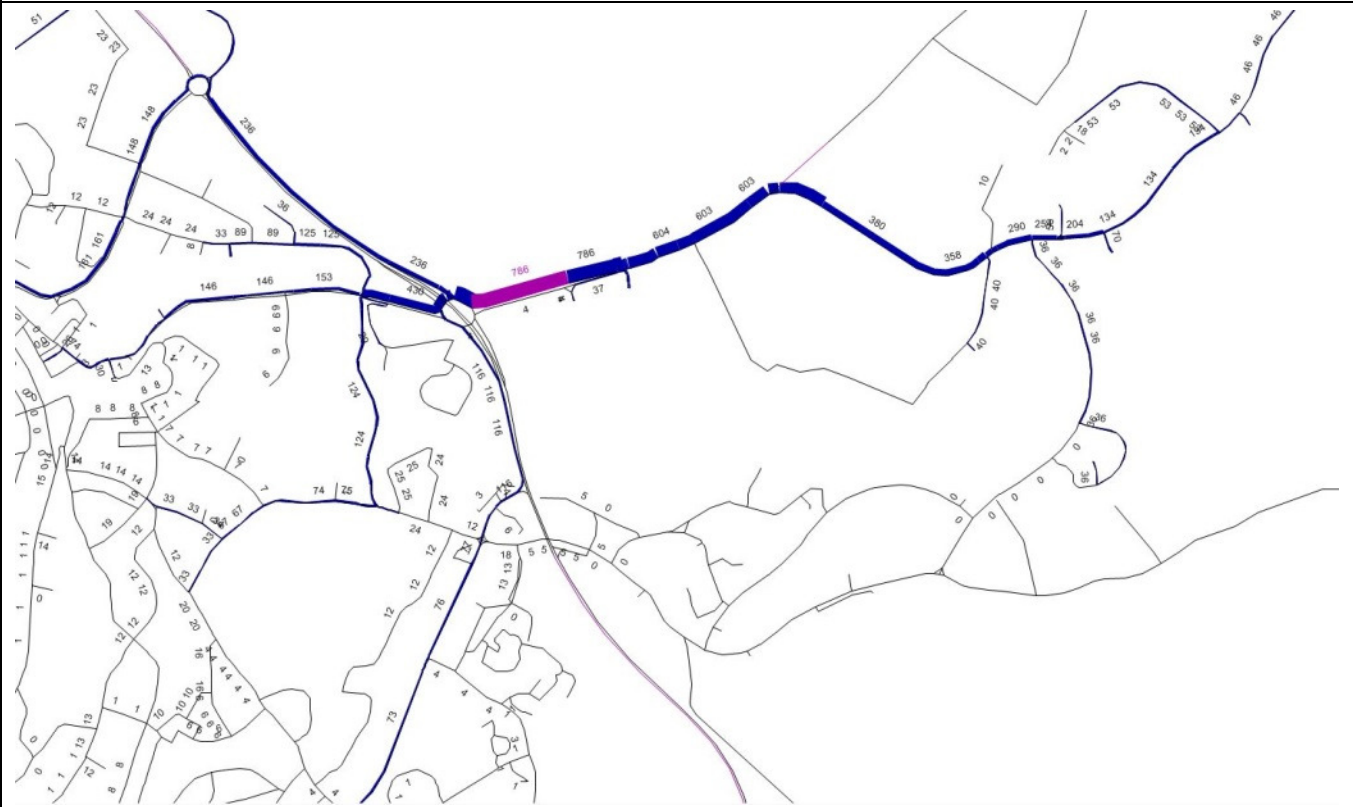


### Opt C 2031 AM Peak – Select Link Analysis A96 Westbound



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

**Do Min 2031 PM Peak – Select Link Analysis A96 Eastbound**

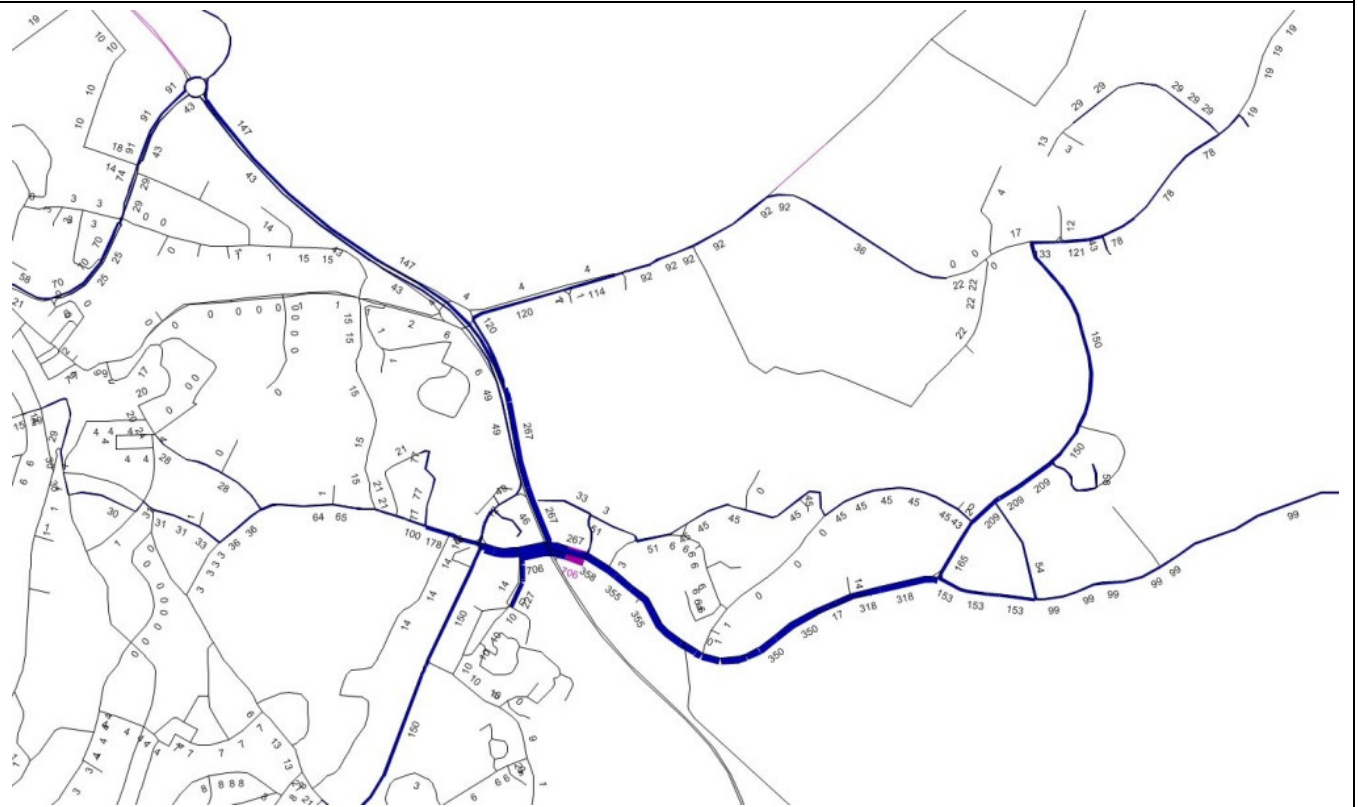


**Opt C 2031 PM Peak – Select Link Analysis A96 Eastbound**

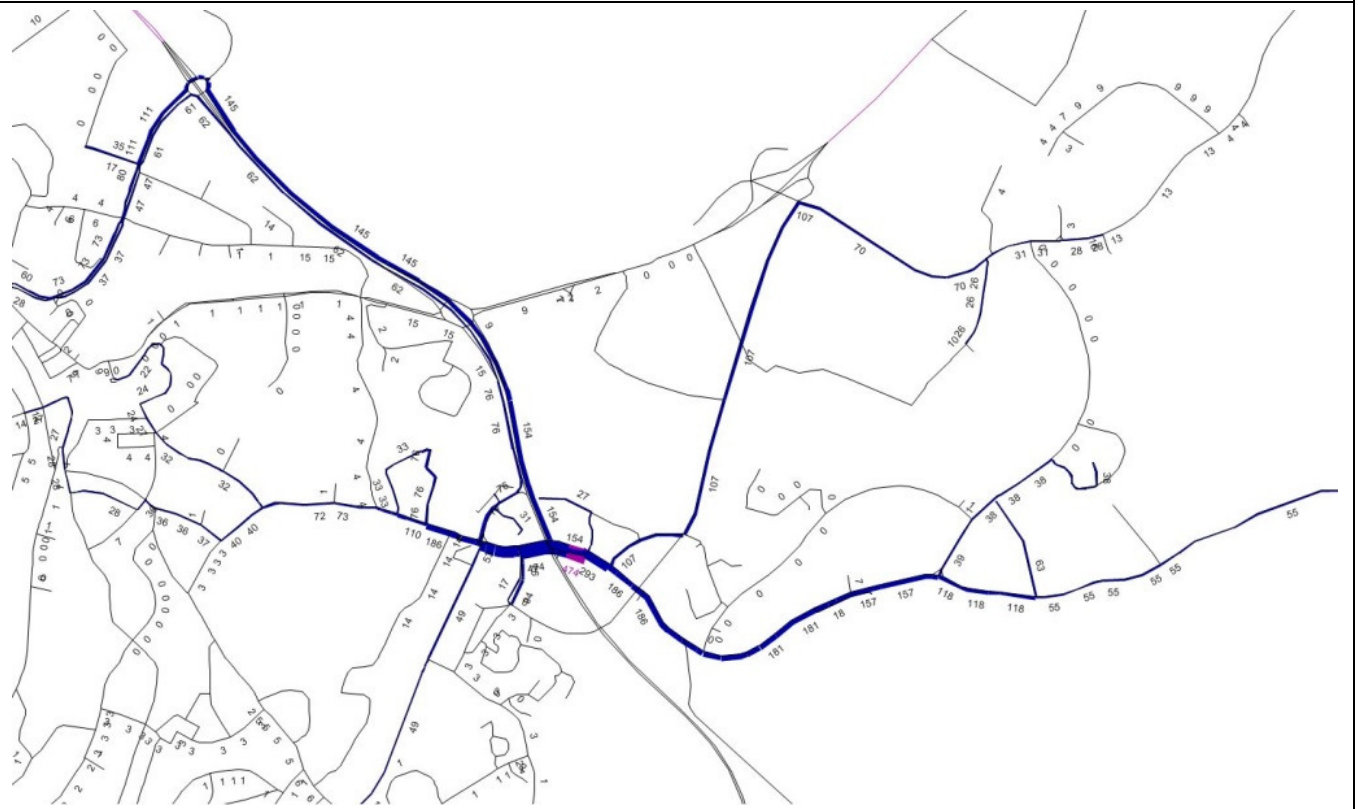


## A9/A96 Connections Study Appraisal Summary Tables

### Do Min 2031 AM peak – Select Link Analysis Culloden Road Overbridge Westbound



### Opt C 2031 AM peak – Select Link Analysis Culloden Road Overbridge Westbound







**A9/A96 Connections Study  
Appraisal Summary Tables  
Table 1 – Local Traffic summary**

	Longman Junction A82 East approach		Raigmore Interchange A96 West approach		Inshes Junction Culloden Road overbridge		Total	
	AM peak	PM peak	AM peak	PM peak	AM peak	PM peak	AM peak	PM peak
Do Minimum	398	360	1012	786	706	396	2116	1542
Option C	609	487	828	594	474	143	1911	1224
Difference	211	127	-184	-192	-232	-253	-205	-318
% Difference	<b>+ 53%</b>	<b>+ 35%</b>	<b>- 18%</b>	<b>- 24%</b>	<b>- 33%</b>	<b>- 64%</b>	<b>- 10%</b>	<b>- 21%</b>

## A9/A96 Connections Study Appraisal Summary Tables

### Appendix 2 – Journey time analysis

From Point	To Point	Do min		Opt C		Difference		Percentage Difference	
		AM	PM	AM	PM	AM	PM	AM	PM
A9 Kessock Bridge	A96 East of Smithton	523	343	286	270	-237	-73	-45%	-21%
A9 Kessock Bridge	Barn Church Road	559	391	336	339	-223	-52	-40%	-13%
A9 Kessock Bridge	Culloden Road east of B9177	596	419	311	315	-285	-103	-48%	-25%
A9 Kessock Bridge	A9 South of Milton of Leys	612	397	365	359	-248	-38	-40%	-9%
A9 Kessock Bridge	Sir Walter Scott Drive South of Stevenson Road	702	721	457	448	-244	-273	-35%	-38%
A96 East of Smithton	A9 Kessock Bridge	761	492	375	270	-386	-222	-51%	-45%
A96 East of Smithton	Culloden Road east of B9177	502	366	194	201	-308	-165	-61%	-45%
A96 East of Smithton	A9 South of Milton of Leys	518	344	332	322	-185	-21	-36%	-6%
A96 East of Smithton	Sir Walter Scott Drive South of Stevenson Road	607	668	322	382	-285	-286	-47%	-43%
Barn Church Road	A9 Kessock Bridge	809	530	493	377	-315	-153	-39%	-29%
Barn Church Road	Culloden Road east of B9177	549	403	256	228	-293	-175	-53%	-43%
Barn Church Road	A9 South of Milton of Leys	566	382	451	392	-115	11	-20%	3%
Barn Church Road	Sir Walter Scott Drive South of Stevenson Road	655	706	384	410	-271	-296	-41%	-42%
Culloden Road east of B9177	A9 Kessock Bridge	697	555	430	428	-268	-126	-38%	-23%
Culloden Road east of B9177	A96 East of Smithton	548	529	207	210	-341	-319	-62%	-60%
Culloden Road east of B9177	Barn Church Road	584	577	225	241	-359	-335	-61%	-58%
A9 South of Milton of Leys	A9 Kessock Bridge	570	484	348	355	-222	-129	-39%	-27%
A9 South of Milton of Leys	A96 East of Smithton	420	458	403	404	-17	-55	-4%	-12%
A9 South of Milton of Leys	Barn Church Road	457	506	454	472	-3	-34	-1%	-7%
Sir Walter Scott Drive South of Stevenson Road	A9 Kessock Bridge	718	542	456	398	-262	-144	-37%	-27%
Sir Walter Scott Drive South of Stevenson Road	A96 East of Smithton	576	522	357	362	-219	-160	-38%	-31%
Sir Walter Scott Drive South of Stevenson Road	Barn Church Road	613	570	375	393	-238	-177	-39%	-31%
Sir Walter Scott Drive South of Stevenson Road	Culloden Road east of B9177	346	308	277	278	-68	-30	-20%	-10%
Sir Walter Scott Drive South of Stevenson Road	A9 South of Milton of Leys	458	441	428	420	-30	-22	-7%	-5%
A96 East of Smithton	Millburn Road/Harbour Road Junction	396	175	232	148	-164	-27	-41%	-16%

### A9/A96 Connections Study Appraisal Summary Tables

Millburn Road/Harbour Road Junction	A96 East of Smithton	179	190	165	168	-15	-22	-8%	-12%
A96 East of Smithton	Old Perth Rd	505	294	400	406	-105	112	-21%	38%
A96 East of Smithton	Old Perth Rd	568	609	395	351	-173	-258	-30%	-42%
A96 East of Smithton	Milburb Rd	396	175	232	148	-164	-27	-41%	-16%
A96 East of Smithton	A82	696	432	401	318	-295	-114	-42%	-26%
Old Perth Rd	A96 East of Smithton	283	298	263	273	-20	-25	-7%	-8%
Old Perth Rd	A96 East of Smithton	433	470	409	406	-24	-65	-6%	-14%
Milburb Rd	A96 East of Smithton	179	190	165	168	-15	-22	-8%	-12%
A82	A96 East of Smithton	366	387	342	341	-23	-46	-6%	-12%
Barn Church Road	Old Perth Rd	553	331	462	434	-91	102	-16%	31%
Barn Church Road	Old Perth Rd	616	647	462	434	-154	-213	-25%	-33%
Old Perth Rd	Barn Church Road	320	346	314	341	-6	-5	-2%	-1%
Old Perth Rd	Barn Church Road	469	518	401	462	-68	-57	-15%	-11%