

Appendix H Improvement Strategies Stage 1 Assessment Tables



Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B1 – Raigmore Interchange to Gollanfield
Strategy Description	This section generally follows the A96 corridor from the A9 Raigmore Interchange in Inverness to Gollanfield located to the west of Nairn.
Engineering and Traffic	
Topography and Land Use	<p>The topography is generally flat, low-lying, open ground. The land use is predominately farmland, with several commercial developments, communities and settlements.</p> <p>Several residential and agricultural properties and buildings are situated immediately adjacent to the A96</p> <p><u>Land use includes:</u> Inverness Airport; Inverness Retail Park; Stoneyfield Business Park; Culloden; Smithton; Balloch; Agriculture and Norbord Timber processing plant.</p> <p><u>Buildings within 60m of A96:</u> 36 No. (inc' 2 No. Listed Buildings) [excluding settlements] <i>(This section will be completed pending completion of the SEA Tier 2.)</i></p>
Water Environment, Hydrology and Drainage	
Geotechnical	<p>A considerable variety of superficial deposits exist in in this section and, in particular, at either end of the section. Raised Tidal Flat Deposits (clay, silt and sand) and Raised Glaciomarine Deposits, both Ardersier Silt Formation (silt and sand) and Alturlie Gravels Formation (sand and gravel), are indicated. In addition, Hummocky Glacial Till (diamicton, sand and gravel) and Glacial Till (diamicton) Deposits are indicated to be present in this section along with localised outcrops of Peat and Alluvium are also noted within the section.</p> <p>The solid geology of this section is indicated to belong entirely to the Hillhead Sandstone Formation. No faults are present within this section.</p>
Alignment and Cross-Section	<p>Rural dual carriageway: 0.75 km Standard single carriageway: 14.1 km</p> <p>The single carriageway has been reviewed separately under the A96 Inverness to Nairn, including Nairn Bypass, DMRB Stage 2 Assessment.</p>
Traffic Flows (AADT 2012)	<p>Section B1 is contained within traffic flow sections listed below: Inverness to West Seafield: 29,000 West Seafield to Nairn: 14,200</p>
Accident Rate (Per 100 MVkm)	<p><u>Inverness to Smithton (Urban Dual)</u> Accident Rate: 16.82 Fatal Accident Rate: 0</p> <p><u>Smithton to Nairn (Rural Single)</u> Accident Rate: 8.5 Fatal Accident Rate: 0.39</p>
Average Actual Vehicle Speed	<p><u>Inverness single carriageway (2010)</u> Current Speed limit: 50 mph Average Actual Vehicle Speed All: 46.03 mph Average Actual Vehicle Speed HGV: 42.12 mph</p> <p><u>West Seafield to Nairn. (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 51.28 mph Average Actual Vehicle Speed HGV: n/a</p>
Junctions and Side Roads	<p><u>Existing A96 Junctions</u> A Roads: 1 No. B Roads: 2 No. C Roads: 14 No. Unclassified: 1 No. Accesses: 64 No.</p> <p>The existing A and B class roads in this section are: A9, B9039 and B9006/B9090.</p>

Structures	<u>Existing A96</u> Stoneyfield 2 Rail (A96 590), Stoneyfield 1 Rail (A96 580), Screttan Burn (A96 570) and Morayston (A96 560)
Utilities	Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition the section includes a Government Pipeline and Storage System.
Maintenance	ARSA Frost Susceptible Area: A96 Roundabout near A9
Non-Motorised Users	Existing NMU facilities include designated core paths that cross the A96 and others that run parallel to the route. There are 9 at-grade crossings along this section of A96.
Local Development	The Highland Council's strategy is that the majority of the City's growth in the medium and long term (2016-2031) should be directed to the corridor between Inverness and Nairn which is in line with the growth strategy set out in the A96 Corridor Development Framework. The growth areas set out are East Inverness, Tornagrain, the Airport Economic Development Initiative Area, Whiteness, and Nairn.
Other Constraints	-

Environment

Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:

(Provide summary of key benefits and issues as identified in the SEA.)

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B2 – Gollanfield to Hardmuir Wood
Strategy Description	This section is an offline bypass to the south of Nairn from Gollanfield to the west of Nairn to Hardmuir Wood to the east of Auldearn.
Engineering and Traffic	
Topography and Land Use	<p>The topography is primarily flat, low-lying, open ground to the west of the River Nairn, and becomes increasingly rolling and hilly to the east. The section crosses both the River Nairn and its associated floodplain. The land use is a mixture of grazing and arable farmland, interspersed with areas of woodland and small rural communities including the village of Auldearn.</p> <p><u>Land use includes:</u> Agriculture, woodland, Nairn, and Auldearn.</p> <p><u>Buildings within 60m of A96:</u> 16 No. [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>Raised Tidal Flat Deposits including both Ardesier Silt Formation and Alturlie Gravels Formation, are indicated in this section. In addition, Alluvial Deposits (clay, silt, sand and gravel), Glacial Till and discrete pockets of Peat are also indicated throughout the section.</p> <p>The solid geology underlying this section comprises predominantly of the Inverness Sandstone Group.</p>
Alignment and Cross-Section	<p>Standard single carriageway: 15.9 km</p> <p>This section has been reviewed separately under the A96 Inverness to Nairn, including Nairn Bypass, DMRB Stage 2 Assessment.</p>
Traffic Flows (AADT 2012)	Section B2 is contained within traffic flow sections listed below: Nairn: 10,500
Accident Rate (Per 100 MVkm)	<p><u>Nairn (Urban Single)</u> Accident Rate: 32.62 Fatal Accident Rate: 0</p>
Average Actual Vehicle Speed	<p><u>Nairn West Approach (2010)</u> Current Speed limit: 40 mph Average Actual Vehicle Speed All: 38.99 mph Average Actual Vehicle Speed HGV: 38.92 mph</p> <p><u>Nairn East Approach (2010)</u> Current Speed limit: 40 mph Average Actual Vehicle Speed All: 44.51 mph Average Actual Vehicle Speed HGV: 42.86 mph</p>
Junctions and Side Roads	<p><u>Existing A96 Junctions (excluding Nairn)</u> A Roads: 0 No. B Roads: 3 No. C Roads: 5 No. Unclassified: 3 No. Accesses: 45 No.</p> <p>The existing B class roads in this section are: B9092, B911 and B9101.</p> <p><u>Offline Bypass Side Roads</u> This section includes an offline bypass to the south of Nairn. There are a number of radial routes from Nairn which the bypass intersects with, including the A939, B9091, B9090 and B9111.</p>

Structures	<p><u>Existing A96</u> Gollanfield Rail (A96 550), Auchnacloch Burn (A96 528), Auchnacloch Underpass (A96 526)</p> <p><u>Offline Bypass Major Structures</u> Aberdeen to Inverness Railway Line River Nairn</p> <p>Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition the section includes a Government Pipeline and Storage System and a high voltage overhead line.</p>
Maintenance	<p>No specific issues identified at this stage.</p>
Non-Motorised Users	<p>Existing NMU facilities include designated core paths as well as NCN Route 1 which crosses the A96 at Nairn. There are seven current crossing points, six at-grade and one underpass.</p>
Local Development	<p>Future mixed used development to the southern edge of Nairn set out in three phases to post 2031. Additional mixed use and residential development to the western and eastern edges respectively.</p>
Other Constraints	<p>-</p>

Environment

Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:

(Provide summary of key benefits and issues as identified in the SEA.)

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B3 – Hardmuir Wood to Alves (north)
Strategy Description	This section generally follows the A96 corridor from Hardmuir Wood to the east of Auldearn, to Alves with an offline bypass to the north of Forres.
Engineering and Traffic	
Topography and Land Use	<p>The topography is relatively flat and low-lying adjacent to Findhorn Bay on the Moray Firth. The section crosses the River Findhorn and the Burn of Mosset and their large floodplains. The Aberdeen to Inverness Railway Line runs in close proximity to the north of the A96. Land use in this section is predominantly agricultural with settlements at Brodie, Dyke and Forres.</p> <p>The low-lying and flat topography may restrict opportunity to reclaim earthworks materials for embankments and may result in an earthworks imbalance for the section requiring material to be imported to site.</p> <p><u>Land use includes:</u> Forres; Brodie; Brodie Castle; Dyke; Waste Water Treatment Works; Glenburgie Distillery; Benromach Distillery; and The Enterprise Park</p> <p><u>Buildings within 60m of A96:</u> 26 No. (inc' 2 No. Listed Buildings) [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>This section is predominantly underlain by Glaciofluvial Ice Contact Deposits (typically gravels, sands and silt). Localised areas of Alluvium are also noted around watercourses, which pass typically perpendicularly under the existing A96. Of note, and towards the centre of the section, is an extensive area of Alluvium, which forms part of the floodplain of the River Findhorn. The Alluvium is underlain by River Terrace Deposits (both deposits comprising a mix of clay, silt, sand and gravel). Raised Marine Deposits (consisting of gravel, sand and silt) are indicated to the north of the central area, north of Forres. The eastern half of the section comprises Glaciofluvial Ice Contact Deposits with Glacial Till Deposits indicated to the south of the existing A96. There are localised areas of Peat beneath the southern parts of the central section, to the south of Forres and at the eastern limit of the section, north of the existing A96.</p> <p>The solid geology underlying this section comprises predominantly of sedimentary sandstone of Devonian Age, with deposits at Forres being a more diverse mix of sandstone, conglomerate, argillaceous rock and limestone. A number of faults are also indicated to the east and central areas of the section trending north-east/south-west.</p>
Alignment and Cross-Section	<p>Standard Single Carriageway: 17.1km Includes Feddan Overtaking Lane: 0.7km eastbound</p> <p>Approximately one quarter of this section is below current design standards. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B3 (north) is contained within traffic flow sections listed below: Nairn to Forres: 9,900 Forres: 11,100 Forres to Elgin: 12,900</p>
Accident Rate (Per 100 MVkm)	<p><u>Nairn to Forres (Rural Single)</u> Accident Rate: 7.6 Fatal Accident Rate: 0.8 <u>Forres (Urban Single)</u> Accident Rate: 10.84 Fatal Accident Rate: 1.55 <u>Forres to Elgin (Rural Single)</u> Accident Rate: 7.32 Fatal Accident Rate: 0.27</p>
Average Actual Vehicle Speed	<p><u>Nairn to Brodie (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 54.04 mph Average Actual Vehicle Speed HGV: n/a <u>Brodie (2010)</u></p>

	<p>Current Speed limit: 50 mph Average Actual Vehicle Speed All: 43.77 mph Average Actual Vehicle Speed HGV: 44.43 mph <u>Brodie to Forres (2012)</u> Current Speed limit: 660 mph Average Actual Vehicle Speed All: 52.45 mph Average Actual Vehicle Speed HGV: n/a <u>Forres West (2010)</u> Current Speed limit: 40 mph Average Actual Vehicle Speed All: 31.59 mph Average Actual Vehicle Speed HGV: 29.40 mph <u>Forres East (2012)</u> Current Speed limit: 40 mph Average Actual Vehicle Speed All: 45.33 mph Average Actual Vehicle Speed HGV: 44.26 mph <u>Forres to Alves (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 51.49 mph Average Actual Vehicle Speed HGV: n/a</p>
Junctions and Side Roads	<p><u>Existing A96 Junctions (excluding Forres)</u> A Roads: 0 No. B Roads: 1 No. C Roads: 18 No. Unclassified: 4 No. Accesses: 49 No.</p> <p>The existing B class roads in this section are: B9011.</p> <p><u>Offline Bypass Side Roads</u> This section includes an offline bypass to the north of Forres. The primary road to the north of Forres is the B9011 linking Forres to Kinloss.</p>
Structures	<p><u>Existing A96</u> Brodie (A96 520), Dalvie (A96 510), Findhorn (A96 500) <u>Offline Bypass Major Structures</u> Aberdeen to Inverness Railway Line (x2) River Findhorn Burn of Mosset Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition the section includes a Government Pipeline and Storage System and a high voltage overhead line.</p>
Maintenance	<p>No specific issues identified at this stage.</p>
Non-Motorised Users	<p>Existing NMU facilities include designated core paths as well as NCN Route 1 which crosses the A96 at Nairn. The section also includes the Moray Coast Trail. There are four crossings within the existing carriageway, all at-grade.</p>
Local Development	<p>Industrial zoning to the north of Forres with potential for a future industrial zone adjacent to the existing zone. Moray council will not permit any further housing development within Brodie.</p>
Other Constraints	<p>The proximity of the Aberdeen to Inverness Railway Line to the existing A96 may restrict opportunities for improvement works in these areas.</p>
Environment	
<p>Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:</p>	
<p><i>(Provide summary of key benefits and issues as identified in the SEA.)</i></p>	

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B3 – Hardmuir Wood to Alves (south)
Strategy Description	This section generally follows the A96 corridor from Hardmuir Wood, to the east of Auldearn, to Alves with an offline bypass to the south of Forres.
Engineering and Traffic	
Topography and Land Use	<p>The topography of the offline southern bypass section is generally flat to the south-west and south of Forres, however starts to rise steadily from 30mAOD to 234mAOD at Heldon Hill which continues in a north-easterly direction towards Elgin. The section crosses the River Findhorn and its floodplain as well as several other smaller watercourses. To the west of Forres, land use in section is predominantly agriculture with settlements at Brodie and Dyke.</p> <p>The low-lying and flat topography may restrict opportunity to reclaim earthworks materials for embankments and may result in an earthworks imbalance for the section requiring material to be imported to site.</p> <p><u>Land use includes:</u> Forres; Brodie; Mundole; Rafford; Califer; Glenburgie Distillery; Darnaway Forest and Altyre Woods; Dallas Dhu Distillery; Newforres Quarry; Burn of Mosset Flood alleviation scheme; and The Enterprise Park</p> <p><u>Buildings within 60m of A96:</u> 26 No. (inc' 2 No. Listed Buildings) [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>This section is predominantly underlain by Glaciofluvial Ice Contact Deposits (typically gravels, sands and silt). Localised areas of Alluvium are also noted around watercourses, which pass typically perpendicularly under the existing A96. Of note, and towards the centre of the section, is an extensive area of Alluvium, which forms part of the floodplain of the River Findhorn. The Alluvium is underlain by River Terrace Deposits (both deposits comprising a mix of clay, silt, sand and gravel). Raised Marine Deposits (consisting of gravel, sand and silt) are indicated to the north of the central area, north of Forres. The eastern half of the section comprises Glaciofluvial Ice Contact Deposits with Glacial Till Deposits indicated to the south of the existing A96. There are localised areas of Peat beneath the southern parts of the central section, to the south of Forres and at the eastern limit of the section, north of the existing A96.</p> <p>The solid geology underlying this section comprises predominantly of sedimentary sandstone of Devonian Age, with deposits at Forres being a more diverse mix of sandstone, conglomerate, argillaceous rock and limestone. A number of faults are also indicated to the east and central areas of the section trending north-east/south-west.</p>
Alignment and Cross-Section	<p>Standard Single Carriageway: 17.1km Includes Feddan Overtaking Lane: 0.7km eastbound</p> <p>Approximately one quarter of this section is below current design standards. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B3 (south) is contained within traffic flow sections listed below: Nairn to Forres: 9,900 Forres: 11,100 Forres to Elgin: 12,900</p>
Accident Rate (Per 100 MVkm)	<p><u>Nairn to Forres (Rural Single)</u> Accident Rate: 7.6 Fatal Accident Rate: 0.8 <u>Forres (Urban Single)</u> Accident Rate: 10.84 Fatal Accident Rate: 1.55 <u>Forres to Elgin (Rural Single)</u> Accident Rate: 7.32 Fatal Accident Rate: 0.27</p>
Average Actual Vehicle Speed	<p><u>Nairn to Brodie (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 54.04 mph</p>

	<p>Average Actual Vehicle Speed HGV: n/a <u>Brodie (2010)</u> Current Speed limit: 50 mph Average Actual Vehicle Speed All: 43.77 mph Average Actual Vehicle Speed HGV: 44.43 mph <u>Brodie to Forres (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 52.45 mph Average Actual Vehicle Speed HGV: n/a <u>Forres West (2010)</u> Current Speed limit: 40 mph Average Actual Vehicle Speed All: 31.59 mph Average Actual Vehicle Speed HGV: 29.40 mph <u>Forres East (2012)</u> Current Speed limit: 40 mph Average Actual Vehicle Speed All: 45.33 mph Average Actual Vehicle Speed HGV: 44.26 mph <u>Forres to Alves (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 51.49 mph Average Actual Vehicle Speed HGV: n/a</p>
Junctions and Side Roads	<p><u>Existing A96 Junctions (excluding Forres)</u> A Roads: 0 No. B Roads: 1 No. C Roads: 18 No. Unclassified: 4 No. Accesses: 49 No.</p> <p>The existing B class roads in this section are: B9011.</p> <p><u>Offline Bypass Side Roads</u> This section includes an offline bypass to the south of Forres. The primary roads to the south of Forres are the A940 and B9010.</p>
Structures	<p><u>Existing A96</u> Brodie (A96 520), Dalvie (A96 510), Findhorn (A96 500) <u>Offline Bypass Major Structures</u> River Findhorn Burn of Mosset Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, the section includes a high voltage overhead line.</p>
Maintenance	<p>No specific issues identified at this stage.</p>
Non-Motorised Users	<p>Existing NMU facilities include designated core paths as well as NCN Route 1 which crosses the A96 at Nairn. The section also includes the Moray Coast Trail. There are four crossings within the existing carriageway, all at-grade.</p>
Local Development	<p>Residential zoning located to the south of the town with the potential for additional future residential zoning and a proposed country park. Potential for zoning for future expansion of the Forres Enterprise Park and additional future residential zoning in this area. Moray council will not permit any further housing development within Brodie.</p>
Other Constraints	<p>The proximity of the Aberdeen to Inverness Railway Line to the existing A96 may restrict opportunities for improvement works in these areas.</p>

Environment

Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:

(Provide summary of key benefits and issues as identified in the SEA.)

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B4 – Alves to Lhanbryde (north)
Strategy Description	This section generally follows the A96 corridor from west of Alves to Lhanbryde, with an offline bypass to the north of Elgin.
Engineering and Traffic	
Topography and Land Use	<p>The topography is generally flat and low-lying with the exception of local high spots at Carden Hill (102mAOD) and Quarrywood Hill (127mAOD) to the west and north-west of Elgin. To the north of Elgin there is the River Lossie and the Spynie Canal, each of which has a large associated floodplain.</p> <p>Settlements in this section include Alves to the west and Lhanbryde and Urquhart to the east. Lhanbryde is currently bypassed by the existing A96, however the A96 currently passes through Alves. In addition, there are residential and agricultural properties situated immediately adjacent to the A96 along this section particularly to the west of Elgin. The Aberdeen to Inverness Railway Line runs through this section. Land use is predominantly agricultural interspersed with areas of forestry. The existing single carriageway A96 at Lhanbryde is physically constrained between the railway embankment and the properties on the edge of Lhanbryde, including two retaining walls to retain the road earthworks.</p> <p>The low-lying and flat topography may restrict opportunity to reclaim earthworks materials for embankments and may result in an earthworks imbalance for the section requiring material to be imported to site.</p> <p><u>Land use includes:</u> Elgin; Alves; Urquhart; Lhanbryde; Alves Wood; Quarrel Wood; Findrassie Wood; Crooked Wood; Sleepieshill Wood and Newton Nursery.</p> <p><u>Buildings within 60m of A96:</u> 24 No. (inc' 3 No. Listed Buildings) [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>This section predominantly consists of Glaciofluvial Ice Contact and Till Deposits with Till largely found in the west of the section becoming discrete pockets to the east. There is also an extensive area of Alluvial Deposits associated with the River Lossie. Lacustrine Deposits (typically clay, sand and silt) are found to the west of Elgin, north of the existing A96. Localised outcrops of Peat and Alluvium are also noted within the section.</p> <p>The solid geology underlying this section comprises predominantly of sandstone of various geological settings, becoming more gravelly and calcareous sandstone in the east of the section. A discrete area of interbedded sandstone and siltstone exists north of Elgin. A number of faults trending north/south are also indicated to the east of Elgin.</p>
Alignment and Cross-Section	<p>Standard Single Carriageway: 19.2km Includes Alves Overtaking Lane: 0.7km westbound</p> <p>Approximately one tenth of this section is not to current design standards. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B4 (north) is contained within traffic flow sections listed below: Forres to Elgin: 12,900 Elgin: 18,300</p>
Accident Rate (Per 100 MVkm)	<p><u>Forres to Elgin (Rural Single)</u> Accident Rate: 7.32 Fatal Accident Rate: 0.27 <u>Elgin (Urban Single)</u> Accident Rate: 19.37 Fatal Accident Rate: 0.0 <u>Elgin to Fochabers Bypass (Rural Single)</u> Accident Rate: 7.65 Fatal Accident Rate: 0.43</p>
Average Actual Vehicle Speed	<p><u>Alves (2012)</u> Current Speed limit: 50 mph Average Actual Vehicle Speed All: n/a</p>

	<p>Average Actual Vehicle Speed HGV: n/a <u>Alves to Elgin (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 52.28 mph Average Actual Vehicle Speed HGV: n/a <u>Elgin (2012)</u> Current Speed limit: 30 mph Average Actual Vehicle Speed All: n/a Average Actual Vehicle Speed HGV: n/a <u>Elgin to Mosstodloch (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 48.78 mph Average Actual Vehicle Speed HGV: n/a</p>
Junctions and Side Roads	<p><u>Existing A96 Junctions (excluding Elgin)</u> A Roads: 0 No. B Roads: 2 No. C Roads: 9 No. Unclassified: 2 No. Accesses: 24 No.</p> <p>The existing B class roads in this section are: B9013 and B9103.</p> <p><u>Offline Bypass Side Roads</u> This section includes an offline bypass to the north of Elgin. There are two radial routes heading out of Elgin to the north with the A941 and B9012 as well as the B9013 and B9103 which meet the A96 to the west and east of Elgin respectively.</p>
Structures	<p><u>Existing A96</u> Alves New Rail (A96 480), Lhanbryde Farm Underpass (A96 430) <u>Offline Bypass Major Structures</u> Aberdeen to Inverness Railway Line Hopeman Branch Line River Lossie Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, the section includes a high voltage overhead line.</p>
Maintenance	<p>No specific issues identified at this stage.</p>
Non-Motorised Users	<p>Existing NMU facilities include designated core paths throughout Elgin as well as the surrounding woods. There is also NCN Route 1 to the north of the A96. There are a total of six crossing points along the A96 route, one underpass, and five at-grade crossings.</p>
Local Development	<p>The majority of the current land zoning is located on the south edge of Elgin, but potential for long term residential zoning to the northern edge of Elgin beyond the Local Development Plan period. The north of Elgin is the preferred location for new employment zones, the need for which was identified in the Moray Economic Strategy.</p>
Other Constraints	<p>-</p>
Environment	
<p>Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below: <i>(Provide summary of key benefits and issues as identified in the SEA.)</i></p>	

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B4 – Alves to Lhanbryde (south)
Strategy Description	This section generally follows the A96 corridor from west of Alves to Lhanbryde, with an offline bypass to the south of Elgin.
Engineering and Traffic	
Topography and Land Use	<p>The topography is generally flat at the A96 rising to a local high spot at Heldon Hill (234mAOD) to the south of Alves. To the east of the River Lossie the topography rises to the south towards Hart Hill (275mAOD) and Brown Muir Hill (339mAOD). The River Lossie is located to the west of Elgin and has a large associated floodplain, as well as numerous tributaries.</p> <p>There are a number of settlements and distilleries along this corridor interspersed with agriculture and forestry. The Aberdeen to Inverness Railway Line runs through this section. The existing single carriageway A96 at Lhanbryde is physically constrained between the existing railway embankment and the properties on the edge of Lhanbryde including two existing retaining walls to retain the road earthworks.</p> <p>The low-lying and flat topography may restrict opportunity to reclaim earthworks materials for embankments and may result in an earthworks imbalance for the section requiring material to be imported to site.</p> <p><u>Land use includes:</u> Elgin; Milntonduff; Longmorn; Fogwatt; Milntonduff Distillery; Longmorn Distillery; Benriach Distillery; Glenlossie Distillery; Glen Elgin Distillery; Linkwood Distillery; Elgin Golf Club and Cloddoch Quarry.</p> <p><u>Buildings within 60m of A96:</u> 24 No. (inc' 3 No. Listed Buildings) [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>This section predominantly consists of Glaciofluvial Ice Contact and Till Deposits with Till largely found in the west of the section becoming discrete pockets to the east. There is also an extensive area of Alluvial Deposits associated with the River Lossie. Lacustrine Deposits (typically clay, sand and silt) are found to the west of Elgin, north of the existing A96. Localised outcrops of Peat and Alluvium are also noted within the section.</p> <p>The solid geology underlying this section comprises predominantly of sandstone of various geological settings, becoming more gravelly and calcareous sandstone in the east of the section. A discrete area of interbedded sandstone and siltstone exists north of Elgin. A number of faults trending north/south are also indicated to the east of Elgin.</p>
Alignment and Cross-Section	<p>Standard Single Carriageway: 19.2km Includes Alves Overtaking Lane: 0.7km westbound</p> <p>Approximately one tenth of this section is not to current design standards. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B4 (south) is contained within traffic flow sections listed below: Forres to Elgin: 12,900 Elgin: 18,300</p>
Accident Rate (Per 100 MVkm)	<p><u>Forres to Elgin (Rural Single)</u> Accident Rate: 7.32 Fatal Accident Rate: 0.27 <u>Elgin (Urban Single)</u> Accident Rate: 19.37 Fatal Accident Rate: 0.0 <u>Elgin to Fochabers Bypass (Rural Single)</u> Accident Rate: 7.65 Fatal Accident Rate: 0.43</p>
Average Actual Vehicle Speed	<p><u>Alves (2012)</u> Current Speed limit: 50 mph Average Actual Vehicle Speed All: n/a Average Actual Vehicle Speed HGV: n/a <u>Alves to Elgin (2012)</u></p>

	<p>Current Speed limit: 60 mph Average Actual Vehicle Speed All: 52.28 mph Average Actual Vehicle Speed HGV: n/a <u>Elgin (2012)</u> Current Speed limit: 30 mph Average Actual Vehicle Speed All: n/a Average Actual Vehicle Speed HGV: n/a <u>Elgin to Mosstodloch (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 48.78 mph Average Actual Vehicle Speed HGV: n/a</p>
Junctions and Side Roads	<p><u>Existing A96 Junctions (excluding Elgin)</u> A Roads: 0 No. B Roads: 2 No. C Roads: 9 No. Unclassified: 2 No. Accesses: 24 No.</p> <p>The existing B class roads in this section are: B9013 and B9103.</p> <p><u>Offline Bypass Side Roads</u> This section includes an offline bypass to the south of Elgin. An offline strategy to the south of Elgin would intersect the A941 and the B9010.</p>
Structures	<p><u>Existing A96</u> Alves New Rail (A96 480), Lhanbryde Farm Underpass (A96 430) <u>Offline Bypass Major Structures</u> Aberdeen to Inverness Railway Line River Lossie Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, the section includes a high voltage overhead line.</p>
Maintenance	<p>No specific issues identified at this stage.</p>
Non-Motorised Users	<p>Existing NMU facilities include designated core paths throughout Elgin as well as the surrounding woods. There is also NCN Route 1 to the north of the A96. There are a total of six crossing points along the A96 route, one underpass, and five at-grade crossings.</p>
Local Development	<p>The majority of the current land zoning is located on the immediate southern edge of Elgin with two business park zones located between the existing A96 and the railway line on the eastern edge of the town. Majority of preferred long term development to the north of the town.</p>
Other Constraints	<p>-</p>
Environment	
<p>Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below: <i>(Provide summary of key benefits and issues as identified in the SEA.)</i></p>	

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B5 – Lhanbryde to west of Keith
Strategy Description	This section generally follows the A96 corridor from Lhanbryde to west of Keith.
Engineering and Traffic	
Topography and Land Use	<p>The topography falls slightly from Lhanbryde to the River Spey before rising steeply after crossing the river and its associated large floodplain from approximately 20m AOD to Whiteash Hill (265m AOD) and Thiefs Hill (250m AOD), to the north and south of Section B5 respectively. From this high point, the topography falls back towards Keith.</p> <p>This section is largely covered by forested areas and agricultural areas. The main settlements in this section are Fochabers and Mosstodloch which are bypassed by the A96. There are residential and agricultural properties situated immediately adjacent to the A96 between Lhanbryde and Mosstodloch as well as to the west of Keith. At Mosstodloch, the A96 is physically constrained between the Baxters of Speyside factory and the Old Toll house/electricity substation. There is also Gordon Castle Estate which is located directly adjacent to the north of the A96 Fochabers Bypass.</p> <p><u>Land use includes:</u> Fochabers; Mosstodloch; Aultmore; Baxters of Speyside; Gordon Castle Estate; Threapland Wood; Sleepieshill Wood; Balnacoul Wood; Whiteash Hill Wood and Wood of Ordiequish.</p> <p><u>Buildings within 60m of A96:</u> 20 No. [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>This section consists of Glaciofluvial Ice Contact and Sheet Deposits to the east of the River Spey. Alluvium Deposits are indicated to be associated with the River Spey which flows from south to north in this area. To the east of Fochabers, the superficial geology is mainly indicated to consist of Till Deposits with discrete pockets of Alluvium and Glaciofluvial Ice Contact Deposits to the north and south of the existing A96. An extensive deposit of peat is noted at Forgie, with smaller localised outcrops of peat to the north of the current A96.</p> <p>The solid geology consists of sandstone to the west of the section with subordinate conglomerate, siltstone and mudstone beds. The centre of the section consists of Spey Conglomerate Formation. The east of the section consists of calcareous psammite and calcareous semipelite (lower grade metamorphic rocks corresponding to the older Dalradian meta-sediments). The Mulderie Intrusion consisting of gneissose granite is indicated in the eastern limit of the section, south of the existing A96. A small number of faults run generally north/south along the eastern side of the River Spey with one other fault trending south-west/north-east to the north of the A96 from Lhanbryde.</p>
Alignment and Cross-Section	<p>Standard Single Carriageway: 11.2km Includes Dramlachs Overtaking Lane: 1.9km eastbound Mosstodloch Bypass: 1.7 km of WS2+1 Fochabers Bypass: 1.4 km of WS2+1</p> <p>Approximately one fifth of this section is not to current design standards. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B5 is contained within traffic flow sections listed below: Elgin to Fochabers: 8,200 (note: large reduction on traffic around Fochabers due to the opening of the Fochabers Bypass in 2012 which bypassed this counter.) Fochabers to Keith: 6,400</p>
Accident Rate (Per 100 MVkm)	<p><u>Elgin to Fochabers Bypass (Rural Single)</u> Accident Rate: 7.65 Fatal Accident Rate: 0.43 <u>Fochabers Bypass (Rural Single)</u> Accident Rate: 14.94 Fatal Accident Rate: 0.0 <u>Fochabers Bypass to Keith (Rural Single)</u> Accident Rate: 18.72 Fatal Accident Rate: 0.0</p>

Average Actual Vehicle Speed	<p><u>Fochabers (2012)</u> Current Speed limit: 30 mph Average Actual Vehicle Speed All: n/a Average Actual Vehicle Speed HGV: n/a</p> <p><u>Fochabers to B9016 Junction (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 53.64 mph Average Actual Vehicle Speed HGV: n/a</p>
Junctions and Side Roads	<p><u>Existing A96 Junctions</u> A Roads: 1 No. B Roads: 3 No. C Roads: 3 No. Unclassified: 2 No. Accesses: 53 No.</p> <p>The existing A and B class roads in this section are: A98, B9015 and B9104.</p>
Structures	<p><u>Existing A96</u> Rothes Road Underpass (A96 415), Inchberry Road Underpass (A96 412) Fochabers New (A96 410), Gordon Castle Main Driveway Bridge (A96 408), Gordon Castle Farm Access and Bridge (A96 407), Fochabers East Roundabout Underpass (A96 406), Drumlachs Underpass (A96 405), Rumbuch (A96 400)</p> <p>Cross-section width between abutments underneath the Gordon Castle Main Driveway Bridge is insufficient to accommodate a rural dual carriageway.</p> <p>Existing Fochabers New Bridge over River Spey is highly constrained and the River Spey is designated as an SAC.</p> <p>Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, the section includes two high voltage overhead lines.</p>
Maintenance	<p>ARSA Frost Susceptible Area: A96 near Fochabers ARSA Steep Incline: A96 Drumlachs climbing lane</p>
Non-Motorised Users	<p>Existing NMU facilities include designated core paths around Mosstodloch and Fochabers as well as the surrounding woods. There is also the Speyside Way path that runs from north to south (passing through Fochabers). There are a total of six crossing points along the existing A96 including two underpasses, one overpass and three at-grade.</p>
Local Development	<p>Future industrial zoning planned for area south of existing A96 in Mosstodloch west of Coalbrae Roundabout. Future residential zoning indicated for area immediately adjacent to Fochabers East Roundabout. Additional longer term future residential zoning to the southern edge of Fochabers.</p>

Environment

Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:

(Provide summary of key benefits and issues as identified in the SEA.)

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B6 – West of Keith to west of Huntly
Strategy Description	This section generally follows the A96 corridor from west of Keith with an offline bypass to the south of Keith before re-joining the A96 corridor to the south-east of Keith to the end of the section near Carnie.
Engineering and Traffic	
Topography and Land Use	<p>The topography in this section rises steadily towards Blackhill Wood at 190mAOD, before descending towards the River Isla valley before rising again to Cairds Hill (301mAOD), south of Keith. The topography then descend towards the A96 and into the Glen of Coachford with hills of 365mAOD and 215mAOD high to the north of the A96, and peaks of 291mAOD and 264mAOD to the south. The topography continues to rise to the Bin Hill (313mAOD) before falling back towards the River Deveron valley at the eastern extent of the section. The A96 passes between the Bin Hill and another of its peaks (230mAOD) reaching an elevation of 170mAOD. The A96 route also crosses a large number of smaller watercourses as well as the River Isla.</p> <p>The land use within this section is primarily agricultural with some forestry at Cairds Wood and in particular, the Bin Forest. The Aberdeen to Inverness Railway Line and Keith to Dufftown tourist railway are present in this section.</p> <p><u>Land use includes:</u> Keith; Cairnie; Cairds Wood; the Bin Forest; Ashgrove Services; Blackhillock Quarry; BEAR Scotland Roads Maintenance Depot and Blackhillock sub-station.</p> <p><u>Buildings within 60m of A96:</u> 32 No. (inc' 2 No. Listed Buildings) [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>In this section the superficial geology consists predominantly of Glacial Till, although Alluvium and Glaciofluvial Sheet Deposits are associated with the watercourses present within this section. A small number of localised peat deposits are identified scattered throughout the section. There are also discrete areas throughout the section where no superficial deposits are recorded (i.e. thin or absent).</p> <p>The solid geology indicates that the majority of the site is underlain by late-Precambrian rocks of the Dalradian Supergroup (Lochaber and Ballachulish Subgroups). These comprise metasedimentary rocks including pelites, semi-pelites, psammites and quartzite, commonly described as schistose or phyllitic. Strata are typically recorded to dip to the east and south. The Keith Shear Zone is present in the vicinity of Keith and to the south-west, which is represented by a series of south-west/north-east trending thrust faults with hanging walls on the south-east side.</p>
Alignment and Cross-Section	<p>Standard Single Carriageway: 15.5km Includes Coachford Overtaking Lane: 1.5km westbound, and Ashgrove Overtaking Lane: 0.7km eastbound</p> <p>Approximately two fifths of the existing alignment is not to current standards. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B6 is contained within traffic flow sections listed below: Keith: 6,600 Keith to Huntly: 6,800</p>
Accident Rate (Per 100 MVkm)	<p><u>Keith (Urban Single)</u> Accident Rate: 75.31 Fatal Accident Rate: 3.96 <u>Keith to Huntly (Rural Single)</u> Accident Rate: 16.92 Fatal Accident Rate: 1.75</p>
Average Actual Vehicle Speed	<p><u>B9016 Junction to Keith (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 45.70 mph Average Actual Vehicle Speed HGV: n/a <u>Keith West (2010)</u> Current Speed limit: 30 mph Average Actual Vehicle Speed All: 30.01 mph Average Actual Vehicle Speed HGV: 29.20 mph</p>

	<p><u>Keith East (2010)</u> Current Speed limit: 30 mph Average Actual Vehicle Speed All: 27.58 mph Average Actual Vehicle Speed HGV: 24.24 mph</p>
Junctions and Side Roads	<p><u>Existing A96 Junctions (excluding Keith)</u> A Roads: 0 No. B Roads: 3 No. C Roads: 6 No. Unclassified: 2 No. Accesses: 39 No.</p> <p>The existing B class roads in this section are: B9016, B9017 and B9115.</p> <p><u>Offline Bypass Side Roads</u> This section includes an offline bypass to the south of Keith. The strategy for the offline bypass to the south of the town is likely to intersect with the A95 and B9014.</p>
Structures	<p><u>Existing A96</u> Bogbain (A96 390), Coachford Underpass (A96 345), Cairnie (A96 340), Bogmoor (A96 330) <u>Offline Bypass Major Structures</u> Aberdeen to Inverness Railway Line Keith to Dufftown tourist railway Loan Burn River Isla Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, there is an SSE high voltage transmission sub-station to the south of Keith and several high voltage overhead lines in this section. Future corridor for offshore underground high voltage cable which runs from Moray Firth to the west of Keith before continuing south-east to a proposed substation and convertor station at Blackhillock.</p>
Maintenance	<p>Existing A96 maintenance depot is located on a side road off the existing A96 at Blackhillock. ARSA Water Run Off Locations: A96 Carnie Junction – Coachford ARSA Steep Incline: A96 Ashgrove climbing lane ARSA Steep Incline: A96 Cairnie Brae</p>
Non-Motorised Users	<p>Existing NMU facilities include designated core paths surrounding Keith as well as in Cairds Woods. The Isla Way is also present within the section. There are a total of two crossing points along the A96 route, one underpass and one at-grade crossing.</p>
Local Development	<p>Existing zoning generally located on the south-east and east of Keith. Future zoning planned for the east edge of Keith.</p>
Other Constraints	-
Environment	
<p>Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below: <i>(Provide summary of key benefits and issues as identified in the SEA.)</i></p>	

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B7 – West of Huntly to east of Huntly
Strategy Description	This section generally follows the A96 corridor from the west of Huntly to the east of Huntly.
Engineering and Traffic	
Topography and Land Use	<p>The topography at the western extent of this section descends from the Bin Hill towards Huntly which lies in a relatively flat depression at the confluence of the River Deveron and River Bogie. Travelling from the south-west of Huntly, through to the east of Huntly there are a number of hills including Clashmach Hills (375mAOD), Hill of Greenhaug (179mAOD), Ba Hill (238mAOD), Cairn Hill (190mAOD) and Battle Hill (179mAOD) respectively. The land continues to rise to the Hill of Dummuies (282mAOD) which is located to the south of the A96, and south-east of Huntly. Over this section, the existing A96 rises from 125mAOD at Huntly to 220mAOD at Adamston.</p> <p>The strategy passes to the south-west of Huntly, crossing the River Deveron and the River Bogie. To the east of Huntly, the strategy also crosses the Aberdeen to Inverness Railway Line. The land use is primarily agricultural with forestry on the Bin. There are a number of farm and residential properties in the vicinity of the A96, some of which are directly adjacent to the road.</p> <p><u>Land Use Includes:</u> Huntly; Huntly Auction Mart; Agricultural Machinery business; Strathbogie Filling Station and The Bin Forest.</p> <p><u>Buildings within 60m of A96:</u> 27 No. [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>It is indicated that the superficial deposits at the section mainly consist of Glacial Till Deposits. River Terrace and Alluvium Deposits overlying the Glacial Till Deposits are indicated to be associated with the Rivers Bogie and Deveron at and around Huntly.</p> <p>The solid geology underlying the north of the section is part of the Caledonian Igneous Supersuite. These are mainly described as gabbroic rocks including olivine gabbro, orthopyroxene gabbro and xenoliths of pelites, semi-pelites, quartzite and calc-silicate rocks. The Huntly-Knock Pluton located west of Huntly is marked on the geological map as 'contaminated'. Vertical foliations of unspecified origin are recorded within the xenolithic gabbroic rocks.</p> <p>In the southern section of the study area the underlying geology changes to the Upper Proterozoic rocks of the Southern Highland Group. These are described as Psammite and Quartzite with intrusions of biotite granite and olivine gabbro. Steeply dipping foliation and cleavage is recorded within the psammite deposits. The main fault within the section trends north-west/south-east adjacent to the western side of the current A96, north-west of Huntly.</p>
Alignment and Cross-Section	<p>Standard Single Carriageway: 10.7km Includes Bin Hill Overtaking Lane: 1.3 km westbound</p> <p>Approximately half of the existing alignment is not to current design standards. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B7 is contained within traffic flow sections listed below: Keith to Huntly: 6,800 Huntly: 8,100</p>
Accident Rate (Per 100 MVkm)	<p><u>Keith to Huntly (Rural Single)</u> Accident Rate: 16.92 Fatal Accident Rate: 1.75 <u>Huntly (Rural Single)</u> Accident Rate: 54.50 Fatal Accident Rate: 0.00 <u>Huntly to Inverurie (Rural Single)</u> Accident Rate: 15.53 Fatal Accident Rate: 0.68</p>

Average Actual Vehicle Speed	<p><u>Keith to Pitmachie (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 55.26 mph Average Actual Vehicle Speed HGV: n/a</p>
Junctions and Side Roads	<p><u>Existing A96 Junctions</u> A Roads: 4 No. B Roads: 1 No. C Roads: 5 No. Unclassified: 3 No. Accesses: 53 No.</p> <p>The existing A and B class roads in this section are: A97, A920 and B9022.</p>
Structures	<p><u>Existing A96</u> Deveron (A96 320), Meadowburn Underpass (A96 310), Bogie (A96 300), Huntly Rail Overbridge (A96 290), Thaines Burn (A96 280)</p> <p>The Huntly Rail Overbridge has insufficient cross-section underneath the bridge to accommodate a dual carriageway cross-section.</p> <p>Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, the section includes a high voltage overhead line.</p>
Maintenance	<p>ARSA Frost Susceptible Area: A96 north of Huntly near Westerton ARSA Water Run Off Locations: A96 Portsoy Junction to Banff Junction ARSA Steep Incline: A96 Bin Forest climbing lane</p>
Non-Motorised Users	<p>Existing NMU facilities include designated core paths to the north of Huntly and to the south-east. There are further core paths around Ord Hill and Boddum Hill. There are a total of three crossing points along the A96 route including one underpass and two at-grade.</p>
Local Development	<p>Two employment zones are located adjacent to the Auction Mart to the south of the town. All residential zoning is located on the northern edge of the town.</p>
Other Constraints	-

Environment

Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:

(Provide summary of key benefits and issues as identified in the SEA.)

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B8 – East of Huntly to Old Rayne
Strategy Description	This section generally follows the A96 corridor from the east of Huntly through the Glens of Foudland to Old Rayne.
Engineering and Traffic	
Topography and Land Use	<p>The topography continues to rise from the previous section, with the A96 passing between Wind's Eye (314mAOD) and Cot Hill (311mAOD) to the south and the Hill of Thomastown (241mAOD) and the Hill of Chapelton (296mAOD) to the north to reach the peak elevation of 275mAOD. The A96 passes between Broom Hill (274mAOD) and Saddle Hill (294mAOD) to enter the Glens of Foudland, which is situated between Foudland Hill (467mAOD) and the Hill of Skares (329mAOD) to the south and the Hill of Bainshole (326mAOD) and the Hill of Tillymorgan (381mAOD) to the north and east respectively. Leaving the Glens of Foudland, the topography flattens out, with some local undulations, and the A96 descends to an approximate level of 95m at Old Rayne.</p> <p>The land use is primarily agricultural with some areas of forestry on the Wind's Eye, the Hill of Skares and the Hill of Tillymorgan. There are a number of small settlements along the route including Bainshole and Colpy, with other individual businesses, residential and farm properties along the section, many of which are directly adjacent to the A96.</p> <p><u>Land use includes:</u> Glen of Foudland Wind Farm; Dummuies Wind Farm; Colpy; Kirkton of Culsalmond; Bainshole; Pitmachie; Old Rayne; Loch Insch Fishery; Morgan McVeighs and Kellockbank Country Emporium.</p> <p><u>Buildings within 60m of A96:</u> 41 No. (inc' 1 No. Listed Buildings) [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>The superficial deposits consist mainly of Glacial Till Deposits. Thin lenses of Alluvium Deposits overlying the Glacial Till are indicated to be associated with the watercourses throughout the section. Small discrete pockets of Peat are identified in the western area of the section, north and south of the existing A96. Rock is recorded as being at or close to ground level on high ground (above 150m AOD).</p> <p>The solid geology in the north-west of the section is indicated to be metasedimentary rocks of the Southern Highland Group. These are mainly described as psammites, semipelites, pelites and grit. Geological maps indicate that these deposits are dipping in a generally south-east direction. In the south-east of the section the geology is dominated by rocks of the Caledonian igneous suite comprising of plutonic rocks. These are mainly described as olivine gabbro, norite and gabbro-norite. The geological maps show a number of faults scattered throughout the section trending north-west/south-east.</p>
Alignment and Cross Section	<p>Standard Single Carriageway: 15.9km Includes Newtowngarry Overtaking Lane: 1.3 km eastbound, and Whinbrae Overtaking Lane: 1.5 km westbound</p> <p>Approximately half of the existing alignment is not to current design standards. This would be challenging for direct online widening. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	Section B8 is contained within traffic flow sections listed below: Huntly to Inverurie: 8,400
Accident Rate (Per 100 MVkm)	<u>Huntly to Inverurie (Rural Single)</u> Accident Rate: 15.53 Fatal Accident Rate: 0.68
Average Actual Vehicle Speed	<p><u>Keith to Pitmachie (2012)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 55.26 mph Average Actual Vehicle Speed HGV: n/a</p> <p><u>Pitmachie (2010)</u> Current Speed limit: 60 mph Average Actual Vehicle Speed All: 48.00 mph</p>

	Average Actual Vehicle Speed HGV: 44.76 mph
Junctions and Side Roads	<p><u>Existing A96 Junctions</u> A Roads: 1 No. B Roads: 1 No. C Roads: 4 No. Unclassified: 0 No. Accesses: 92 No.</p> <p>The existing A and B class roads in this section are: A920 and B992.</p>
Structures	<p><u>Existing A96</u> Agricultural Underpass (A96 275), Whinbrae Underpass (A96 270), Bainshole (A96 260), Kellock (A96 250), Shevock (A96 240).</p> <p>Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, the section includes a high voltage overhead line. Wind farms are located south-east of Hutnly at Dummuie and the Glens of Foudland.
Maintenance	<p>ARSA Frost Susceptible Area: Glens of Foudland ARSA Water Run Off Locations: A96 Skares – Bainshole ARSA Steep Incline: A96 Newtongarry climbing lane The existing section of the A96 at the Glens of Foudland has a specific monitoring plan as an Area Requiring Special Attention (ARSA) for winter operations.</p>
Non-Motorised Users	Existing NMU facilities include designated core paths around Wishach Hill and Old Rayne. There is a further at Hill of Knockenbaird. There are a total of three crossing points along the route, two underpasses and an at-grade crossing.
Local Development	There are no major areas of development that would interface with the route options. The only areas to note are small area of employment land and community use land in the vicinity of Insch.
Other Constraints	-
Environment	
Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below: <i>(Provide summary of key benefits and issues as identified in the SEA.)</i>	

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B9 – Old Rayne to Kintore (inner)
Strategy Description	This section generally follows the A96 corridor from Old Rayne to the north of Kintore including the existing Inverurie Bypass.
Engineering and Traffic	
Topography and Land Use	<p>The topography in this section rises from the River Urie towards the Bennachie Mountains to the south of the river, including a localised hill, Gallows Hill (177mAOD), which rises steeply to the south of the A96 near Pitcaple. To the north of the A96, the land is undulating and generally rises to the east in the direction of the Hill of Bara (193mAOD), Lawel Hill (236mAOD) and the Hill of Selbie (190mAOD), which are located in an approximate north-south line between Inverurie and Oldmeldrum. Inverurie is located to the north of the confluence of the River Don and River Urie. The existing A96 Inverurie Bypass is located on the western extent of the town on the slopes of Dilly Hill (140mAOD) and the Hill of Ardtannes (159mAOD). The existing A96 crosses the River Don towards Port Elphinstone where it traverses the base of Shaw Hill (174mAOD), parallel to the River Don, towards Kintore.</p> <p>Inverurie is the main settlement in this section with Port Elphinstone adjacent to Inverurie on the south bank of the River Don. The Aberdeen to Inverness Railway Line runs through this section.</p> <p>The single carriageway section of the A96 at Inverurie is constrained between the main town centre, directly adjacent to the north-west of the road, and an additional housing development, business park and golf course located to the south-west of the road. Similarly, the single carriageway section of the A96 is constrained at Port Elphinstone, with the town adjacent to the north-west edge of the road. Kintore Business Park is also located to the north-east, and has direct access from the dual carriageway section of the A96, with Thainstone Events Centre and Auction House, and the Inverurie Paper Mills, located to the south-east and north-west respectively of the existing A96 dual carriageway. The proximity of the railway line to the existing A96, in combination with the settlement at Pitcaple, may restrict opportunities for improvement works in this area.</p> <p><u>Land use includes:</u> Inverurie; Port Elphinstone; Pitmachie; Pitcaple; Inverurie Golf Club; Highclere Business Park; Kintore Business Park; Thainstone Events Centre and Auction House and Inverurie Paper Mills.</p> <p><u>Buildings within 60m of A96:</u> 44 No (inc' 6 No Listed Buildings) [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>The superficial geology beneath this section consists predominately of Glacial Till Deposits. Alluvium, Glaciofluvial Sheet and Glaciolacustrine Deposits are indicated to overlie the Glacial Till, in the vicinity of the Rivers Urie and Don. Localised deposits of Peat are noted throughout the section.</p> <p>The solid geology in the north-west of the section is dominated by igneous rocks of the Caledonian igneous suite comprising of norite and gabbronorite. At and around Inverurie, the geology changes to become predominantly metasedimentary rocks of the Dalradian supergroup. These deposits are generally described as psammite and semipelite with foliation dipping typically towards the north-west. To the south of Inverurie, the underlying geology is dominated by granite of the Aberdeen Formation. The geological maps show a number of faults crossing the north of the section (Westhall to Harlaw) generally trending north-east/south-west.</p>
Alignment and Cross Section	<p>Standard Single Carriageway: 15.7km Rural dual carriageway: 7km</p> <p>Approximately one third of the single carriageway and three quarters of the dual carriageway is not compliant with the current design standards. There is minimal land available surrounding the existing alignment through Inverurie. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B9 (inner) is contained within traffic flow sections listed below: Huntly to Inverurie: 8,400 Inverurie: 22,700</p>

<p>Accident Rate (Per 100 MVkm)</p>	<p><u>Huntly to Inverurie (Rural Single)</u> Accident Rate: 15.53 Fatal Accident Rate: 0.68 <u>Inverurie (Rural Single)</u> Accident Rate: 16.33 Fatal Accident Rate: 0.0 <u>Inverurie to Kintore (Rural Dual)</u> Accident Rate: 6.86 Fatal Accident Rate: 0.0</p>
<p>Average Actual Vehicle Speed</p>	<p>No data available for this section</p>
<p>Junctions and Side Roads</p>	<p><u>Existing A96 Junctions</u> A Roads: 0 No. B Roads: 3 No. C Roads: 7 No. Unclassified: 2 No. Accesses: 46 No.</p> <p>The existing B class roads in this section are: B9002, B9170 and B993.</p>
<p>Structures</p>	<p><u>Existing A96</u> Carden (A96 230), Inveramsay Rail Overbridge (A96 220), Inveramsay Underpass (A96 210), Strathnaterick (A96 200), Drimmies Farm Underpass (A96 190), Conglas Cattle Underpass (A96 180), Inverurie Underpass (A96 175), Inverurie Golf Underpass (A96 170), Upperboat Overbridge (A96 160), Don Inverurie New (A96 150), Quarry Road Interchange (A96 140), Forrest Road Overbridge (A96 130), Castle Road Underpass (A96 120), Dunnecht Road Overbridge (A96 110), Kemnay Road Overbridge (A96 100).</p> <p>Inveramsay Rail Overbridge is to be replaced with a new single carriageway underbridge which carries the A96 over the Aberdeen to Inverness Railway Line.</p> <p>Upperboat Overbridge has insufficient cross section between the piers underneath the bridge to accommodate a rural dual carriageway cross section.</p> <p>Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
<p>Utilities</p>	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, the section includes two high voltage overhead line. Within this section there are also three National Grid High pressure Gas Mains that cross the A9 at two separate locations.</p>
<p>Maintenance</p>	<p>ARSA Frost Susceptible Area: A96 Inverurie Bypass</p>
<p>Non-Motorised Users</p>	<p>Existing NMU facilities include designated core paths along the River Don as well as through Inverurie. There is a further NMU facility at Kintore. There are a total of 20 crossing points, including six underpasses, four overbridges and 10 at-grade.</p>
<p>Local Development</p>	<p>The Westgate development site and Blackhall development sites are located south of the A96 to the north-west and west of Blackhall Roundabout respectively. Site R3 which is located 1km west of Blackhall Roundabout is reserved for the relocation of St Andrews Primary School. Site H1 is proposed for 737 houses over two phases and is located immediately west of the A96 at Port Elphinstone. Similarly, Site E1 to the south of H1 is proposed for employment with additional sites as a strategic reserve employment land. Both of these areas are included in the Crichton Masterplan.</p> <p>The Inverurie South Development Framework sets out the proposed development framework for development sites adjacent to the A96 to the south of Inverurie and specifically sites at Crichton, the Thainstone Auction Mart and Kirkwood Commercial Park. As part of this framework, a new grade separated junction is proposed on the A96 which will be located between the Thainstone and Port Elphinstone roundabouts. To facilitate the grade separated junction, the A96 Thainstone and Port Elphinstone roundabouts would be removed</p>

Other Constraints	The proximity of the Aberdeen to Inverness Railway Line to the sections of the A96 is a significant constraint in these areas. .
Environment	
Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:	
<i>(Provide summary of key benefits and issues as identified in the SEA.)</i>	

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B9 – Old Rayne to Kintore (north)
Strategy Description	This section generally follows the A96 corridor from Old Rayne with an offline bypass to the north and east of Inverurie before re-joining the A96 corridor to the north of Kintore.
Engineering and Traffic	
Topography and Land Use	<p>The topography of the northern strategy is undulating and generally rises away from the River Urie floodplain towards the east, in the direction of the Hill of Bara (193mAOD), Lawel Hill (236mAOD) and the Hill of Selbie (190mAOD) which are located in an approximate north-south line between Inverurie and Oldmeldrum. To the east of Port Elphinstone, the land rises steeply out of the floodplain at the confluence of the River Urie and River Don to local high spots at Upper Kinkell and Hogholm.</p> <p>Land use to the north-east of Inverurie is predominantly agricultural with open fields and farm buildings with some isolated areas of woodland, Pitcaple Quarry and the settlements at Pitcaple, Whiteford and Old Rayne. The town of Inverurie has expanded beyond the River Urie with the recent Uryside development located adjacent to the B9170. The Aberdeen to Inverness Railway Line runs through this section</p> <p><u>Land uses include:</u> Inverurie; Uryside; Pitcaple; Whiteford; Old Rayne; Keith Hall and Pitcaple Quarry.</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>The superficial geology beneath this section consists predominately of Glacial Till Deposits. Alluvium, Glaciofluvial Sheet and Glaciolacustrine Deposits are indicated to overlie the Glacial Till, in the vicinity of the Rivers Urie and Don. Localised deposits of Peat are noted throughout the section.</p> <p>The solid geology in the north-west of the section is dominated by igneous rocks of the Caledonian igneous suite comprising of norite and gabbronorite. At and around Inverurie, the geology changes to become predominantly metasedimentary rocks of the Dalradian supergroup. These deposits are generally described as psammite and semipelite with foliation dipping typically towards the north-west. To the south of Inverurie, the underlying geology is dominated by granite of the Aberdeen Formation. The geological maps show a number of faults crossing the north of the section (Westhall to Harlaw) generally trending north-east/south-west.</p>
Alignment and Cross Section	<p>Standard Single Carriageway: 15.7km Rural dual carriageway: 7km</p> <p>Approximately one third of the single carriageway and three quarters of the dual carriageway is not compliant with the current design standards. The existing alignment will not be a constraint to the offline widening, to the north, along this section. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B9 (north) is contained within traffic flow sections listed below: Huntly to Inverurie: 8,400 Inverurie: 22,700</p>
Accident Rate (Per 100 MVkm)	<p><u>Huntly to Inverurie (Rural Single)</u> Accident Rate: 15.53 Fatal Accident Rate: 0.68 <u>Inverurie (Rural Single)</u> Accident Rate: 16.33 Fatal Accident Rate: 0.0 <u>Inverurie to Kintore (Rural Dual)</u> Accident Rate: 6.86 Fatal Accident Rate: 0.0</p>
Average Actual Vehicle Speed	No data available for this section
Junctions and Side Roads	<p><u>Offline Bypass Side Roads</u> This section includes an offline bypass to the north of Inverurie. The primary roads to the north of Inverurie are the B9001, B9170 and B993.</p>

Structures	<p><u>Offline Bypass Major Structures</u> Aberdeen to Inverness Railway Line (x2) River Urie River Don Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, the section includes two high voltage overhead line. Within this section there are also three National Grid High pressure Gas Mains that cross the A9 at two separate locations.</p>
Maintenance	<p>No specific issues identified at this stage.</p>
Non-Motorised Users	<p>Existing NMU facilities include designated core paths along the River Don as well as through Inverurie. There is a further NMU facility at Kintore. There are a total of 20 crossing points, including six underpasses, four overbridges and 10 at-grade.</p>
Local Development	<p>Majority of future development zoning to the north and north-east of Inverurie. Large bank of zoning for mixed use development located to the north of Inverurie, but are dependent on the feasibility of an Inverurie Eastern bypass. Uryside Development Framework has a masterplan in place for a mixed use development including 1080 residential units, retail, business park, community school and Sports Facilities and Riverside Park. Additional allocation for 250 houses to the north of Inverurie at Portstown.</p>
Other Constraints	<p>The proximity of the Aberdeen to Inverness Railway Line to the sections of the A96 is a significant constraint in these areas.</p>

Environment

Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:

(Provide summary of key benefits and issues as identified in the SEA.)

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B9 – Old Rayne to Kintore (south)
Strategy Description	This section generally follows the A96 corridor from Old Rayne with an offline bypass to the west and south of Inverurie before re-joining the A96 corridor to the north of Kintore.
Engineering and Traffic	
Topography and Land Use	<p>The topography of the southern strategy rises southwards from the River Urie towards the Bennachie Mountains and includes a localised hill, Gallows Hill (177mAOD), which rises steeply to the south of the A96 near Pitcaple. To the west of Inverurie, the undulating topography continues with several hills with valleys in between, including high spots at Knockinglews (238mAOD), Hill of Ardtanes (159mAOD) and Corsman Hill (120mAOD) to the north of the River Don. The river flows generally in an easterly direction across this section towards Inverurie and Port Elphinstone to where it meets the River Urie and continues south, where the land steeply rises from approximately 60mAOD at the river to Roquharold Hill (140mAOD) and Shaw Hill (174mAOD).</p> <p>The land use in this section is mainly agricultural with settlements at Oyne, Kirkton of Oyne and Chaple of Garioch in addition to numerous smaller communities and individual residential and farm properties. The agricultural land is interspersed with areas of forest which are generally located on the slopes of the hills in the area. The Aberdeen to Inverness Railway Line runs through this section.</p> <p><u>Land Use includes:</u> Inverurie: Pitcaple; Oyne; Kirkton of Oyne; Chaple of Garioch and Crichtie Plantation.</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>The superficial geology beneath this section consists predominately of Glacial Till Deposits. Alluvium, Glaciofluvial Sheet and Glaciolacustrine Deposits are indicated to overlie the Glacial Till, in the vicinity of the Rivers Urie and Don. Localised deposits of Peat are noted throughout the section.</p> <p>The solid geology in the north-west of the section is dominated by igneous rocks of the Caledonian igneous suite comprising of norite and gabbronorite. At and around Inverurie, the geology changes to become predominantly metasedimentary rocks of the Dalradian supergroup. These deposits are generally described as psammite and semipelite with foliation dipping typically towards the north-west. To the south of Inverurie, the underlying geology is dominated by granite of the Aberdeen Formation. The geological maps show a number of faults crossing the north of the section (Westhall to Harlaw) generally trending north-east/south-west.</p>
Alignment and Cross Section	<p>Standard Single Carriageway: 15.7km Rural dual carriageway: 7km</p> <p>Approximately one third of the single carriageway and three quarters of the dual carriageway is not compliant with the current design standards. The existing alignment will not be a constraint to the offline widening, to the south, along this section. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B9 (south) is contained within traffic flow sections listed below: Huntly to Inverurie: 8,400 Inverurie: 22,700</p>
Accident Rate (Per 100 MVkm)	<p><u>Huntly to Inverurie (Rural Single)</u> Accident Rate: 15.53 Fatal Accident Rate: 0.68 <u>Inverurie (Rural Single)</u> Accident Rate: 16.33 Fatal Accident Rate: 0.0 <u>Inverurie to Kintore (Rural Dual)</u> Accident Rate: 6.86 Fatal Accident Rate: 0.0</p>

Average Actual Vehicle Speed	No data available for this section
Junctions and Side Roads	<u>Offline Bypass Side Roads</u> This section includes an offline bypass to the south of Inverurie. The primary roads to the north of Inverurie are the B9002 and B993.
Structures	<u>Offline Bypass Major Structures</u> Aberdeen to Inverness Railway Line River Don Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.
Utilities	Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, the section includes two high voltage overhead line. Within this section there are also three National Grid High pressure Gas Mains that cross the A9 at two separate locations.
Maintenance	No specific issues identified at this stage.
Non-Motorised Users	Existing NMU facilitates include designated core paths along the River Don as well as through Inverurie. There is a further NMU facility at Kintore. There are a total of 20 crossing points, including six underpasses, four overbridges and 10 at-grade.
Local Development	Development to the west and south-west of Inverurie is generally located adjacent to the existing A96 corridor. The southern strategy is likely to tie-into existing dual carriageway near to the Crichton Masterplan.
Other Constraints	The proximity of the Aberdeen to Inverness Railway Line to the sections of the A96 is a significant constraint.

Environment

Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:

(Provide summary of key benefits and issues as identified in the SEA.)

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option B
Sub-Section	B10 – Kintore to proposed junction with AWPR
Strategy Description	This section generally follows the A96 corridor from the north of Kintore to the proposed junction with the Aberdeen Western Peripheral Route.
Engineering and Traffic	
Topography and Land Use	<p>The topography of the section rises from Kintore towards Kinellar, with a steeper rise as it crosses the slopes of Tyrebagger Hill (250mAOD) before descending towards Aberdeen. The existing dual carriageway bypasses the settlements of Kintore and Blackburn.</p> <p>The land use around in this section is mainly agricultural along with Kirkhill Forest which is located on Tyrebagger Hill. There are a large number of farm buildings and residential properties in close proximity to the A96, with Aberdeen Airport located to the north-east of this section.</p> <p><u>Land uses includes:</u> Kintore; Blackburn; Kinellar; Kintore Cemetery; Kirkhill Forest; Clinterty Woods; Aberdeen Airport; Marshall's Farm Shop and Marshall Trailers: Disused Refuge tip.</p> <p><u>Buildings within 60m of A96:</u> 21 No. (inc' 1 No. Listed Building) [excluding settlements]</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>The superficial geology is indicated to consist predominantly of Glacial Till Deposits. Alluvium and Glaciofluvial Sheet Deposits are also indicated to underlie the section in the vicinity of watercourses and in particular the River Don. At Blackburn at the eastern end of the section, an outcrop of the Glen Dye Silt Formation is noted comprising of clay, silt and sand. Further east of this are deposits of the Blairdaff Moraine Formation, comprising diamicton, sand and gravel. Throughout the section, at higher topographic levels, there are discrete pockets where no superficial deposits are recorded indicating bedrock to be at or close to ground level.</p> <p>Solid geology is indicated to consist predominately of metasedimentary psammite and semipelite rocks of the Aberdeen Formation. The Clinterty Pluton, consisting of granodiorite, is indicated to be present within the east of the section. Granite of the Aberdeen Pluton is noted at the most eastern extent of the section. The bedrock throughout the section is not indicated to be affected by faulting.</p>
Alignment and Cross Section	<p>Rural dual carriageway: 8.1 km</p> <p>Approximately half of the existing route is not to current design standards. All junctions are at-grade which would require upgrading to be in line with the junction strategy for the route.</p>
Traffic Flows (AADT 2012)	<p>Section B10 is contained within traffic flow sections listed below: Kintore: 22,800 Kintore to Bucksburn: 23,800</p>
Accident Rate (Per 100 MVkm)	<p><u>Kintore to Bucksburn (Rural Dual)</u> Accident Rate: 9.75 Fatal Accident Rate: 0.49</p>
Average Actual Vehicle Speed	No data available for this section
Junctions and Side Roads	<p><u>Existing A96 Junctions</u> A Roads: 0 No. B Roads: 6 No. C Roads: 1 No. Unclassified: 5 No. Accesses: 8 No.</p> <p>The existing B class roads in this section are: B987, B977, B973 and B979.</p>

Structures	<p><u>Existing A96</u> Boghead Farm Underpass (A96 90), Kinellar Road Overbridge (A96 80), Black Burn New (A96 70), Bishopston Farm Underpass (A96 60).</p> <p>Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>Within this section, there are water, gas, electricity and telecommunication apparatus in close proximity to the A96. In addition, the section includes two high voltage overhead line. Within this section there are also three National Grid High pressure Gas Mains that cross the A9 at two separate locations, as well as a BP pipeline.</p>
Maintenance	<p>ARSA Steep Incline: A96 Tyrebagger The existing section of the A96 at Tyrebagger Hill has a specific monitoring plan as an Area Requiring Special Attention (ARSA) for winter operations.</p>
Non-Motorised Users	<p>Existing NMU facilities include designated core paths around Blackburn and Kinellar. There are a further three NMU routes within Kirkhill Forest. There are a total of six crossing points including one overbridge, two underpasses and three at-grade crossings.</p>
Local Development	<p>Potential future zoning to the east of Kintore. Existing land between the A96 and B973 to the west of Blackburn is zoned for employment use with an associated landscaping buffer. Potential for additional residential zoning to the eastern edge of Blackburn to the north off the existing A96 roundabout.</p>
Other Constraints	-
<p>Environment</p>	
<p>Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:</p>	
<p><i>(Provide summary of key benefits and issues as identified in the SEA.)</i></p>	

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option C
Sub-Section	-
Strategy Description	Option C is a fully offline alternative to the Option B strategy between Huntly and Blackburn, passing to the south of the existing A96. The strategy adopts a direct line from near Huntly to Blackburn to bypass Inverurie to the south and avoid a number of sections of poor road alignment on the A96.
Engineering and Traffic	
Topography and Land Use	<p>The topography in Option C rises from a level of approximately 170mAOD, from the online corridor south of Huntly, as it follows the rising topography towards Wishach Hill (422mAOD) and the Hill of Foudland (467mAOD), which are located within close proximity to the proposed strategy. South of Wishach Hill, the topography is undulating with localised high spots at Candle Hill (267mAOD), to the north-west of Insch; Hill of Knockenbaird (190mAOD), to the north of Insch; and Candle Hill (204mAOD) to the south-east of Insch. The topography of the corridor is generally rising from Insch towards the Bennachie Mountain (528mAOD), south of Oyne. To the east of the Bennachie Mountain, the land is generally undulating with high spots to the west of Inverurie at Knockinglews (238mAOD) and Gallows Hill (153mAOD). The strategy crosses the River Don and its floodplain with the land rising out of the floodplain to the south to Aquhythie (130mAOD). The topography then begins to descent towards the existing A96 near Blackburn, at a level of approximately 65mAOD.</p> <p>The main community within the vicinity of the offline strategy is Insch, however there are several other settlements which could be impacted by the construction of Option C including Aquhythie, Ardoyne, Burnhervie, Shanquhar, Oyne and Westhall. Land use is predominantly agricultural with two large areas of forestry at Gartly Moor on Wishach Hill and at Bennachie Forest on the lower slopes of the Bennachie Mountains.</p> <p><u>Land uses includes:</u> Insch; Aquhythie; Ardoyne; Burnhervie; Shanquhar; Oyne; Westhall; Benachie Forest and Gartly Moor.</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>Superficial Deposits for this option predominantly consist of Glacial Till Deposits. Alluvial deposits are indicated to be associated with watercourses in the area. Occasionally the Alluvial deposits are underlain by River Terrace and Glaciofluvial Sheet Deposits. Discrete pockets of peat are also located throughout the study area. At higher elevations rock is shown to be absent or just below ground level.</p> <p>Solid geology consists of a complex mix of metamorphic rocks of Precambrian age and igneous rocks of Ordovician age.</p>
Alignment and Cross Section	The length of this offline strategy is approximately 36km.
Traffic Flows	Not available as strategy is offline.
Accident Data	Not available as strategy is offline.
Diversion	Not available as strategy is offline.
Junctions and Side Roads	<p>The side roads which may be intersected by any new route strategy include the B992, B9002, B993, B994 and B977. There are also additional C Class and Unclassified Roads.</p> <p>The existing A96 will be retained as part of the side road network under this strategy resulting in an additional 43km of de-trunking works.</p>
Structures	<p>A large crossing of the River Don would be required, as well as smaller bridges for The Shevock and Gadie Burn. A railway line structure may also be required.</p> <p>Local road structures and bridges associated with Grade Separated Junctions will be determined through</p>

	application of the junction strategy.
Utilities	This section includes two high voltage overhead lines. A wind farm is located south-east of Huntly at Dummuie. In addition, a wind farm is currently in planning at Hill of Foudland.
Maintenance	Road elevation at the Wishach Hill may be higher than the existing road elevation at the Glens of Foudland which is already an Area Requiring Special Attention (ARSA) for winter operations.
Non-Motorised Users	There is an extensive Core Path network on Bennachie Mountain, as well as at Kenmay and Insch.
Local Development	This strategy mainly passes through remote areas, with the exception of the settlement of Insch. There is an existing site reserved for business use with additional proposed future reserve for employment to the north of Insch. In addition, there is the potential future zoning to the east of Kintore.
Other Constraints	-

Environment

Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:

(Provide summary of key benefits and issues as identified in the SEA.)

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option D
Sub-Section	-
Strategy Description	Option D is a fully offline alternative to the Option B strategy between the Glens of Foudland and Pitcaple.
Engineering and Traffic	
Topography and Land Use	<p>The existing A96 at the north-western extent of this strategy passes in between the Hill of Skares (329mAOD) and the Hill of Tillymorgan (381mAOD) as it leaves the Glens of Foudland. The topography to the south-east of the Glens of Foudland quickly flattens with some local undulations to the north of Old Rayne. To the south and east of Old Rayne, the undulations become more pronounced with local high spots at The Law (155mAOD), Westerton (130mAOD) and Gallows Hill (135mAOD) before descending back towards the level of the existing A96 near Pitcaple, at an elevation of approximately 70mAOD.</p> <p>There are several settlements within this strategy area including Colpy, Pitcaple, Whiteford, Bonnyton, Durno, and Kirkton of Culsalmond. The land use in the area outside of the settlements is agricultural with associated farm properties and buildings dispersed across the area. Forestry is limited to small isolated sections of woodland with the exception of some larger areas on the slopes of the Hill of Skares and the Hill of Tillymorgan and at the southern extent of the strategy in the vicinity of Pitcaple and Whiteford.</p> <p><u>Land use includes:</u> Colpy; Pitcaple; Whiteford; Bonnyton; Durno and Kirkton of Culsalmond.</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>The soils are indicated to consist predominantly of Glacial Till deposits. Localised deposits of alluvium are indicated to be associated with watercourses in the area. Discrete pockets of peat are also located throughout the study area. At higher elevations, rock is shown to be absent or just below ground level.</p> <p>The solid geology consists mainly of the Insch Pluton which is made up of iron rich olivine gabbro and gabbronorite, with the Macduff Formation consisting of micaceous psammite, semipelite and pelite indicated in the north of the option.</p>
Alignment and Cross Section	The length of this offline strategy is approximately 16km.
Traffic Flows	Not available as strategy is offline.
Accident Data	Not available as strategy is offline.
Diversion	Not available as strategy is offline.
Junctions and Side Roads	<p>The side roads which may be intersected by any new route strategy include the A920 and B992. There are also additional C Class and Unclassified Roads.</p> <p>The existing A96 will be retained as part of the side road network under this strategy resulting in an additional 14km of de-trunking works.</p>
Structures	<p>A large crossing of the River Urie would be required, as well as four others for its tributaries. Other structures to maintain accesses will also be necessary.</p> <p>Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	This section includes two high voltage overhead lines. A wind farm is located at Glens of Foudland.

Maintenance	No specific issues identified at this stage.
Non-Motorised Users	There is limited existing NMU provision in this section.
Local Development	The strategy is remote from the main settlements. However, the Local Development Plan has designated landscape areas near Colpy and Old Rayne.
Other Constraints	-

Environment

Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:

(Provide summary of key benefits and issues as identified in the SEA.)

Improvement Strategies Stage 1 Assessment Table	
Improvement Strategy	Option N
Sub-Section	-
Strategy Description	Option N is a fully offline alternative to the Option B strategy between Forres and Fochabers removing the need to travel the longer length of existing A96 through Forres and Elgin.
Engineering and Traffic	
Topography and Land Use	<p>The topography to the south and west of Forres is relatively flat, with elevation levels typically below 50mAOD. However, the Black Burn river valley is located to the east of Forres, where the topography rises to Heldon Hill (234mAOD) in the north and the Hill of the Wangie (319mAOD) in the south, with the Black Burn running along the flat base of the valley between the two hills towards the River Lossie. To the east of the River Lossie and its floodplain, the land generally starts to rise towards Brown Muir Hills (339mAOD), to the south of Fogwatt, and then falls slightly from Fogwatt towards the River Spey and Fochabers. On the east side of the River Spey and its floodplain, the topography rises steadily from around 20m to the level of Whiteash Hill (265mAOD) and Thiefs Hill (250mAOD), which are located to the south-east of Fochabers.</p> <p>There are a number of settlements located within the strategy area including Altonside, Fogwatt, Orbliston, Rafford, and Tulloch as well as individual residential and farm properties distributed across this section. The land use in this section is predominantly agricultural and forestry.</p> <p>To the south of Elgin, there are a number of distilleries in the area and a country park which is located at Millbuies.</p> <p><u>Land use includes:</u> Altonside; Fogwatt; Orbliston; Rafford; Tulloch; Darnaway Forest; Altyre Woods; Teinland Woods; Heldon Woods; Wangie Wood; Millbuies Country Park; Glenlossie Distillery; Glen Elgin Distillery; Longmorn Distillery and Benriach Distillery.</p>
Water Environment, Hydrology and Drainage	<i>(This section will be completed pending completion of the SEA Tier 2.)</i>
Geotechnical	<p>This section is predominantly underlain by Glaciofluvial Ice Contact and Sheet Deposits. Localised areas of Alluvium are also noted around watercourses, namely the Rivers Findhorn and Lossie. In addition, River Terrace and Lacustrine Deposits are also associated with these rivers. There are localised areas of Peat to the south of the study area. Glacial Till is shown to underlie the above superficial deposits throughout the section.</p> <p>The solid geology underlying this section comprises the Nethybridge Psammite Formation consisting of psammite in the centre of the area, with sandstone and conglomerate of Devonian age beneath the west and east of the option.</p>
Alignment and Cross Section	The length of this offline strategy is approximately 42km.
Traffic Flows	Not available as strategy is offline.
Accident Data	Not available as strategy is offline.
Diversion	Not available as strategy is offline.
Junctions and Side Roads	<p>The side roads which may be intersected by any new route strategy include the A940, A941, B9010, B9103 and B9015. There are also additional C Class and Unclassified Roads</p> <p>The existing A96 will be retained as part of the side road network under this strategy resulting in an additional 37.5km of de-trunking works.</p>

Structures	<p>Structures will be required for the large river crossings of the River Findhorn, River Lossie and the River Spey and their respective floodplains.</p> <p>The strategy will also cross the Aberdeen to Inverness Railway Line to the south-east of Lhanbryde.</p> <p>Local road structures and bridges associated with Grade Separated Junctions will be determined through application of the junction strategy.</p>
Utilities	<p>The section includes two high voltage overhead lines.</p>
Maintenance	<p>No specific issues identified at this stage.</p>
Non-Motorised Users	<p>There is a limited Core Path Network in this section. However, there is a network of local routes at Millbuies Country Park at Fogwatt and within Monaghty Wood.</p>
Local Development	<p>This strategy is remote from the main settlements. However, the Local Development Plan includes an Area of Great Landscape Value (AGLV) between Pluscarden and Kellas which includes the Hill of Wangie. In addition, the area around Pluscarden Abbey is designated as the Pluscarden Area of Special Control.</p>
Other Constraints	<p>-</p>

Environment

Detailed information regarding the environmental impacts can be found in the Tier 2 Strategic Environmental Assessment Report. A summary of the SEA findings is included below:

(Provide summary of key benefits and issues as identified in the SEA.)