Proposal Details			
Proposal Name:	Longman Option 1		
Proposal Description:	A two-bridge roundabout grade separated junction. Existing roundabout enlarged to an oval shape at existing ground level with approaches from the A82 and Stadium Road altered. Slip roads constructed to the side of the existing A9 dual carriageway and the A9 raised on embankment over the new roundabout. A9 between Raigmore Junction and Longman Junction widened to three lanes in each direction providing a lane gain / lane drop arrangement between the ends of the slip roads.	Estimated Total Public Sector Funding Requirement:	Capital costs/grant £34 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 a dual carriageway on approach to the Inverness Retail Park roundabout. The A9 on approach to and around Inverness is dual carriageway. 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 the Kessock Bridge and the A96, travel to/from Inverness city centre. The A9 is subject to the national speed limit, as is the A82 until approximately 100m from the junction. Stadium Road has a speed limit of 30mph		
Social Context:	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 (2012).		

Economic Context:	Both the A9 and A96 are of strategic and local economic importance. Longman junction is the main junction for traffic travelling to/from the 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. Therefore any changes to the operation of Longman are likely to have an economic impact on the surrounding area and possibly further afield.
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 – Minor Benefit** Traffic modelling of this option showed that journey times between the A96 East of Smithton and the A82 via Longman Junction were reduced by 21% in the AM peak and 17% in the PM peak. In the opposite direction there are more modest journey time savings, with a 6% reduction in the AM peak and a 2% reduction in the PM peak. For trips travelling via Raigmore Interchange from the A96 to the city centre this option has minimal impact in terms of improved journey times, and therefore minimal impact on the majority of public transport services 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 – Moderate Benefit** The road network hierarchy will be enhanced and re-enforced through the provision of the grade separated junction, which will separate longer distance A9 traffic from local traffic accessing Inverness via the A82 and Stadium Road. Currently there are significant delays for traffic turning onto the A82 from the Kessock Bridge and from the A9 South. By grade separating the junction, the conflict between longer distance and local traffic is reduced and traffic on the A9 is able to pass through the junction unimpeded, benefiting from an improvement in journey times. Modelling has shown a reduction in traffic on the local roads, indicating a transfer of traffic from Harbour Road and Milburn Road onto the A9.
L2.2: Reduce conflicts for longer distance and local traffic for planned development areas to the east.	**L2.2 – Minor Benefit** Introduction of the grade separated junction at Longman reduces the interaction between longer distance strategic traffic and local traffic. Journey times to the Kessock Bridge from the A96 are reduced by 28% in the AM and 24% in the PM, suggesting that long distance movements will benefit from the option.
L3: Improve connectivity, particularly by public transport	**L.3 - Neutral**

and active travel, between Inverness city centre and the growth area to the east including Inverness Airport	This option would not directly impact on this objective, although the option would facilitate potential future connectivity improvements for public transport and non-motorised users.
L4: Improve safety for motorised and non-motorised users by reducing the accident rate at Trunk Road junctions	**L.4 – Moderate Benefit** This option reduces the level of conflicting traffic travelling through the new Longman Junction by separating the A9 through traffic from the traffic accessing Inverness. 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. This option would provide a safer facility for non-motorised users by removing a significant level of traffic from the junction, and would allow for the provision of additional traffic control measures, such as signal control, to further reduce exposure to conflicting traffic movements.
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 will improve the operational performance of the A9 Longman Junction by separating traffic on the A9 from local movements into Inverness which currently cause delays, especially in the peak periods. Modelling indicates that there are moderate journey time savings for vehicles travelling between the A9 Kessock Bridge and the A9 South; 12% in the AM and 8% in the PM, and significant journey time savings when travelling north on the A9, from South of Milton of Leys to the Kessock Bridge, 42% in the AM and 25% in the PM. Similarly there are journey time savings for local movements between the A9, the A82 and Stadium Road, with reductions between 5% and 30%. However it should be noted that movements from the A9 North to the A82 and Stadium Road see an increase in journey times under this option as tested without signalisation, and indicates that signals would be necessary to provide journey time benefits for these traffic movements.
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 – Minor Benefit** Modelling has shown a reduction in traffic on the local road network, suggesting a transfer of traffic away from Harbour Road (5% in the AM Peak and 6% in the PM Peak) and Milburn Road, onto the A82 Longman Road and the A9 in this option. The operational improvements provided by this option at the trunk road junction will provide an additional benefit in improving the operation of these roads on the secondary road network.
Implementability Appraisal	

Technical:	The new grade separated junction would be implemented using proven methods and technology. Disruption during construction would be limited by first enlarging the roundabout and constructing the slip roads outside the extent of the current dual carriageway. Once traffic was diverted to use the new slip roads the works on top of the existing dual carriageway and roundabout could be completed. There are significant utilities in the vicinity of Longman junction, in particular a high pressure gas main and an Inverness – Lossiemouth fuel pipeline in the verges of the A9. Each would require protection or diversion as part of this proposal.
Operational:	There are no factors which might adversely affect the ability to operate the proposal over its projected life without major additional costs.
Financial:	The implementation of this option would be subject to available funding being confirmed, whether that be from the Scottish Government, Developers or The Highland Council.
Public:	Grade separation of Longman junction is not 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.

STAG Criteria

Criterion	**Assessment Summary**	**Supporting Information**
Environment: *Note – all STAG ratings for individual assessment areas are expressed without mitigation.* *Overall STAG Rating – Small*	Global and Local Air Quality: Minor Benefit	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.
	Cultural Heritage: No Benefit or Impact.	There are no impacts on known cultural heritage assets and there is limited potential for the presence of unknown archaeological remains.

STAG Criteria		
Criterion	**Assessment Summary**	**Supporting Information**
Minor - Moderate Impact.	Noise & Vibration: Minor Benefit.	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.
	Biodiversity and Habitats: Moderate - Major Impact.	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.
	Agriculture and Soils: No Benefit or Impact.	Land is not used for agriculture.

STAG Criteria		
Criterion	**Assessment Summary**	**Supporting Information**
	Landscape & Visual Amenity: Small Minor - Moderate Impact.	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. 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.
	Water Quality, Drainage and Flood Defence. • Water Quality and Drainage – Moderate Impact. • Flood Defence – Small Minor Impact.	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.
	Geology– Moderate Impact.	Contaminated land within the vicinity of the route option includes the Inverness to 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.

STAG Criteria		
Criterion	**Assessment Summary**	**Supporting Information**
	Social Inclusion & Integration - Moderate Impact	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. During operation, without signalisation at the roundabout, there is likely to be an increase in journey times for vehicles/buses travelling from the Kessock Bridge to Stadium Road and Harbour Road potentially causing severance of communities north of the Kessock Bridge in accessing Inverness. There are likely to be benefits to communities in the south in accessing facilities and employment in Inverness as journey times on the A9 north 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.
	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.*	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.

STAG Criteria		
Criterion	**Assessment Summary**	**Supporting Information**
Safety:	Moderate Benefit	Between 2000 and 2010 there were 14 slight accidents and 2 serious accidents at or on approach to Longman Junction. Most of the accidents occurred on the roundabout. 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.
Economy:	Moderate Negative	This option has shown journey time reductions along the A9 and from the A96 to the Kessock Bridge in the peak periods. Especially for those trips from the A9 South of Milton of Leys to the Kessock Bridge where journey times reduce by 42% in the AM and by 25% in the PM compared to the current situation. Journey times reduce for the majority of movements through the junction, with a decrease for the following in the AM Peak: • Kessock Bridge to A9 South (12%) • Stadium Road to Kessock Bridge (37%) • Stadium Road to the A82 (12%) • A9 South to Kessock Bridge (42%) • A9 South to Stadium Road (36%) • A9 South to A82 (22%) • A82 to Stadium Road (11%) • A82 to A9 South (6%) There are similar reductions in the PM Peak, including additional time savings from the Kessock Bridge to the A82 and Stadium Road. The journey time reductions in the PM Peak are as follows: • Kessock Bridge to Stadium Road (3%) • Kessock Bridge to A9 South (8%) • Kessock Bridge to A82 (11%) • Stadium Road to Kessock Bridge (47%) • Stadium Road to the A82 (31%)

STAG Criteria		
Criterion	**Assessment Summary**	**Supporting Information**
		• A9 South to Kessock Bridge (25%) • A9 South to Stadium Road (22%) • A9 South to A82 (18%) • A82 to Stadium Road (6%) • A82 to A9 South (4%) There are a number of movements that show an increase in journey time in either one or both peaks, these are • Kessock Bridge to Stadium Road (76% in the AM Peak) • Kessock Bridge to A82 (56% in the AM Peak) • Stadium Road to the A9 South (4% in the AM Peak and 1% in the PM Peak) • A82 to Kessock Bridge (5% in the AM Peak and 1% in the PM Peak) There are increases in journey times in this option from the Kessock Bridge to the A82 and Stadium Road, indicating that signalisation may be required to provide these key movements with similar improvements in journey times. The indicative economic appraisal (TUBA only) shows that the option (without signalisation) would provide a Benefit to Cost Ratio (BCR) of approximately 0.5.
Integration:	Minor Impact	<u>Transport Integration</u> This option currently may have a negative impact on buses from North of the Kessock Bridge travelling to Inverness; in the AM peak there are 23 buses travelling from the A9 to the A82 via Longman and 25 buses in the PM peak. This option would result in delays and increased journey times for these services in its current form (without signalisation). <u>Transport & Land Use Integration</u> This option is removed from the development areas to the east of Inverness and so will not directly improve connectivity to that area. However journey times from the A96 to the A82 are reduced by 21% in the AM and 17% in the PM, and by a smaller amount in the reverse direction so there may be some secondary positive impacts from improving Longman

STAG Criteria		
Criterion	**Assessment Summary**	**Supporting Information**
		Junction. Policy Integration The option will not result in any conflicts with National, Regional or Local transport policies. 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 trunk road accesses to Inverness. 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.
Accessibility and Social Inclusion:	Minor Impact	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.
Rationale for Selection or Rejection of Proposal:	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. However, there are disbenefits to users travelling from the A9 North to Inverness in terms of journey time increases, and the option at this stage of development also has a high capital cost estimate. As there is potential for further detailed design developments to mitigate against the potential delays for the A9 North to Inverness movement and reduce the capital cost, it is therefore recommended that this option be selected for further appraisal.	