

## Appendix I

### First Fix Alignments - Assessment Summaries

**Corridor D01 Assessment Review**

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
D01-001	Landscape	The appraisal has identified 36% of the alignment as having Major adverse impacts on landscape character. These occur in sections of earthworks over 15m and where new structures will be introduced. To the north, these are caused by impacts on Williamston House Garden and Designed Landscape (GDL), and to the south by loss of ancient woodland and potential impacts on settlements. Moderate adverse impacts are expected for 28% of the alignments, due to earthworks of 5-15m. The overall assessment of the alignment is Moderate adverse.	Alignment	Approx. 11.7km in length	Operation and inter-urban connectivity	A high standard dual carriageway, combined with a shorter distance than the existing alignment, results in a journey time improvement of 3 minutes, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic.	<p><b>Traffic</b></p> <ul style="list-style-type: none"> <li>In traffic terms, all the alignments in D01 perform similarly however D01_001 is closest to the existing A96 and therefore may attract slightly more traffic from communities to the south west. Conversely, it is also the closest to communities to the north east of the existing A96 and may therefore have less community support.</li> </ul> <p><b>Engineering</b></p> <ul style="list-style-type: none"> <li>All alignments require a crossing of the River Urie at Colpy - the impact of a structure is very similar for all alignments.</li> <li>All alignments similar in overall length (approx. 1km overall difference between longest and shortest)</li> <li>Alignment D01-003 has the lowest earthworks quantities; whereas D01-002 has the highest earthworks quantities. D01-004 has the most advantageous earthworks balance.</li> <li>Similar number of structures associated with each alignment</li> <li>Larger structure associated with alignment option D01-004 at Pitcaple, alignments 001, 002 and 003 have smaller structures.</li> <li>D01-002 is influenced by the 275KV pylon running parallel for approx. 4.8km before crossing under the line. 001 has 3 crossings of the 275kv line, 003 and 004 has one crossing identified.</li> <li>The combination of engineering and environmental impacts in the vicinity of Pitcaple Castle associated with D01-003 and D01-004 suggests D01-001 and D01-002 would be preferable at the southern tie in.</li> </ul> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>At Pitcaple the crossing of the Urie with alignment D01-004 has a major adverse impact and is worse than the other 3 alignments as it does not take the shortest route impacting to a greater extent upon local environmental constraints.</li> <li>Alignment D01-001 impacts on the Williamston GDL, however alignments 002, 003 and 004 avoid this.</li> <li>The impact on the setting of Freefield House would mean D01-001 and D01-004 would be</li> </ul>
	Water	Route crosses the extensive floodplain of the River Urie (ch.11200m) and is perpendicular to flow (moderate adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.650m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 1,284,569m <sup>3</sup> Bulk Fill - 1,086,986m <sup>3</sup> Surplus - 197,583m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. The route severs core paths at Old Rayne, Logie Woods and Whiteford, but provision to maintain connectivity is assumed. Users of footpaths of the A96 in the villages of Colpy, Pitmachie and Pitcaple will experience improved safety due to reduced traffic levels.	
	Ecology	The very northern part of the alignments all incur a moderate adverse impact due to the northern end of all four cutting through a local designated site (Foudland Local Nature Conservation Site), however the remaining parts of all alignments are generally only slightly ecologically adverse and so, overall, each has only scored slight instead of moderate. All four alignments cut through an area of ancient woodland in the east and across a few watercourses, however, this area appears to be largely agricultural so many of the watercourses are actually field drains with only a few exceptions. It is assumed that no realignment of the watercourses is needed.	Geotechnical	Embankments >10m on potentially compressible soils Peat identified at ch 3050 – 3300	Promoting regional economic growth	Moderate improvement in access to jobs and wider strategic transport network due to journey time reduction.	
	People and communities	Prime and non-prime agricultural land is located along section and the alignment passes through large areas of class 3.1 land. There are no class 1 or 2 areas of land.	Structures	10no. Underbridges 4no. Overbridges New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 250m New Underbridge crossing the River Urie and flood plain at Pitcaple - total Length is 250m	Facilitating active travel	Retention of the core paths must be accommodated in the design of this alignment. There are opportunities to improve existing NMU facilities such as surfacing and cycle/pedestrian segregation. Reduced traffic on the existing A96 will make the existing alignment more attractive to NMUs.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Noise and air quality	<p>There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. Minor changes to the noise climate around Old Rayne which is a community with a relative medium population count.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distinct from inhabited areas with population seemingly &lt;10ppl/km along much of their length. This alignment is &lt;200m from Whiteford settlement area so is classed as minor beneficial.</p>	Hydrology	<p>2 active flood plain crossings – River Urie at Colpy (150m) and River Urie at Pitcaple (200m)</p> <p>Bonnyton Burn crossing</p> <p>Numerous small crossings and tributary diversions</p>	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations.	<p>more preferable from an environmental setting perspective than D01-002 and D01-003 thorough this central section of corridor.</p> <ul style="list-style-type: none"> <li>D01-002, 003 and 004 are in close proximity to the Law Cairn scheduled monument.</li> </ul> <p><b>D01_001 performed best across all disciplines and has been assessed as the better performing alignment however the following amendments are recommended for 2<sup>nd</sup> fix assessment:</b></p> <ul style="list-style-type: none"> <li><b>Shift alignment eastward to avoid encroaching on the Williamston House GDL (ch 1000 – 1500m)</b></li> <li><b>Check clearances to SSE 275 Pylon Line (ch 1800m).</b></li> <li><b>Minor realignment at Newton Moss to avoid potential peat (ch 3100m).</b></li> <li><b>Further investigation required post first fix around Pitcaple involving discipline specialists from both environmental and engineering to determine potential to achieve an acceptable solution</b></li> </ul>	
Cultural heritage	<p>This alignment intersects with the north-eastern corner of Williamston House GDL (but moving the alignment during design iteration should enable a direct impact to be avoided). As discussed below, the group of heritage assets at this northern end of the alignment form a ‘pinch-point’, and leave little room for moving the alignment to avoid/ minimise impacts on setting. The alignment runs in close proximity to the end of the tree-lined avenue associated with Freefield House (Listed Building - LB16001), which forms an important part of its setting. This could be acceptable assuming the line of sight along this avenue (including the view towards the ‘borrowed landscape’ of Bennachie) was maintained, and not obscured by the road or associated landscaping. If this view was disrupted, the effect on the setting of Freefield House may be significant. The proximity of the alignment to The Law cairn (Scheduled Monument - SM12113) is a potential issue. The cairn is intentionally situated to be a prominent landscape feature and to have good views over the surrounding landscape. The current baseline includes a woodland plantation which screens views to the south-west from the cairn. If this was removed, and the views in this direction became more open, the impact of this alignment upon the setting of The Law cairn may be higher (and potentially significant).</p>	Utilities	<p>3no. crossing of SSE 275KV lines</p> <p>6no.Pylons within 100m of edge of alignment</p>	Integration	Faster journey times have the potential to improve access to the minor LDP allocations at Old Rayne. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.		
Plans and policies	<p>Route entirely outwith settlement boundaries and Local Development Plan (LDP) allocations. The route does pass through a number of sites which are subject to planning permission for small numbers of houses.</p>	Construction Access & Temporary Disruption/ Traffic Management	<p>Predominately offline construction. Access is possible from the B992 at CH3500. The B992 does not pass through a settlement and links directly to the A96 and A920.</p> <p>Access possible from the C59S at CH 5800. Access from the C59S can either be taken from the B992 or through the settlement of Old Rayne. Access possible from the C82S at CH 10900 and the C76C at CH 11850 however access would be through Whiteford. Access also possible from Unclassified Road at CH 8250 (Access through Old Rayne). Some localised traffic management required.</p>	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Inverurie and Insch, although these can be partially accommodated on the existing A96 and A920.		
Soil and geology	<p>Peat in 225m of alignment, large stretches of prime agricultural land, and mineral resources all present.</p>			Public acceptability	There are public concerns for the loss of prime agricultural land and impact on properties in Old Rayne, Durno and Whiteford. Some people showed a preference for a Strategy D corridor		

Alignment	Environment		Engineering		Traffic	Discipline Review Assessment Commentary
						option in preference to Strategy C as it is more remote from Bennachie.
D01-002	Landscape	Major adverse effects occur at both ends of the alignment due to cuttings of more than 15m, introduction of new structures, impacts on Williamston House GDL close to the north end and loss of ancient woodland at the south end. Moderate adverse effects are due to earthworks of more than 5-15m and potential new structures. The overall assessment of the alignment is Moderate adverse.	Alignment	Approx. 11.7km in length	Operation and inter-urban connectivity	A high standard dual carriageway, combined with a shorter distance than the existing alignment, results in a journey time improvement of 3 minutes, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic.
	Water	Route crosses the extensive floodplain of the River Urie (ch.11200m) and is perpendicular to flow (moderate adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.650m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 1,429,820 m <sup>3</sup> Bulk Fill - 996,719m <sup>3</sup> Surplus – 433,101m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. The route severs core paths at Logie Woods and Whiteford, but provision to maintain connectivity is assumed. Users of footpaths of the A96 in the villages of Colpy, Pitmachie and Pitcaple will experience improved safety due to reduced traffic levels.
	Ecology	The very northern part of the alignments all incur a moderate adverse impact due to the northern end of all four cutting through a local designated site (Foudland Local Nature Conservation Site), however the remaining parts of all alignments are generally only slightly ecologically adverse and so, overall, each has only scored slight instead of moderate. All four alignments cut through an area of ancient woodland in the east and across a few watercourses, however, this area appears to be largely agricultural so many of the watercourses are actually field drains with only a few exceptions. It is assumed that no realignment of the watercourses is needed.	Geotechnical	Embankments >10m on potentially compressible soils Rock cuts >19m identified	Promoting regional economic growth	Moderate improvement in access to jobs and wider strategic transport network due to journey time reduction.
	People and communities	Prime and non-prime agricultural land is located along section and the alignment passes through large areas of class 3.1 land. There are no class 1 or 2 areas of land.	Structures	14no. Underbridges New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 250m New Underbridge crossing the River Urie and flood plain at Pitcaple - total Length is 250m	Facilitating active travel	Retention of the core paths must be accommodated in the design of this alignment. There are opportunities to improve existing NMU facilities such as surfacing and cycle/pedestrian segregation. Reduced traffic on the existing A96 will make the existing alignment more attractive to NMUs.
	Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. Minor changes to the noise climate around Old Rayne which is a community with a relative medium population count.	Hydrology	2 active flood plain crossings – River Urie at Colpy (150m) and River Urie at Pitcaple (200m) Bonnyton Burn crossing Numerous small crossings and tributary diversions	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations.

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		The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distinct from inhabited areas with population seemingly <10ppl/km along much of their length. This alignment is <200m from Whiteford settlement area so is classed as minor beneficial.					
	Cultural heritage	This alignment cuts across the tree-lined avenue associated with Freefield House (LB16001) which forms an important part of its setting. This alignment passes in extremely close proximity to The Law cairn (SM12113), and would cause a major change in its immediate vicinity. The cairn was intentionally located to be a prominent feature in the landscape, with extensive views. This alignment intersects with the north-eastern corner of Williamston House GDL (but moving the alignment during design iteration should enable a direct impact to be avoided).	Utilities	275Kv HV line and pylons within alignment for approximately 4km., 1no. crossing of SSE 275KV lines 17no.Pylons within 100m of edge of alignment, 3no. Wind turbines within 100m of edge of alignment, 1no. Telecomms Mast within 100m of edge of alignment	Integration	Faster journey times have the potential to improve access to the minor LDP allocations at Old Rayne. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. The route does pass in close proximity to local developments sites which are subject to planning permission for small numbers of houses.	Construction Access & Temporary Disruption/ Traffic Management	Predominately offline construction. Access is possible from the B992 at CH3700. The B992 does not pass through a settlement and links directly to the A96 and A920. Access possible from the C59S at CH 5300. Access from the C59S can either be taken from the B992 or through the settlement of Old Rayne. Access also possible from Unclassified Roads at CH 1500 (Access from A920), CH 6950 (Access through Old Rayne), CH 10150 (Access through Old Rayne or Whiteford) and CH 10800 (Access through Whiteford). Access possible from the A96 at CH 11694 and the C82S at CH 11450. Some localised traffic management required.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Inverurie and Insch, although these can be partially accommodated on the existing A96 and A920.	
	Soil and geology	Large stretches of prime agricultural land and mineral resources are present.			Public acceptability	There are public concerns for the loss of prime agricultural land and impact on properties in Old Rayne, Durno and Whiteford. Some people showed a preference for a Strategy D corridor option in preference to Strategy C as it is more remote from Bennachie.	
D01-003	Landscape	Moderate effects are due to earthworks of 5-15m and some loss of woodland and ancient woodland. Major effects are caused by the introduction of new structures, loss of ancient woodland and potential impacts on the setting of Williamston House GDL and Pitcaple Castle. The overall assessment of the alignment is Moderate adverse.	Alignment	Approx. 12.1km in length	Operation and inter-urban connectivity	A high standard dual carriageway, combined with a shorter distance than the existing alignment, results in a journey time improvement of 3 minutes, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic.	
	Water	Route crosses the extensive floodplain of the River Urie (ch.11400m) and is perpendicular to flow (moderate adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.650m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 790,503m <sup>3</sup> Bulk Fill - 980,874m <sup>3</sup> Deficit – 190,372m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. The route severs core paths at Logie Woods and Durno, but provision to maintain connectivity is assumed. Users of footpaths of the A96 in the villages of Colpy, Pitmachie and Pitcaple will experience improved safety due to reduced traffic levels.	

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Ecology	The very northern part of the alignments all incur a moderate adverse impact due to the northern end of all four cutting through a local designated site (Foudland Local Nature Conservation Site), however the remaining parts of all alignments are generally only slightly ecologically adverse and so, overall, each has only scored slight instead of moderate. All four alignments cut through an area of ancient woodland in the east and across a few watercourses, however, this area appears to be largely agricultural so many of the watercourses are actually field drains with only a few exceptions. It is assumed that no realignment of the watercourses is needed.		Geotechnical	Embankments >10m on potentially compressible soils	Promoting regional economic growth	Moderate improvement in access to jobs and wider strategic transport network due to journey time reduction.	
People and communities	There are eight properties within the alignment: Residential properties: Old School House The Old School Pulwhite The Old Mill Hill Brae (Borderline) Moss Side Croft The Lodge Business property: ACM Trailer and Adam Cleaning and Maintenance at The Old Mill. Prime and non-prime agricultural land located along section and the alignment passes through large areas of class 3.1 land. There are no class 1 or 2 areas.		Structures	9no. Underbridges 3no. Overbridges New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 250m New Underbridge crossing the River Urie and flood plain and a farm road at Pitcaple - Total Length is 400m	Facilitating active travel	Retention of the core paths must be accommodated in the design of this alignment. There are opportunities to improve existing NMU facilities such as surfacing and cycle/pedestrian segregation. Reduced traffic on the existing A96 will make the existing alignment more attractive to NMUs.	
Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. Minor changes to the noise climate around Old Rayne which is a community with a relative medium population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distinct from inhabited areas with population seemingly <10ppl/km along much of their length. This alignment is <200m from Whiteford and Durno settlement areas so is classed as minor beneficial.		Hydrology	2 active flood plain crossings – River Urie at Colpy (150m) and River Urie at Pitcaple (375m) Bonnyton Burn crossing Numerous small crossings and tributary diversions	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations.	
Cultural heritage	This alignment cuts across the tree-lined avenue associated with Freefield House (LB16001) which forms an important part of its setting. This alignment passes in extremely close proximity to The Law cairn (SM12113), and would cause a major change in its immediate vicinity. The cairn was intentionally located to be a prominent feature in the landscape, with extensive views. This alignment passes in very close proximity to Category A Listed Pitcaple Castle (and through the non-inventory GDL which forms its setting).		Utilities	1no. crossing of SSE 275KV lines 3no. Pylons within 100m of edge of alignment 3no. Wind turbines within 100m of edge of alignment	Integration	Faster journey times have the potential to improve access to the minor LDP allocations at Old Rayne. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. The route does pass in close proximity to local developments sites which are subject to planning permission for small numbers of houses.	Construction Access & Temporary Disruption/Traffic Management	Predominately offline construction. Access is possible from the B992 at CH3450. The B992 does not pass through a settlement and links directly to the A96. Access possible from the C59S at CH 5600. Access from the C59S can either be taken from the B992 or through the settlement of Old Rayne. Access possible from the C82S at CH 10550 and the C76C at CH 11200 however access would be through Whiteford. Access also possible from Unclassified Road at CH 7450 (Access through Old Rayne). Traffic management will be required to facilitate access from A920 throughout the duration of the works. Temporary speed limits and average speed cameras may be required. Some localised traffic management required	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Inverurie and Insch, although these can be partially accommodated on the existing A96 and A920.	
	Soil and geology	Large stretches of prime agricultural land, contaminated land (railway), and mineral resources are all present.			Public acceptability	There are public concerns for the loss of prime agricultural land and impact on properties in Old Rayne, Durno and Whiteford. Some people showed a preference for a Strategy D corridor option in preference to Strategy C as it is more remote from Bennachie.	
D01-004	Landscape	Major adverse effects occur at the north end of the alignment, by the introduction of a new structure across the river Urie, loss of woodland and impacts on the setting of Williamston House GDL. At the south end of the alignment there are potential impacts on the setting of Pitcaple Castle, due to earthworks and loss of ancient woodland. Moderate adverse effects are due to earthworks of 5-15m and impacts on setting of Williamston House GDL and residential receptors. The overall assessment of the alignment is Moderate adverse.	Alignment	Approx. 12.8km in length	Operation and inter-urban connectivity	A high standard dual carriageway, combined with a shorter distance than the existing alignment, results in a journey time improvement of 3 minutes, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic.	
	Water	Route crosses the extensive floodplain of the River Urie (ch.12000m) and is not perpendicular to flow (major adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.650m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 934,321m <sup>3</sup> Bulk Fill - 954,472m <sup>3</sup> Deficit – 20,151m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. The route severs core paths at Logie Woods and Durno, but provision to maintain connectivity is assumed. Users of footpaths of the A96 in the villages of Colpy, Pitmachie and Pitcaple will experience improved safety due to reduced traffic levels.	
	Ecology	The very northern part of the alignments all incur a moderate adverse impact due to the northern end of all four cutting through a local designated site (Foudland Local Nature Conservation Site), however the remaining parts of all alignments are generally only slightly ecologically adverse and so, overall, each has only scored slight instead of moderate. All four alignments cut through an area of ancient woodland in the east and across a few watercourses, however, this area appears to be largely agricultural so many of the watercourses are actually field drains with only a few exceptions. It is assumed that no realignment of the watercourses is needed.	Geotechnical	Embankments >10m on potentially compressible soils	Promoting regional economic growth	Moderate improvement in access to jobs and wider strategic transport network due to journey time reduction.	

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People and communities	<p>There are 10 properties within the alignment:</p> <p>Residential Properties:            Old School House            The Old School            Pulwhite.            Hill Brae (Borderline)            The Old Mill            Newbigging (borderline)            Loan Head Cottage            Loanhead of Lathries (0.01km south)            1, 2, 3 and 4 The stables, Pitcaple Castle</p> <p>Business Properties:            ACM Trailer and Adam Cleaning &amp; Maintenance at The Old Mill.</p> <p>Other receptors:            Pitcaple Castle outbuilding. Use unknown.            Prime and non-prime agricultural land located along section and the alignment passes through areas of class 3.1 land. There are no class 1 or 2 areas.</p>		Structures	<p>10no. Underbridges            3no. Overbridges            New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 250m            New Underbridge crossing the River Urie and Burn of Durno flood plain at Pitcaple - Total Length is 1050m</p>	Facilitating active travel	Retention of the core paths must be accommodated in the design of this alignment. There are opportunities to improve existing NMU facilities such as surfacing and cycle/pedestrian segregation. Reduced traffic on the existing A96 will make the existing alignment more attractive to NMUs.	
Noise and air quality	<p>Potential noticeable decrease to level of current noise climate at Old Rayne, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area.</p> <p>All of the alignments are distinct from inhabited areas with population seemingly &lt;10ppl/km along much of their length. This alignment is &lt;200m from Durno settlement area so is classed as minor beneficial.</p>		Hydrology	<p>3 active flood plain crossings – River Urie at Colpy (150m), Bonnyton burn (175m) and River Urie at Pitcaple (1005m)            Bonnyton Burn crossing            Numerous small crossings and tributary diversions            Attenuation impacts at Pitcaple – low point in flood plain</p>	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations.	
Cultural heritage	<p>This alignment passes in extremely close proximity to The Law cairn (SM12113), and would cause a major change in its immediate vicinity. The cairn was intentionally located to be a prominent feature in the landscape, with extensive views. This alignment passes in very close proximity to Category A Listed Pitcaple Castle (and through the non-inventory GDL which forms its setting).</p>		Utilities	<p>1no. crossing of SSE 275KV lines            2no.Pylons within 100m of edge of alignment            2no. Wind turbines within 100m of edge of alignment</p>	Integration	Faster journey times have the potential to improve access to the minor LDP allocations at Old Rayne. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.	
Plans and policies	<p>Route entirely outwith settlement boundaries and LDP allocations. The route does pass in close proximity to local developments sites which are subject to planning permission for small numbers of houses.</p>		Construction Access & Temporary Disruption/Traffic Management	<p>Predominately offline construction. Access is possible from the B992 at CH3500. The B992 does not pass through a settlement and links directly to the A96 and A920.            Access possible from the C59S at CH 5800. Access from the C59S can either be taken from the B992 or through the settlement of Old Rayne. Access possible from the C82S at CH 10900 and the C76C at CH 11850 however access would be through</p>	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Inverurie and Insch, although these can be partially accommodated on the existing A96 and A920.	



Alignment	Environment		Engineering	Traffic		Discipline Review Assessment Commentary
	Soil and geology	Large stretch of prime agricultural land across majority of alignment, contaminated land (railway), and large areas of mineral resources, all present.	Whiteford. Access also possible from Unclassified Road at CH 8250 (Access through Old Rayne). Traffic management will be required to facilitate access from A920 throughout the duration of the works. Temporary speed limits and average speed cameras may be required. Some localised traffic management required.	Public acceptability	There are public concerns for the loss of prime agricultural land and impact on properties in Old Rayne, Durno and Whiteford. Some people showed a preference for a Strategy D corridor option in preference to Strategy C as it is more remote from Bennachie.	

Corridor OLN Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
OLN-001	Landscape	While there are sections of earthworks greater than 15m in depth/height and a new structure crossing Glen Water, the alignment is assessed as Moderate due to predominantly Minor and Moderate impacts and the fact that these are due solely to earthworks.	Alignment	Approx. 12.7km in length	Operation and inter-urban connectivity	OLN-001 follows the general line of the existing A96 and therefore has a similar travel distance. As it is a high-quality grade-separated dual carriageway, there are journey time benefits of up to 4 minutes, more reliable journey times due to overtaking opportunities and improved incident management, faster and more efficient freight movements are possible, and there should be more segregation of local and strategic traffic through fewer A96 junctions and the retention of the existing route for local traffic.	<p>Traffic</p> <ul style="list-style-type: none"> <li>Online options may be difficult to retain local access. Reducing level of access to local roads could have significant impact for local population (likely to be low population numbers affected but substantial impact)</li> <li>Very little differentiation between options, with -001, -002 and -003 shorter and therefore offering very slightly faster journey times.</li> </ul> <p>Engineering</p> <ul style="list-style-type: none"> <li>Topography around base of the Hill of Skares is challenging, however potential routes are available offline to the north and south. 007 at eastern end avoids Hill of Skares (1.7km less than 001) and is shortest route overall.</li> <li>May be difficult to provide local access online</li> <li>In providing desirable minimum horizontal geometry around the Hill of Skares, all alignments options (with the exception of 007) require large structures to cross the Glen Water valley.</li> <li>Alignments 001 and 004 very similar in length and earthworks however two less structures associated with 001.</li> <li>Alignments 003, 006 and 008 similar in engineering impact west of Bainshole.</li> <li>Some very challenging topography for all alignments requiring large cuts and fills.</li> <li>Alignment option 005 and 006 generates the highest volumes of earthworks. 006 is particularly onerous at eastern end and requires 82m cut (would require a 1.2km tunnel).</li> </ul> <p>Environmental</p> <ul style="list-style-type: none"> <li>Preference would be an alignment which avoids the need for large structures to cross the valley, particularly crossing the water course.</li> <li>South/west avoiding Hill of Skares is preferred.</li> <li>Offline to the south is best for all topics.</li> </ul> <p><b>Overall – 3 alignments to the western end to be taken forward</b></p> <ul style="list-style-type: none"> <li><b>001 to the west as an online option</b></li> <li><b>007 to the west as an offline option</b></li> <li><b>At the eastern end 007 is to be taken forward. A link from 001 to 007 at Mid Bog is to be considered.</b></li> </ul>
	Water	Route crosses the extensive floodplain of the River Urie (ch.9700m) and is not perpendicular to flow (major adverse). Potential for active morphology at a number of crossings of the River Urie (moderate adverse). Potential requirement for river realignment of the River Urie at ch.6100m (moderate adverse).	Earthworks	Bulk Cut – 1,232,772m <sup>3</sup> Bulk Fill – 3,120,963m <sup>3</sup> Surplus – 1,888,192m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Road safety will be improved and driver stress reduced through the provision of a higher quality, more predictable route with fewer junctions and therefore conflict points. This route will take the Bainshole Bends accident cluster site off the mainline of the A96. The route also presently suffers from winter weather related accidents and a new design will offer opportunities to mitigate against these. NMU activity on the corridor is very limited with no core paths or NMU facilities affected by the route.	
	Ecology	Ecological receptors/constraints include the wildcat priority area, one Local Nature Conservation Site (LNCS), and five water crossings.	Geotechnical	Embankments >25m (up to 30m) on potentially compressible soils. Rock cuttings >19m (up to 22.7m) identified. Peat identified at Ch. 2750 – 3250.	Promoting regional economic growth	The small improvement in journey times will result in faster access to the wider transport network, to jobs and to services.	
	People and communities	Scattered private property along the route with a cluster at Colpy end. Very small area of prime agricultural land at Colpy. Remainder of alignment within non-prime land.	Structures	4no. Underbridges 1no. Overbridge 1no. Grade Separated Junction comprising underbridges for connection with A920. 2no. Viaducts 2no. Existing underbridge widened 1no. Existing culvert widened 6no. Culverts	Facilitating active travel	This route has no impact on active travel provision.	
	Noise and air quality	There is noticeable potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. However, the increase in noise is identified at communities with a relative low population count such as Colpy and communities located by the existing A96.  All alignments are generally in line with the current alignment. The area covered is sparsely populated	Hydrology	1no. active flood plain crossing – River Urie at Ch. 9550 – 9750. 3no. Glen Water watercourse crossings Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The small improvement in journey times will result in faster access to Inverurie and Huntly rail stations.	

Corridor OLN Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
OLN-001	Landscape	While there are sections of earthworks greater than 15m in depth/height and a new structure crossing Glen Water, the alignment is assessed as Moderate due to predominantly Minor and Moderate impacts and the fact that these are due solely to earthworks.	Alignment	Approx. 12.7km in length	Operation and inter-urban connectivity	OLN-001 follows the general line of the existing A96 and therefore has a similar travel distance. As it is a high-quality grade-separated dual carriageway, there are journey time benefits of up to 4 minutes, more reliable journey times due to overtaking opportunities and improved incident management, faster and more efficient freight movements are possible, and there should be more segregation of local and strategic traffic through fewer A96 junctions and the retention of the existing route for local traffic.	<p>Traffic</p> <ul style="list-style-type: none"> <li>Online options may be difficult to retain local access. Reducing level of access to local roads could have significant impact for local population (likely to be low population numbers affected but substantial impact)</li> <li>Very little differentiation between options, with -001, -002 and -003 shorter and therefore offering very slightly faster journey times.</li> </ul> <p>Engineering</p> <ul style="list-style-type: none"> <li>Topography around base of the Hill of Skares is challenging, however potential routes are available offline to the north and south. 007 at eastern end avoids Hill of Skares (1.7km less than 001) and is shortest route overall.</li> <li>May be difficult to provide local access online</li> <li>In providing desirable minimum horizontal geometry around the Hill of Skares, all alignments options (with the exception of 007) require large structures to cross the Glen Water valley.</li> <li>Alignments 001 and 004 very similar in length and earthworks however two less structures associated with 001.</li> <li>Alignments 003, 006 and 008 similar in engineering impact west of Bainshole.</li> <li>Some very challenging topography for all alignments requiring large cuts and fills.</li> <li>Alignment option 005 and 006 generates the highest volumes of earthworks. 006 is particularly onerous at eastern end and requires 82m cut (would require a 1.2km tunnel).</li> </ul> <p>Environmental</p> <ul style="list-style-type: none"> <li>Preference would be an alignment which avoids the need for large structures to cross the valley, particularly crossing the water course.</li> <li>South/west avoiding Hill of Skares is preferred.</li> <li>Offline to the south is best for all topics.</li> </ul> <p><b>Overall – 3 alignments to the western end to be taken forward</b></p> <ul style="list-style-type: none"> <li><b>001 to the west as an online option</b></li> <li><b>007 to the west as an offline option</b></li> <li><b>At the eastern end 007 is to be taken forward. A link from 001 to 007 at Mid Bog is to be considered.</b></li> </ul>
	Water	Route crosses the extensive floodplain of the River Urie (ch.9700m) and is not perpendicular to flow (major adverse). Potential for active morphology at a number of crossings of the River Urie (moderate adverse). Potential requirement for river realignment of the River Urie at ch.6100m (moderate adverse).	Earthworks	Bulk Cut – 1,232,772m <sup>3</sup> Bulk Fill – 3,120,963m <sup>3</sup> Surplus – 1,888,192m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Road safety will be improved and driver stress reduced through the provision of a higher quality, more predictable route with fewer junctions and therefore conflict points. This route will take the Bainshole Bends accident cluster site off the mainline of the A96. The route also presently suffers from winter weather related accidents and a new design will offer opportunities to mitigate against these. NMU activity on the corridor is very limited with no core paths or NMU facilities affected by the route.	
	Ecology	Ecological receptors/constraints include the wildcat priority area, one Local Nature Conservation Site (LNCS), and five water crossings.	Geotechnical	Embankments >25m (up to 30m) on potentially compressible soils. Rock cuttings >19m (up to 22.7m) identified. Peat identified at Ch. 2750 – 3250.	Promoting regional economic growth	The small improvement in journey times will result in faster access to the wider transport network, to jobs and to services.	
	People and communities	Scattered private property along the route with a cluster at Colpy end. Very small area of prime agricultural land at Colpy. Remainder of alignment within non-prime land.	Structures	4no. Underbridges 1no. Overbridge 1no. Grade Separated Junction comprising underbridges for connection with A920. 2no. Viaducts 2no. Existing underbridge widened 1no. Existing culvert widened 6no. Culverts	Facilitating active travel	This route has no impact on active travel provision.	
	Noise and air quality	There is noticeable potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. However, the increase in noise is identified at communities with a relative low population count such as Colpy and communities located by the existing A96.  All alignments are generally in line with the current alignment. The area covered is sparsely populated	Hydrology	1no. active flood plain crossing – River Urie at Ch. 9550 – 9750. 3no. Glen Water watercourse crossings Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The small improvement in journey times will result in faster access to Inverurie and Huntly rail stations.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		and there are no agglomerations of receptors. All alignments are assigned neutral impact.					<ul style="list-style-type: none"> <li>- Also investigate the impact of a relaxation in geometry around the Hill of Skares to mirror the existing road.</li> <li>- Alignment 008 (with modifications to align closer to 006 at western end in 2<sup>nd</sup> fix) was also chosen to be taken forward.</li> <li>- The team agreed that that an option heading north( between the Hills of Skares and Foundland to the Hill of Bainshole) from Colpy will provide an alternative to alignment 007, if connections to OLC and D01/02/03 prove difficult (option 008).</li> </ul>
	Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	4no. crossing of AC private water supplies 4no. crossing of SGN high pressure gas pipelines 1no. crossing of SSE 33Kv cables 21no. crossing of SSE 11Kv lines 2no. crossing of SSE 275Kv lines 2no. crossing of SSE 33Kv lines 16no. crossing of SSE low voltage cables 9no. crossing of SSE low voltage lines 7no. SSE pylons within 100m of edge of alignment 7no. crossing of SW distribution main (100 to 300) 7no. crossing of SW distribution main (<100) 3no. crossing of SW gravity pipes 1no. impact on SW wastewater treatment works 1no. impact on Traffic Scotland assets	Integration	There will be some benefit to access to LDP allocations in Huntly. Journey time and reliability improvements are a key local and national policy thread, as is the best utilisation of existing infrastructure which is partially met by this alignment's use of the A96 corridor.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the C66S at CH 3250. Access also possible from the C87S at CH 10100. Access also possible from the A920 at CH 12000. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be at least as good as it is in the area now.	
	Soil and geology	Peat in 400m of alignment. Contaminated Land (mill in one location). Small areas of mineral resources.			Public acceptability	There is support for online routes as these are perceived to have lower costs and less environmental impact. The route has a high elevation in the Glens of Foudland and there are public concerns that winter weather will continue to affect it. There are also some concerns for loss of passing trade for businesses no longer directly connected to the A96.	
OLN-002	Landscape	The majority of impacts are Major or Minor along this alignment and relate primarily to earthworks. Given the relatively small amount of woodland that would be removed and the alignment is assessed as Moderate adverse overall.	Alignment	Approx. 13.3km in length	Operation and inter-urban connectivity	OLN-002 is slightly longer than OLN-001 and the existing A96, but as it as a high-quality grade-separated dual carriageway, there are journey time benefits of up to 4 minutes, more reliable journey times due to overtaking opportunities and improved incident management, faster and more efficient freight movements are possible, and there should be more segregation of local and strategic traffic through fewer A96 junctions and the retention of the existing route for local traffic.	
	Water	Route crosses the extensive floodplain of the River Urie (ch.10300m) and is not perpendicular to flow (major adverse). Potential for active morphology at a number of crossings of the River Urie (moderate adverse).	Earthworks	Bulk Cut – 1,803,668m <sup>3</sup> Bulk Fill – 3,227,234m <sup>3</sup> Surplus – 1,423,565m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Road safety will be improved and driver stress reduced through the provision of a higher quality, more predictable route with fewer junctions and therefore conflict points. This route will take the Bainshole Bends accident cluster site off the mainline of the A96. The route also presently suffers from winter weather related	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						accidents and a new design will offer opportunities to mitigate against these. NMU activity on the corridor is very limited with no core paths or NMU facilities affected by the route.	
	Ecology	Ecological receptors/constraints include the wildcat priority area, one Local Nature Conservation Site (LNCS), and three water crossings.	Geotechnical	Embankments >25m (up to 29.3m) on potentially compressible soils. Rock cuttings >19m (up to 22.1m) identified. Peat identified at Ch. 3000 – 3300.	Promoting regional economic growth	The small improvement in journey times will result in faster access to the wider transport network, to jobs and to services.	
	People and communities	Scattered private property along the route with a cluster at Colpy end. Very small area of prime agricultural land at Colpy. Remainder of alignment within non-prime land.	Structures	6no. Underbridges 1no. Overbridge 1no. Grade Separated Junction comprising underbridges for connection with A920. 2no. Viaducts 1no. Existing underbridge widened 3no. Culverts	Facilitating active travel	This route has no impact on active travel provision.	
	Noise and air quality	There is noticeable potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. However, the increase in noise is identified at communities with a relative low population count such as Colpy and communities located by the existing A96.  All alignments are generally in line with the current alignment. The area covered is sparsely populated and there are no agglomerations of receptors. All alignments are assigned neutral impact.	Hydrology	1no. active flood plain crossing – River Urie at Ch. 10100 – 10350. 2no. Glen Water watercourse crossings Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The small improvement in journey times will result in faster access to Inverurie and Huntly rail stations.	
	Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	2no. crossing of AC private water supplies 2no. crossing of SGN high pressure gas pipelines 3no. crossing of SSE 33Kv cables 16no. crossing of SSE 11Kv lines 4no. crossing of SSE 275Kv lines 2no. crossing of SSE 33Kv lines 14no. crossing of SSE low voltage cables 4no. crossing of SSE low voltage lines 7no. SSE pylons within 100m of edge of alignment 9no. crossing of SW distribution main (100 to 300) 7no. crossing of SW distribution main (<100) 3no. crossing of SW gravity pipes 1no. impact on SW wastewater treatment works 1no. impact on Traffic Scotland assets 1no. wind turbines within 100m of edge of alignment	Integration	There will be some benefit to access to LDP allocations in Huntly. Journey time and reliability improvements are a key local and national policy thread. as is the best utilisation of existing infrastructure although OLN-002 utilises little of the existing route.	
	Plans and policies	Route entirely outwith settlement boundaries and Local Development Plan (LDP) allocations. Route passes through small scale committed development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the C66S at CH 3500 to CH 4250.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be at least as good as it is in the area now.	
	Soil and geology	Peat in 350m of alignment. Small area of prime agricultural land. Contaminated Land (textile mill in one location). Small areas of mineral resources.		Access also possible from the C87S at CH 10650. Access also possible from the A920 at CH 12550. Temporary access roads required to facilitate construction.	Public acceptability	There is support for online routes as these are perceived to have lower costs and less environmental impact, although OLN-002 is less likely to be perceived as “online” than OLN-001.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
				Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.		The route has a high elevation in the Glens of Foudland and there are public concerns that winter weather will continue to affect it. There are also some concerns for loss of passing trade for businesses no longer directly connected to the A96.	
OLN-003	Landscape	The majority of impacts are Moderate or Minor along this alignment and relate primarily to earthworks. Given the relatively small loss of woodland the alignment is assessed as Moderate adverse overall.	Alignment	Approx. 12.1km in length	Operation and inter-urban connectivity	OLN-003 covers a similar distance to the A96, so as it as a high-quality grade-separated dual carriageway, there are journey time benefits of up to 4 minutes, more reliable journey times due to overtaking opportunities and improved incident management, faster and more efficient freight movements are possible, and there should be more segregation of local and strategic traffic through fewer A96 junctions and the retention of the existing route for local traffic.	
	Water	Route crosses the extensive floodplain of the River Urie (ch.9100m) and is not perpendicular to flow (major adverse). Potential for active morphology at a number of crossings of the River Urie (moderate adverse). Potential requirement for river realignment of the River Urie at a number of locations where existing A96 is in close proximity to the watercourse (moderate adverse).	Earthworks	Bulk Cut – 1,360,897m <sup>3</sup> Bulk Fill – 3,039,465m <sup>3</sup> Surplus – 1,678,568m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Road safety will be improved and driver stress reduced through the provision of a higher quality, more predictable route with fewer junctions and therefore conflict points. This route will take the Bainshole Bends accident cluster site off the mainline of the A96. The route also presently suffers from winter weather related accidents and a new design will offer opportunities to mitigate against these. NMU activity on the corridor is very limited with no core paths or NMU facilities affected by the route.	
	Ecology	Ecological receptors/constraints include the wildcat priority area, one Local Nature Conservation Site (LNCS), and four water crossings.	Geotechnical	Embankments >25m (up to 29.5m) on potentially compressible soils. Cuttings >19m (up to 21.3m) identified.	Promoting regional economic growth	The small improvement in journey times will result in faster access to the wider transport network, to jobs and to services.	
	People and communities	Scattered private property along the route with a cluster at Colpy end. Very small area of prime agricultural land at Colpy. Remainder of alignment within non-prime land.	Structures	5no. Underbridges 2no. Overbridges 1no. Grade Separated Junction comprising underbridges for connection with A920. 2no. Viaducts 1no. Bridge over Farm Rd and culvert 3no. Culverts 1no. Existing culvert widened	Facilitating active travel	This route has no impact on active travel provision.	
	Noise and air quality	There is noticeable potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. However, the increase in noise is identified at communities with a relative low population count such as Colpy and communities located by the existing A96.	Hydrology	1no. active flood plain crossing – River Urie at Ch. 8950 – 9150. 3no. Glen Water watercourse crossings 1no. Wedderburn watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The small improvement in journey times will result in faster access to Inverurie and Huntly rail stations.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		All alignments are generally in line with the current alignment. The area covered is sparsely populated and there are no agglomerations of receptors. All alignments are assigned neutral impact.					
	Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	5no. crossing of AC private water supplies 3no. crossing of SGN high pressure gas pipelines 2no. crossing of SSE 33Kv cables 33no. crossing of SSE 11Kv lines 1no. crossing of SSE 275Kv lines 2no. crossing of SSE 33Kv lines 16no. crossing of SSE low voltage cables 11no. crossing of SSE low voltage lines 1no. SSE pylons within 100m of edge of alignment 6no. crossing of SW distribution main (100 to 300) 7no. crossing of SW distribution main (<100) 3no. crossing of SW gravity pipes 1no. impact on SW wastewater treatment works 2no. impact on Traffic Scotland assets 1no. wind turbines within 100m of edge of alignment	Integration	There will be some benefit to access to LDP allocations in Huntly. Journey time and reliability improvements are a key local and national policy thread, as is the best utilisation of existing infrastructure which is partially met by this alignment's use of the A96 corridor.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the C82S at CH 3300. Access also possible from the C87S at CH 9500. Access also possible from the A920 at CH 10750. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be at least as good as it is in the area now.	
	Soil and geology	Small area of prime agricultural land. Contaminated Land (textile mill in one location). Small areas of mineral resources.			Public acceptability	There is support for online routes as these are perceived to have lower costs and less environmental impact. The route has a high elevation in the Glens of Foudland and there are public concerns that winter weather will continue to affect it. There are also some concerns for loss of passing trade for businesses no longer directly connected to the A96.	
OLN-004	Landscape	The majority of impacts are Major or Minor along this alignment and relate primarily to earthworks. Given the fact that the alignment is predominantly off line it is assessed as Major adverse overall.	Alignment	Approx. 12.9km in length	Operation and inter-urban connectivity	OLN-004 covers a longer distance than the existing A96. It as a high-quality grade-separated dual carriageway offering journey time benefits of up to 3 minutes, lower than for OLN-001, -002 and -003. There are also more reliable journey times due to overtaking opportunities and improved incident management, faster and more efficient freight movements are possible, and there should be more segregation of local and strategic traffic through fewer A96 junctions and the retention of the existing route for local traffic.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential for active morphology at a number of	Earthworks	Bulk Cut – 2,567,040m <sup>3</sup> Bulk Fill – 1,799,662m <sup>3</sup> Surplus – 767,378m <sup>3</sup> *no allowance for structures	Safety for motorised and non-	Road safety will be improved and driver stress reduced through the provision of a higher quality, more predictable route with fewer junctions	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		crossings of the River Urie (moderate adverse). Potential requirement for river realignment of the River Urie at a number of locations (moderate adverse).			motorised users	and therefore conflict points. This route will take the Bainshole Bends accident cluster site off the mainline of the A96. The route also presently suffers from winter weather related accidents and a new design will offer opportunities to mitigate against these. NMU activity on the corridor is very limited with no core paths or NMU facilities affected by the route.	
	Ecology	Ecological receptors/constraints include the wildcat priority area, one Local Nature Conservation Site (LNCS), and five water crossings.	Geotechnical	Embankments >25m (up to 29.3m) on potentially compressible soils. Rock cuttings >19m (up to 29.2m) identified. Peat identified at Ch. 3000 – 3350.	Promoting regional economic growth	The small improvement in journey times will result in faster access to the wider transport network, to jobs and to services.	
	People and communities	Scattered private property along the route with a cluster at Colpy end. Very small area of prime agricultural land at Colpy. Remainder of alignment within non-prime land.	Structures	6no. Underbridges 1no. Overbridge 1no. Grade Separated Junction comprising underbridges for connection with A920. 2no. Viaducts 2no. Existing underbridge widened 2no. Culverts 1no. Existing culvert widened	Facilitating active travel	This route has no impact on active travel provision.	
	Noise and air quality	There is noticeable potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. However, the increase in noise is identified at communities with a relative low population count such as Colpy and communities located by the existing A96.  All alignments are generally in line with the current alignment. The area covered is sparsely populated and there are no agglomerations of receptors. All alignments are assigned neutral impact.	Hydrology	1no. active flood plain crossing – River Urie at Ch. 9750 – 9900. 3no. Glen Water watercourse crossings Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The small improvement in journey times will result in faster access to Inverurie and Huntly rail stations.	
	Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	3no. crossing of AC private water supplies 4no. crossing of SGN high pressure gas pipelines 1no. crossing of SSE 33Kv cables 20no. crossing of SSE 11Kv lines 3no. crossing of SSE 275Kv lines 2no. crossing of SSE 33Kv lines 12no. crossing of SSE low voltage cables 8no. crossing of SSE low voltage lines 6no. SSE pylons within 100m of edge of alignment 8no. crossing of SW distribution main (100 to 300) 7no. crossing of SW distribution main (<100) 3no. crossing of SW gravity pipes 1no. impact on SW wastewater treatment works 1no. impact on Traffic Scotland assets	Integration	There will be some benefit to access to LDP allocations in Huntly. Journey time and reliability improvements are a key local and national policy thread, as is the best utilisation of existing infrastructure which is partially met by this alignment's use of the A96 corridor.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Route passes through small scale committed development.	Construction Access & Temporary Disruption/	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the C66S at CH 3500. Access also possible from the C87S at CH 10500.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be at least as good as it is in the area now.	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Soil and geology	Peat in 350m of alignment. Small areas of prime agricultural land. Contaminated Land (textile mill in one location). Small areas of mineral resources.	Traffic Management	Access also possible from the A920 at CH 12150. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Public acceptability	There is support for online routes as these are perceived to have lower costs and less environmental impact. The route has a high elevation in the Glens of Foudland and there are public concerns that winter weather will continue to affect it.	
OLN-005	Landscape	The majority of impacts are Major or Moderate along this alignment. The scale of earthworks is considerable at two locations with cuttings of up to 32m and 58m respectively. In addition there will be considerable variation in levels at five other locations along the alignment. The overall impact is therefore assessed as Major adverse.	Alignment	Approx. 12.5km in length	Operation and inter-urban connectivity	OLN-005 covers the longest distance of any OLN route, so even though it as a high-quality grade-separated dual carriageway it offers journey time benefits of a maximum of only 2 minutes. There are also more reliable journey times due to overtaking opportunities and improved incident management, faster and more efficient freight movements are possible, and there should be more segregation of local and strategic traffic through fewer A96 junctions and the retention of the existing route for local traffic.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential for active morphology at the crossing of the River Urie at ch.9450m (moderate adverse). Potential requirement for river realignment of the River Urie at a number of locations (moderate adverse).	Earthworks	Bulk Cut – 10,458,312m <sup>3</sup> Bulk Fill – 1,736,424m <sup>3</sup> Surplus – 8,721,888m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Road safety will be improved and driver stress reduced through the provision of a higher quality, more predictable route with fewer junctions and therefore conflict points. This route will take the Bainshole Bends accident cluster site off the mainline of the A96. The route also presently suffers from winter weather related accidents and a new design will offer opportunities to mitigate against these. NMU activity on the corridor is very limited with no core paths or NMU facilities affected by the route.	
	Ecology	Ecological receptors/constraints include the wildcat priority area, one Local Nature Conservation Site (LNCS), and four water crossings.	Geotechnical	Embankments >25m (up to 31.6m) on potentially compressible soils. Cuttings >49m (up to 58.5m) identified.	Promoting regional economic growth	The small improvement in journey times will result in faster access to the wider transport network, to jobs and to services.	
	People and communities	Scattered private property along the route with a cluster at Colpy end. Very small area of prime agricultural land at Colpy. Remainder of alignment within non-prime land.	Structures	4no. Underbridges 4no. Overbridges 1no. Viaduct 1no. Existing underbridge widened 2no. Culverts 1no. Existing culvert widened	Facilitating active travel	This route has no impact on active travel provision.	
	Noise and air quality	There is noticeable potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. However, the increase in noise is identified at communities with a relative low population count such as Colpy and communities located by the existing A96.	Hydrology	1no. Glen Water watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The small improvement in journey times will result in faster access to Inverurie and Huntly rail stations.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		All alignments are generally in line with the current alignment. The area covered is sparsely populated and there are no agglomerations of receptors. All alignments are assigned neutral impact.					
	Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	5no. crossing of AC private water supplies 3no. crossing of SGN high pressure gas pipelines 1no. crossing of SSE 33Kv cables 19no. crossing of SSE 11Kv lines 1no. crossing of SSE 275Kv lines 2no. crossing of SSE 33Kv lines 11no. crossing of SSE low voltage cables 11no. crossing of SSE low voltage lines 4no. SSE pylons within 100m of edge of alignment 7no. crossing of SW distribution main (100 to 300) 7no. crossing of SW distribution main (<100) 3no. crossing of SW gravity pipes 1no. impact on SW wastewater treatment works 2no. impact on Traffic Scotland assets	Integration	There will be some benefit to access to LDP allocations in Huntly. Journey time and reliability improvements are a key local and national policy thread, as is the best utilisation of existing infrastructure which is partially met by this alignment's use of the A96 corridor.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the C82S at CH 3200. Access also possible from the C87S at CH 10500. Access also possible from the C87S at CH 9900. Access also possible from the A920 at CH 12150. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be at least as good as it is in the area now.	
	Soil and geology	Small area of prime agricultural land. Contaminated Land (textile mill in one location). Small areas of mineral resources.			Public acceptability	There is support for online routes as these are perceived to have lower costs and less environmental impact. The route has a high elevation in the Glens of Foudland and there are public concerns that winter weather will continue to affect it.	
OLN-006	Landscape	The majority of impacts are Major or Moderate along this alignment. The scale of earthworks is considerable at three locations with an embankment up to 32m in height and cuttings of up to 28m and 82m respectively. The overall impact is therefore assessed as Major adverse.	Alignment	Approx. 11.6km in length	Operation and inter-urban connectivity	OLN-006 is a largely offline route longer than the existing A96. As a high-quality grade-separated dual carriageway it offers journey time benefits of a maximum of only 3 minutes, more reliable journey times due to overtaking opportunities and improved incident management, faster and more efficient freight movements are possible, and there should be more segregation of local and strategic traffic through fewer A96 junctions and the retention of the existing route for local traffic.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential for active morphology at the crossing of the River Urie at ch.8750m (moderate adverse). Potential requirement for river realignment of the River Urie at ch.6500m (moderate adverse).	Earthworks	Bulk Cut – 14,652,735m <sup>3</sup> Bulk Fill – 2,557,997m <sup>3</sup> Surplus – 12,094,738m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Road safety will be improved and driver stress reduced through the provision of a higher quality, more predictable route with fewer junctions and therefore conflict points. This route will take the Bainshole Bends accident cluster site off the mainline of the A96. The route also presently suffers from winter weather related	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						accidents and a new design will offer opportunities to mitigate against these. NMU activity on the corridor is very limited with no core paths or NMU facilities affected by the route.	
	Ecology	Ecological receptors/constraints include the wildcat priority area, one Local Nature Conservation Site (LNCS), and four water crossings.	Geotechnical	Embankments >25m (up to 33.1m) on potentially compressible soils. Rock cuttings >39m (up to 82m) identified.	Promoting regional economic growth	The small improvement in journey times will result in faster access to the wider transport network, to jobs and to services.	
	People and communities	Scattered private property along the route with a cluster at Colpy end. Very small area of prime agricultural land at Colpy. Remainder of alignment within non-prime land. Two commercial properties at CH 10000 and 10250.	Structures	4no. Underbridges 3no. Overbridges 1no. Grade Separated Junction comprising underbridges for connection with A920. 1no. Viaducts 1no. Culvert	Facilitating active travel	This route has no impact on active travel provision.	
	Noise and air quality	There is noticeable potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. However, the increase in noise is identified at communities with a relative low population count such as Colpy and communities located by the existing A96.  All alignments are generally in line with the current alignment. The area covered is sparsely populated and there are no agglomerations of receptors. All alignments are assigned neutral impact.	Hydrology	1no. Glen Water watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The small improvement in journey times will result in faster access to Inverurie and Huntly rail stations.	
	Cultural heritage	At the southern end of the alignment, this alignment diverges from the course of the existing A96 road, and may have an effect upon the setting of Woodside hut circles (Scheduled Monument - SM11513).	Utilities	6no. crossing of AC private water supplies 2no. crossing of SGN high pressure gas pipelines 1no. crossing of SSE 33Kv cables 14no. crossing of SSE 11Kv lines 1no. crossing of SSE 275Kv lines 2no. crossing of SSE 33Kv lines 16no. crossing of SSE low voltage cables 3no. crossing of SSE low voltage lines 1no. SSE pylons within 100m of edge of alignment 8no. crossing of SW distribution main (100 to 300) 7no. crossing of SW distribution main (<100) 3no. crossing of SW gravity pipes 1no. impact on SW wastewater treatment works 1no. impact on Traffic Scotland assets 3no. wind turbines within 100m of edge of alignment	Integration	There will be some benefit to access to LDP allocations in Huntly. Journey time and reliability improvements are a key local and national policy thread, as is the best utilisation of existing infrastructure; this route uses little of the existing A96.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the C82S at CH 3250. Access also possible from the A920 at CH 10900. Limited availability of alternative access points between Ch. 6350 – 10650. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be at least as good as it is in the area now.	
	Soil and geology	Small area of prime agricultural land. Contaminated Land (textile mill in one location). Small areas of mineral resources.			Public acceptability	There is support for online routes as these are perceived to have lower costs and less environmental impact, although the level to which this route will be perceived as “online” is limited. The route has a high elevation in the	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
				works. Temporary speed limits and average speed cameras may be required.		Glens of Foudland and there are public concerns that winter weather will continue to affect it.	
OLN-007	Landscape	The majority of impacts are Major or Moderate along this alignment. The scale of earthworks is considerable at two locations with cuttings of up to 27m and 35m respectively. The overall impact is therefore assessed as Major adverse.	Alignment	Approx. 11.5km in length	Operation and inter-urban connectivity	OLN-007 is a largely offline route longer than the existing A96. As a high-quality grade-separated dual carriageway it offers journey time benefits of a maximum of only 3 minutes, more reliable journey times due to overtaking opportunities and improved incident management, faster and more efficient freight movements are possible, and there should be more segregation of local and strategic traffic through fewer A96 junctions and the retention of the existing route for local traffic.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse).	Earthworks	Bulk Cut – 4,946,754m <sup>3</sup> Bulk Fill – 560,082m <sup>3</sup> Surplus – 4,386,672m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Road safety will be improved and driver stress reduced through the provision of a higher quality, more predictable route with fewer junctions and therefore conflict points. This route will take the Bainshole Bends accident cluster site off the mainline of the A96. The route also presently suffers from winter weather related accidents and a new design will offer opportunities to mitigate against these. NMU activity on the corridor is very limited with no core paths or NMU facilities affected by the route.	
	Ecology	Ecological receptors/constraints include the wildcat priority area, one Local Nature Conservation Site (LNCS), two water crossings, and two areas with protected species (badgers).	Geotechnical	Embankments up to 8.6m high on potentially compressible material. Rock cuttings >19m (up to 35.6m) identified. Peat identified at Ch. 2950 – 3350.	Promoting regional economic growth	The small improvement in journey times will result in faster access to the wider transport network, to jobs and to services.	
	People and communities	Scattered private property along the route.	Structures	6no. Underbridges 1no. Overbridge 1no. Grade Separated Junction comprising underbridges for connection with A920. 1no. Viaduct 1no. Existing underbridge widened	Facilitating active travel	This route has no impact on active travel provision.	
	Noise and air quality	Potential noticeable decrease to level of current noise climate at Colpy and receptors located by A96, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts only communities with a relative low population count.  All alignments are generally in line with the current alignment. The area covered is sparsely populated and there are no agglomerations of receptors. All alignments are assigned neutral impact.	Hydrology	Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The small improvement in journey times will result in faster access to Inverurie and Huntly rail stations.	
	Cultural heritage	At the southern end of the alignment, this alignment diverges from the course of the existing	Utilities	3no. crossing of AC private water supplies 3no. crossing of SGN high pressure gas pipelines	Integration	There will be some benefit to access to LDP allocations in Huntly. Journey time	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		A96 road, and may have an effect upon the setting of Woodside hut circles (SM11513).		5no. crossing of SSE 33Kv cables 9no. crossing of SSE 11Kv lines 3no. crossing of SSE 275Kv lines 7no. crossing of SSE 33Kv lines 3no. crossing of SSE low voltage cables 7no. SSE pylons within 100m of edge of alignment 1no. crossing of SW distribution main (100 to 300) 4no. crossing of SW distribution main (<100) 1no. impact on Traffic Scotland assets 1no. wind turbines within 100m of edge of alignment		and reliability improvements are a key local and national policy thread, as is the best utilisation of existing infrastructure; this route uses little of the existing A96.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Route passes through small scale committed developments.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the C665 from CH 3400 to CH 4150. Limited availability of alternative access points between Ch. 4150 – 11527. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be at least as good as it is in the area now.	
	Soil and geology	Peat in 375m of alignment. Small area of prime agricultural land. Small areas of mineral resources.			Public acceptability	There is support for online routes as these are perceived to have lower costs and less environmental impact, although the level to which this route will be perceived as “online” is limited. The route has a high elevation in the Glens of Foudland and there are public concerns that winter weather will continue to affect it.	
OLN-008	Landscape	The majority of impacts are Major or Moderate along this alignment. The scale of earthworks is considerable at four locations with embankments up to 24m and 32m in height and cuttings of up to 40m and 24m respectively. The overall impact is therefore assessed as Major adverse.	Alignment	Approx. 11.9km in length	Operation and inter-urban connectivity	OLN-008 is a largely offline route longer than the existing A96. As a high-quality grade-separated dual carriageway it offers journey time benefits of a maximum of only 3 minutes, more reliable journey times due to overtaking opportunities and improved incident management, faster and more efficient freight movements are possible, and there should be more segregation of local and strategic traffic through fewer A96 junctions and the retention of the existing route for local traffic.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential for active morphology at the crossing of the River Urie at ch.8950m (moderate adverse). Potential requirement for river realignment of the River Urie at ch.10450m (moderate adverse).	Earthworks	Bulk Cut – 4,588,918m <sup>3</sup> Bulk Fill – 3,407,365m <sup>3</sup> Surplus – 1,181,553m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Road safety will be improved and driver stress reduced through the provision of a higher quality, more predictable route with fewer junctions and therefore conflict points. This route will take the Bainshole Bends accident cluster site off the mainline of the A96. The route also presently suffers from winter weather related accidents and a new design will offer opportunities to mitigate against these. NMU activity on the corridor is very limited with no core paths or NMU facilities affected by the route.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	Ecological receptors/constraints include the wildcat priority area, one Local Nature Conservation Site (LNCS), three water crossings, one area with protected species (badgers), and one area of ancient woodland.		Geotechnical	Embankments >25m (up to 33.1m) on potentially compressible soils. Rock cuttings >39m (up to 41.8m) identified.	Promoting regional economic growth	The small improvement in journey times will result in faster access to the wider transport network, to jobs and to services.	
People and communities	Scattered private property along the route with a cluster at Colpy end. Very small area of prime agricultural land at Colpy. Remainder of alignment within non-prime land.		Structures	5no. Underbridges 2no. Overbridges 1no. Grade Separated Junction comprising underbridges for connection with A920. 1no. Viaduct 1no. Culvert	Facilitating active travel	This route has no impact on active travel provision.	
Noise and air quality	<p>There is noticeable potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. However, the increase in noise is identified at communities with a relative low population count such as Colpy and communities located by the existing A96.</p> <p>All alignments are generally in line with the current alignment. The area covered is sparsely populated and there are no agglomerations of receptors. All alignments are assigned neutral impact.</p>		Hydrology	1no. active flood plain crossing – River Urie at Ch. 8750 – 8950. 1no. Glen Water watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The small improvement in journey times will result in faster access to Inverurie and Huntly rail stations.	
Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.		Utilities	3no. crossing of AC private water supplies 2no. crossing of SGN high pressure gas pipelines 2no. crossing of SSE 33Kv cables 14no. crossing of SSE 11Kv lines 1no. crossing of SSE 275Kv lines 2no. crossing of SSE 33Kv lines 11no. crossing of SSE low voltage cables 4no. crossing of SSE low voltage lines 2no. SSE pylons within 100m of edge of alignment 7no. crossing of SW distribution main (100 to 300) 7no. crossing of SW distribution main (<100) 3no. crossing of SW gravity pipes 1no. impact on SW wastewater treatment works 1no. impact on Traffic Scotland assets 1no. wind turbines within 100m of edge of alignment	Integration	There will be some benefit to access to LDP allocations in Huntly. Journey time and reliability improvements are a key local and national policy thread, as is the best utilisation of existing infrastructure; this route uses little of the existing A96.	
Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.		Construction Access & Temporary Disruption/ Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the C82S at CH 3050. Access possible from the C87S between CH 8700 to CH 9300. Access also possible from the A920 at CH 11200. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be at least as good as it is in the area now.	
Soil and geology	Small areas of prime agricultural land. Contaminated Land (textile mill in one location). Small areas of mineral resources.				Public acceptability	There is support for online routes as these are perceived to have lower costs and less environmental impact, although the level to which this route will be perceived as “online” is limited. The route has a high elevation in the Glens of Foudland and there are public concerns that winter weather will continue to affect it.	

**Corridor CN01 Assessment Review**

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
CN01-001	Landscape	The appraisal identifies 16km of the alignments as having Major adverse effects, mainly due to large scale of earthworks and loss of woodland. The southern 8.5 km of the alignment lies within the Bennachie Special Landscape Area (SLA), between 21+250 and 29+750. Moderate effects are predicted for approximately 9km of the alignment, mostly along the central section. Due to these factors the overall assessment is Major adverse.	Alignment	Approx. 29.7km in length.	Operation and inter-urban connectivity	Between Oyne and Huntly journey times are reduced by an average 1 minute and a maximum of 2 minutes, despite the added distance relative to the existing A96. A high quality dual carriageway route improves journey time reliability by providing overtaking opportunities, improved incident management and fewer traffic conflicts. Freight access to Huntly Auction Mart and Kennethmont Distillery will be improved, as well as conditions for freight in general due to faster and more efficient vehicle utilisation. The route runs through a sparsely populated area and is therefore likely to attract mostly strategic traffic, leaving local traffic to use the existing A96.	<p>Corridor CN01 is the western most corridor in the north section and the First Fix Alignments were developed to potentially achieve lower lying ground and more favourable topography through Strathbogie following the existing alignments of the Aberdeen to Inverness railway and the A97. The possibility of following the route of the railway line was raised by members of the public at the meet the team event.</p> <p><b>Engineering</b></p> <ul style="list-style-type: none"> <li>All CN01 First Fix Alignments are the longest in the northern section with CN01-002, CN01-003 and CN01-004 circa 27km in length and CN01-001 the longest at approximately 30km.</li> <li>The section through Strathbogie to Leith Hall is approximately 10km in length and presents significant engineering difficulty. The A97 and railway line lie to the immediate west and east of the River Bogie and floodplain. Coupled with the residential properties and farms sporadically located throughout there is limited scope to run adjacent to either the A97 or railway.</li> <li>CN01-004 runs along the west side of Strathbogie and is located into higher ground with resulting significant earthworks along the full length with cuts and embankments up to 40 metres in sections. Alignments CN01-001 and CN01-002 run along the east of Strathbogie and result in significant earthworks, of up to 40-50 metres in sections and require significant structures to cross the floodplain, railway and A97 at Gartly. CN01-004 avoids the crossing at Gartly due to its position along the west side.</li> <li>CN01-003 alignment tracks the A97, railway and River Bogie route but results in major engineering impacts due to the multiple crossing and resulting structures affecting the floodplain, A97 and railway.</li> <li>At the Leith Hall section, CN01-002 and CN01-003 run to the immediate north of Leith Hall along the steeper ground of Knockandy Hill and Hill of Corskie with resulting significant earthworks cut up to 60 metres over a length of 1.5kms.</li> </ul>
	Water	Route crosses extensive floodplain of the River Bogie (ch.500m) and is not perpendicular to flow (major adverse). Potential for active morphology at the three crossings of the River Bogie (moderate adverse). Potential for river realignment where route encroaches on the Gadie Burn (ch.21750m) (moderate adverse).	Earthworks	Bulk Cut – 22,678,051m <sup>3</sup> Bulk Fill – 10,785,656m <sup>3</sup> Surplus – 11,892,395m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	This corridor avoids bends, junctions and accesses on the existing A96 from Huntly to Oyne, including cluster sites at Bainshole and Mill of Carden. It has a lower elevation than the existing route and may benefit from less severe weather exposure. The removal of strategic trips from the existing A96 will reduce accident risk there. The upgrades to route quality will reduce driver stress and the risks associated with overtaking manoeuvres. The route passes through the base of Bennachie, a popular area for walking and cycling, as well as the core path network at Gartly and Auchleven, so NMU facilities are required to manage their interaction with the route.	
	Ecology	Ecological receptors and constraints include the wildcat priority area, one local designated site (Local Nature Conservation Site), one sensitive area (for badger), two areas of ancient woodland, and two water crossings.	Geotechnical	Cuttings up to 48.1m high in rock. Embankments up to 30.3m high on potentially compressible material (alluvium) and an area of potentially contaminated land (railway). Embankments up to 30.3m high on potentially compressible material (alluvium) and an area of potentially contaminated land (railway).	Promoting regional economic growth	The small improvement in journey times slightly improves access to the wider transport network, jobs and services along the corridor.	
	People and communities	Insch Airfield partially crosses the alignment. It is utilised by Grampian Microlight and Flying Club. The alignment crosses part of the former Waulkmill Church, now converted to a residential property. Alignment passes through areas of agricultural land of class 3.1 west and south of Auchleven. No Class 1 or 2 land is present.	Structures	Structures to cross A97 and river. Up to three separate viaducts to cross A97, railway & river with notable skew. Several small structures potentially required to maintain local access if no other means.	Facilitating active travel	The route crosses the core path network at Gartly and Auchleven, so NMU provision will be required to facilitate continued use of these paths. The route also crosses through the base of Bennachie which is well used by walkers and cyclists.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Noise and air quality	Potential noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, including Huntly and small communities located close to proposed alignment.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignment passes <200m from Gartly and Auchleven settlement areas so is classed as minor beneficial.	Hydrology	A few instances of construction on a floodplain.	Integration with public transport facilities	The small improvement in journey times slightly improves access to Huntly and Insch stations.	<ul style="list-style-type: none"> <li>Both CN01-001 and CN01-004 track more favourable ground south of Leith Hall with the routing influenced by environmental constraints. CN01-004 runs alongside the railway but through the Leith Hall GDL while CN01-001 is located further to south west taking a wider route to avoid a cluster of constraints that include properties, SSSI and woodland and locates the alignment out with the SEA boundary.</li> <li>After Leith Hall, all alignments track south east for circa 13kms over similar topography and constraints before converging at Bennachie at Garioch. All alignments have sections up to 5kms in length where road elevation is in the range of 200-230 metres. Over this section due to high impact areas to the immediate north, predominantly high ground and Insch, cross links are not feasible and therefore all alignments will route along the base of Bennachie.</li> </ul> <p><b>Environment</b></p> <ul style="list-style-type: none"> <li>All alignments have a major adverse impact on landscape and visual receptors, as they are within the Bennachie Special Landscape Area (SLA) and require large scale earthworks (large cuttings) and the introduction of a large structure.</li> <li>All alignments have an impact upon the water environment due to the number of watercourse crossings and the potential for active river morphology in these locations.</li> <li>All alignments have a major adverse impact upon ecological receptors due to the presence of the Wildcat Priority Area, Local Nature Conservation Site, ancient woodland and protected species issues.</li> <li>All alignments have moderate adverse impact upon people and community receptors, which are scattered residential properties and agricultural land.</li> <li>All alignments have moderate adverse impacts for noise, because of the introduction of a road into an area of relatively high population count.</li> <li>Alignments CN01-001, CN01-002 and CN01-003 have moderate adverse impacts upon cultural heritage receptors, due to the impacts upon settings of various scheduled monuments.</li> </ul>	
Cultural heritage	The southern end of the alignment passes through an area with numerous Scheduled Monuments (SM) of prehistoric date whose settings are inter-related, with views between many of the hill forts/ settlements forming a key part of their setting. This means that this whole area is sensitive to change. Also at the southern end, the alignment passes in close proximity to Lickleyhead Castle Category A Listed Building (LB16234) and may have an impact on its setting. The settings of Harthill Castle Category A Listed Building (LB16132) and Leslie Castle Category B Listed Building (LB9239) are also vulnerable to change. Further north the alignment passes in very close proximity to Ardlair stone circle (SM3) this is likely to result in significant impacts on its setting.	Utilities	275kV crossings. High pressure gas mains. Some minor utility impacts. Distribution mains.	Integration	The alignment may benefit access to LDP allocations at Huntly, Oyne and Kennethmont but is relatively distant from Insch. Improving journey times and journey time reliability is a good fit with local and national policy. Crossing points and junctions are required for this route to align with local accessibility policy.		
Plans and policies	The route does not pass through any LDP allocations or settlements, or committed developments.	Construction Access & Temporary Disruption/ Traffic Management	Challenging construction access due to extended sections without road access through rural land and high topography Limited access from existing roads	Accessibility and social inclusion	Potential to improve accessibility to services, education and employment etc for settlements align this alignments (Gartly, Kennethmont, Insch and Oyne) subject to junction provision.		
Soil and geology	Large stretch of prime agricultural land (1375m), but this is a small proportion of overall alignment length. Contaminated land (railway), and mall areas of mineral resources, are also present.			Public acceptability	There are significant public acceptability concerns with the route including impact on landscape and wildlife in Strathbogie (particularly endangered Scottish Wildcat population), visual amenity and natural heritage at the Back o' Bennachie and proximity to Gartly, Kennethmont and Auchleven. Some support for a lower-lying route than the existing A96.		



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
							<ul style="list-style-type: none"> <li>Alignment CN01-004 had moderate adverse impacts upon cultural heritage receptors, due to the additional impact upon Leith Hall Garden and Designed Landscape (GDL).</li> <li>All alignments perform poorly from an environmental perspective at Strathbogie with four of the environment sub topics having major adverse impacts</li> </ul> <p><b>Traffic</b></p> <ul style="list-style-type: none"> <li>All Alignments are approximately 7 to 8km away from the existing A96 and considered to be remote and coupled with the length of the route, traffic may continue to use the existing A96.</li> </ul> <p><b>It was concluded that all First Fix Alignments within the CN01 Corridor Option have significant Engineering and Environmental challenges.</b></p> <p><b>The environmental issues through Strathbogie resulted in four of the nine Environmental disciplines rating the alignments as having a major impact. From an Engineering perspective, none of the alignments perform particularly well, with only CN01-004 located to the west side of Strathbogie marginally preferred as it avoided the significant structure at Gartly.</b></p> <p><b>At Leith Hall, the Environmental team did not support alignments CN01-002 and CN01-003 due to the impact on the setting of Leith Hall and CN01-004 as this routes directly through the GDL. Therefore, the only option is CN01-001 and although this avoids Leith Hall and the SSSI it is located out with the SEA boundary. The Engineering preference would be for CN01-004 as it is shorter in comparison to the next best performing CN01-001.</b></p> <p><b>For the remaining section of CN01, all alignments perform similarly from an environmental perspective with a major adverse impact on the setting of Bennachie. From an Engineering perspective, all alignments perform similarly, with CN01-001 and CN01-004 being preferred.</b></p> <p><b>No distinction can be made by section from a traffic perspective and overall it is not clear how much strategic or local traffic would redistribute to CN01 due to the length of route and remoteness from the existing A96.</b></p> <p><b>It was concluded that additional work would need to be undertaken to confirm that no alignment from the CN01 corridor would be progressed to Second Fix Alignment development (see Appendix J).</b></p>

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
CN01-002	Landscape	The appraisal identifies long sections of the alignment for which Major adverse effects are predicted. These are due to large scale earthworks, including cuttings of up to 50m and potentially the introduction of eight new structures, four of which cross the enclosed valley of Strathbogie. The alignment will impact upon the setting of Leith Hall Garden and Designed Landscape (GDL). To the east of Gadie Burn, a new structure, a cutting of more than 45m in depth at Tillymuick, loss of woodland and ancient woodland will cause major impacts on Bennachie SLA. Moderate effects are predicted for some sections of the alignment, mostly due to earthworks of 5-15m. These appear generally linked to sections of larger earthworks. The overall assessment of the alignment is therefore Major adverse.	Alignment	Approx. 27.0km in length.	Operation and inter-urban connectivity	Between Oyne and Huntly journey times are reduced by an average 2-3 minutes and a maximum of 4 minutes, despite the added distance relative to the existing A96 – an improvement of 1-2 minutes on all journeys relative to CN01-001. A high quality dual carriageway route improves journey time reliability by providing overtaking opportunities, improved incident management and fewer traffic conflicts. Freight access to Huntly Auction Mart and Kennethmont Distillery will be improved, as well as conditions for freight in general due to faster and more efficient vehicle utilisation. The route runs through a sparsely populated area and is therefore likely to attract mostly strategic traffic, leaving local traffic to use the existing A96.	
	Water	Route crosses extensive floodplain of the River Bogie (ch.450m) and is not perpendicular to flow (major adverse). Potential for active morphology at the three crossings of the River Bogie and the crossing of the Gadie Burn at ch.23100m (moderate adverse). Potential for river realignment where route encroaches onto the River Bogie at ch.2250m (moderate adverse).	Earthworks	Bulk Cut – 27,744,549m <sup>3</sup> Bulk Fill – 3,327,237m <sup>3</sup> Surplus – 24,417,312m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	This corridor avoids bends, junctions and accesses on the existing A96 from Huntly to Oyne, including cluster sites at Bainshole and Mill of Carden. It has a lower elevation than the existing route and may benefit from less severe weather exposure. The removal of strategic trips from the existing A96 will reduce accident risk there. The upgrades to route quality will reduce driver stress and the risks associated with overtaking manoeuvres. The route passes through the base of Bennachie, a popular area for walking and cycling, as well as the core path network at Gartly, so NMU facilities are required to manage their interaction with the route, but not at Auchleven unlike CN01-001.	
	Ecology	Ecological receptors and constraints include the wildcat priority area, one local designated site, one sensitive area (for badger), one area of ancient woodland, and five water crossings.	Geotechnical	Cuttings up to 59.1m high in rock. Cuttings up to 7.1m high in potentially compressible material (alluvium). Embankments up to 23.1m high in rock. Embankments up to 6.6m high in PEAT.	Promoting regional economic growth	The small improvement in journey times slightly improves access to the wider transport network, jobs and services along the corridor.	
	People and communities	The alignment crosses two residential properties, Braehead House and East Newton. Alignment passes through areas of class 3.2 and higher agricultural land. No Class 1, 2, or 3.1.	Structures	Viaduct required. Underbridge to cross A-road, railway & floodplain. Underbridge to cross B-road, railway & floodplain.	Facilitating active travel	The route crosses the core path network at Gartly, so NMU provision will be required to facilitate continued use of these paths. The route also crosses through the base of Bennachie which is well used by walkers and cyclists.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Noise and air quality	<p>Potential noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, including Huntly and small communities located close to proposed alignment.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area.</p>	Hydrology	Several instances of construction on a floodplain. Several areas susceptible to flooding.	Integration with public transport facilities	The small improvement in journey times slightly improves access to Huntly and Inch stations.	
	Cultural heritage	The southern end of the alignment passes through an area with numerous SMs of prehistoric date whose settings are inter-related, with views between many of the hill forts/ settlements forming a key part of their setting. This means that this whole area is sensitive to change. Further north the alignment passes through the non-inventory GDL with forms the setting for Category B Listed Warehouse (LB9192). The alignment also passes close to a viewpoint which overlooks the Leith Hall Inventory GDL (and forms a key part of its setting). This is a key concern with the use of this alignment.	Utilities	275kV crossing. SGN high pressure gas pipe.	Integration	The alignment may benefit access to LDP allocations at Huntly, Inch, Oyne and Kennethmont. Improving journey times and journey time reliability is a good fit with local and national policy. Crossing points and junctions are required for this route to align with local accessibility policy.	
	Plans and policies	The route does not pass through any LDP allocations or settlements, or committed developments.	Construction Access & Temporary Disruption/ Traffic Management	Challenging construction access due to extended sections without road access through rural land and high topography Limited access from existing roads	Accessibility and social inclusion	Potential to improve accessibility to services, education and employment etc for settlements align this alignments (Gartly, Kennethmont, Inch and Oyne) subject to junction provision.	
	Soil and geology	Small areas of peat, contaminated land (railway), and mineral resources are present.			Public acceptability	There are significant public acceptability concerns with the route including impact on landscape and wildlife in Strathbogie (particularly endangered Scottish Wildcat population), visual amenity and natural heritage at the Back o' Bennachie and proximity to Gartly, Kennethmont and Auchleven (more so than in CN01-001 due to closer proximity). Some support for a lower-lying route than the existing A96.	
CN01-003	Landscape	The appraisal identifies 10km of Major adverse effects within the high sensitivity landscapes of Strathbogie due to the construction of a number of crossings across the river, a structure of 5km length and up to 60m in height, and impacts on the setting of Leith Hall. A cutting of 50m in depth and loss of woodland along the 5.5km of alignment within Bennachie SLA. Moderate adverse effects are predicted for sections of earthworks of 5-15m, and also due to loss of woodland. The overall assessment of the alignment is Major adverse.	Alignment	Approx. 27.0km in length.	Operation and inter-urban connectivity	Between Oyne and Huntly journey times are reduced by an average 2-3 minutes and a maximum of 4 minutes, despite the added distance relative to the existing A96 – an improvement of 1-2 minutes on all journeys relative to CN01-001. A high quality dual carriageway route improves journey time reliability by providing overtaking opportunities, improved incident management and fewer traffic conflicts. Freight access to Huntly	

Alignment	Environment	Engineering	Traffic	Discipline Review Assessment Commentary	
				Auction Mart and Kennethmont Distillery will be improved, as well as conditions for freight in general due to faster and more efficient vehicle utilisation. The route runs through a sparsely populated area and is therefore likely to attract mostly strategic traffic, leaving local traffic to use the existing A96.	
Water	Route crosses the extensive floodplain of the River Bogie seven times in the first 5km. These crossings are not perpendicular to flow (major adverse) and in many places the route encroaches on the channel (potential for river realignment), and there is potential for active morphology (moderate adverse). This represents an unacceptable environmental impact on the River Bogie and this route should not be taken forward. Route crosses the extensive floodplain of the Kirkney Water (ch.5850m) and is not perpendicular to flow (major adverse). Potential for active morphology at the crossing of the Gadie Burn at ch.23500m (moderate adverse).	Earthworks	Bulk Cut – 7,220,428m <sup>3</sup> Bulk Fill – 28,289,722m <sup>3</sup> Deficit – 21,069,294m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	This corridor avoids bends, junctions and accesses on the existing A96 from Huntly to Oyne, including cluster sites at Bainshole and Mill of Carden. It has a lower elevation than the existing route and may benefit from less severe weather exposure. The removal of strategic trips from the existing A96 will reduce accident risk there. The upgrades to route quality will reduce driver stress and the risks associated with overtaking manoeuvres. The route passes through the base of Bennachie, a popular area for walking and cycling, as well as the core path network at Gartly, so NMU facilities are required to manage their interaction with the route, but not at Auchleven unlike CN01-001.
Ecology	Ecological receptors and constraints include the wildcat priority area, one local designated site, one sensitive area (for badger), two areas of ancient woodland, and two water crossings.	Geotechnical	Embankments up to 62.1m high in non-identified geotechnical constraint and a small area of possible contaminated land (railway). Cuttings up to 50.0m high in rock. A combination of at grade construction and cuttings up to 0.7m in PEAT.	Promoting regional economic growth	The small improvement in journey times slightly improves access to the wider transport network, jobs and services along the corridor.
People and communities	The alignment crosses three residential properties, Mill of Greenhaugh, south of Huntly; Bogie View in Bridgend; and Cappaghmore to the south of Bridgend. Alignment passes through areas of 3.1 land north and east of Auchleven. No Class 1 or 2.	Structures	Several structures to cross roads, floodplain & river. Several separate viaducts to cross A97, B-roads, railway & river.	Facilitating active travel	The route crosses the core path network at Gartly, so NMU provision will be required to facilitate continued use of these paths. The route also crosses through the base of Bennachie which is well used by walkers and cyclists.
Noise and air quality	Potential noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, including Huntly and small communities located close to proposed alignment. There is also a Local Development Plan (LDP) allocation at Gartly named OP1 for Land adjacent to Railway and an allocation of five homes.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment	Hydrology	Several instances of construction on a floodplain. Several areas susceptible to flooding.	Integration with public transport facilities	The small improvement in journey times slightly improves access to Huntly and Inch stations.

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		moves the road to a similarly sparsely populated area. Alignment passes <200m from Auchleven settlement area so is classed as minor beneficial.					
	Cultural heritage	The southern end of the alignment passes through an area with numerous SMs of prehistoric date whose settings are inter-related, with views between many of the hill forts/ settlements forming a key part of their setting. This means that this whole area is sensitive to change. Further north the alignment passes through the non-inventory GDL with forms the setting for Category B Listed Wardhouse (LB9192). The alignment also passes close to a viewpoint which overlooks the Leith Hall GDL (and forms a key part of its setting). This is a key concern with the use of this alignment. The alignment passes through the non-inventory GDL that forms the setting of Category B Listed Culdrain House (LB9204), and is likely to result in a significant impact on the LB's setting. Adjustments to the alignment may be able to reduce the impact on the setting of Culdrain House.	Utilities	Minor utility diversions/impacts.	Integration	The alignment may benefit access to LDP allocations at Huntly, Inch, Oyne and Kennethmont. Improving journey times and journey time reliability is a good fit with local and national policy. Crossing points and junctions are required for this route to align with local accessibility policy.	
	Plans and policies	The route does not pass through any LDP allocations or settlements. It does pass directly through a single small committed development site.	Construction Access & Temporary Disruption/ Traffic Management	Challenging construction access due to extended sections without road access through rural land and high topography Limited access from existing roads	Accessibility and social inclusion	Potential to improve accessibility to services, education and employment etc for settlements align this alignments (Gartly, Kennethmont, Inch and Oyne) subject to junction provision.	
	Soil and geology	Small area of peat, small areas of prime agricultural land, contaminated land (railway, mills), an small areas of mineral resources, are all present.			Public acceptability	There are significant public acceptability concerns with the route including impact on landscape and wildlife in Strathbogie (particularly endangered Scottish Wildcat population), although the overall impact is lower than for the other CN01 routes due to greater proximity to the existing A97. There are also concerns with visual amenity and natural heritage at the Back o' Bennachie and proximity to Gartly, Kennethmont and Auchleven (more so than in CN01-001 due to closer proximity). Some support for a lower-lying route than the existing A96.	
CN01-004	Landscape	The appraisal identifies long sections of the alignment as having Major adverse effects, being mainly due to large scale earthworks of >15m depth and height and to the introduction of new structures, the loss of woodland and ancient woodland. Direct impacts and loss of woodland would occur at Leith Hall GDL. Bennachie SLA is affected by cuttings of more than 15m at	Alignment	Approx. 27.1km in length.	Operation and inter-urban connectivity	Between Oyne and Huntly journey times are reduced by an average 2-3 minutes and a maximum of 3 minutes, despite the added distance relative to the existing A96 – an intermediate benefit relative to the other CN01 alignments. A high quality dual carriageway route improves journey	

Alignment	Environment	Engineering	Traffic	Discipline Review Assessment Commentary	
	Tillymuick Hill, introduction of a new structure across the Gadie Burn and loss of woodland and ancient woodland. Moderate adverse effects are due to earthworks of 5-15m, loss of woodland, and impacts on visual amenity at Gartly and Auchleven. The overall assessment of the alignment is therefore Major adverse.			time reliability by providing overtaking opportunities, improved incident management and fewer traffic conflicts. Freight access to Huntly Auction Mart and Kennethmont Distillery will be improved, as well as conditions for freight in general due to faster and more efficient vehicle utilisation. The route runs through a sparsely populated area and is therefore likely to attract mostly strategic traffic, leaving local traffic to use the existing A96.	
Water	Route crosses the extensive floodplain of Priest's Water (ch.3800m) and is approximately perpendicular to flow (moderate adverse). Potential for active morphology at crossings of Priest's Water, Kirkney Water, River Bogie and Gadie Burn (moderate adverse).	Earthworks	Bulk Cut – 6,100,863m <sup>3</sup> Bulk Fill – 10,566,774m <sup>3</sup> Deficit – 4,465,911m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	This corridor avoids bends, junctions and accesses on the existing A96 from Huntly to Oyne, including cluster sites at Bainshole and Mill of Carden. It has a lower elevation than the existing route and may benefit from less severe weather exposure. The removal of strategic trips from the existing A96 will reduce accident risk there. The upgrades to route quality will reduce driver stress and the risks associated with overtaking manoeuvres. The route passes through the base of Bennachie, a popular area for walking and cycling, as well as the core path network at Gartly and Kennethmont, so NMU facilities are required to manage their interaction with the route.
Ecology	Ecological receptors and constraints include the wildcat priority area, one local designated site, one sensitive area (for badger), two areas of ancient woodland, and two water crossings.	Geotechnical	Embankments up to 39.4m high in non-identified geotechnical constraints. Cuttings up to 34.5m high in rock.	Promoting regional economic growth	The small improvement in journey times slightly improves access to the wider transport network, jobs and services along the corridor.
People and communities	The alignment crosses residential properties, Burnend, south of Huntly; and Collithie Mill House, south east of Bridgend. Alignment passes through areas of 3.1 class land north and east of Auchleven. No Class 1 or 2.	Structures	Viaduct may be required to cross flood sensitive area. Overbridge required for A97 to cross A96.	Facilitating active travel	The route crosses the core path network at Gartly and Kennethmont, so NMU provision will be required to facilitate continued use of these paths. The route also crosses through the base of Bennachie which is well used by walkers and cyclists.
Noise and air quality	Potential noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, including Huntly, Garioch and small communities located close to proposed alignment. There is also a LDP allocation at Gartly named OP1 for Land	Hydrology	Several areas susceptible to flooding.	Integration with public transport facilities	The small improvement in journey times slightly improves access to Huntly and Inch stations.

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		<p>adjacent to Railway and an allocation of five homes.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area.</p> <p>Alignment passes &lt;200m from Kennethmont settlement area and the Ardmore Distillery so is classed as minor beneficial.</p>					
Cultural heritage		<p>The use of this alignment would result in a direct impact upon the Leith Hall Inventory GDL. The use of this alignment would also result in a likely significant impact upon the setting of Leith Hall GDL and on Category A Listed Leith Hall which lies at its centre. The southern end of the alignment passes through an area with numerous SMs of prehistoric date whose settings are inter-related, with views between many of the hill forts/ settlements forming a key part of their setting. This means that this whole area is sensitive to change. The alignment passes through the non-inventory GDL that forms the setting of Category B Listed Culdrain House (LB9204), and is likely to result in a significant impact on the LB's setting. Adjusting the position of the alignment may be able to reduce the impact on the setting of Culdrain House.</p>	Utilities	<p>275kV crossing. SGN high pressure gas main crossing. Distribution main crossings.</p>	Integration	<p>The alignment may benefit access to LDP allocations at Huntly, Inch, Oyne and Kennethmont. Improving journey times and journey time reliability is a good fit with local and national policy. Crossing points and junctions are required for this route to align with local accessibility policy.</p>	
Plans and policies		<p>The route does not pass through any LDP allocations or settlements, or committed developments. It does pass in close proximity to a number of committed development sites.</p>	Construction Access & Temporary Disruption/ Traffic Management	<p>Challenging construction access due to extended sections without road access through rural land and high topography Limited access from existing roads</p>	Accessibility and social inclusion	<p>Potential to improve accessibility to services, education and employment etc for settlements align this alignments (Gartly, Kennethmont, Inch and Oyne) subject to junction provision.</p>	
Soil and geology		<p>Small areas of prime agricultural land, contaminated land (railway), and small areas of mineral resources are all present.</p>			Public acceptability	<p>There are significant public acceptability concerns with the route including impact on landscape and wildlife in Strathbogie (particularly endangered Scottish Wildcat population). There are also concerns with visual amenity and natural heritage at the Back o' Bennachie and proximity to Gartly, Auchleven and particularly Kennethmont particularly, with the route passing directly through the community. Some support for a lower-lying route than the existing A96.</p>	

Corridor CN02 Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
CN02-001	Landscape	The appraisal identifies long sections of the alignment as having Major adverse effects on landscape character, due to large scale earthworks and introduction of new large structures, together with the loss of mature beech trees within rows to the northwest of Inch and the impacts and loss of woodland on the setting of the village. Earthworks and loss of woodland within Bennachie Special Landscape Area (SLA) will result on Major adverse effects at the south end of the alignment. Moderate adverse effects are predicted where earthworks are 5-15m and where there is loss woodland. Due to the magnitude of areas rated as having Major adverse effects, the overall rating of this alignment is Major adverse.	Alignment	Approx. 21.1km in length.	Operation and inter-urban connectivity	Between Huntly and Oyne, this offers a shorter and faster route than the existing A96 with a journey time saving of 4-5 minutes. As a high standard dual carriageway, the route offers better overtaking opportunities and incident management leading to faster journey times, as well as faster and more efficient freight movements. The route passes through a sparsely populated area and is therefore likely to attract mostly strategic traffic, although the precise mix will be dependent on the junction strategy. Some local traffic is expected to continue to use the existing A96.	<p>CN02 alignments start at Huntly and run parallel to the existing A96 in the northern section of the corridor before going south of Inch and terminating at Garioch at Bennachie.</p> <p><b>Traffic</b></p> <ul style="list-style-type: none"> <li>All alignments offer operational benefits although alignments through this section lie at a greater elevation to the existing A96 and therefore may still suffer similar issues around winter resilience.</li> <li>All alignments have the potential to impact on existing NMU routes which would require mitigation. CN02_004 brings NMU users into closer proximity to traffic than at present, with 1.2km of core path running adjacent to the alignment.</li> <li>Proximity to Bennachie makes the southern end of this alignment likely unacceptable to large numbers of people.</li> </ul> <p><b>Engineering</b></p> <ul style="list-style-type: none"> <li>Alignments CN02-002, CN02-003 and CN02-004 require to cross the River Bogie and associated floodplain at Huntly and the Aberdeen to Inverness Railway requiring structures up to approximately 650m long.</li> <li>Alignment CN02-001 ties-in on the existing A96 after Huntly thereby avoiding the River Bogie and railway line</li> <li>All of the alignments route through challenging and steep sided topography which generate significant earthworks particularly in the middle section at Gartly Moor.</li> <li>All of the alignments have elevations that are higher than the existing A96 and require to route through Stony Hill that can result in significant rock cut of up to 70 metres.</li> <li>There is a pinch point (600-700m wide) between Inch and a topography of the Hill of Dunideer which forces all of the alignments in close proximity to the town.</li> </ul> <p><b>Environment</b></p> <ul style="list-style-type: none"> <li>All alignments have a major adverse impact on landscape and visual receptors, as they are within the Bennachie Special Landscape Area (SLA), require large scale earthworks and the introduction of large structures.</li> <li>All alignments have a major adverse impact upon the water environment due to a</li> </ul>
	Water	Route crosses the extensive floodplain of the Shevock Burn (ch.13850m) and is not perpendicular to flow (major adverse). Potential for active morphology at this crossing and the crossing of the Gadie Burn (ch.16900m) (moderate adverse).	Earthworks	Bulk Cut – 11,311,811m <sup>3</sup> Bulk Fill – 4,275,204m <sup>3</sup> Surplus – 7,036,607m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	This corridor avoids bends, junctions and accesses on the existing A96 from Huntly to Oyne, including cluster sites at Bainshole and Mill of Carden. As a high-quality dual carriageway route with fewer, higher-specification junctions, there will be safety benefits for road users relative to the existing route; the removal of traffic from the existing route will make it in turn safer. The elevation of the route is also lower than the existing A96 reducing the risk of weather-related accidents. The route does intersect the core path network at Inch and Oyne, as well as passing through the base of Bennachie which is a popular area with walkers and cyclists; suitable NMU facilities would be required to maintain safe routes for these users.	
	Ecology	Ecological receptors/constraints include the wildcat priority area, and one local designated site (Local Nature Conservation Site).	Geotechnical	~Cutting in Peat up to 3m (CH. 4050-4550). ~Embankments >19m on unidentified geotechnical constraints & compressible soils. ~Rock cuttings >39m (CH. 7650-8800).	Promoting regional economic growth	The journey time improvements result in a slight improvement in ease of access to the wider transport network, jobs and services.	
	People and communities	The alignment crosses two residential properties, Trevol Cottage and Bonnyview Cottage, both west of Inch. Alignment passes through areas of class 3.1 agricultural land surrounding Inch. No Class 1 or 2 land is present.	Structures	Structure with span >30m required (x4).	Facilitating active travel	The route intersects the core path network around Inch and Oyne a total of five times (one fewer than in the alternative CN02 routes), plus the Inch to Oyne "Archaeolink" cycle route, and retention of these routes must form part of any design. There are opportunities to improve existing	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						NMU routes through better surfacing and pedestrian/cycle segregation.	<p>number of watercourse crossings (Shevock Burn, Gadie Burn, River Bogie) and the potential for active river morphology in these locations.</p> <ul style="list-style-type: none"> <li>All alignments have a major adverse impact upon ecological receptors due to the presence of the Wildcat Priority Area, protected species issues, and watercourse crossings.</li> <li>All alignments have a moderate adverse impact upon people and community receptors, which are scattered residential properties and agricultural land.</li> <li>All alignments have moderate adverse impacts for noise, because of the introduction of a road into an area of moderate population count.</li> <li>Alignments CN02-002, CN01-003 and CN03-004 have moderate adverse impacts upon cultural heritage receptors, due to the impacts upon settings of various scheduled monuments. Alignment CN02-001 has major adverse impacts upon cultural heritage receptors, as it intersects a scheduled monument.</li> <li>All alignments perform similarly from an environmental perspective, with at least three major adverse impacts identified.</li> </ul> <p><b>Given the Engineering and Environmental constraints associated with Gartly Moor and Insch, CN02-001 was assessed as the best performing First Fix Alignment to be taken forward to the Second Fix phase. Due to the impact of the southern section around Insch and approach to Bennachie, as an alternative, options to develop a hybrid between CN03 and /or OLC alignments will be considered at second fix.</b></p>
Noise and air quality	<p>Potential very noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative medium population count, including Insch and Huntly. Additionally, there are Local Development Plan (LDP) allocations which are potentially affected by the proposed road alignment including: Insch: OP1: Land at North Road Allocation: 48 homes, OP2: Land at South Road Allocation: 12 homes, OP3: Hillview, South Road Allocation: 10 homes.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignment passes &lt;200m from Insch settlement area, so is classed as minor beneficial.</p>	Hydrology	<p>Floodplain crossing @ the Shevock (CH. 13750-13900).</p> <p>Floodplain crossing (CH. 16800-17100).</p>	Integration with public transport facilities	The journey time improvements result in a slight improvement in ease of access to Insch and Huntly rail stations.		
Cultural heritage	<p>This alignment intersects the southern part of Berryhill enclosure (Scheduled Monument - SM5380), but it is assumed it would be possible to move the alignment to avoid any direct impacts. Nonetheless significant effects upon the setting of Berryhill enclosure (SM5380) are likely. There are also a series of other Scheduled Monuments whose settings are likely to be impacted by the use of this alignment.</p>	Utilities	<p>SGN high pressure gas main (CH. 1150-1400). SSE pylon within 100m (CH. 4500). 275kV crossing (CH. 4850-5100).</p>	Integration	<p>The route will improve access to the major LDP allocations at Huntly and those at Insch and Oyne. Improvements to journey times and journey time reliability fit will with local and national policy. Local accessibility policies should not be impacted if a suitable NMU strategy is adopted with junctions and crossing points.</p>		
Plans and policies	<p>The route does not pass through any LDP allocations or settlements. It does pass within close proximity to/through small scale committed developments to the east of Insch.</p>	Construction Access & Temporary Disruption/Traffic Management	<p>Extended sections of route remote from main roads for construction access</p> <p>Difficult and high topography to north and centre of alignment</p>	Accessibility and social inclusion	<p>Potential to improve accessibility to services, education and employment etc for settlements along this alignment (Insch and Oyne) subject to junction provision.</p>		
Soil and geology	<p>Peat in 450m of alignment. Many small areas and one large stretch of prime agricultural land (1km), but small proportion of overall alignment length. Contaminated land (railway) and peat diggings also present.</p>			Public acceptability	<p>Proximity to Bennachie makes the southern end of this alignment likely unacceptable to large numbers of people. There are also public concerns over the impact on properties at Insch and Oyne, as well as on recreational sites at Gartly Moor (although this impact is reduced relative to alternative CN02 routes).</p>		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
CN02-002	Landscape	The appraisal identifies long sections of the alignment as having Major adverse effects on the landscape character, due to large scale earthworks and introduction of new large structures together with the loss of mature beech trees forming distinctive intact field boundaries and belts to the northwest of Inch and the impacts of loss of woodland on the setting of the village. Earthworks and loss of woodland within Bennachie SLA will result in Major adverse effects at the south end of the alignment. Moderate adverse effects are predicted in sections of earthworks of 5-15m depth/height and where there is loss of woodland. Given these factors the overall rating of this alignment is Major adverse.	Alignment	Approx. 23.7km in length	Operation and inter-urban connectivity	Between Huntly and Oyne, this offers a shorter and faster route than the existing A96 with a journey time saving of 4-5 minutes. As a high standard dual carriageway, the route offers better overtaking opportunities and incident management leading to faster journey times, as well as faster and more efficient freight movements. The route passes through a sparsely populated area and is therefore likely to attract mostly strategic traffic, although the precise mix will be dependent on the junction strategy. Some local traffic is expected to continue to use the existing A96.	
	Water	Route crosses the extensive floodplain of the Shevock Burn (ch.15800m) and Gadie Burn (ch.19500m) - these crossings are not perpendicular to flow (major adverse) and there is potential for active morphology (moderate adverse). Route crosses the extensive floodplain of the River Bogie (ch.400m) and is perpendicular to flow (moderate adverse).	Earthworks	Bulk Cut – 10,655,697m <sup>3</sup> Bulk Fill – 10,649,683m <sup>3</sup> Surplus – 6,015m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	This corridor avoids bends, junctions and accesses on the existing A96 from Huntly to Oyne, including cluster sites at Bainshole and Mill of Carden. As a high-quality dual carriageway route with fewer, higher-specification junctions, there will be safety benefits for road users relative to the existing route; the removal of traffic from the existing route will make it in turn safer. The elevation of the route is also lower than the existing A96 reducing the risk of weather-related accidents. The route does intersect the core path network at Inch and Oyne, as well as passing through the base of Bennachie which is a popular area with walkers and cyclists; suitable NMU facilities would be required to maintain safe routes for these users.	
	Ecology	Ecological receptors/constraints include the wildcat priority area, one sensitive area for protected species (badger), and two water crossings.	Geotechnical	~Embankment on Peat >5m (CH. 6500-6700). ~Embankment on unidentified material >39m. ~Rock cuttings >39m (CH. 9550-10300).	Promoting regional economic growth	The journey time improvements result in a slight improvement in ease of access to the wider transport network, jobs and services.	
	People and communities	There is a commercial property, east of Huntly at a Scottish Hydro Electric substation and a residential property at Upper Pirriesmill. Alignment passes through areas of class 3.1 land surrounding Inch. No Class 1 or 2 land.	Structures	Underbridge & Viaducts >300m due to railway, river & floodplains (x2).	Facilitating active travel	The route intersects the core path network around Inch and Oyne a total of six times, plus the Inch to Oyne "Archaeolink" cycle route, and retention of these routes must form part of any design. There are opportunities to improve existing NMU routes through better surfacing and pedestrian/cycle segregation.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Noise and air quality	<p>Potential very noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative medium population count, including Inch and Huntly. Additionally, there are LDP allocations which are potentially affected by the proposed road alignment including: Inch: OP1: Land at North Road Allocation: 48 homes, OP2: Land at South Road Allocation: 12 homes, OP3: Hillview, South Road Allocation: 10 homes.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignment passes &lt;200m from Huntly and Inch settlement areas, so is classed as minor beneficial. Main road is moved slightly further from receptors at Huntly.</p>	Hydrology	<p>Floodplain crossing (CH. 300-600). Floodplain crossing (CH. 15750-15900). Floodplain crossing (CH. 19450-19600).</p>	Integration with public transport facilities	The journey time improvements result in a slight improvement in ease of access to Inch and Huntly rail stations.	
	Cultural heritage	This alignment lies close to Berryhill enclosure (SM5380) and would have a likely significant impact on its setting. Further to the north the alignment lies within the key view south from Picardy Stone. It also passes in close proximity to Candle Stane Stone circle (SM12).	Utilities	<p>High pressure gas main (CH. 2450-2650). Windfarm severed (CH. 5050-5600). SSE pylon within 100m (CH. 5400). SSE pylon &amp; 275kV crossing (CH. 5700-6050).</p>	Integration	The route will improve access to the major LDP allocations at Huntly and those at Inch and Oyne. Improvements to journey times and journey time reliability fit will with local and national policy. Local accessibility policies should not be impacted if a suitable NMU strategy is adopted with junctions and crossing points.	
	Plans and policies	The route does not pass through any LDP allocations or settlements. It does pass within close proximity to/through small scale committed developments to the east of Inch and at Greenmyres.	Construction Access & Temporary Disruption/Traffic Management	Extended sections of route remote from main roads for construction access Difficult and high topography to north and centre of alignment	Accessibility and social inclusion	Potential to improve accessibility to services, education and employment etc for settlements along this alignment (Inch and Oyne) subject to junction provision.	
	Soil and geology	Peat in 225m of alignment. Many small areas and one large stretch of prime agricultural land (1.8km), but small proportion of overall alignment length. Contaminated land (railway) and mineral resources also present.			Public acceptability	Proximity to Bennachie makes the southern end of this alignment likely unacceptable to large numbers of people. There are also public concerns over the impact on properties at Inch and Oyne, as well as on recreational sites at Gartly Moor.	
CN02-003	Landscape	The appraisal identifies long sections of the alignment as having Major adverse effects on the landscape character, mainly due to large scale earthworks, introduction of large structures and loss of woodland. The loss of complete lines of mature beech trees west of Auchenbreddie and northwest of Inch, potential impacts on the setting of the scheduled monument at Dunnideer and severance of Dunnideer Hill from Inch, large scale earthworks and loss of woodland within Bennachie SLA are also Major adverse effects.	Alignment	Approx. 23.2km in length	Operation and inter-urban connectivity	Between Huntly and Oyne, this offers a shorter and faster route than the existing A96 with a journey time saving of 4-6 minutes (a slightly improvement on other CN02 routes). As a high standard dual carriageway, the route offers better overtaking opportunities and incident management leading to faster journey times, as well as faster and more efficient freight movements. The route passes through a sparsely populated area and is therefore likely	

Alignment	Environment	Engineering	Traffic	Discipline Review Assessment Commentary	
	The assessment of the alignment is therefore Major adverse.			to attract mostly strategic traffic, although the precise mix will be dependent on the junction strategy. Some local traffic is expected to continue to use the existing A96.	
Water	Route crosses the extensive floodplain of the Gadie Burn (ch.19100m) and is not perpendicular to flow (major adverse). There is potential for active morphology at this crossing and the crossing of the Shevock Burn (moderate adverse). Route crosses the extensive floodplain of the River Bogie (ch.400m) and is perpendicular to flow (moderate adverse).	Earthworks	Bulk Cut – 15,594,453m <sup>3</sup> Bulk Fill – 19,644,544m <sup>3</sup> Deficit – 4,050,091m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	This corridor avoids bends, junctions and accesses on the existing A96 from Huntly to Oyne, including cluster sites at Bainshole and Mill of Carden. As a high-quality dual carriageway route with fewer, higher-specification junctions, there will be safety benefits for road users relative to the existing route; the removal of traffic from the existing route will make it in turn safer. The elevation of the route is also lower than the existing A96 reducing the risk of weather-related accidents. The route does intersect the core path network at Inch and Oyne, as well as passing through the base of Bennachie which is a popular area with walkers and cyclists; suitable NMU facilities would be required to maintain safe routes for these users.
Ecology	Ecological receptors/constraints include the wildcat priority area, two sensitive areas for protected species (badger etc.), one ancient woodland, and one water crossing.	Geotechnical	~Rock cuttings up to 58m (CH. 7700-8150). ~Embankments up to 48m on unidentified constraint (CH. 11700-12200). ~Cutting through contaminated land (CH. 22850).	Promoting regional economic growth	The journey time improvements result in a slight improvement in ease of access to the wider transport network, jobs and services.
People and communities	Alignment passes through areas of class 3.1 land surrounding Inch and Oyne. No Class 1 or 2 land.	Structures	Viaduct >300m (CH. 300-800). Viaduct >60m (CH. 15650-15800). Underbridge on compressible soils (CH. 18900-19150).	Facilitating active travel	The route intersects the core path network around Inch and Oyne a total of six times, plus the Inch to Oyne "Archaeolink" cycle route, and retention of these routes must form part of any design. There are opportunities to improve existing NMU routes through better surfacing and pedestrian/cycle segregation.
Noise and air quality	Potential noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, including Inch and Huntly.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignment ties in to existing road <200m	Hydrology	Constructing on floodplain (CH. 300-600). Constructing underbridge on floodplain (CH. 18950-19150).	Integration with public transport facilities	The journey time improvements result in a slight improvement in ease of access to Inch and Huntly rail stations.

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		from Huntly settlement area, but moves the main road slightly further from receptors.					
	Cultural heritage	This alignment lies close to Berryhill enclosure (SM5380) and would have a likely significant impact on its setting. Further to the north it runs close to Hill of Dunnideer (SM95), and is likely to have a significant impact on its setting.	Utilities	Minor utility diversion (CH. 0-250). Moderate utility diversions (CH. 950-1450). High pressure gas main (CH. 1450-1550).	Integration	The route will improve access to the major LDP allocations at Huntly and those at Inch and Oyne. Improvements to journey times and journey time reliability fit will with local and national policy. Local accessibility policies should not be impacted if a suitable NMU strategy is adopted with junctions and crossing points.	
	Plans and policies	The route does not pass through any LDP allocations or settlements, or committed developments.	Construction Access & Temporary Disruption/Traffic Management	Extended sections of route remote from main roads for construction access Difficult and high topography to north and centre of alignment	Accessibility and social inclusion	Potential to improve accessibility to services, education and employment etc for settlements along this alignment (Inch and Oyne) subject to junction provision.	
	Soil and geology	Small areas of prime agricultural land, contaminated land (railway, cement works), and small areas of mineral resources also present.			Public acceptability	Proximity to Bennachie makes the southern end of this alignment likely unacceptable to large numbers of people. There are also public concerns over the impact on properties at Inch and Oyne, as well as on recreational sites at Gartly Moor. CN02-003 also has a potential adverse impact on cultural heritage sites such as Hill of Dunnideer.	
CN02-004	Landscape	The appraisal identifies long sections of the alignment as having Major adverse effects on the landscape character due to the cumulative effect of introducing three new large structures along 2.45km, large scale earthworks, loss of woodland and treelines in Shanquhar, a major loss of woodland in the slopes of Wishach Hill. Major adverse impacts on the setting of Dunnideer are expected with cuttings of >30m. In addition, cumulative adverse effects are expected from the cutting of >40m through Hill of Tillymuick, earthworks of >5m and major loss of woodland and ancient woodland within the SLA of Bennachie.	Alignment	Approx. 24.3km in length	Operation and inter-urban connectivity	Between Huntly and Oyne, this offers a shorter and faster route than the existing A96 with a journey time saving of 4-5 minutes. As a high standard dual carriageway, the route offers better overtaking opportunities and incident management leading to faster journey times, as well as faster and more efficient freight movements. The route passes through a sparsely populated area and is therefore likely to attract mostly strategic traffic, although the precise mix will be dependent on the junction strategy. Some local traffic is expected to continue to use the existing A96.	
	Water	Route crosses the extensive floodplain of the River Bogie (ch.450m) and is not perpendicular to flow (major adverse). Potential for active morphology at the crossings of the Shevock Burn (ch.16350m) and Gadie Burn (ch.20000m) (moderate adverse).	Earthworks	Bulk Cut – 15,507,262m <sup>3</sup> Bulk Fill – 18,854,266m <sup>3</sup> Deficit – 4,050,091m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	This corridor avoids bends, junctions and accesses on the existing A96 from Huntly to Oyne, including cluster sites at Bainshole and Mill of Carden. As a high-quality dual carriageway route with fewer, higher-specification junctions, there will be safety benefits for road users relative to the existing	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						route; the removal of traffic from the existing route will make it in turn safer. The elevation of the route is also lower than the existing A96 reducing the risk of weather-related accidents. The route does intersect the core path network at Inch and Oyne, as well as passing through the base of Bennachie which is a popular area with walkers and cyclists; suitable NMU facilities would be required to maintain safe routes for these users. Potential conflict with 1.2km of core path which would bring users into more direct contact with traffic and would require segregation.	
Ecology	Ecological receptors/constraints include the wildcat priority area, two sensitive areas for protected species (badger etc.), one large and one small ancient woodland, and two water crossings.	Geotechnical	~Rock cuttings >39m (CH. 20700-20850). ~Embankments up to 44m on rock & unidentified constraint (CH. 6700-7250). ~Embankment on Peat >5m (CH. 9100-9750).	Promoting regional economic growth	The journey time improvements result in a slight improvement in ease of access to the wider transport network, jobs and services.		
People and communities	There is one residential property at Puttingstone, south of Oyne. Alignment passes through areas of class 3.1 land surrounding Inch and Oyne. No Class 1 or 2 land.	Structures	Viaduct >60m (CH. 100-750). Structure clearance >20m & span >65m (CH. 16250-16500).	Facilitating active travel	The route intersects the core path network around Inch and Oyne a total of six times plus the Inch to Oyne "Archaeolink" cycle route, and retention of these routes must form part of any design. There are opportunities to improve existing NMU routes through better surfacing and pedestrian/cycle segregation.		
Noise and air quality	Potential noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, including Inch and Huntly.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignment ties in to existing road <200m from Huntly settlement area but moves the main road slightly further from receptors.	Hydrology	Construction on floodplain (CH. 350-500).	Integration with public transport facilities	The journey time improvements result in a slight improvement in ease of access to Inch and Huntly rail stations.		
Cultural heritage	This alignment passes close to Tillymuick settlement (SM5316) and may have a significant effect on its setting (particularly its intervisibility with Berryhill enclosure. Further north it runs very close to Hill of Dunnideer (SM95) and is likely to have a significant impact on its setting. This alignment would also be visible in the key view south from Candle Stane Stone Circle (SM12).	Utilities	SSE Pylons within 100m and 275kV crossing (CH. 100-750). High pressure gas main (CH. 750-1050). Wind turbine within 100m (CH. 11400-11450).	Integration	The route will improve access to the major LDP allocations at Huntly and those at Inch and Oyne. Improvements to journey times and journey time reliability fit will with local and national policy. Local accessibility policies should not be impacted if a suitable NMU strategy is adopted with junctions and crossing points.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Plans and policies	The route does not pass through any LDP allocations or settlements, or committed developments.	Construction Access & Temporary Disruption/Traffic Management	Extended sections of route remote from main roads for construction access Difficult and high topography to north and centre of alignment	Accessibility and social inclusion	Potential to improve accessibility to services, education and employment etc for settlements along this alignment (Insch and Oyne) subject to junction provision.	
	Soil and geology	Small area of peat, small area of prime agricultural land, contaminated land (railway), and small areas of mineral resources, all present.			Public acceptability	Proximity to Bennachie makes the southern end of this alignment likely unacceptable to large numbers of people; it runs closer to the foot of the hill than any other CN02 alignment. There are also public concerns over the impact on properties at Insch and Oyne, as well as on recreational sites at Gartly Moor. CN02-004 also has a potential adverse impact on cultural heritage sites such as Hill of Dunnideer.	

Corridor CN03 Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
CN03-001	Landscape	The majority of the alignment has earthworks >15m with sections of cutting up to 76m in depth and long sections of embankment >15m and up to 35m in height. The overall rating is therefore Major adverse.	Alignment	Approx. 13.7km in length.	Operation and inter-urban connectivity	Between Huntly and Oyne, this route covers approximately the same distance as the A96 as a high standard dual carriageway it offers 2-3 minute journey time savings, better overtaking opportunities and incident management leading to faster journey times, as well as faster and more efficient freight movements. The route passes through an area of low population density, with the major nearby settlements being Inch and Oyne; these are likely to be served by a junction with other local traffic staying on the existing road network, segregated from the mostly strategic traffic using route CN03. CN01_001 is most remote from the existing employment and commercial areas in Inch.	<p>There are three alignments within the CN03 Corridor Option (CN03-001, CN03-002 and CN03-003). The alignments run parallel to the A96, tie into the A96 to the west of the Glens of Foudland, pass to the north of Inch and terminate at Garioch.</p> <p><b>Engineering</b></p> <ul style="list-style-type: none"> <li>All of the alignments have challenging topography constraints through the Glens of Foundland and across the western edge of the Hill of Skares.</li> <li>Significant cuttings result with the largest on alignment CN03-001 which is in excess of 75m deep at the centreline of the road. CN03-003 has the lowest cut at 35-40 metres</li> <li>There are significant utility constraints impacting all the alignments including high pressure gas mains that are crossed several times.</li> <li>All of the alignments have multiple water course crossings.</li> <li>The southern half of the alignments all converge on the area near to Bennachie and therefore have similar challenges in terms of topography and subsequent earthworks</li> </ul> <p><b>Environment</b></p> <ul style="list-style-type: none"> <li>All alignments have a major adverse impact on landscape and visual receptors, as they are within the Bennachie Special Landscape Area (SLA) and require large scale earthworks.</li> <li>Alignments CN03-001 and CN03-003 have major adverse impacts upon the water environment as they cross the significant floodplain of the Shevock Burn. Alignment CN03-002 is moderate adverse as it crosses a number of watercourses where the floodplain is smaller.</li> <li>All alignments have a moderate adverse impact upon ecological receptors due to the presence of the Local Nature Conservation Site and watercourse crossings.</li> <li>All alignments have a moderate adverse impact upon people and community receptors, which are scattered residential properties and prime agricultural land.</li> </ul>
	Water	Route crosses the extensive floodplain of The Kellock (ch.6250m) and is not perpendicular to flow (major adverse).	Earthworks	Bulk Cut – 16,917,092m <sup>3</sup> Bulk Fill – 8,811,988m <sup>3</sup> Surplus – 8,105,104m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	As a high-quality dual carriageway route with fewer, higher-specification junctions, there are significant safety benefits, including the removal of the accident cluster site at Bainshole from the route. The reduction in traffic volume on the existing A96 will also benefit safety for local road users. There is no significant difference in maximum elevation between the proposed and existing routes so accidents due to winter weather may not be affected. The route crosses a core path at Oyne and passes through the base of Bennachie which is a popular area with walkers and cyclists; suitable NMU facilities would be required to maintain safe routes for these users.	
	Ecology	Ecological receptors/constraints include one local designated site (Local Nature Conservation Site), six water crossings, and one small ancient woodland.	Geotechnical	Cuttings up to 76.6m high in non-identified geotechnical constraint. Embankments up to 35.1m high on potentially compressible soils (alluvium).	Promoting regional economic growth	The journey time improvements result in a slight improvement in ease of access to the wider transport network, jobs and services.	
	People and communities	Alignment passes through areas of class 3.1 agricultural land surrounding Inch and Oyne. No Class 1 or 2 land.	Structures	Viaduct larger than 300m required to cross flood plain.	Facilitating active travel	The route has one crossing of a core path at Oyne and also crosses the "Archaeolink" cycle route; retention of these routes must form part of any design. There are opportunities to improve existing NMU routes through	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						better surfacing and pedestrian/cycle segregation.	<ul style="list-style-type: none"> <li>Alignments CN03-002 and CN03-003 have moderate adverse impacts upon cultural heritage receptors, due to the impacts upon settings of various scheduled monuments and adjacent Gardens and Designed Landscapes (GDL).</li> <li>Alignment CN03-001 has major adverse impacts upon cultural heritage receptors, as it affects the setting of scheduled monuments, and would be visible in key views from two GDLs at Williamston House and Newton House.</li> <li>All alignments perform similarly from an environmental perspective, with major adverse impacts identified on all three.</li> </ul> <p><b>Transportation</b> Alignment CN03-001 is located closest to the existing A96 within the CN03 Corridor Option and is likely to attract the most existing traffic (both local and strategic).</p> <p><b>Alignment CN03-003 was concluded to be the better performing alignment from within the CN03 Corridor Option. Due to the impact of the southern section at Bennachie, as an alternative, options to develop a hybrid between CN02 and /or OLC alignments will be considered at Second Fix.</b></p>
Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. The small increase around Insch in noise is identified at communities with a relative low population count.	Hydrology	Crossing flood plain.	Integration with public transport facilities	The journey time improvements result in a slight improvement in ease of access to Insch and Huntly rail stations.		
Cultural heritage	Alignment CN03_001 passes in very close proximity to the Gowk Stane standing stone (Scheduled Monument - SM12107) and would cause a substantial change to its setting. The alignment also runs in close proximity to Westhall House Category A Listed Building (LB16134), through the remnants of the non-inventory Garden and Designed Landscape (GDL) which forms its setting. The alignment would be visible within the key view south-east from the House, forming a major new element in this key view. The alignment would also run between the two Scheduled Monuments of Brownhills Cairns (SM12116) and Wester Shevock Cairn (SM12115). Views between the two SMs form a key part of their settings. The alignment would also be visible within the key views from Newton House (Category B Listed Building at the centre of Newton House Inventory GDL), and Williamston House (category B Listed Building at the centre of Williamston House Inventory GDL). The alignment may impact on the setting of Harthill Castle. It may be visible beyond the castle in views from locations to the north.	Utilities	273mm SGN high pressure gas main crosses alignment at several locations & SSE Pylons within 100m. Water storage facility within alignment although likely able to avoid.	Integration	The route will improve access to the major LDP allocations at Huntly and those at Insch and Oyne. Improvements to journey times and journey time reliability fit with local and national policy. Local accessibility policies should not be impacted if a suitable NMU strategy is adopted with junctions and crossing points.		
Plans and policies	This route does not pass through any LDP allocations, settlements or committed developments.	Construction Access & Temporary Disruption/Traffic Management	Extended sections of route remote from main roads for construction access Difficult and high topography to north of alignment	Accessibility and social inclusion	Potential to improve accessibility to services, education and employment etc for settlements along this alignment (Insch, Old Rayne and Oyne) subject to junction provision.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Soil and geology	One large stretch of prime agricultural land, and several smaller areas. Small area of mineral resources.			Public acceptability	Proximity to Bennachie makes the southern end of this alignment likely unacceptable to large numbers of people. There are public concerns over the impact on Inch and Oyne, and the route's lack of benefits to winter resilience may meet opposition.	
CN03-002	Landscape	The scale of the earthworks, loss of woodland and length of alignment within Bennachie Special Landscape Area (SLA) will result in Major adverse impacts along the majority of the alignment. The overall rating is therefore Major adverse.	Alignment	Approx. 14.2km in length.	Operation and inter-urban connectivity	Between Huntly and Oyne, this route covers approximately the same distance as the A96 as a high standard dual carriageway it offers 2-3 minute journey time savings (very slightly less than CN03-001), better overtaking opportunities and incident management leading to faster journey times, as well as faster and more efficient freight movements, particularly to existing and proposed employment areas in Inch which are closer to this alignment than to CN03-001. The route passes through an area of low population density, with the major nearby settlements being Inch and Oyne; these are likely to be served by a junction with other local traffic staying on the existing road network, segregated from the mostly strategic traffic using route CN03.	
	Water	Route crosses a number of watercourses where the floodplain is <100m wide (minor adverse). Potential active morphology at the crossing of Gadie Burn at ch.10050m (moderate adverse).	Earthworks	Bulk Cut – 6,814,776m <sup>3</sup> Bulk Fill – 6,627,552m <sup>3</sup> Surplus – 187,224m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	As a high-quality dual carriageway route with fewer, higher-specification junctions, there are significant safety benefits, including the removal of the accident cluster site at Bainshole from the route. The reduction in traffic volume on the existing A96 will also benefit safety for local road users. There is no significant difference in maximum elevation between the proposed and existing routes so accidents due to winter weather may not be affected. The route crosses a core path at Oyne and passes through the base of Bennachie which is a popular area with walkers and cyclists; suitable NMU facilities would be required to maintain safe routes for these users. Potential conflict with 1km of core path which would bring users into more direct contact with traffic and would require segregation.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	Ecological receptors/constraints include one local designated site, five water crossings, one small ancient woodland, one small sensitive area for protected species (badger).		Geotechnical	Cuttings up to 53.8m high in non-identified geotechnical constraints. Embankments up to 30.2m high on potentially compressible soils (alluvium).	Promoting regional economic growth	The journey time improvements result in a slight improvement in ease of access to the wider transport network, jobs and services.	
People and communities	There is one residential property at Hillbrae south of Oyne. Alignment passes through areas of class 3.1 surrounding Insch and Oyne. No Class 1 or 2 land.		Structures	Larger structure required to span the B class road and railway line.	Facilitating active travel	The route has two crossings of a core path at Oyne and also crosses the "Archaeolink" cycle route (with more net impact than CN03-001); retention of these routes must form part of any design. There are opportunities to improve existing NMU routes through better surfacing and pedestrian/cycle segregation.	
Noise and air quality	<p>There is noticeable potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. However, the increase in noise is identified at communities with a relative low population count. Areas of Insch may be affected and Local dEvelopment Plan (LDP) allocations in the region such as OP4: North of Insch Business Park Allocation: 5ha employment land.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distant from inhabited areas with population seemingly &lt;10ppl/km. This alignments passes within 200m of the LDP settlement boundary for Insch, but there are few receptors in this area so is classed as moderate beneficial.</p>		Hydrology	None.	Integration with public transport facilities	The journey time improvements result in a slight improvement in ease of access to Insch and Huntly rail stations.	
Cultural heritage	Alignment CN03-002 passes in close proximity to Berry Hill enclosure (SM5380) and would cause a substantial change to its setting. The alignment would be visible within the key Williamston House (Category B Listed Building at the centre of Williamston House Inventory GDL), potentially having an effect upon the setting of both the House and the GDL. The alignment may impact on the setting of Harthill Castle. It may be visible beyond the castle in views from locations to the north.		Utilities	Wind turbine with in extents however this has not been confirmed, additional checks needed. SSE High voltage line. SW Distribution line. SW Gravity pipe.	Integration	The route will improve access to the major LDP allocations at Huntly and those at Insch and Oyne. Improvements to journey times and journey time reliability fit will with local and national policy. Local accessibility policies should not be impacted if a suitable NMU strategy is adopted with junctions and crossing points.	
Plans and policies	This route does not pass through any LDP allocations, settlements or committed developments.		Construction Access & Temporary Disruption/	Extended sections of route remote from main roads for construction access Difficult and high topography to north of alignment	Accessibility and social inclusion	Potential to improve accessibility to services, education and employment etc for settlements along this alignment (Insch, Old Rayne and Oyne) subject to junction provision.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Soil and geology	Small areas of prime agricultural land, contaminated land (railway, military land), and a small area of mineral resources, are present.	Traffic Management		Public acceptability	Proximity to Bennachie makes the southern end of this alignment likely unacceptable to large numbers of people. There are public concerns over the impact on Inch and Oyne, and the route's lack of benefits to winter resilience may meet opposition.	
CN03-003	Landscape	The scale of the earthworks, loss of woodland and length of alignment within Bennachie SLA will result in Major adverse impacts along the majority of the alignment. The overall rating is therefore Major adverse.	Alignment	Approx. 14.5km in length.	Operation and inter-urban connectivity	Between Huntly and Oyne, this route covers approximately the same distance as the A96 as a high standard dual carriageway it offers 1 to 2 minute journey time savings (less than both CN03 alternatives), better overtaking opportunities and incident management leading to faster journey times, as well as faster and more efficient freight movements, particularly to existing and proposed employment areas in Inch which are closer to this alignment than to CN03-001. The route passes through an area of low population density, with the major nearby settlements being Inch and Oyne; these are likely to be served by a junction with other local traffic staying on the existing road network, segregated from the mostly strategic traffic using route CN03.	
	Water	Route crosses the extensive floodplain of the Shevock Burn(ch.8350) and Gadie Burn (ch.10650). These crossings are not perpendicular to flow (major adverse).	Earthworks	Bulk Cut – 5,378,721m <sup>3</sup> Bulk Fill – 7,479,251m <sup>3</sup> Deficit – 2,100,530m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	As a high-quality dual carriageway route with fewer, higher-specification junctions, there are significant safety benefits, including the removal of the accident cluster site at Bainshole from the route. The reduction in traffic volume on the existing A96 will also benefit safety for local road users. There is no significant difference in maximum elevation between the proposed and existing routes so accidents due to winter weather may not be affected. The route crosses a core path at Oyne and passes through the base of Bennachie which is a popular area with walkers and cyclists; suitable NMU facilities would be required to maintain safe routes for these users. Potential conflict with 1km of core path which would bring users into more direct contact with traffic and would require segregation.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Ecology	Ecological receptors/constraints include one local designated site, and three water crossings.	Geotechnical	2no. instances of embankments on contaminated land – one on railway & one on sewage. Cuttings up to 37.5m high in non-identified geotechnical constraint and rock. Embankments up to 30.9m high on potentially compressible soils (alluvium).	Promoting regional economic growth	The journey time improvements result in a slight improvement in ease of access to the wider transport network, jobs and services.	
	People and communities	There is one residential property at Hillbrae south of Oyne. Alignment passes through areas of class 3.1 land surrounding Insch and Oyne. No Class 1 or 2 land.	Structures	Underbridge required on compressible soils. Area susceptible to flooding and may require structure. Embankment height 30m+ would represent significant structural implications. Structure over 300m in length required to cross a farm access road and area susceptible to flooding & on compressible material. Overbridge required allowing a C-class road to cross the A96. Structure on significant skew. 300m+ viaduct required to span area susceptible to flooding.	Facilitating active travel	The route has two crossings of a core path at Oyne and also crosses the “Archaeolink” cycle route (with more net impact than CN03-001); retention of these routes must form part of any design. There are opportunities to improve existing NMU routes through better surfacing and pedestrian/cycle segregation.	
	Noise and air quality	Potential noticeable Increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative medium population count such as Insch. Additionally, there are LDP allocations which are potentially affected including the Insch OP4: North of Insch Business Park Allocation: 5ha employment land.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distant from inhabited areas with population seemingly <10ppl/km. This alignments passes within 200m of the LDP settlement boundary for Insch, but there are few receptors in this area so is classed as moderate beneficial.	Hydrology	2no. instances of alignment on areas susceptible to flooding.	Integration with public transport facilities	The journey time improvements result in a slight improvement in ease of access to Insch and Huntly rail stations.	
	Cultural heritage	Alignment CN03-003 passes in close proximity to Berry Hill enclosure (SM5380) and would cause a substantial change to its setting. The alignment would be visible within the key view to the SW from Hatton of Ardoyne Stone Circle (SM23) and would cause a substantial change to its setting. The alignment would be visible within the key Williamston House (Category B Listed Building at the centre of Williamston House Inventory GDL), potentially having an effect upon the setting of both the House and the GDL. The alignment may impact on the setting of Harthill Castle. It may be visible beyond the castle in views from locations to the north.	Utilities	273mm SGN High pressure gas main. SSE HIGH Voltage line 33kV. Wind turbine, not confirmed. 300mm dia. distribution main.	Integration	The route will improve access to the major LDP allocations at Huntly and those at Insch and Oyne. Improvements to journey times and journey time reliability fit will with local and national policy. Local accessibility policies should not be impacted if a suitable NMU strategy is adopted with junctions and crossing points.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Plans and policies	This route does not pass through any LDP allocations, settlements or committed developments.	Construction Access & Temporary Disruption/Traffic Management	Extended sections of route remote from main roads for construction access Difficult and high topography to north of alignment	Accessibility and social inclusion	Potential to improve accessibility to services, education and employment etc for settlements along this alignment (Insch, Old Rayne and Oyne) subject to junction provision.	
	Soil and geology	Small areas of prime agricultural land, contaminated land (sewage works, railway), small areas of mineral resources, are present.			Public acceptability	While any route impacting on Bennachie is likely unacceptable to large numbers of people, this route has less impact relative to the CN03 alternatives. There are public concerns over the impact on Insch and Oyne, and the route's lack of benefits to winter resilience may meet opposition.	

Corridor OLC Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
OLC-001	Landscape	While there is a potential Major adverse impact at Williamston House Garden and Designed Landscape (GDL), the majority of impacts identified in the appraisal are Moderate. The alignment is predominantly online.	Alignment	Approx. 13.9km in length	Operation and inter-urban connectivity	The route reduces journey times between Colpy and Inveramsay by 3 minutes on average and 4 minutes at peak times. By providing a high-quality dual carriageway route, overtaking opportunities and incident management will be improved resulting in better journey time reliability. Freight efficiency will also be improved by faster travel and possibly an improved link to the proposed mixed use site at Old Rayne (dependent on junction strategy). The new route will cater for a mixture of local and strategic traffic, with the existing A96 able to cater for more local traffic if bridges are provided where the two routes intersect.	<p>Traffic</p> <ul style="list-style-type: none"> <li>Very slight journey time preference for shorter routes with OLC-005 performing best</li> <li>Varying levels of interaction with the NMU network with OLC-004 and -007 severing the fewest routes and OLC-002 and -002b the most</li> <li>More segregation of strategic and local traffic where the new route is provided significantly offline from the existing (OLC-003 and OLC-006)</li> <li>All routes offer improvement to freight efficiency, journey time reliability and safety, bypassing two accident cluster sites on the existing route</li> </ul> <p>Engineering</p> <ul style="list-style-type: none"> <li>Northern end – alignment 003 is very similar to alignment D01_001 in the adjoining corridor and D01_001 has less impact on Home Farm and the settlement of Old Rayne. 003 has the highest number of structures (17).</li> <li>Little to differentiate between online alignments 001, 004 and 005 between Colpy and Mill of Petmeddan. Kellockbank and the A96 through Carden identified as particularly constrained and further work in 2<sup>nd</sup> fix required.</li> <li>Alignment 005 (offline section) and 006 generate the highest volume of earthworks, particularly at the southern/eastern end where 86m and 66m cuts are required (1.9km or 1.6km tunnel respectively). Therefore 005 (offline to south), 006 and 006b are to be discounted from further assessment at the southern end.</li> <li>Southern end – very constrained corridor along existing A96 through Pitcaple due to River Urie, existing rail line and Pitcaple Castle extents.</li> </ul> <p>Environment</p> <ul style="list-style-type: none"> <li>Routes to the south of the existing A96 is preferable (006, 007)</li> </ul> <p><b>Overall – 2 alignments taken forward</b>                      - <b>Online 004 option along full length. This is a predominantly online option from Colpy to Oyne Cross (may encompass the better performing parts of parallel alignments 001 and 005). South</b></p>
	Water	Route crosses extensive floodplain of Gadie Burn (ch.8700m) and is not perpendicular to flow (major adverse). Route encroaches onto extensive floodplain of the River Urie without crossing it at several locations. Potential for river realignment of River Urie at ch.2000m and ch.2500m (moderate adverse). Potential for active morphology at crossing of Shevock Burn (ch.4500m) (moderate adverse).	Earthworks	Bulk Cut – 756,271m <sup>3</sup> Bulk Fill – 1,496,900m <sup>3</sup> Surplus – 740,628m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The alignment will reduce the risk and severity of accidents and driver stress through improved alignment and fewer accesses, directly addressing the accident cluster sites at Pitcaple and Chapel of Garioch. There will be safety benefits for NMUs on the existing route, particularly where footpaths are provided adjacent to the A96 at Pitmachie and Pitcaple, although a crossing will be required for the Insch to Oyne “Archaeolink” cycle route.	
	Ecology	A number of minor watercourse crossings and encroachment into a sensitive area alongside the current A96 alignment (an area which currently forms a habitat corridor). It is assumed that no realignment of the watercourses is needed.	Geotechnical	Embankments >10m (up to 19m) on potentially compressible soils. Rock cuttings up to 5.4m identified. Cuttings > 10m (up to 10.7m) identified. Potential for contaminated ground.	Promoting regional economic growth	Faster journey times will result in improved access to jobs, services and the wider strategic network.	
	People and communities	Garden centre (Kellockbank). There are a few areas where scattered properties and farms fall within the alignment. The route is constantly in and out of areas of prime land along its length. Only a short section between Carden Farm and Pitcaple Castle is completely free from prime land.	Structures	7no. Underbridges 2no. Overbridge 1no. Existing culvert widened	Facilitating active travel	There are opportunities to improve NMU facilities on the existing corridor once it has been relieved by the new alignment – for example improving surfacing and providing segregation between pedestrians and cyclists. There should be no net impact on use of the Archaeolink route so long as crossings are provided for it.	
	Noise and air quality	Potential noticeable Increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative medium population count, including Old Rayne and receptors close to existing A96. Additionally, there are LDPs which could be potentially affected such as: Old Rayne -	Hydrology	11no. active flood plain crossings – River Urie, Gadie Burn and various tributaries 1no. The Kellock watercourse crossing 1no. The Shevock watercourse crossing 1no. The Gadie Burn watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	Faster journey times will result in improved access to the rail stations at Inverurie, Insch and Huntly.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		<p>OP2: Barreldykes Allocation: 30 homes, business use and retail use &amp; OP1: East of School Allocation: 10 homes.</p> <p>The alignments are broadly in line with the existing alignment, however move away from all major settlements &gt;10ppl. Alignment passes &lt;200m from Pitcaple/Old Rayne settlement area.</p>					<p>of Oyne alignment 004 crosses the railway line and stays south of the existing A96 and railway line tying into the existing A96 at Inveramsay. Potential impact on properties to be assessed and minimised.</p> <ul style="list-style-type: none"> <li>- Hybrid of OLC-004 and OLC-007.</li> <li>- May need to also consider an option around the north of Pitcaple Castle for tie-in to a BN01 alignment (this would incorporate elements of alignment 002 and BN01_004 – refer to BN01 Assessment Review.).</li> <li>- Due to the concentration of constraints near to Pitcaple (existing road, railway, residential properties, flooding and cultural heritage) specific consideration of links between OLC, D01/02, BN01 and OLI is required.</li> <li>- Pitcaple link assessment should determine preferred route for southern elements of OLC</li> </ul>
	Cultural heritage	The alignment would likely affect the settings of Wester Shevock cairn (SM12115), Williamston House (LB2964) and GDL and Newton House (LB2962) and GDL. The alignment cuts through the edge of the non-inventory GDL which forms the setting of Category A Listed Pitcaple Castle (LB2830), and may have a significant effect on its setting.	Utilities	<p>17no. crossing of AC private water supplies</p> <p>1no. SGN above ground installation sites within alignment</p> <p>2no. crossing of SGN high pressure gas pipelines</p> <p>4no. crossing of SSE 11Kv cables</p> <p>19no. crossing of SSE 11Kv lines</p> <p>2no. crossing of SSE 275Kv lines</p> <p>19no. crossing of SSE low voltage cables</p> <p>17no. crossing of SSE low voltage lines</p> <p>1no. SSE pylons within 100m of edge of alignment</p> <p>14no. crossing of SW distribution main (100 to 300)</p> <p>4no. crossing of SW distribution main (&lt;100)</p> <p>2no. crossing of SW gravity pipes</p> <p>1no. impact on Traffic Scotland assets</p>	Integration	There are LDP allocations at Insch, Old Rayne, Oyne and Chapel of Garioch, all of which will receive improved access from this route. The route also forms a good fit with policy regarding improving journey times and reliability, improved access to the Strategic Growth Area and best use of existing infrastructure (being primarily online).	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Route passes through small scale committed housing development.	Construction Access & Temporary Disruption/Traffic Management	<p>Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road.</p> <p>Access also possible from the B992 at CH 2400.</p> <p>Temporary access roads required to facilitate construction.</p> <p>Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.</p>	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be unaffected.	
	Soil and geology	Large stretches of prime agricultural land. Contaminated Land (railway, fuel storage, mills). Large areas of mineral resources.			Public acceptability	There is significant support for this route as it is perceived to be less environmentally intrusive and costly as it is perceived as a largely online upgrade. There is some concern for loss of prime agricultural land and the loss of trade for businesses fronting to or near the existing road.	
OLC-002	Landscape	The appraisal has not identified any Major adverse impacts. The overall rating is therefore Moderate adverse.	Alignment	Approx. 14.7km in length	Operation and inter-urban connectivity	The route reduces journey times between Colpy and Inveramsay by 3 minutes (a slight disbenefit relative to OLC-001). By providing a high-quality dual carriageway route, overtaking opportunities and incident management will be improved resulting in better journey time reliability. Freight efficiency will also be improved by faster travel and possibly an improved link to the proposed mixed use site at Old Rayne and existing and proposed sites at Insch (dependent on junction strategy). The new route has more	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						offline sections than OLC-001 and will cater for both strategic and local traffic with the precise mix dependent on the junction strategy; with more of the existing A96 intact relative to OLC-001 local traffic may be more inclined to use it.	
	Water	Route crosses extensive floodplain of the River Urie at ch.6350m and ch.13100m and these crossings are not perpendicular to flow (major adverse). Potential for river realignment of River Urie at ch.12500m (moderate adverse). Potential for active morphology at crossing of Shevock Burn (ch.5100m) (moderate adverse).	Earthworks	Bulk Cut – 798,004m <sup>3</sup> Bulk Fill – 1,561,208m <sup>3</sup> Surplus – 763,204m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The alignment will reduce the risk and severity of accidents and driver stress through improved alignment and fewer accesses, directly addressing the accident cluster sites at Pitcaple and Chapel of Garioch, with indirect benefits for traffic on the existing A96 using these junctions due to reduced traffic levels. OLC-002 crosses several NMU routes, including the Old Rayne and Whiteford core path network (three crossings), the Inch to Oyne “Archaeolink” cycle route (two crossings) and the Oldmeldrum to Old Rayne cycle route (four crossings); all will require mitigation to prevent disbenefits to NMUs.	
	Ecology	Crossing of the River Urie. Several minor watercourse crossing throughout. It is assumed that no realignment of the watercourses is needed. Fragmentation of several larger blocks of ancient woodland within the area around the River Urie, causing a greater level of impact to this ecological habitat mosaic. Further crossing through more blocks of ancient woodland and several watercourse crossings which form part of a habitat corridor across the current A96.	Geotechnical	Embankments >10m (up to 15.9m) on potentially compressible soils. Rock cuttings >10m (up to 12.7m) identified. Potential for contaminated ground.	Promoting regional economic growth	Faster journey times will result in improved access to jobs, services and the wider strategic network.	
	People and communities	Whole area of protected reserve land (LDP Aberdeenshire Council) within alignment at Whiteford Old School. There are a few areas where scattered properties and farms fall within the alignment. Large sections of the route are within prime land. Logie Durno Primary Scholl located directly adjacent to alignment.	Structures	10no. Underbridges 3no. Overbridges 3no. Viaducts	Facilitating active travel	There are opportunities to improve NMU facilities on the existing corridor once it has been relieved by the new alignment – for example improving surfacing and providing segregation between pedestrians and cyclists. Retention of the core paths and cycle networks will be required as part of the design.	
	Noise and air quality	Potential noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, including Old Rayne and Whiteford. Additionally, there a number of Local Development Plan (LDP) with the potential to be affected including Old Rayne - OP2 (Barreldykes Allocation: 30 homes,	Hydrology	9no. active flood plain crossings – River Urie and Burn of Durno 1no. The Kellock watercourse crossing 1no. The Shevock watercourse crossing 2no. River Urie watercourse crossings 1no. Burn of Durno watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	Faster journey times will result in improved access to the rail stations at Inverurie, Inch and Huntly.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		business use and retail use) and OP1: East of School Allocation: 10 homes.  The alignments are broadly in line with the existing alignment, however move away from all major settlements (>10pp/km).					
	Cultural heritage	The alignment intersects with the western edge of Durno Roman temporary camp Scheduled Monument (SM4123). It is assumed that a direct impact can be avoided through adjusting the alignment. Nonetheless the proximity of the alignment to the temporary camp would likely cause a significant impact on its setting. The alignment would be visible in the key view (to the south-east) from Candle Hill stone circle (SM13). The alignment cuts through the edge of the non-inventory GDL which forms the setting of Category A Listed Pitcaple Castle (LB2830), and may have a significant effect on its setting. The settings of Pitscurry, cairn 410m N of (SM12302), Williamston House (LB2964) and GDL and Newton House (LB2962) and GDL, and the Inventory Historic Battlefield of Battle of Harlaw, and Logie House Hotel (LB2857) are all likely to be impacted by the use of this alignment.	Utilities	4no. crossing of AC private water supplies 6no. crossing of SGN high pressure gas pipelines 7no. crossing of SSE 11Kv cables 35no. crossing of SSE 11Kv lines 2no. crossing of SSE 275Kv lines 15no. crossing of SSE low voltage cables 8no. crossing of SSE low voltage lines 2no. SSE pylons within 100m of edge of alignment 14no. crossing of SW distribution main (100 to 300) 6no. crossing of SW distribution main (<100) 2no. crossing of SW gravity pipes	Integration	There are LDP allocations at Insch, Old Rayne, Oyne and Chapel of Garioch, all of which will receive improved access from this route. The route also forms a good fit with policy regarding improving journey times and reliability and improved access to the Strategic Growth Area, but does not make as good use of existing infrastructure as OLC-001.	
	Plans and policies	Route passes through Pitcaple/Whiteford settlement and LDP allocated protected green space. Route passes through small scale committed housing development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the B992 at CH 2650. Access also possible from the C76C at CH 11450. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be unaffected.	
	Soil and geology	Large stretches of prime agricultural land. Contaminated Land (railway). Mineral resources.			Public acceptability	OLC-002 runs closer to Whiteford and the River Don than OLC-001 and is therefore likely to attract additional local opposition, over and above concerns on loss of prime agricultural land and loss of passing trade for businesses near the existing route.	
OLC-002B	Landscape	The loss of ancient woodland, introduction of new structures and impacts on residential receptors lead to an overall impact that will be major adverse.	Alignment	Approx. 2km in length	Operation and inter-urban connectivity	OLC-002B is an alternative to OLC-002 which offers a different southern tie-in point. The impact on operation and inter-urban connectivity, in terms of journey times, reliability, freight efficiency and separation of strategic and local traffic, is unchanged relative to OLC-002.	
	Water	Route crosses extensive floodplain of the River Urie (ch.1450m) and is not perpendicular to flow (major adverse).	Earthworks	Bulk Cut – 52,543m <sup>3</sup> Bulk Fill – 291,700m <sup>3</sup> Surplus – 239,157m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The impact on motorised user safety and driver stress is as for OLC-002. The number of NMU crossings required to deliver OLC-002B is lower, with one core path and two cycle network crossings fewer, although all will still require mitigation for NMU users.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Ecology	Crosses the river Urie and impacts three large blocks of ancient woodland, all of which directly contribute to a habitat corridors across the current A96. There is likely to be a cumulative negative impact on local habitat porosity associated with cutting across two potential habitat corridors and a river which connects them.	Geotechnical	Embankments up to 9.7m on potentially compressible soils. Rock cuttings >10m (up to 14.1m) identified. Potential for contaminated ground.	Promoting regional economic growth	The impact on regional economic growth will be unchanged relative to OLC-002.	
	People and communities	Mill of Durno and properties at Pitcaple within the alignment. Large proportion of alignment in prime land.	Structures	3no. Underbridges 1no. Overbridge	Facilitating active travel	Although there are fewer crossings of active travel routes relative to OLC-002, with the correct mitigation in the form of junctions and crossings for NMUs, the net impact should be negligible in either case.	
	Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. The small increase in noise is identified at communities with a relative low population count.  The alignments are broadly in line with the existing alignment, however move away from all major settlements (>10ppl/km). Alignment passes <200m from Pitcaple/Old Rayne and Whiteford settlement areas.	Hydrology	1no. active flood plain crossings – River Urie at Ch. 1400 - 1550 1no. River Urie watercourse crossing 1no. assumed tributary diversion	Integration with public transport facilities	The impact on integration with public transport facilities will be unchanged relative to OLC-002	
	Cultural heritage	The suboption cuts through the edge of the non-inventory GDL which forms the setting of Category A Listed Pitcaple Castle (LB2830), and may have a significant effect on its setting. The setting of Logie House Hotel (LB2857) is likely to be impacted by the use of this suboption.	Utilities	2no. crossing of SSE 11Kv lines 2no. crossing of SSE 275Kv lines 3no. crossing of SSE low voltage lines 3no. SSE pylons within 100m of edge of alignment 1no. crossing of SW distribution main (100 to 300) 2no. crossing of SW distribution main (<100) 2no. crossing of SW gravity pipes	Integration	The impact on integration with LDP sites and with policy outcomes will be unchanged relative to OLC-002.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/ Traffic Management	Construction runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the C83C at CH 1850. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Accessibility and social inclusion	The impact on accessibility and social inclusion is highly dependent on the junction strategy but is likely to be broadly similar to OLC-002.	
	Soil and geology	Large stretches of prime agricultural land. Contaminated Land (mill at one location). Mineral resources.			Public acceptability	OLC-002B runs slightly further from Whiteford than OLC-002 and therefore may attract slightly less local opposition. All other classes of opposition to OLC-002 are likely to apply to this route also.	
OLC-003	Landscape	The appraisal has identified Major adverse impacts on Williamston GDL and Newton House GDL. While the overall proportion of the alignment affecting these two GDL is relatively small, the overall rating is assessed as Major due to the importance of the GDL.	Alignment	Approx. 14.6km in length	Operation and inter-urban connectivity	The route reduces journey times between Colpy and Inveramsay by 3 minutes (a slight disbenefit relative to OLC-001). By providing a high-quality dual carriageway route, overtaking opportunities and incident management will be improved resulting in better journey time reliability. Freight efficiency will also be improved by faster travel and possibly an improved link to the	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						proposed mixed use site at Old Rayne and existing and proposed sites at Insch (dependent on junction strategy). The new route has more offline sections than OLC-001 and will cater for both strategic and local traffic with the precise mix dependent on the junction strategy; with more of the existing A96 intact relative to OLC-001 local traffic may be more inclined to use it.	
Water	Route crosses extensive floodplain of the River Urie (ch.6850m and ch.13750m) and the Gadie Burn (ch.8800m) and these crossings are not perpendicular to flow (major adverse). Potential for river realignment of River Urie at ch.12100m (moderate adverse). Potential for active morphology at crossing of the River Urie (ch.13750m) (moderate adverse).	Earthworks	Bulk Cut – 955,298m <sup>3</sup> Bulk Fill – 1,299,159m <sup>3</sup> Surplus – 343,861m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The alignment will reduce the risk and severity of accidents and driver stress through improved alignment and fewer accesses, directly addressing the accident cluster sites at Pitcaple and Chapel of Garioch, with indirect benefits for traffic on the existing A96 using these junctions due to reduced traffic levels. OLC-003 crosses several NMU routes, including the Old Rayne and Whiteford core path network (three crossings), and the Oldmeldrum to Old Rayne cycle route (four crossings); all will require mitigation to prevent disbenefits to NMUs.		
Ecology	Several minor watercourse crossings and skimming of ancient woodland. It is assumed that no realignment of the watercourses is needed. Fragmentation of habitat corridor across current A96.	Geotechnical	Embankments >10m (up to 16m) on potentially compressible soils. Rock cuttings > 10m (up to 11m) identified. Cuttings > 10m (up to 10.6m) identified. Potential for contaminated ground.	Promoting regional economic growth	Faster journey times will result in improved access to jobs, services and the wider strategic network.		
People and communities	Pitcaple Environmental Project. There are scattered properties within the alignment. Majority of alignment is within prime land ch.000-350 ch.750-1750 ch.2400-7400 ch. 9750 to end	Structures	13no. Underbridges 3no. Overbridges 1no. Viaduct	Facilitating active travel	There are opportunities to improve NMU facilities on the existing corridor once it has been relieved by the new alignment – for example improving surfacing and providing segregation between pedestrians and cyclists. Retention of the core paths and cycle networks will be required as part of the design.		
Noise and air quality	Potential noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, including Old Rayne and Whiteford. Additionally, there a number of LDP with the potential to be affected including Old Rayne - OP2 (Barreldykes Allocation: 30 homes, business use and retail use) and OP1: East of School Allocation: 10 homes.  The alignments are broadly in line with the existing alignment, however move away from all major settlements (>10ppl/km). Alignment passes <200m	Hydrology	12no. active flood plain crossings – River Urie, Gadie Burn, Burn of Durno and 1no. tributary 1no. The Kellock watercourse crossing 1no. Bonnyton Burn watercourse crossing 3no. The River Urie watercourse crossings 1no. Gadie Burn watercourse crossing 1no. Burn of Durno watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	Faster journey times will result in improved access to the rail stations at Inverurie, Insch and Huntly.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		from Pitcaple/Old Rayne and Whiteford settlement areas.					
	Cultural heritage	The alignment would have a direct impact on the north-east corner of the Newton House Inventory GDL. The alignment intersects the Inventory Historic Battlefield of the Battle of Harlaw. The alignment cuts through the edge of the non-inventory GDL which forms the setting of Category A Listed Pitcaple Castle (LB2830), and may have a significant effect on its setting. The alignment would be visible in the key view (to the south-east) from Candle Hill stone circle (SM13). The settings of Pitscurry, cairn 410m N of (SM12302), Williamston House (LB2964) and GDL and Newton House (LB2962) and GDL, and Logie House Hotel (LB2857) are likely to be affected by the use of this alignment.	Utilities	12no. crossing of AC private water supplies 8no. crossing of SSE 11Kv cables 23no. crossing of SSE 11Kv lines 2no. crossing of SSE 275Kv lines 32no. crossing of SSE low voltage cables 10no. crossing of SSE low voltage lines 1no. SSE pylons within 100m of edge of alignment 16no. crossing of SW distribution main (100 to 300) 6no. crossing of SW distribution main (<100) 2no. crossing of SW gravity pipes 1no. crossing of SW reservoirs (TBC) 2no. wind turbines within 100m of edge of alignment	Integration	There are LDP allocations at Insch, Old Rayne, Oyne and Chapel of Garioch, all of which will receive improved access from this route. The route also forms a good fit with policy regarding improving journey times and reliability and improved access to the Strategic Growth Area, but makes almost no use of existing infrastructure (a key policy thread).	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Route passes through small scale committed housing development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the B992 at CH 3100. Access also possible from the C59S at CH 4600. Access also possible from the C83C at CH 11250. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be unaffected.	
	Soil and geology	Large stretches of prime agricultural land. Contaminated Land (railway, tanks, mills). Large areas of mineral resources.			Public acceptability	OLC-003 runs closer to Whiteford, Old Rayne and the River Don than OLC-001 and is therefore likely to attract additional local opposition, over and above concerns on loss of prime agricultural land and loss of passing trade for businesses near the existing route. It is much less likely to be perceived as an "online" upgrade and therefore may face additional opposition on grounds of environmental impact and/or cost.	
OLC-004	Landscape	Due to the potential impacts on Williamston GDL, Newton House GDL, the scale of earthworks at Hill of Knockallochie and Pitcaple and loss of woodland the overall rating is assessed as Major adverse.	Alignment	Approx. 13.9km in length	Operation and inter-urban connectivity	The route reduces journey times between Colpy and Inveramsay by 3 minutes (a slight disbenefit relative to OLC-001). By providing a high-quality dual carriageway route, overtaking opportunities and incident management will be improved resulting in better journey time reliability. Freight efficiency will also be improved by faster travel and possibly an improved link to the proposed mixed use site at Old Rayne	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						and existing and proposed sites at Insch (dependent on junction strategy). The route is largely offline, and will therefore cater for a mixture of strategic and local trips (while some of the latter will use the existing A96).	
	Water	Route encroaches onto extensive floodplain of the River Urie (ch.5000m) without crossing it - potential river realignment (major adverse). Route crosses extensive floodplain of the Shevock Burn (ch.440m) and is perpendicular to flow (moderate adverse). Potential for active morphology at crossing of Gadie Burn (ch.8400m).	Earthworks	Bulk Cut – 3,431,370m <sup>3</sup> Bulk Fill – 386,724m <sup>3</sup> Surplus – 3,044,647m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The alignment will reduce the risk and severity of accidents and driver stress through improved alignment and fewer accesses, directly addressing the accident cluster sites at Pitcaple and Chapel of Garioch, with indirect benefits for traffic on the existing A96 using these junctions due to reduced traffic levels. OLC-004 has far fewer crossings of NMU routes than most other OLC routes, with only a single crossing of the Insch to Oyne “Archaeolink” route which requires mitigation.	
	Ecology	Significant fragmentation of sensitive area, including large blocks of ancient woodland, that form a habitat connection across the current A96. The alignment cuts through Govals Local Nature Conservation Site (LNCS) which is designated for geological reasons so has not been considered within this ecological assessment. It is assumed that no realignment of the watercourses is needed.	Geotechnical	Embankments >10m (up to 10.4m) on potentially compressible soils. Embankments >10m (up to 11.7m) on non-identified geotechnical constraints. Rock cuttings > 39m (up to 44m) identified. Potential for contaminated ground.	Promoting regional economic growth	Faster journey times will result in improved access to jobs, services and the wider strategic network.	
	People and communities	Garden centre (Kellockbank). Scattered properties along the alignment. Station Cottages ch13000 ch. 11250 ch. 8150 ch. 7300 ch. 6100 ch. 4500 - 5000 Large cluster of property. First half of alignment within prime land ch. 000 - 7350 ch. 12850 - 13150 ch. 13550- end	Structures	4no. Underbridges 2no. Overbridges 1no. Viaduct 2no. Existing culverts widened 1no. Existing culvert effected but currently no details of its condition or capacity	Facilitating active travel	There are opportunities to improve NMU facilities on the existing corridor once it has been relieved by the new alignment – for example improving surfacing and providing segregation between pedestrians and cyclists. Retention of the core paths and cycle networks will be required as part of the design.	
	Noise and air quality	Potential noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, including Old Rayne and Whiteford. Additionally, there a number of LDP with the potential to be affected including Old Rayne - OP2 (Barreldykes Allocation: 30 homes, business use and retail use) and OP1: East of School Allocation: 10 homes.  The alignments are broadly in line with the existing alignment, however move away from all major settlements (>10ppl/km). Alignment passes <200m	Hydrology	7no. active flood plain crossings – River Urie, The Shevock, The Kellock, Gadie Burn 1no. River Urie watercourse crossing 1no. The Kellock watercourse crossing 1no. The Shevock watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	Faster journey times will result in improved access to the rail stations at Inverurie, Insch and Huntly.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		from Pitcaple/Old Rayne and Whiteford settlement areas.					
	Cultural heritage	As much of this alignment follows the course of the existing A96 road, there is generally a reduced likelihood of impacts on the setting of heritage assets. The alignment would likely affect the settings of Pitcaple Castle (LB2830), Wester Shevock cairn (SM12115), Williamston House (LB2964) and GDL, Newton House (LB2962) and GDL, and the Inventory Historic Battlefield of the Battle of Harlaw.	Utilities	18no. crossing of AC private water supplies 2no. crossing of SSE 11Kv cables 21no. crossing of SSE 11Kv lines 2no. crossing of SSE 275Kv lines 64no. crossing of SSE low voltage cables 20no. crossing of SSE low voltage lines 2no. SSE pylons within 100m of edge of alignment 17no. crossing of SW distribution main (100 to 300) 6no. crossing of SW distribution main (<100) 4no. crossing of SW gravity pipes 1no. impact on Traffic Scotland assets	Integration	There are LDP allocations at Insch, Old Rayne, Oyne and Chapel of Garioch, all of which will receive improved access from this route. The route also forms a good fit with policy regarding improving journey times and reliability and improved access to the Strategic Growth Area, and makes reasonably good use of the existing infrastructure.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Route passes through small scale committed housing development, and immediately adjacent to Old Rayne settlement boundary.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access is restricted to the C120C at CH 9050 and the detrunked A96 at Inveramsay Bridge at CH 12700 unless a temporary structure over the railway is constructed. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required. As alignment crosses the Inverness to Aberdeen Rail Line Network Rail Possessions may be required to facilitate works.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be unaffected.	
	Soil and geology	Large stretches of prime agricultural land. Contaminated Land (railway, fuel storage, mills). Mineral resources.			Public acceptability	OLC-004 bypasses the Inveramsay Bridge, which is likely to attract opposition as this may be perceived as a waste of money as the existing bridge was only completed in 2016. The remainder of the route is likely to be largely perceived as online and therefore attract support as being less costly or environmentally intrusive, although there is some concern for loss of trade for local businesses.	
OLC-005	Landscape	The alignment includes very large scale earthworks at Gallows Hill, Hill of Knockallochie and Croft of Nethererton in addition to a large structure/embankment at the Gadie Burn and loss of woodland at that location. Due to these factors the overall rating is Major adverse.	Alignment	Approx. 14.9km in length	Operation and inter-urban connectivity	The route reduces journey times between Colpy and Inveramsay by 3-4 minutes, being slightly shorter than most other OLC routes. By providing a high-quality dual carriageway route, overtaking opportunities and incident management will be improved resulting in better journey time reliability. Freight efficiency will also be improved by faster travel and possibly an improved link to the proposed mixed use site at Old Rayne and existing and proposed sites at Insch (dependent on junction strategy). The route will cater for a mixture of strategic and local trips as both it and the existing A96 follow a	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						similar corridor over its northern section.	
	Water	Route crosses the extensive floodplain of the Gadie Burn (ch.7400m) and is not perpendicular to flow (major adverse). Potential for active morphology at the crossings of the Gadie Burn and Shevock Burn (moderate adverse). Potential for river realignment of the River Urie at ch.2550m (moderate adverse).	Earthworks	Bulk Cut – 20,484,943m <sup>3</sup> Bulk Fill – 1,763,366m <sup>3</sup> Surplus – 18,721,577m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The alignment will reduce the risk and severity of accidents and driver stress through improved alignment and fewer accesses, directly addressing the accident cluster sites at Pitcaple and Chapel of Garioch, with indirect benefits for traffic on the existing A96 using these junctions due to reduced traffic levels. OLC-005 crosses existing NMU routes five times in total (once on the Core Path network at Oyne and twice each on the Inch to Oyne “Archaeolink” and the “Great Inverurie Bike Ride” cycle routes) all of which will require mitigation to prevent disbenefits to NMUs.	
	Ecology	Several minor watercourse crossings and encroachment into several small ancient woodland blocks. It is assumed that no realignment of the watercourses is needed.	Geotechnical	Embankments >25m (up to 26.2m) on potentially compressible soils. Rock cuttings > 39m (up to 86m) identified. Potential for contaminated ground.	Promoting regional economic growth	Faster journey times will result in improved access to jobs, services and the wider strategic network.	
	People and communities	Garden centre (Kellockbank) is present within the alignment. Few scattered properties along route. First half of alignment mainly in prime agricultural land with scattered pockets along the remaining section.	Structures	4no. Underbridges 7no. Overbridges 1no. Viaduct 1no. Existing culvert widened	Facilitating active travel	There are opportunities to improve NMU facilities on the existing corridor once it has been relieved by the new alignment – for example improving surfacing and providing segregation between pedestrians and cyclists. Retention of the core paths and cycle networks will be required as part of the design.	
	Noise and air quality	Potential noticeable Increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative medium population count, including Old Rayne and receptors close to existing A96.  The alignments are broadly in line with the existing alignment, however move away from all major settlements (>10pp/km).	Hydrology	3no. active flood plain crossings – River Urie and Gadie Burn 1no. The Kellock watercourse crossing 1no. The Shevock watercourse crossing 1no. Gadie Burn watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	Faster journey times will result in improved access to the rail stations at Inverurie, Inch and Huntly.	
	Cultural heritage	This alignment would be in the immediate vicinity of Mains of Balquhain stone circle (SM3961) and would be likely to cause a significant impact on its setting. The use of this alignment would likely affect the settings of Balquhain Castle (SM90), Wester Shevock cairn (SM12115), The Maiden Stone (SM25 and HES Property in Care), Harthill Castle (LB16132), Williamston House (LB2964) and GDL, Newton House (LB2962) and GDL, and the Inventory Historic Battlefield of the Battle of Harlaw.	Utilities	7no. crossing of AC private water supplies 1no. crossing of NG high pressure gas pipelines 1no. SGN above ground installation sites within alignment 2no. crossing of SGN high pressure gas pipelines 7no. crossing of SSE 11Kv cables 13no. crossing of SSE 11Kv lines 3no. crossing of SSE 275Kv lines 5no. crossing of SSE low voltage lines 6no. SSE pylons within 100m of edge of alignment 13no. crossing of SW distribution main (100 to 300) 2no. crossing of SW distribution main (>300)	Integration	There are LDP allocations at Inch, Old Rayne, Oyne and Chapel of Garioch, all of which will receive improved access from this route. The route also forms a good fit with policy regarding improving journey times and reliability and improved access to the Strategic Growth Area, but does not make good use of existing infrastructure with few online sections.	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
				23no. crossing of SW distribution main (<100) 2no. crossing of SW raw water mains 1no. crossing of SW reservoirs 1no. telecommunications masts within 100m of edge of alignment 1no. wind turbines within 100m of edge of alignment			
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Route passes through small scale committed housing development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access is restricted to the B9002 at CH 8200, C120C at CH 9200 and the C117C at CH 11650. Construction vehicles would need pass through Pitcaple/Inveramsay to reach the alignment. Access is restricted to the C120C at CH 13400 and an unclassified road at CH 14550. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required. As alignment crosses the Inverness to Aberdeen Rail Line Network Rail Possessions may be required to facilitate works.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be unaffected.	
	Soil and geology	Large stretches of prime agricultural land. Contaminated Land (railway, mills). Small areas of mineral resources.			Public acceptability	OLC-005 may face public opposition on the grounds of bypassing the new (as of 2016) Inveramsay Bridge and a perceived waste of money; for using prime agricultural land; for removing trade from local business; and for adversely affecting cultural heritage, particularly the Maiden Stone which is directly affected. However, as it is likely to be perceived as online, it may receive some support as it may be perceived as less environmentally damaging and costly.	
OLC-006	Landscape	The scale of earthworks, loss of woodland and potential impact on the Maiden Stone mean the alignment is assessed as major adverse.	Alignment	Approx. 15.5km in length	Operation and inter-urban connectivity	The route reduces journey times between Colpy and Inveramsay by 3-4 minutes. By providing a high-quality dual carriageway route, overtaking opportunities and incident management will be improved resulting in better journey time reliability. Freight efficiency will also be improved by faster travel and possibly an improved link to the proposed mixed use site at Old Rayne and existing and proposed sites at Inch (dependent on junction strategy). As OLC-006 is largely offline, the existing route is more likely to be used by local traffic leaving more strategic traffic on the new alignment.	
	Water	Route crosses the extensive floodplain of The Kellock (ch.2250m) and Gadie Burn (ch.7450m) - these crossings are not perpendicular to flow (major adverse). Potential for active morphology at the crossing of the Gadie Burn.	Earthworks	Bulk Cut – 14,880,005m <sup>3</sup> Bulk Fill – 1,606,603m <sup>3</sup> Surplus – 13,273,402m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The alignment will reduce the risk and severity of accidents and driver stress through improved alignment and fewer accesses, directly addressing the accident cluster sites at Pitcaple and Chapel of Garioch, with greater	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						indirect benefits for traffic on the existing A96 using these junctions due to reduced traffic levels than for partially-online OLC alignments. OLC-006 crosses existing NMU routes four times in total (twice on the Core Path network at Oyne and twice on the Inch to Oyne "Archaeolink" cycle route) which will require mitigation; although the overall impact on NMUs is lower than for most OLC routes.	
	Ecology	Several minor watercourse crossings. Fragmentation of sensitive area which currently forms a habitat corridor across the A96 and is composed of woodland and ancient woodland blocks and watercourses.	Geotechnical	Embankments >10m (up to 24.9m) on potentially compressible soils. Rock cuttings > 39m (up to 65.2m) identified. Potential for contaminated ground.	Promoting regional economic growth	Faster journey times will result in improved access to jobs, services and the wider strategic network.	
	People and communities	Property at start of alignment and at ch. 750. Prime agricultural land located at: ch. 900- 2100 ch. 2350 - 3750 ch. 4800 - 7400 ch. 8200 - 8450 ch. 13450 - 14100	Structures	7no. Underbridges 4no. Overbridges 1no. Viaduct	Facilitating active travel	There are opportunities to improve NMU facilities on the existing corridor once it has been relieved by the new alignment – for example improving surfacing and providing segregation between pedestrians and cyclists. Retention of the core paths and cycle networks will be required as part of the design.	
	Noise and air quality	Potential noticeable decrease to level of current noise climate at Old Rayne and receptors located at A96, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts only communities with a relative low population count.  The alignments are broadly in line with the existing alignment, however move away from all major settlements >10ppl.	Hydrology	2no. active flood plain crossings – The Kellock and Gadie Burn 1no. The Kellock watercourse crossing 1no. The Shevock watercourse crossing 1no. The Gadie Burn watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	Faster journey times will result in improved access to the rail stations at Inverurie, Inch and Huntly.	
	Cultural heritage	Two Scheduled Monuments Mains of Balquhain stone circle (SM3961) and The Maiden Stone cross slab (SM90210 and HES Property in Care) are situated within the alignment. Although adjusting the alignment would be able to avoid direct impacts on the SMs, the proximity of the alignment to the SMs would likely cause a significant impact on their settings. The use of this alignment would also likely affect the settings of Balquhain Castle (SM90), Wester Shevock cairn (SM12115), Brownhills Cairns (SM12116), Harthill Castle (LB16132), Williamston House (LB2964) and GDL, Newton House (LB2962) and GDL, and the Inventory Historic Battlefield of the Battle of Harlaw.	Utilities	2no. crossing of AC private water supplies 1no. crossing of NG high pressure gas pipelines 6no. crossing of SGN high pressure gas pipelines 5no. crossing of SSE 11Kv cables 15no. crossing of SSE 11Kv lines 2no. crossing of SSE 275Kv lines 1no. crossing of SSE low voltage cables 1no. crossing of SSE low voltage lines 3no. SSE pylons within 100m of edge of alignment 17no. crossing of SW distribution main (100 to 300) 4no. crossing of SW distribution main (>300) 23no. crossing of SW distribution main (<100) 2no. crossing of SW raw water mains 1no. crossing of SW reservoirs 1no. wind turbines within 100m of edge of alignment	Integration	There are LDP allocations at Inch, Old Rayne, Oyne and Chapel of Garioch, all of which will receive improved access from this route. The route also forms a good fit with policy regarding improving journey times and reliability and improved access to the Strategic Growth Area. The route is almost entirely offline and therefore fails to align with policy desires for use of existing infrastructure.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Route passes through small scale committed housing development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the B992 at CH 2350. Access also possible from the B992 at CH 2350. Access also possible from an unclassified road at CH 5500. Access is restricted to the B9002 at CH 8150, C120C at CH 10000 and the C117C at CH 12050. Construction vehicles would need pass through Pitcaple/Inveramsay to reach the alignment. Access also possible from the C120C at CH 14100. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required. As alignment crosses the Inverness to Aberdeen Rail Line Network Rail Possessions may be required to facilitate works.	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be unaffected.	
	Soil and geology	Large stretches of prime agricultural land. Contaminated Land (railway, artificial ground, mills). Small areas of mineral resources.			Public acceptability	OLC-006 may face public opposition on the grounds of bypassing the new (as of 2016) Inveramsay Bridge and a perceived waste of money; for using prime agricultural land; for removing trade from local business; and for adversely affecting cultural heritage, particularly the Maiden Stone which is directly affected.	
OLC-006B	Landscape	The scale of earthworks and potential impacts on residential receptors lead to an overall impact that will be major adverse.	Alignment	Approx. 2.3km in length	Operation and inter-urban connectivity	OLC-006B is an alternative to OLC-002 which offers a different southern tie-in point. The impact on operation and inter-urban connectivity, in terms of journey times, reliability, freight efficiency and separation of strategic and local traffic, is unchanged relative to OLC-006.	
	Water	Route crosses the Strathnaterick Burn where the floodplain is <100m wide (minor adverse).	Earthworks	Bulk Cut – 9,140,538m <sup>3</sup> Bulk Fill – 57,194m <sup>3</sup> Surplus – 9,083,344m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The impact on motorised user safety, driver stress and requirements for NMU mitigation are the same as for OLC-006.	
	Ecology	Crossing of a few minor watercourses (likely field drains).	Geotechnical	Embankments <10m on non-identified geotechnical constraint. Rock cuttings > 39m (up to 56.7m) identified.	Promoting regional economic growth	The impact on regional economic growth will be unchanged relative to OLC-006.	
	People and communities	Individual property at end of the alignment. Prime agricultural land located: ch. 1400 - end.	Structures	1no. Underbridge	Facilitating active travel	The impact on facilitating active travel will be unchanged relative to OLC-006.	
	Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. The small increase in noise is identified at communities with a relative low population count.  The alignments are broadly in line with the existing alignment, however move away from all major settlements (>10ppl/km).	Hydrology	1no. culverted crossings and tributary diversions	Integration with public transport facilities	The impact on integration with public transport facilities will be unchanged relative to OLC-006.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Cultural heritage	The suboption would be visible within the key view to the south-east from Mains of Balquhain stone circle (SM3961). The use of this suboption would also likely affect the settings of Balquhain Castle (SM90), and the Inventory Historic Battlefield of the Battle of Harlaw.	Utilities	4no. crossing of SSE 11Kv lines 5no. crossing of SSE low voltage cables 1no. crossing of SSE low voltage lines 6no. crossing of SW distribution main (100 to 300) 1no. crossing of SW distribution main (>300) 5no. crossing of SW distribution main (<100) 1no. telecommunications masts within 100m of edge of alignment	Integration	The impact on integration with LDP sites and with policy outcomes will be unchanged relative to OLC-006.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Construction runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the C120C at CH 14100. Temporary access roads required to facilitate construction. Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Accessibility and social inclusion	The impact on accessibility and social inclusion is highly dependent on the junction strategy but is likely to be broadly similar to OLC-006.	
	Soil and geology	Prime agricultural land (923m stretch).Small area of mineral resources.			Public acceptability	Although running on a slightly different route, the overall public acceptability and likely opposition to OLC-006B are likely to be similar to those of OLC-006.	
OLC-007	Landscape	The scale of earthworks, loss of woodland and potential impacts on mature trees and residential properties mean that the alignment is assessed as major adverse.	Alignment	Approx. 14.7km in length	Operation and inter-urban connectivity	The route reduces journey times between Colpy and Inveramsay by 2-4 minutes; it is the longest OLC route and therefore offers the least overall benefit by a small margin. By providing a high-quality dual carriageway route, overtaking opportunities and incident management will be improved resulting in better journey time reliability. Freight efficiency will also be improved by faster travel and possibly an improved link to the proposed mixed use site at Old Rayne and existing and proposed sites at Inch (dependent on junction strategy). The southern section of OLC-007 runs nearly online and is therefore likely to attract existing local traffic as well as strategic traffic.	
	Water	Route encroaches onto extensive floodplain of the Gadie Burn without crossing it (ch.8200m) with potential requirement for river realignment (major adverse). Potential for active morphology at the existing A96 crossing of the Gadie Burn.	Earthworks	Bulk Cut – 5,062,805m <sup>3</sup> Bulk Fill – 984,620m <sup>3</sup> Surplus – 4,078,185m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The alignment will reduce the risk and severity of accidents and driver stress through improved alignment and fewer accesses, directly addressing the accident cluster sites at Pitcaple and Chapel of Garioch, with greater indirect benefits for traffic on the existing A96 using these junctions due to reduced traffic levels than for partially-online OLC alignments. OLC-007 crosses only the Inch to Oyne “Archaeolink” cycle route and	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						although mitigation will be required, the impact on users is less than for most alternative OLC routes.	
	Ecology	Significant fragmentation of sensitive area, including large blocks of ancient woodland, that form a habitat connection across the current A96. The alignment cuts through Govals LNCS which is designated for geological reasons so has not been considered within this ecological assessment. It is assumed that no realignment of the watercourses is needed.	Geotechnical	Embankments >10m (up to 15.7m) on potentially compressible soils. Rock cuttings > 39m (up to 44.2m) identified. Potential for contaminated ground.	Promoting regional economic growth	Faster journey times will result in improved access to jobs, services and the wider strategic network.	
	People and communities	Scattered properties within alignment and mainly to the southern end. One individual property at Waterton. Prime land located at: ch. 0-500 ch. 1100 - 1250 ch. 2700 - 4150 ch. 6000 - 8500 ch. 13750	Structures	11no. Underbridges 1no. Overbridge 1no. Viaduct	Facilitating active travel	There are opportunities to improve NMU facilities on the existing corridor once it has been relieved by the new alignment – for example improving surfacing and providing segregation between pedestrians and cyclists. Retention of the core paths and cycle networks will be required as part of the design.	
	Noise and air quality	Potential noticeable decrease to level of current noise climate at Old Rayne and receptors located by existing A96, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads.  The alignments are broadly in line with the existing alignment, however move away from all major settlements (>10pp/km).	Hydrology	6no. active flood plain crossings – Gadie Burn 1no. The Kellock watercourse crossing 1no. The Shevock watercourse crossing 1no. The Gadie Burn watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	Faster journey times will result in improved access to the rail stations at Inverurie, Insch and Huntly.	
	Cultural heritage	The use of this alignment would likely affect the settings of Brownhills, cairns (SM12116), Hatton of Ardoyne stone circle (SM23), Wester Shevock cairn (SM12115), Pitcaple Castle (LB2830), Westhall House (LB16134), Williamston House (LB2964) and GDL, Newton House (LB2962) and GDL, and the Inventory Historic Battlefield of the Battle of Harlaw.	Utilities	7no. crossing of AC private water supplies 4no. crossing of SGN high pressure gas pipelines 1no. crossing of SSE 11Kv cables 20no. crossing of SSE 11Kv lines 2no. crossing of SSE 275Kv lines 22no. crossing of SSE low voltage cables 8no. crossing of SSE low voltage lines 2no. SSE pylons within 100m of edge of alignment 11no. crossing of SW distribution main (100 to 300) 2no. crossing of SW distribution main (<100) 3no. crossing of SW gravity pipes	Integration	There are LDP allocations at Insch, Old Rayne, Oyne and Chapel of Garioch, all of which will receive improved access from this route. The route also forms a good fit with policy regarding improving journey times and reliability and improved access to the Strategic Growth Area. Its use of existing infrastructure is intermediate amongst the OLC alignments.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing A96, therefore multiple points of access from the existing road. Access also possible from the B992 at CH 2550. Access also possible from unclassified roads at CH 5350 and CH 6350. Access is restricted to the C120C at CH 9850, C117C at CH 12100 and the detrunked A96 at Inveramsay	Accessibility and social inclusion	With an appropriate number of junctions provided, local accessibility across and to/from the alignment should be unaffected.	

Alignment	Environment		Engineering	Traffic		Discipline Review Assessment Commentary
	Soil and geology	Large stretches of prime agricultural land. Contaminated Land (railway, artificial ground, mills). Small areas of mineral resources.	<p>Bridge at CH 13500 unless a temporary structure over the railway is constructed.</p> <p>Temporary access roads required to facilitate construction.</p> <p>Traffic management will be required to facilitate access from A96 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.</p> <p>As alignment crosses the Inverness to Aberdeen Rail Line Network Rail Possessions may be required to facilitate works.</p>	Public acceptability	Parts of OLC-007 are likely to be perceived as online (likely more public support due to less environmental impact) and offline (likely more opposition due to use of prime agricultural land). Businesses near the existing A96 are likely to oppose a loss of local trade.	

Corridor BS01 Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
BS01-001	Landscape	The alignment is assessed as having Major adverse impacts due to the crossings of the River Don which will result in the introduction of large structures, substantial earthworks and loss of woodland in an area of small scale landscape character.	Alignment	Approx. 6.9km in length.	Operation and inter-urban connectivity	The route covers approximately the same distance as the existing A96 but as it is a high quality dual carriageway route, it offers journey time benefits (2-3 minutes average, 6 minutes maximum), journey time reliability benefits (by allowing overtaking, improving incident management and bypassing congestion hotspots on the Inverurie Bypass) and benefits to freight efficiency (faster journeys and better access to existing industrial sites at Thainstone and Port Elphinstone but not proposed sites in northern Inverurie). Alignment does not address concerns that 'strategic' trips from north of Inverurie to the A96 must travel through the town in order to access the A96.	<p>There are five First Fix Alignments within the BS01 Corridor Option (BS01-001, BS01-002, BS01-003, BS01-004 and BS01-005).</p> <p>The alignments are a southern bypass of Inverurie and tie into the existing A96 to the north and south of the town. Due to constraints within the corridor, the alignments tie back into the existing A96 at multiple locations. At the northern end of the corridor three of the alignments (BS01-003, BS01-004 and BS01-005) tie into the A96 at Garioch and two of the alignments (BS01-001 and BS01-002) tie into the A96 at Inveramsay.</p> <p>At the southern end of the corridor two alignments (BS01-001 and BS01-003) tie in at Port Elphinstone and three alignments (BS01-002, BS01-004 and BS01-005) tie in at Kintore.</p> <p><b>Traffic</b></p> <ul style="list-style-type: none"> <li>BS01-004 is the best performing from a journey time perspective</li> <li>Some strategic traffic will be diverted to the new route however local traffic is expected to remain on the existing A96 route through Inverurie.</li> <li>Due to topographical and environmental constraints, two of the First Fix Alignments within the BS01 Corridor Option (BS01-001 and BS01-003) run directly through Local Development Plan (LDP) land. This land has a planning condition that allows 300 houses to be built without a grade separated junction at Inverurie. This land is a constraint that will have to be avoided at Second Fix Alignment development.</li> </ul> <p><b>Engineering</b></p> <ul style="list-style-type: none"> <li>All of the First Fix Alignments within the BS01 Corridor Option require significant structures to cross the River Don and its associated flood plain. The largest structure is on alignment BS01-001 which requires an approximate 900m long structure crossing the River Don, the floodplain and side roads.</li> <li>Two of the alignments within the BS01 Corridor Option (BS01-004 and BS01-005) perform similar functions to the alignments within the CS02 Corridor Option.</li> </ul>
	Water	Route crosses the River Don (ch.4600) where floodplain is <100m wide (minor adverse). Route is parallel to the River Don without crossing it at ch.3650m - potential river realignment (moderate adverse). Realignment of the River Don should be avoided and the route would therefore need to be moved further from the channel.	Earthworks	Bulk Cut – 681,021m <sup>3</sup> Bulk Fill – 4,017,141m <sup>3</sup> Deficit – 3,336,120m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	With fewer, higher-quality junctions, there will be safety benefits (less risk of accidents and lower driver stress) to users of the route and additional benefits to traffic on the existing route which will be reduced; this impacts accident cluster sites at each of the three Inverurie Bypass junctions. The route crosses the core path network west of Inverurie twice and the circular cycle path used for the "Great Inverurie Bike Ride", although with mitigation in the form of junctions and crossings there should be no safety impact for these users.	
	Ecology	New crossing of the River Don required and additional minor watercourse crossings. Fragmentation of blocks of woodland and woodland. It is assumed that no realignment of the watercourses is needed.	Geotechnical	~Cutting in area of made ground with potential for contaminants (CH. 0-50). ~Embankments up to 45m on potentially compressible soils (CH. 4500-4750).	Promoting regional economic growth	The journey time improvements result in an improvement in ease of access to the wider transport network, jobs and services for long distance traffic, including for existing traffic in the Inverurie area which will benefit from reduced congestion on the existing Inverurie Bypass.	
	People and communities	Receptors include: Drimmies Farm - Business Strathburn Primary School ~2.02km east of the alignment Kellands Primary ~1.02km Port Elphinstone Primary School ~0.54km Inverurie Hospital ~0.73km Inverurie Golf Club located adjacent the alignment No non-motorised use (NMU) receptors but increased journey times could be possible. Properties to be demolished or partially	Structures	Proposed alignment crossing valley & river with extensive level differences of up to 44m (CH. 3150-5050).	Facilitating active travel	There are several intersections between the core path network and local cycle routes (e.g. the "Great Inverurie Bike Ride" route) and these must be accommodated in the design. There are opportunities to improve NMU facilities such as new surfacing and pedestrian/cycle segregation along the corridor.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		demolished: Drimmies Farm - Residential property and outbuildings Alton Cottages - Residential Ardtannes Cottages - derelict building Ardtannes Bungalow and farm Crichie Cottages (6 residential)					<b>Environmental</b> <ul style="list-style-type: none"> <li>All alignments are considered to have major adverse impacts on landscape character with particular sensitivities where the alignments cross through the River Don valley.</li> <li>BS01-002, BS01-003, BS01-004 and BS01-005 alignments run through Bennachie SLA and will involve considerable earthworks and loss of woodland.</li> <li>Alignment BS01-003 performs the worst in relation to the water environment with major impacts expected from the extensive crossing of the River Don floodplain which is not perpendicular to the direction of flow. The other alignments do cross perpendicular to flow and are appraised to have moderate impacts on the water environment.</li> <li>Moderate effects on ecology from fragmentation of ancient woodland blocks and woodland which form a habitat corridor from Bennachie to the west of Inverurie are excepted from alignments BS01-002, BS01-004 and BS01-005.</li> <li>The alignments closest to the population centre (BS01-001 and BS01-002) of Inverurie are considered to have major impacts on people and communities with the remaining three alignments having moderate impacts with areas of prime agricultural land found within alignments BS01-003, BS01-004 and BS01-005.</li> <li>Alignment BS01-003 would potentially lead to a large increase in the level of the current noise climate due to its proximity to communities with a relative high population count, including Inverurie.</li> <li>All alignments are expected to have significant impacts on cultural heritage with impacts on the setting of a number of scheduled monuments expected.</li> <li>Major adverse impacts are identified for areas of land allocated in the Aberdeenshire Local Development Plan (LDP), 2017 for alignments BS01-001, BS01-003 and BS01-004 and BS01-005 with alignment BS01-001 passing through an area of land at Crichie where plans for more than 700 homes, community facilities and industrial development have been recommended for approval in principal.</li> </ul>
Noise and air quality	Potential noticeable decrease to level of current noise climate at Inverurie, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads.	Hydrology	River with extensive level differences of up to 32m (CH. 3600-3700).	Integration with public transport facilities	The journey time improvements result in better access to the proposed Kintore rail station and the Dyce park and ride site at Craibstone. There are also benefits for journeys to Inverurie station due to reduced congestion in the urban area.		
Cultural heritage	There is one area of major constraint on this alignment, close to St Apolinaris Chapel and Burial ground (Scheduled Monument - SM12118). The proximity of the alignment to the SM means it would have an effect upon its setting. At its southern end the alignment cuts through the eastern edge of the non-inventory Garden and Designed Landscape (GDL) which forms the setting for Thainstone House Category B Listed Building (LB9152). As the existing A96 road already runs along this boundary, it would probably not cause a major effect on setting.	Utilities	NG Pipeline crossing proposed alignment at with levels 4m below existing (CH. 300-350). SSE Pylon within 100m & 275kV crossing within proposed alignment with proposed levels 2m below that of existing ground (CH. 900-1150). SW main running parallel (CH. 6600-6900).	Integration	The route provides better access to the existing LDP allocations in Kintore and the reduction in congestion in Inverurie aids LDP site access there. The route is a good policy fit as it offers better journey times and journey time reliability both to strategic and local users of the A96 due to faster routes and reduced congestion respectively. Alignment offers opportunity to connect directly to development areas in Thainstone and Crichie/Port Elphinstone.		
Plans and policies	Route passes through the settlement Port Elphinstone and directly through a number of associated LDP Opportunity Sites for residential development, as well as protected green space. With regards to committed development an application for 737 Dwelling houses, Business and Industrial Development, Community Facilities including Primary School and Associated Infrastructure, which is currently under consideration (ref: APP/2013/0267).	Construction Access & Temporary Disruption/Traffic Management	Access from local minor roads along alignment, with potential access from A96 at each end. Some areas of difficult access within the section, in particular near to river crossings or undulating topography	Accessibility and social inclusion	Provided suitable junction and NMU strategies are adopted, there should be no impact on accessibility and social inclusion, and access to and through Inverurie should be improved by the reduction in urban area traffic. Impacts on the bus route network are limited to those associated with reduced congestion in Inverurie.		
Soil and geology	Small areas of prime agricultural land, contaminated land (worked ground in two locations, tank), and mineral resources.			Public acceptability	Proximity to Bennachie and potential impact on the setting of the hill makes BS01 options likely highly unacceptable to large numbers of people, although BS01-001 is the furthest from the hill and impacts on the least recreational land. The public also do not believe this alignment relieves traffic congestion in Inverurie.		



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
							<p>To manage the potential risk of going through the LDP land adjacent to the existing A96, it was concluded that two First Fix Alignments should be taken through from the BS01 Corridor Option. First Fix Alignment BS01-001 is preferred as this would form a southern bypass closest to Inverurie, subject to further review and development of the alignment to avoid the LDP land. The second option is an alternative hybrid alignment starting on BS01-002 at Kintore and thereby avoiding the LDP land before linking back to BS01-001 at Hill of Ardtannes.</p> <p>Alignments BS01-004 and BS01-005, although not taken forward to BS01 second fix, will be considered as an alternative hybrid option to provide a second fix alignment for CS02.</p>
BS01-002	Landscape	<p>The alignment has a single crossing of the River Don with 4.1km of the alignment within Bennachie Special Landscape Area (SLA). It will result in limited loss of woodland. However, given the impacts on the SLA the impacts are assessed as Major adverse.</p> <p>Between ch. 2100 and ch. 6250 the alignment passes through Bennachie SLA and the impacts have been assessed as Major adverse for this section. Within this section of the alignment there are subsections where the metrics associated only with earthworks, loss of woodland and number of visual receptors indicate a Moderate adverse impact. However, the SLA designation and the high quality landscape mean that the section as a whole is assessed as Major adverse.</p>	Alignment	Approx. 11.3km in length	Operation and inter-urban connectivity	<p>The route covers approximately the same distance as the existing A96 but as it is a high quality dual carriageway route, it offers journey time benefits (2-3 minutes average, 6 minutes maximum), journey time reliability benefits (by allowing overtaking, improving incident management and bypassing congestion hotspots on the Inverurie Bypass) and benefits to freight efficiency (faster journeys and potentially better access to existing industrial sites at Thainstone but not proposed sites at Port Elphinstone northern Inverurie). Alignment does not address concerns that 'strategic' trips from north of Inverurie to the A96 must travel through the town in order to access the A96.</p>	
	Water	<p>Route crosses the extensive floodplain of the River Don (ch.4850m) and Bridgealehouse Burn (ch.10300m). Crossings are perpendicular to flow (moderate adverse).</p>		<p>Bulk Cut – 1,871,854m<sup>3</sup>  Bulk Fill – 1,749,749m<sup>3</sup>  Surplus – 122,105m<sup>3</sup>  *no allowance for structures</p>	Safety for motorised and non-motorised users	<p>With fewer, higher-quality junctions, there will be safety benefits (less risk of accidents and lower driver stress) to users of the route and additional benefits to traffic on the existing route which will be reduced; this impacts accident cluster sites at each of the three Inverurie Bypass junctions (although the level of trip abstraction will be lower than that for BS01-001). Alignment directly conflicts with 1km of existing cycle route and 600m of existing path which would require diversion.</p>	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	Considerable fragmentation of ancient woodland blocks and woodlands, which form a large sensitive area west of Inverurie. New significant crossing of the River Don required as well as a number of more minor watercourse crossings within the currently ecologically sensitive landscape west of Inverurie. Severance of ecological corridors to the west, ultimately leading to Bennachie.	Geotechnical	~Embankment up to 12m high on Peat (CH. 6450-6700). ~Embankment on unidentified material >19m. ~Rock cuttings >19m (CH. 5100-5200). ~Cutting in area of made ground with potential for contaminants (CH. 9600-10100).	Promoting regional economic growth	The journey time improvements result in an improvement in ease of access to wider transport network, jobs and services for long distance traffic, although the benefits to the Inverurie area are most limited than for BS01-001 and -003 due to poorer connectivity to key employment areas in Inverurie..		
People and communities	Approximately 45 properties lie within the alignment: Residential property Mill House Hillair - Barn 2 Cloverstone Lodge. Glen Nevis Cottage plus outbuilding. 55 Forest Road plus outbuilding. Cluster of property on Castlevue Avenue and Castlevue Close, Kintore (40+) Business property: S&C Security and Electrical Ltd Prime and non-prime agricultural land located along section, and the alignment passes through areas of class 3.1. There are no class 1 or 2 areas.	Structures	Underbridge & Viaducts >300m due to railway, Proposed 150m viaduct on potentially compressible soils alongside construction on flood plain. (CH. 4800-5000).	Facilitating active travel	There are several intersections between the core path network and local cycle routes (e.g. the "Great Inverurie Bike Ride" route) and these must be accommodated in the design. There are opportunities to improve NMU facilities such as new surfacing and pedestrian/cycle segregation along the corridor.		
Noise and air quality	There is noticeable potential decrease to level of the existing noise climate in Inverurie resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.  All options move the alignment substantially away from Inverurie with respect to the baseline. The population density in these areas is very low and background air quality is good. The areas where the alignments tie in to the south brings 002, 003, 004 and 005 within 200m of dense settlements in the areas of Port Elphinstone and Kintore and as such are classed as Minor beneficial.	Hydrology	Construction on floodplain (CH. 4800-4950) (CH. 10100-10500).	Integration with public transport facilities	The journey time improvements result in better access to the proposed Kintore rail station and the Dyce park and ride site at Craibstone. There are also benefits for journeys to Inverurie station due to reduced congestion in the urban area.		
Cultural heritage	At the north end of the route there is a likely impact on the settings of Balquhain stone circle (SM3961) and Balquhain Castle (SM90), which have key views to the south-east and east respectively. The proximity of the route to St Apolinaris Chapel and Burial ground (SM12118) means there would likely be a significant impact upon its setting. It is assumed that at the southern end of the route, moving the alignment slightly would ensure direct impact on the Deers Den roundhouses (SM12465) would be avoided, however this area has been highlighted as a 'red area' due to the limited area available due to the proximity of the town of Kintore.	Utilities	Significant cutting required and likely underpass in rock. Revision of vertical alignment possible to convert to overbridge. (CH. 5500-5600).	Integration	The route provides better access to the existing LDP allocations in Kintore and the reduction in congestion in Inverurie aids LDP site access there. The route is a good policy fit as it offers better journey times and journey time reliability both to strategic and local users of the A96 due to faster routes and reduced congestion respectively.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Plans and policies	The route does not pass through any LDP allocations or settlements. It does pass directly through a single small committed development site.	Construction Access & Temporary Disruption/Traffic Management	Access from local minor roads along alignment, with potential access from A96 at each end. Some areas of difficult access within the section, in particular near to river crossings or undulating topography	Accessibility and social inclusion	Provided suitable junction and NMU strategies are adopted, there should be no impact on accessibility and social inclusion, and access to and through Inverurie should be improved by the reduction in urban area traffic. Impacts on the bus route network are limited to those associated with reduced congestion in Inverurie.	
	Soil and geology	Large stretches of prime agricultural land, contaminated land (infilled ground, worked ground, railway), and mineral resources.			Public acceptability	Proximity to Bennachie and potential impact on the setting of the hill makes BS01 options likely highly unacceptable to large numbers of people, although BS01-002 is amongst the furthest from the hill. The public also do not believe this alignment relieves traffic congestion in Inverurie.	
BS01-003	Landscape	Approximately 4.7km of the alignment passes through Bennachie SLA. In the north the alignment will impact upon panoramic views from the edge of the SLA to the west of Chapel of Garioch looking north. There will also be considerable earthworks within the SLA to the southeast of Chapel of Garioch. Loss of woodland along the length of the alignment contributes to the overall rating of Major adverse.	Alignment	Approx. 11.1km in length	Operation and inter-urban connectivity	The route covers approximately the same distance as the existing A96 but as it is a high quality dual carriageway route, it offers journey time benefits (3-4 minutes average, 7 minutes maximum, an improvement on BS01-001 and -002), journey time reliability benefits (by allowing overtaking, improving incident management and bypassing congestion hotspots on the Inverurie Bypass) and benefits to freight efficiency (faster journeys and better access to existing industrial sites at Thainstone and Port Elphinstone but not proposed sites in northern Inverurie). Alignment does not address concerns that 'strategic' trips from north of Inverurie to the A96 must travel through the town in order to access the A96.	
	Water	Route crosses the extensive floodplain of the River Don (ch.9250m) and is not perpendicular to flow (major adverse).	Earthworks	Bulk Cut – 3,008,878m <sup>3</sup> Bulk Fill – 3,655,141m <sup>3</sup> Deficit – 646,263m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	With fewer, higher-quality junctions, there will be safety benefits (less risk of accidents and lower driver stress) to users of the route and additional benefits to traffic on the existing route which will be reduced; this impacts accident cluster sites at each of the three Inverurie Bypass junctions (although the level of trip abstraction will be lower than that for BS01-001). The route crosses the core path network west of Inverurie twice and the circular cycle path used for the "Great Inverurie Bike Ride", although with mitigation in the form of junctions and crossings there should be no safety impact for these users.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	New crossing of the River Don required and additional minor watercourse crossings. Fragmentation of blocks of woodland and woodland, although located closer to the current A96 alignment.		Geotechnical	~Rock cuttings up to 31m (CH. 5300-5700). ~Embankments up to 33m on potentially compressible soils & crossing a river (CH. 1550-2000).	Promoting regional economic growth	The journey time improvements result in an improvement in ease of access to wider transport network, jobs and services for long distance traffic, including for existing traffic in the Inverurie area which will benefit from reduced congestion on the existing Inverurie Bypass.	
People and communities	Chapel of Garioch and Community hall ~0.31km Chapel of Garioch Primary School 0.75km No NMU receptors but increased journey times are possible. Port Elphinstone School 0.39km Alignment passes through a mix of 3.2 to 4.2 areas of non-prime agricultural land. There are two small sections of prime land of class 3.1.		Structures	Proposed 600m viaduct (CH. 8900-9550). Tie in to A96 requiring underbridges (CH. 11100).	Facilitating active travel	There are several intersections between the core path network and local cycle routes (e.g. the "Great Inverurie Bike Ride" route) and these must be accommodated in the design. There are opportunities to improve NMU facilities such as new surfacing and pedestrian/cycle segregation along the corridor.	
Noise and air quality	Potential large increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, including Inverurie.  All options move the alignment substantially away from Inverurie with respect to the baseline. The population density in these areas is very low and background air quality is good. The areas where the alignments tie in to the south brings 002, 003, 004 and 005 within 200m of dense settlements in the areas of Port Elphinstone and Kintore and as such are classed as Minor beneficial. Routes 001 and 003 pass through planning application APP/2013/0267, which is currently under review.		Hydrology	Constructing on floodplain (CH. 9200-9400).	Integration with public transport facilities	The journey time improvements result in better access to the proposed Kintore rail station and the Dyce park and ride site at Craibstone. There are also benefits for journeys to Inverurie station due to reduced congestion in the urban area.	
Cultural heritage	There are no major constraints associated with this alignment. The proximity of the alignment to the Maiden Stone (SM90210 and Property in Care) may cause impacts on its setting. The proximity of the alignment to Chapel of Garioch, Churchyard Gateway (Pittodrie's Yate) (LB2846) may cause impacts on its setting. This asset requires a field visit, as it cannot be readily inspected from online sources. At its southern end the alignment cuts through the eastern edge of the non-inventory GDL which forms the setting for Thainstone House Category B Listed Building (LB9152). As the existing A96 road already runs along this boundary, it would probably not cause a major effect on setting.		Utilities	Alignment passes between pylons within 100m (CH. 4150-4350). 3no. separate minor utility diversions. 300mm SW distribution main runs parallel to the alignment resulting in extensive diversion works (CH. 10800-11150).	Integration	The route provides better access to the existing LDP allocations in Kintore and the reduction in congestion in Inverurie aids LDP site access there. The route is a good policy fit as it offers better journey times and journey time reliability both to strategic and local users of the A96 due to faster routes and reduced congestion respectively. Alignment offers opportunity to connect directly to development areas in Thainstone and Crichton/Port Elphinstone.	
Plans and policies	Route passes through the settlement Port Elphinstone and directly through a number of associated LDP Opportunity Sites for residential development, as well as protected green space. With regards to committed development an		Construction Access & Temporary Disruption/	Access from local minor roads along alignment, with potential access from A96 at each end. Some areas of difficult access within the section, in particular near to river crossings or undulating topography	Accessibility and social inclusion	Provided suitable junction and NMU strategies are adopted, there should be no impact on accessibility and social inclusion, and access to and through Inverurie should be improved by the	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		application for 737 Dwelling houses, Business and Industrial Development, Community Facilities including Primary School and Associated Infrastructure, which is currently under consideration (ref: APP/2013/0267).	Traffic Management			reduction in urban area traffic. Impacts on the bus route network are limited to those associated with reduced congestion in Inverurie.	
	Soil and geology	Large stretches of prime agricultural land. Contaminated Land (worked ground in one location). Small areas of mineral resources.			Public acceptability	Proximity to Bennachie and potential impact on the setting of the hill makes BS01 options likely highly unacceptable to large numbers of people, and there are concerns over the negative impact on walking and cycling. The public also do not believe this alignment relieves traffic congestion in Inverurie.	
BS01-004	Landscape	Approximately 7.7km of the alignment passes through Bennachie SLA. There will be large scale earthworks within the SLA and loss of woodland. Given these factors the overall rating is Major adverse.	Alignment	Approx. 15.1km in length	Operation and inter-urban connectivity	The route covers a shorter distance than the as the existing A96 and is a high quality dual carriageway route, offering journey time benefits (4-5 minutes average, 8 minutes maximum, the best performance amongst BS01 routes), journey time reliability benefits (by allowing overtaking, improving incident management and bypassing congestion hotspots on the Inverurie Bypass) and limited benefits to freight efficiency (faster journeys but no access to industrial sites in Inverurie unlike options BS01-001, -002 and -003). Alignment does not address concerns that 'strategic' trips from north of Inverurie to the A96 must travel through the town in order to access the A96.	
	Water	Route crosses the extensive floodplain of the River Don (ch.8000m) and is perpendicular to flow (moderate adverse).	Earthworks	Bulk Cut – 2,959,715m <sup>3</sup> Bulk Fill – 3,863,763m <sup>3</sup> Deficit – 904,048m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	With fewer, higher-quality junctions, there will be safety benefits (less risk of accidents and lower driver stress) to users of the route and some benefits to traffic on the existing route which will be reduced (although to a lower degree than seen for other BS01 routes). The route crosses the core path network west of Inverurie and Kintore a total of five times (greatest impact of all BS01 routes) and the circular cycle path used for the "Great Inverurie Bike Ride", although with mitigation in the form of junctions and crossings there should be no safety impact for these users.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	Considerable fragmentation of ancient woodland blocks and woodlands, which form a large sensitive area west of Inverurie. New significant crossing of the River Don required as well as a number of more minor watercourse crossings within the currently ecologically sensitive landscape west of Inverurie. Severance of ecological corridors to the west, ultimately leading to Bennachie.	Geotechnical	~Rock cuttings up to 25m (CH. 4200-4550). ~Embankments up to 38m on potentially compressible soils & crossing a river (CH. 7950-8150). ~Cutting up to 12m on Peat (CH. 4700-4800).	Promoting regional economic growth	The journey time improvements result in an improvement in ease of access to wider transport network, jobs and services for long distance traffic, although the benefits to the Inverurie area are most limited than for BS01-001 and -003 due to poorer connectivity to key employment areas in Inverurie.		
People and communities	5 properties lie within the alignment: Residential properties: Invercraig Tuluslande Heathbank Business properties: Breedon Tom's Forest Quarry access Road severed. Nixon Hire - Aberdeen Depot Prime and non-prime agricultural land located along section, and the alignment passes through areas of class 3.1. There are no class 1 or 2 areas.	Structures	Significant structural work required to cross River Don. Large span structure/viaduct required alongside floodplain (CH. 7850-8150).	Facilitating active travel	There are several intersections between the core path network and local cycle routes (e.g. the "Great Inverurie Bike Ride" route) and these must be accommodated in the design. There are opportunities to improve NMU facilities such as new surfacing and pedestrian/cycle segregation along the corridor.		
Noise and air quality	There is noticeable potential decrease to level of the existing noise climate in Inverurie resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.  All options move the alignment substantially away from Inverurie with respect to the baseline. The population density in these areas is very low and background air quality is good. The areas where the alignments tie in to the south brings 002, 003, 004 and 005 within 200m of dense settlements in the areas of Port Elphinstone and Kintore and as such are classed as Minor beneficial.	Hydrology	Construction on floodplain (CH. 8000-8150).	Integration with public transport facilities	The journey time improvements result in better access to the Dyce park and ride site at Craibstone. There are also limited benefits for journeys to Inverurie station due to reduced congestion in the urban area. The route bypasses the proposed Kintore station location.		
Cultural heritage	This alignment runs in close proximity to East Aquhorthies, stone circle (SM90126 & Property in Care), and to Castle of Hallforest (SM92), and is likely to result in significant impacts on their settings. Castle of Hallforest (SM92) requires a site visit to gain a greater understanding of its setting as it cannot be readily inspected from online sources. The alignment cuts through the non-inventory GDL which forms the setting for Category B Listed Manar House (LB9074) and would thus affect its setting. The proximity of the alignment to The Maiden Stone (SM90210 and Property in Care) may cause impacts on its setting. The proximity of the alignment to Chapel of Garioch, Churchyard Gateway (Pittodrie's Yate) (LB2846) may cause impacts on its setting. This asset requires a field visit, as it cannot be readily inspected from online sources.	Utilities	300mm dia. SW main present (CH. 1800-1950) & (CH. 10000-10100). 1050mm dia. SW distribution main crossing (CH. 5000-5050). SGN high pressure gas main (CH. 10650-10800). 275kV crossing & Pylon within 100m (CH. 13050-13150). National Grid pipelines crossing alignment (CH. 14400-14700).	Integration	The route provides better access to the existing LDP allocations in Kintore and the limited reduction in congestion in Inverurie aids LDP site access there. The route is a good policy fit as it offers better journey times and journey time reliability both to strategic and local users of the A96 due to faster routes and reduced congestion respectively.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Plans and policies	Route passes through the settlement of Kintore and through LDP protected green space. It does pass within close proximity of a number of small scale committed development and it passes directly through Tom's Forest which is an area of tree felling and within the established boundary of Tom's Forest Quarry.	Construction Access & Temporary Disruption/Traffic Management	Access from local minor roads along alignment, with potential access from A96 at each end. Some areas of difficult access within the section, in particular near to river crossings or undulating topography	Accessibility and social inclusion	Provided suitable junction and NMU strategies are adopted, there should be no impact on accessibility and social inclusion, and access to and through Inverurie should be partially improved by the reduction in urban area traffic. Impacts on the bus route network are limited to those associated with reduced congestion in Inverurie.	
	Soil and geology	Large stretches of prime agricultural land, contaminated land (made ground, worked ground, railway, others.), and mineral resources.			Public acceptability	Proximity to Bennachie and potential impact on the setting of the hill makes BS01 options likely highly unacceptable to large numbers of people, and there are concerns over the negative impact on walking and cycling. The public also do not believe this alignment relieves traffic congestion in Inverurie.	
BS01-005	Landscape	Approximately 10km of the alignment passes through Bennachie SLA. There will be large scale earthworks within the SLA, loss of woodland and potential impacts on the Maiden Stone which is an important landmark feature. Given these factors the overall rating is Major adverse.	Alignment	Approx. 15.3km in length	Operation and inter-urban connectivity	The route covers a shorter distance than the as the existing A96 and is a high quality dual carriageway route, offering journey time benefits (4-5 minutes average, 8 minutes maximum, the best performance amongst BS01 routes), journey time reliability benefits (by allowing overtaking, improving incident management and bypassing congestion hotspots on the Inverurie Bypass) and limited benefits to freight efficiency (faster journeys but no access to industrial sites in Inverurie unlike options BS01-001, -002 and -003). Alignment does not address concerns that 'strategic' trips from north of Inverurie to the A96 must travel through the town in order to access the A96.	
	Water	Route crosses the extensive floodplain of the River Don (ch.7750m) and is perpendicular to flow (moderate adverse). Potential for active morphology at the existing A96 crossing of the Gadie Burn (ch.100m) (moderate adverse).	Earthworks	Bulk Cut – 2,889,198m <sup>3</sup> Bulk Fill – 2,499,456m <sup>3</sup> Surplus – 389,742m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	With fewer, higher-quality junctions, there will be safety benefits (less risk of accidents and lower driver stress) to users of the route and some benefits to traffic on the existing route which will be reduced (although to a lower degree than seen for other BS01 routes). The route crosses the core path network west of Inverurie and Kintore a total of four times (greater impact than for most BS01 routes) and the circular cycle path used for the "Great Inverurie Bike Ride", although with mitigation in the form of junctions and crossings there should be no safety impact for these users.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	<p>Considerable fragmentation of ancient woodland blocks and woodlands, which form a large sensitive area west of Inverurie.</p> <p>New significant crossing of the River Don required as well as a number of more minor watercourse crossings within the currently ecologically sensitive landscape west of Inverurie.</p> <p>Severance of ecological corridors to the west, ultimately leading to Bennachie.</p>	Geotechnical	<p>~Rock cuttings &gt;19m (CH. 6250-6400).</p> <p>~Embankments up to 21m on potentially compressible soils (CH. 7600-8100).</p> <p>~Embankment on Peat up to 2m (CH. 9600-10000).</p>	Promoting regional economic growth	<p>The journey time improvements result in an improvement in ease of access to wider transport network, jobs and services for long distance traffic, although the benefits to the Inverurie area are most limited than for BS01-001, and -003 due to poorer connectivity to key employment areas in Inverurie.</p>		
People and communities	<p>Primary Schools: Chapel of Garioch Primary; Oyne Primary; Logie Durno Primary; Kintore Primary; Kellands Primary; and Port Elphinstone Primary catchments - no NMU impact. Increased journey times possible.</p> <p>Secondary Schools: The Gordon Schools, Huntly; Inverurie Academy; Kemnay Academy &amp; CEC; and Meldrum Academy catchments - no impact on NMU access. Increased journey times possible.</p> <p>Health Care: No impact to NMU access to any health care provisions. Increased journey times possible.</p> <p>The alignment crosses commercial properties at the Mill of Carden tank (unknown contents), a gas distribution centre and a Depot at Heathbank.</p> <p>Alignment passes through areas of class 3.1 agricultural land surrounding Insch and Oyne.</p> <p>No Class 1 or 2.</p>	Structures	<p>Structure required at tie in with A96 and junction with B9002. Potential under bridges required (CH. 0-200).</p> <p>Bridge over railway line required (CH. 250-350).</p> <p>Large Viaduct required to cross River Don (CH. 7550-8200).</p>	Facilitating active travel	<p>There are several intersections between the core path network and local cycle routes (e.g. the "Great Inverurie Bike Ride" route) and these must be accommodated in the design.</p> <p>There are opportunities to improve NMU facilities such as new surfacing and pedestrian/cycle segregation along the corridor.</p>		
Noise and air quality	<p>There is noticeable potential decrease to level of the existing noise climate in Inverurie resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.</p> <p>All options move the alignment substantially away from Inverurie with respect to the baseline. The population density in these areas is very low and background air quality is good.</p> <p>The areas where the alignments tie in to the south brings 002, 003, 004 and 005 within 200m of dense settlements in the areas of Port Elphinstone and Kintore and as such are classed as Minor beneficial.</p>	Hydrology	<p>Area susceptible to flooding (CH. 0-200).</p> <p>Construction on a floodplain (CH. 7750-7900).</p>	Integration with public transport facilities	<p>The journey time improvements result in better access to the Dyce park and ride site at Craibstone. There are also limited benefits for journeys to Inverurie station due to reduced congestion in the urban area. The route bypasses the proposed Kintore station location.</p>		
Cultural heritage	<p>This alignment runs in very close proximity to The Maiden Stone (SM90210 and Property in Care) and is likely to cause major impact on its setting. The alignment also runs in close proximity to East Aquhorthies, stone circle (SM90126 and Property in Care) and would be visible within the key view to the south-west from the stone circle, and is likely to cause a major impact on its setting. The alignment cuts through the non-inventory GDL which forms the setting for Aquahorthies House</p>	Utilities	<p>300mm dia. SW distribution main (CH. 1350-1500).</p> <p>1050mm dia. National Grid pipeline crosses the alignment (CH. 5500-5700).</p> <p>275kV Crossing with proposed levels 2m below existing (CH. 8950-9000).</p> <p>SW distribution main present crossing with proposed levels 1m below that of existing (CH. 10250-10350).</p> <p>1200mm dia. NG pipeline crossing with existing 0.5m to 2m below proposed (CH. 14700-14800).</p>	Integration	<p>The route provides better access to the existing LDP allocations in Kintore and the limited reduction in congestion in Inverurie aids LDP site access there.</p> <p>The route is a good policy fit as it offers better journey times and journey time reliability both to strategic and local users of the A96 due to faster routes and reduced congestion respectively.</p>		



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		(LB9073) and through the non-inventory GDL that forms the setting for Category B Listed Manar House (LB9074), this would cause effects upon the setting of both of these listed buildings. The proximity of the alignment to Castle of Hallforest (SM92) is likely to result in significant impact on its setting. Castle of Hallforest (SM92) requires a site visit to gain a greater understanding of its setting as it cannot be readily inspected from online sources.		900mm dia. National Grid pipeline crosses alignment (CH. 14800-14950).			
	Plans and policies	Route passes through the settlement of Kintore and through LDP protected green space. It does pass within close proximity of a number of small scale committed developments (including three holiday lodges at northern end) and it passes directly through Tom's Forest which is an area of tree felling and within the established boundary of Tom's Forest Quarry, and also a number of sites associated with the erection of a small number of dwelling houses.	Construction Access & Temporary Disruption/Traffic Management	Access from local minor roads along alignment, with potential access from A96 at each end. Some areas of difficult access within the section, in particular near to river crossings or undulating topography	Accessibility and social inclusion	Provided suitable junction and NMU strategies are adopted, there should be no impact on accessibility and social inclusion, and access to and through Inverurie should be partially improved by the reduction in urban area traffic. Impacts on the bus route network are limited to those associated with reduced congestion in Inverurie.	
	Soil and geology	Small area of prime agricultural land, contaminated land (made ground, railway, others.), and mineral resources.			Public acceptability	Proximity to Bennachie and potential impact on the setting of the hill makes BS01 options likely highly unacceptable to large numbers of people. There are also concerns over the negative impact on walking and cycling in the area and its natural and cultural heritage at locations such as Aquorthies House and Stone Circle, the Maiden Stone, Pittodrie House and Harthill Castle. The public also do not believe this alignment relieves traffic congestion in Inverurie.	

Corridor CS02 Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
CS02-001	Landscape	10km of the alignment lies within the Bennachie Special Landscape Area (SLA). Major adverse effects on this section are mainly due to earthworks of more than 15m and substantial loss of woodland and ancient woodland. Due to the SLA designation and the high quality of the landscape the rating will be Major adverse for the whole section within the SLA. Outwith the SLA, Major adverse effects are due to the loss of ancient woodland. Moderate adverse effects along the alignment are due to earthworks of 5-15m and loss of woodland and ancient woodland. The overall assessment of the alignment is Major adverse.	Alignment	Approx. 17.9km in length.	Operation and inter-urban connectivity	The route offers average journey time savings of 5-6 minutes and maximums of 9 minutes as it is both shorter and higher quality than the existing A96 from Oyne to Blackburn. By improving the route to a high quality dual carriageway standard, and bypassing existing congestion hotspots on the Inverurie bypass, journey time reliability is also improved. Overtaking opportunities and a more predictable alignment will reduce driver stress. The route is distant from Inverurie so is not likely to attract its traffic, passing through sparsely populated areas south of the town; freight traffic is therefore likely to use the existing route, limiting benefits, and most traffic using the new route is likely to be long-distance strategic, with mixed strategic and local traffic continuing to use the existing route.	<p>There are four First Fix Alignments within the CS02 Corridor Option (CS02-001, CS02-002, CS02-003 and CS02-004). All the First Fix Alignments start in the northern section of the CS02 Corridor Option at Garioch and tie back into the existing A96 at Kintore at the southern end of the Corridor Option.</p> <p><b>Engineering</b></p> <ul style="list-style-type: none"> <li>All of the First Fix Alignments have substantial engineering challenges throughout.</li> <li>Within the northern section of the CS02 Corridor Option all alignments have significant earthworks (cuttings up to 52m deep and embankments in excess of 35m high) around the Bennachie pinch point just south of Garioch.</li> <li>All of the alignments require major structures between approximately 200m to 400m long to cross the River Don and its associated floodplain.</li> <li>A number of Alignments are also affected by numerous utility constraints including high pressure gas mains, a major substation and SSE pylons, particularly in the southern section.</li> <li>Due to the constraints (engineering and environmental) at Thainstone and Port Elphinstone the CS02 First Fix Alignments do not tie into the existing A96 until Kintore with options to the north and south. Both options will result in significant sections of the existing dual carriageway north of Kintore not being utilised by a significant proportion of A96 traffic.</li> </ul> <p><b>Environment</b></p> <p>All four alignments have equal environment impact:</p> <ul style="list-style-type: none"> <li>Major impacts on landscape character with sections of each alignment running through Bennachie SLA. Loss of ancient woodland, large scale earthworks and the new structure required over the River Don contribute to these impacts.</li> <li>Major impacts on the water environment from crossing the extensive floodplains of the River Don, Linn Burn and Tuach Burn.</li> <li>Moderate effects on ecology with areas of sensitive habitat affected throughout the corridor.</li> </ul>
	Water	Route crosses extensive floodplain of the Linn Burn (ch.3150m) and is not perpendicular to flow (major adverse). This localised area of extensive floodplain could be avoided by crossing further upstream or downstream. Route crosses extensive floodplain of the Tuach Burn (ch.17750m) and is not perpendicular to flow (major adverse). Route crosses the extensive floodplain of the River Don (ch.8050m) and is perpendicular to flow (moderate adverse).	Earthworks	Bulk Cut – 4,247,085m <sup>3</sup> Bulk Fill – 4,509,624m <sup>3</sup> Deficit – 262,539m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	As a high-quality dual carriageway route with fewer, higher-specification junctions, the route will offer safety benefits to users but may not remove significant volumes of traffic from the existing A96 due to remoteness from key settlements of Inverurie and Kintore. While the alignment offers safety benefits for users of the dual carriageway, users of the existing A96 will continue to pass through existing at-grade junctions and several accident cluster sites. Any traffic reduction on the existing A96 will benefit non-motorised users there, although the new route crosses the core path network around Inverurie and Kintore five times in total; mitigation will be required to prevent safety disbenefits to users of those paths.	
	Ecology	Ecological receptors/constraints include three local designated sites (including Bennachie), several areas of woodland, badger habitat, and one water crossing.	Geotechnical	Cutting up to 39.0m high in rock (CH. 1200-1300). Embankments up to 30m high in compressible soils (CH. 7950-8150).	Promoting regional economic growth	The journey time improvements result in an improvement in ease of access to the wider transport network, jobs and services for long distance traffic, but the improvement for existing users of the congested Inverurie urban area and Kintore is limited.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
People and communities	<p>The following properties lie within the alignment: The Bungalow and Hay Lee at Whitecross. The Mill House, Bernhervie. Well-leys off the B994. East Laylodge Cottage and South Lee Cottage, at East Laylodge near Kintore. Boghead Farm Shop. Concraig Bothy, Boghead. Marshalls Farm Shop.</p> <p>One very small area of class 3.1 agricultural land to the north of the route (at Whitecross). Distance of only 200m along route only. Predominantly class 3.2 along alignment with pockets of class 4.1 and 4.2.</p>		Structures	Structure required to span river, valley & two roads (CH. 8050-8250).	Facilitating active travel	There are several intersections between the core path network and local cycle routes (e.g. the "Great Inverurie Bike Ride" route) and these must be accommodated in the design. There are opportunities to improve NMU facilities such as new surfacing and pedestrian/cycle segregation along the corridor.	<ul style="list-style-type: none"> <li>Significant impacts on people and communities due to the proximity of residential properties.</li> <li>Significant impacts on cultural heritage with impacts on the setting of a number of scheduled monuments and one Category A listed building.</li> <li>Alignments CS02-001 and CS02-002 pass within close proximity to a number of small scale committed developments and go through Tom's Forest and within the established boundary of Tom's Forest Quarry.</li> </ul> <p><b>Transportation</b></p> <ul style="list-style-type: none"> <li>The First Fix Alignments within the CS02 Corridor Option score the worst from a public acceptability perspective due to the impact on Bennachie and the associated recreational areas.</li> <li>The alignments are also remote from Inverurie and Kintore so may not attract trips from the existing A96.</li> </ul> <p><b>It was concluded that due to the engineering and environmental impacts all single or hybrid alignments were all poorly performing and no option would therefore be taken forward to Second Fix Alignment development.</b></p> <p><b>All first fix alignments considered for CS02 performed poorly and it was determined not to taken suitable for second fix development.</b></p> <p><b>Whilst outside of the area allocated to the CS02 corridor, a potential hybrid route has been identified in the BS01 area which would be able to fulfil the intention of the C South corridor.</b></p> <p><b>This alignment will be considered at second fix and it comprises the south-east sections of CS02 alignments (tie-in at Kintore) with the western alignments in the adjoining BS01 Corridor Option. Although the majority of the Environment impacts will likely remain, there is potential to reduce the Engineering impacts particularly by utilising the middle and northern sections of the western BS01 alignments (BS01-004 &amp; BS01-005).</b></p>
Noise and air quality	<p>There is noticeable potential decrease to level of the existing noise climate in Inverurie and Kintore resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distant from inhabited areas with population seemingly &lt;10ppl/km.</p>		Hydrology	Construction on floodplain (CH. 3000-3150). River crossing (CH. 8050-8150). Construction on a floodplain (CH. 16800-18050).	Integration with public transport facilities	Improvements in journey time will will make trips to Kintore and Huntly railway stations quicker. Does not improve integration with Inverurie train station or bus services to Inverurie.	
Cultural heritage	<p>The alignment passes in close proximity to a cluster of assets at the northern end of the route and may impact on the setting of Category A Listed Harthill Castle (Listed Building - LB16132), Maiden Castle fort (Scheduled Monument - SM12012), and Category B Listed Pittodrie House (LB2853). This applies to all of the alignments. The alignment would likely be visible within the key view south-west from East Aquhorthies stone circle (SM90126 and HES Property in Care), causing an impact on its setting. The alignment would also be visible within the key views south-east from Category A Listed Aquhorthies House (LB9073) and Category B Listed Manar House (LB9074). The alignment passes in proximity to South Leylodge steading stone circle (SM12350) and may have an effect on its setting.</p>		Utilities	SGN high pressure gas main (CH. 1550-1850), (CH. 2700-2900), (CH. 4850-4950) & (CH. 10750-10900). NG pipeline crossing (CH. 5800-5950). Pylon within 100m and 275kV crossing present (CH. 9150-9200). Pylon within vicinity & high voltage cable crossing alignment (CH. 11650-11850). Proposed alignment runs along pylon route (CH. 13350-14550). Pylons within the area (CH. 14900-15200). NG pipeline in vicinity (CH. 16700-16850). Cable crossing & pylon within 100m (CH. 16850-18100).	Integration	The route provides better access to the existing LDP allocations in Kemnay, and there are small indirect benefits to access to Inverurie LDP areas due to some traffic reduction in the urban area. Faster and more reliable journeys are a key policy thread partially delivered by this alignment.	
Plans and policies	<p>The route does not pass through any LDP allocations or settlements. It does pass within close proximity of a number of small scale committed developments. It passes directly through Tom's Forest which is an area of tree felling and within the established boundary of Tom's Forest Quarry.</p>		Construction Access & Temporary Disruption/Traffic Management	Extended sections of route remote from main roads for construction access	Accessibility and social inclusion	Alignments are remote from main population, employment and service centres of Inverurie and Kintore and therefore benefits are primarily limited to journeys which bypass these settlements eg Huntly to Aberdeen.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Soil and geology	Small area of prime agricultural land, contaminated land (made ground, worked ground), and mineral resources over large areas of alignment.			Public acceptability	Proximity to Bennachie and potential impact on the setting of the hill makes this option likely highly unacceptable to large numbers of people. The public also do not believe this alignment relieves traffic congestion in Inverurie. The severance of popular walking and cycling paths by this route is also a significant public concern.	
CS02-002	Landscape	10.8km of the alignment lies within Bennachie SLA. Major adverse effects occur along a 5km section mainly due to earthworks of more than 15m and substantial loss of woodland and ancient woodland. Due to the SLA designation and the high quality of the landscape, the rating will be Major adverse for the whole section within the SLA. Outwith the SLA, Major adverse effects are due to the loss of ancient woodland and earthworks of more than 15m. Moderate adverse effects along the alignment are due to earthworks of 5-15m and loss of woodland. The overall assessment of the alignment is Major adverse.	Alignment	Approx. 18.3km in length	Operation and inter-urban connectivity	The route offers average journey time savings of 5-6 minutes and maximums of 9 minutes as it is both shorter and higher quality than the existing A96 from Oyne to Blackburn. By improving the route to a high quality dual carriageway standard, and bypassing existing congestion hotspots on the Inverurie bypass, journey time reliability is also improved. Overtaking opportunities and a more predictable alignment will reduce driver stress. The route is distant from Inverurie so is not likely to attract its traffic, passing through sparsely populated areas south of the town; freight traffic is therefore likely to use the existing route, limiting benefits, and most traffic using the new route is likely to be long-distance strategic, with mixed strategic and local traffic continuing to use the existing route.	
	Water	Route crosses extensive floodplain of the Linn Burn (ch.3700m) and is not perpendicular to flow (major adverse). This localised area of extensive floodplain could be avoided by crossing further upstream or downstream. Route crosses the extensive floodplain of the River Don (ch.8650m) and is perpendicular to flow (moderate adverse). Potential for active morphology at crossing of Tuach Burn at ch.17200m (moderate adverse).	Earthworks	Bulk Cut – 4,736,690m <sup>3</sup> Bulk Fill – 2,655,470m <sup>3</sup> Surplus – 2,081,220m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	As a high-quality dual carriageway route with fewer, higher-specification junctions, the route will offer safety benefits to users but may not remove significant volumes of traffic from the existing A96 due to remoteness from key settlements of Inverurie and Kintore. While the alignment offers safety benefits for users of the dual carriageway, users of the existing A96 will continue to pass through existing at-grade junctions and several accident cluster sites. Any traffic reduction on the existing A96 will benefit non-motorised users there, although the new route crosses the core path network around Inverurie and Kintore five times in total; mitigation will be required to prevent safety disbenefits to users of those paths.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	Ecological receptors/constraints include three local designated sites (including Bennachie), several areas of woodland, badger habitat, and two water crossings.		Geotechnical	Cutting up to 39.0m high in rock (CH. 1200-1300). Embankments up to 6.7m high on peat (CH. 3600-3750). Embankments up to 27.5m on potentially compressible soil (alluvium) (CH. 8600-8750).	Promoting regional economic growth	The journey time improvements result in an improvement in ease of access to the wider transport network, jobs and services for long distance traffic, but the improvement for existing users of the congested Inverurie urban area and Kintore is limited.	
People and communities	The following properties lie within the alignment: Boghead Farm Shop. Concraig Bothy, Boghead. Marshalls Farm Shop. No class 3.1 land or above, it is predominantly class 3.2 with pockets of Class 4.1 and 4.2.		Structures	Structure to span valley (CH. 8600-8850).	Facilitating active travel	There are several intersections between the core path network and local cycle routes (e.g. the "Great Inverurie Bike Ride" route) and these must be accommodated in the design. There are opportunities to improve NMU facilities such as new surfacing and pedestrian/cycle segregation along the corridor.	
Noise and air quality	Potential noticeable decrease to level of current noise climate at Inverurie and Kintore, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distant from inhabited areas with population seemingly <10ppl/km.		Hydrology	Construction on floodplain (CH. 8650-8800).	Integration with public transport facilities	Improvements in journey time will make trips to Kintore and Huntly railway stations quicker. Does not improve integration with Inverurie train station or bus services to Inverurie.	
Cultural heritage	The alignment passes in close proximity to a cluster of assets at the northern end of the route and may impact on the setting of Category A Listed Harthill Castle (LB16132), Maiden Castle fort (SM12012), and Category B Listed Pittodrie House (LB2853). This applies to all of the alignments. The alignment would also be visible within the key views south-east from Category A Listed Aquhorthies House (LB9073) and Category B Listed Manar House (LB9074). The alignment passes in close proximity to Castle of Hallforest (SM92) and is likely to cause an impact on its setting.		Utilities	High pressure gas main (CH. 2800-3150). SGN gas main (CH. 4600-4750). NG pipeline (CH. 7100-7400). 275kV crossing (CH. 9800-9850). 300mm dia. distribution main (CH. 10850-10900). SGN gas main & high voltage line (CH. 11400-11600). High voltage line & telecoms mast (CH. 12150-12400). 275kV crossing (CH. 13750-13850) Several NG pipeline & pylons (CH. 15300-16100).	Integration	The route provides better access to the existing LDP allocations in Kemnay, and there are small indirect benefits to access to Inverurie LDP areas due to some traffic reduction in the urban area. Faster and more reliable journeys are a key policy thread partially delivered by this alignment.	
Plans and policies	The route does not pass through any LDP allocations or settlements. It does pass within close proximity of a number of small scale committed developments. It passes directly through Tom's Forest which is an area of tree felling and within the established boundary of Tom's Forest Quarry.		Construction Access & Temporary Disruption/Traffic Management	Extended sections of route remote from main roads for construction access	Accessibility and social inclusion	Alignments are remote from main population, employment and service centres of Inverurie and Kintore and therefore benefits are primarily limited to journeys which bypass these settlements eg Huntly to Aberdeen.	
Soil and geology	Small area of peat, contaminated land (made ground), and mineral resources are all present.				Public acceptability	Proximity to Bennachie and potential impact on the setting of the hill makes this option likely highly unacceptable to large numbers of people. The public also do not believe this alignment relieves traffic congestion in Inverurie.	

Alignment	Environment		Engineering		Traffic	Discipline Review Assessment Commentary
						The severance of popular walking and cycling paths by this route is also a significant public concern.
CS02-003	Landscape	10.9km of the alignment lies within Bennachie SLA. Major adverse effects are predicted along a 6km section mainly due to loss of ancient woodland, earthworks of more than 15m and the introduction of a new structure across the River Don. Due to the SLA designation and the high quality of the landscape, the rating is Major adverse for the part of the alignment within the SLA. The overall assessment is Major adverse.	Alignment	Approx. 19.7km in length	Operation and inter-urban connectivity	The route offers average journey time savings of 5-7 minutes and maximums of 10 minutes as it is both shorter and higher quality than the existing A96 from Oyne to Blackburn; this performs slightly better than any alternative CN03 alignment. By improving the route to a high quality dual carriageway standard, and bypassing existing congestion hotspots on the Inverurie bypass, journey time reliability is also improved. Overtaking opportunities and a more predictable alignment will reduce driver stress. The route is distant from Inverurie so is not likely to attract its traffic, passing through sparsely populated areas south of the town; freight traffic is therefore likely to use the existing route, limiting benefits, and most traffic using the new route is likely to be long-distance strategic, with mixed strategic and local traffic continuing to use the existing route.
	Water	Route crosses extensive floodplain of an unnamed watercourse (ch.10500m) and is not perpendicular to flow (major adverse). This localised area of extensive floodplain could be avoided. Route crosses the extensive floodplain of the River Don (ch.9400m) and is perpendicular to flow (moderate adverse). Potential for active morphology at crossing of Tuach Burn at ch.16850m (moderate adverse).	Earthworks	Bulk Cut – 9,315,337m <sup>3</sup> Bulk Fill – 4,842,878m <sup>3</sup> Surplus – 4,472,460m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	As a high-quality dual carriageway route with fewer, higher-specification junctions, the route will offer safety benefits to users but may not remove significant volumes of traffic from the existing A96 due to remoteness from key settlements of Inverurie and Kintore. While the alignment offers safety benefits for users of the dual carriageway, users of the existing A96 will continue to pass through existing at-grade junctions and several accident cluster sites. Any traffic reduction on the existing A96 will benefit non-motorised users there, although the new route crosses the core path network around Inverurie and Kintore five times in total; mitigation will be required to prevent safety disbenefits to users of those paths.

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Ecology	Ecological receptors/constraints include two local designated sites (including Bennachie), several areas of woodland, badger habitat, and one water crossing.	Geotechnical	Embankments up to 33.6m in compressible soils (CH. 9400-9600). Cuttings up to 30.2m high in non-compressible soils and rock (CH. 950-1550). Embankments up to 24.7m high in contaminated land (infilled ground) (CH. 9600-9700). Embankments up to 3.4m high on peat (CH. 10200-10350).	Promoting regional economic growth	The journey time improvements result in an improvement in ease of access to the wider transport network, jobs and services for long distance traffic, but the improvement for existing users of the congested Inverurie urban area and Kintore is limited.	
	People and communities	The following properties lie within the alignment: Riverbank House (including farm buildings), near Kemnay. Boghead Farm Shop. Concraig Bothy, Boghead. Marshalls Farm Shop. No class 3.1 land or above, it is predominantly class 3.2 with pockets of Class 4.1 and 4.2.	Structures	Structure to span valley & river Don (CH. 9300-9700).	Facilitating active travel	There are several intersections between the core path network and local cycle routes (e.g. the "Great Inverurie Bike Ride" route) and these must be accommodated in the design. There are opportunities to improve NMU facilities such as new surfacing and pedestrian/cycle segregation along the corridor.	
	Noise and air quality	There is noticeable potential decrease to level of the existing noise climate in Inverurie and Kintore resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distant from inhabited areas with population seemingly <10ppl/km.	Hydrology	Proposed alignment crossing river Don (CH. 9450-9600). Floodplain (CH. 10500-10600).	Integration with public transport facilities	Improvements in journey time will make trips to Kintore and Huntly railway stations quicker. Does not improve integration with Inverurie train station or bus services to Inverurie.	
	Cultural heritage	The alignment passes in close proximity to a cluster of assets at the northern end of the route and may impact on the setting of Category A Listed Harthill Castle (LB16132), Maiden Castle fort (SM12012), and Category B Listed Pittodrie House (LB2853). This applies to all of the alignments. The alignment passes in close proximity to Castle of Hallforest (SM92) and is likely to cause an impact on its setting.	Utilities	Raw water main (CH. 2000-2100). NG pipeline (CH. 7800-7900). Distribution main (CH. 10900-11000). SGN high pressure pipe & pylons within 100m (CH. 11350-11950). Pylon crossing (CH. 13450-13550). High pressure pipeline (CH. 15000-15750).	Integration	The route provides better access to the existing LDP allocations in Kemnay, and there are small indirect benefits to access to Inverurie LDP areas due to some traffic reduction in the urban area. Faster and more reliable journeys are a key policy thread partially delivered by this alignment.	
	Plans and policies	The route does not pass through any LDP allocations or settlements. It does pass within close proximity of a number of small scale committed developments.	Construction Access & Temporary Disruption/Traffic Management	Extended sections of route remote from main roads for construction access	Accessibility and social inclusion	Alignments are remote from main population, employment and service centres of Inverurie and Kintore and therefore benefits are primarily limited to journeys which bypass these settlements eg Huntly to Aberdeen.	
	Soil and geology	Small area of peat, contaminated land (worked ground, infilled ground, tank), and mineral resources are all present.			Public acceptability	Proximity to Bennachie and potential impact on the setting of the hill makes this option likely highly unacceptable to large numbers of people. The public also do not believe this alignment relieves traffic congestion in Inverurie. The severance of popular walking and	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						cycling paths by this route is also a significant public concern.	
CS02-004	Landscape	11.5km of the alignment lies within Bennachie SLA. Major adverse effects occur along a 10km section mainly due to a substantial loss of ancient woodland, earthworks of more than 15m and the introduction of a new structure across the River Don. Given the SLA designation and the high quality of the landscape, the rating will be Major adverse for that part of the alignment within the SLA. The overall assessment is Major adverse.	Alignment	Approx. 19.4km in length	Operation and inter-urban connectivity	The route offers average journey time savings of 5-7 minutes and maximums of 9 minutes as it is both shorter and higher quality than the existing A96 from Oyne to Blackburn. By improving the route to a high quality dual carriageway standard, and bypassing existing congestion hotspots on the Inverurie bypass, journey time reliability is also improved. Overtaking opportunities and a more predictable alignment will reduce driver stress. The route is distant from Inverurie so is not likely to attract its traffic, passing through sparsely populated areas south of the town; freight traffic is therefore likely to use the existing route, limiting benefits, and most traffic using the new route is likely to be long-distance strategic, with mixed strategic and local traffic continuing to use the existing route.	
	Water	Route crosses extensive floodplain of the Tuach Burn (ch.17650m) and is not perpendicular to flow (major adverse).	Earthworks	Bulk Cut – 4,608,273m <sup>3</sup> Bulk Fill – 3,369,377m <sup>3</sup> Surplus – 1,238,896m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	As a high-quality dual carriageway route with fewer, higher-specification junctions, the route will offer safety benefits to users but may not remove significant volumes of traffic from the existing A96 due to remoteness from key settlements of Inverurie and Kintore. While the alignment offers safety benefits for users of the dual carriageway, users of the existing A96 will continue to pass through existing at-grade junctions and several accident cluster sites. Any traffic reduction on the existing A96 will benefit non-motorised users there, although the new route crosses the core path network around Inverurie and Kintore five times in total; mitigation will be required to prevent safety disbenefits to users of those paths.	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	Ecological receptors/constraints include two local designated sites (including Bennachie), several areas of ancient woodland, badger habitat, and one water crossing.	Geotechnical	Embankments up to 24.2m on potentially compressible material and made ground (potential contamination source) (CH. 9800-9900). At grade construction on peat (CH. 10500-10600). Embankments up to 39.4m high on compressible soils (river terrace deposits and alluvium) (CH. 3600-3800). Cuttings up to 51.7m high in non-compressible soils and rock (CH. 1000-1550).	Promoting regional economic growth	The journey time improvements result in an improvement in ease of access to jobs and services for long distance traffic, but the improvement for existing users of the congested Inverurie urban area and Kintore is limited.		
People and communities	The following properties lie within the alignment: Riverbank House, near Kemnay. House near to Hill of Cottown. Marshalls Farm Shop. Hawthorne Cottages (No 1 and 2). Heathland Park (Nos. 9 -12 and 14) and Torness & Rohan, at Kinellar. No class 3.1 land or above within the alignment, and it is mostly 3.2, 4.1 and 4.1 along the alignment with some 5.1 to the north.	Structures	Structure to span valley (CH. 4050-4100). Structure to span valley, river Don & floodplain (CH. 9600-10050).	Facilitating active travel	There are several intersections between the core path network and local cycle routes (e.g. the "Great Inverurie Bike Ride" route) and these must be accommodated in the design. There are opportunities to improve NMU facilities such as new surfacing and pedestrian/cycle segregation along the corridor.		
Noise and air quality	There is noticeable potential decrease to level of the existing noise climate in Inverurie and Kintore resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distant from inhabited areas with population seemingly <10ppl/km.	Hydrology	Proposed alignment crossing river Don and floodplain (CH. 9650-9800). Floodplain (CH. 10750-10950) & (CH. 15650-16050). Floodplain & watercourse crossing (CH. 17350-17950).	Integration with public transport facilities	Improvements in journey time will make trips to Kintore and Huntly railway stations quicker. Does not improve integration with Inverurie train station or bus services to Inverurie.		
Cultural heritage	The alignment passes in close proximity to a cluster of assets at the northern end of the route and may impact on the setting of Category A Listed Harthill Castle (LB16132), Maiden Castle fort (SM12012), and Category B Listed Pittodrie House (LB2853). This applies to all of the alignments. It is assumed that the alignment can be moved such that Newton of Braco ring cairn (SM12011) would not be directly affected. The setting of the cairn is likely to be impacted, due to the proximity of the alignment, depending how much and which areas of the forestry plantation are felled. Impacts on the settings of Woodend cairn (12009) and Chapel o'Sink cairn (SM12178) are also likely due to their proximity to the alignment.	Utilities	SGN high pressure crossing (CH. 7300-7400). High pressure gas crossing (CH. 8250-8350). High voltage line crossing (10800-10900). SW distribution main (CH. 11300-11550). SGN high pressure crossing (CH. 11800-11950). Pylon & 275kV crossing (CH. 13500-13850). 275kV crossing (CH. 14950-15050) & (CH. 15600-16100). NG pipeline & Pylons run adjacent (CH. 16100-16350). NG pipeline (CH. 19500-19600).	Integration	The route provides better access to the existing LDP allocations in Kemnay, and there are small indirect benefits to access to Inverurie LDP areas due to some traffic reduction in the urban area. Faster and more reliable journeys are a key policy thread partially delivered by this alignment.		
Plans and policies	The route does not pass through any LDP allocations or settlements. It does pass within close proximity of a number of small scale committed developments.	Construction Access & Temporary Disruption/Traffic Management	Extended sections of route remote from main roads for construction access	Accessibility and social inclusion	Alignments are remote from main population, employment and service centres of Inverurie and Kintore and therefore benefits are primarily limited to journeys which bypass these settlements eg Huntly to Aberdeen.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Soil and geology	Small area of peat, contaminated land (worked ground, infilled ground), and mineral resources are all present.			Public acceptability	Proximity to Bennachie and potential impact on the setting of the hill makes this option likely highly unacceptable to large numbers of people. The public also do not believe this alignment relieves traffic congestion in Inverurie. The severance of popular walking and cycling paths by this route is also a significant public concern.	

Corridor OLI Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
OLI-001	Landscape	The alignment is online on the alignment of the existing A96. It will result in widening of the existing road which has the potential to impact upon nearby residential properties between ch. 3500 and ch. 6000. There is an existing structure across the River Don at ch. 6100. It will be replaced by a new structure which will result in loss of woodland and potential impacts upon visual amenity.	Alignment	Approx 8.2km in length.	Operation and inter-urban connectivity	The route offers journey time savings of an average 3 minutes and maximum 7 minutes between Inveramsay Bridge and Thainstone Roundabout by improving the capacity and eliminating the congestion on the existing Inverurie bypass. This, combined with the provision of better overtaking opportunities and incident management, offers improved journey time reliability. Freight traffic additionally benefits by better connection to industrial sites at Thainstone and Port Elphinstone. However, the route will continue to be used by a mix of strategic and local traffic as the existing A96 is.	<p>There is only one main First Fix Alignment within the OLI Corridor Option (OLI-001) since this is an online improvement of the existing A96 which runs from Inveramsay to Port Elphinstone through Inverurie (on the line of the existing road). Two alternative short links to here are two short link sections to the west (OLI-002) and east (OLI-003) of Inverurie.</p> <p>Engineering</p> <ul style="list-style-type: none"> <li>The main engineering challenge associated with the First Fix Alignment OLI-001 is the existing built up environment of Inverurie particularly the section south of the Blackhall Roundabout. At the narrowest section, the available width between boundary fence lines is approximately 21m and therefore to achieve the absolute minimum dual carriageway cross section of 26 metres, any widening at this location will encroach and directly impact on existing properties adjacent to both sides of the A96.</li> <li>The impact on properties and commercial premises is increased if the existing at grade roundabout is grade separated.</li> <li>A significant structure would be required on First Fix Alignment OLI-001 to cross the River Don and the Upperboat Bridge over the existing A96 if the existing Don Crossing could not be extended. This would require demolition of the existing structure.</li> <li>Alignment OLI-002 requires a significant structure to cross the Aberdeen to Inverness Railway, River Urie, its flood plain and a local road. This structure would be approximately 650m total length.</li> <li>Any widening and upgrade to junctions will result in significant disruption to existing A96 traffic</li> </ul> <p>Environment</p> <ul style="list-style-type: none"> <li>Alignment OLI-001 will widen the existing carriageway through Inverurie and is expected to have significant visual impacts on</li> </ul>
	Water	The existing A96 crosses extensive floodplain of the River Don at ch. 4750m. The crossing is perpendicular to flow and there is potential for active morphology at this location (moderate adverse).	Earthworks	Alignment is an entirely online option with no significant earthworks anticipated.	Safety for motorised and non-motorised users	By grade-separating and improving the standard of the A96 through Inverurie, significant safety benefits and reductions in driver stress are achieved, particularly as all three existing junctions on the bypass are accident cluster sites. There are intersections between the existing route and the core path network, as well as the Great Inverurie Bike Ride route, for which crossings must be incorporated into the design.	
	Ecology	Impacts on ancient woodland adjacent to the current A96 and additional impacts of works required on River Don crossing.	Geotechnical	Assumed cutting in made ground (former tank) with potential contamination risk (ch 500-550)  Assumed cutting in made ground (former factory) with potential contamination risk (ch 2850-3100)	Promoting regional economic growth	Journey time improvements will enhance access to the key economic driver of Aberdeen including its airport, wider road network via the AWPR, its employment and service locations.	
	People and communities	Central area of section through densely populated at Inverurie and most likely where community facilities are located. Inverurie Golf Club located along side and within the alignment. Partially affected. Ardrennan House Hotel and Edgehill Kids centre (Pre-school nursery and after school club with activities for disabled children) within alignment Properties are located within alignment. Seven properties north of Inverurie. Two or three large clusters of approx. 20 houses in middle section through Inverurie. Nine properties south of Inverurie.	Structures	The alignment crosses a number of existing structures which it is thought can be readily extended. The underbridge at St James's place (ch 5900-5920) and the bridge over the River Don (ch 6050-6200) would likely need replaced.	Facilitating active travel	There is an opportunity to improve NMU facilities in tandem with those on the road, although any design must accommodate crossings for the existing Core Path network and cycle routes.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		Prime and non prime agricultural land located along section.					<p>a large number of receptors within close proximity to the A96.</p> <ul style="list-style-type: none"> <li>Alignment OLI-002 is also expected to have major impacts on landscape character from substantial earthworks, two crossings of the River Urie and direct impacts upon the Battle of Harlaw site.</li> <li>Impacts on the water environment are considered to be major adverse from alignment OLI-002 where it crosses extensive floodplain of the River Urie and moderate adverse for the crossing of the River Don floodplain by alignment OLI-001. All alignments have significant effects on people and communities due to the proximity to properties, businesses and community facilities, with prime agricultural land located along both OLI-001 and OLI-002.</li> <li>Alignments OLI-001 and OLI-003 are considered to have significant impacts on noise and air quality due to the proximity of the widened road to a large number of receptors.</li> <li>Significant impacts on cultural heritage are expected from alignment OLI-002 where it runs through the Inventory Historic Battlefield of the Battle of Harlaw.</li> <li>Land allocated in the LDP is considered to be adversely affected from alignments OLI-001 and OLI-003 where they pass through the settlements of Inverurie and Port Elphinstone and the Crichton development.</li> </ul> <p>Transportation</p> <p>Automatic Number Plate Recognition data suggests that a significant volume of traffic is generated from the north of Inverurie. Blackhall junction is the busiest junction on the network, within the study area, and would require to be maintained if the First Fix Alignment option OLI-001 is progressed to Second Fix Alignment development. However, due to the existing development constraints a grade separated junction at the current location would create a major impact.</p>
Noise and air quality		<p>Potential minor or negligible increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count such as Inverurie.</p> <p>Online upgrade increases the size of the road running west of Inverurie with the effects of the road covering a commensurate larger area.</p>	Hydrology	<p>The alignment passes through the River Don flood plain (ch 6000-6250).</p> <p>Single point attenuation issue at ch 4350.</p>	Integration with public transport facilities	The improvement in journey times and reduction in congestion on the Inverurie Bypass will allow faster access to Inverurie Station and bus interchanges in the town centre.	
Cultural heritage		This alignment follows the course of the existing A96 road and is therefore unlikely to cause any significant impacts on the setting of heritage assets. An impact on the setting of Thainstone House may result from road widening, if it causes the loss of trees which currently form the edge of the non-inventory Garden and Designed Landscape (GDL) which is the setting for Thainstone House.	Utilities	<p>5no. SW Distribution Mains located (ch 1707-1715, 3872-3884, 3872-6699, 3875-3887, 6699-8186).</p> <p>1no. NG High Pressure pipeline (ch 2076-2087).</p>	Integration	Access to LDP allocations in Inverurie will be improved by the reduction in delays on the corridor, particularly if the present access arrangements are maintained. This alignment aligns well with national and local policies on improving journey times and reliability, making best use of existing infrastructure, improved network efficiency and improving access to the Strategic Growth Area.	
Plans and policies		Route passes directly through the settlements of Inverurie and Port Elphinstone, amongst associated Local Development Plan (LDP) allocations. The route is immediately adjacent to, or in close proximity to, LDP allocations including, Opportunity Sites for residential, mixed use and business development, and Protected Areas of green/amenity space. With regards to committed development there is a relatively high concentration of approved planning permissions, and applications under consideration, immediately adjacent to, or in close proximity to, the route. These include commercial and residential developments at various stages of post consent development.	Construction Access & Temporary Disruption/Traffic Management	Temporary disruption at option OLI_001 would be extensive. The option is a completely online improvement of the existing A96. A network of alternative routes will be required and it is likely that extensive TM will be required throughout. Access to the site via. Existing A96. Temporary works accesses located throughout. Construction through traffic has potential to add to likely significant congestion.	Accessibility and social inclusion	If a junction strategy permitting the current level of accessibility is developed, there should be no impact against these criteria.	
Soil and geology		Many small areas of prime agricultural land. Contaminated Land (tank in one location). Mineral resources.			Public acceptability	There are concerns of the impact on properties local to the A96, e.g. Inverurie Golf Club, but likely to be public support due to the reduced environmental intrusiveness, cost and land take of an online option which directly addresses the current congestion.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
OLI-002	Landscape	The alignment will result in substantial earthworks and two crossings of the River Urie in addition to impacts upon the Battle of Harlaw battle site. For those reasons the overall rating is major for this alignment.	Alignment	Alignment is 3374m in length.	Operation and inter-urban connectivity	This is a partial route offering an offline alternative to OLI-001 at its north end. The change in journey times, reliability, freight efficiency and separation of strategic and local traffic relative to OLI-001 are negligible. It is anticipated a new grade-separated junction would be provided to replace the existing Drimmies junction, but this may also form part of the junction strategy for OLI-001.	<b>It was concluded that additional work would need to be undertaken to determine the feasibility of progressing an online improvement (OLI-001) of the existing A96 through Inverurie prior to Second Fix Alignment development (see Appendix K).</b>
	Water	Route crosses the extensive floodplain of the River Urie (ch.400m) and is not perpendicular to flow (major adverse). Route crosses the extensive floodplain of the River Urie at ch.2300m perpendicular to flow, with potential for active morphology at this location (moderate adverse).	Earthworks	Bulk Cut- 452,973 m <sup>3</sup> Bulk Fill- 544,938 m <sup>3</sup> Deficit- 91,964 m <sup>3</sup>	Safety for motorised and non-motorised users	Provided a grade-separated junction is provided at Drimmies in both OLI-001 and OLI-002, the impact on road safety and driver stress will not differ between the two alignments. There is no net impact on NMU safety relative to OLI-001.	
	Ecology	Two significant watercourse crossings of the River Urie.	Geotechnical	Combined impact of embankments up to 12.8m high and cuttings up to 7.6m in potentially compressible material (ch 400-600). Embankments up to 12.3m high on potentially compressible material (Ch 2050-2350).	Promoting regional economic growth	The impacts on regional economic growth are unchanged relative to an online-only route.	
	People and communities	Four properties are located within the alignment. West mains of Harlaw (north part of section), one property at Cairn Wynd and two properties at Bruntwood Tap in Inverurie (South end of section). Prime and non prime agricultural land located along section.	Structures	2no. viaducts required. Viaduct of total length 300m (ch 250-550) required to cross the River Urie and Flood Plain. Viaduct approx. 650m in total length (ch 1850-2500) required to cross Railway, River Urie, Associated Flood Plain and Local Road.	Facilitating active travel	The impacts on active travel are unchanged relative to an online-only route.	
	Noise and air quality	There is noticeable potential decrease to level of the existing noise climate in Inverurie resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.  Alignment moved up to 1km from existing farmstead receptors, though the southern tie-in is in line with the current alignment within 200m of Inverurie and Highfield.	Hydrology	Alignment passes through the River Urie floodplain twice (Ch 100-500, 2150-2350). Crossing of flood plain recognised as having large adverse impact.	Integration with public transport facilities	The impacts on integration with public transport facilities are unchanged relative to an online-only route.	
	Cultural heritage	This alignment has a direct impact upon the Inventory Historic Battlefield of the Battle of Harlaw. The use of this alignment may also impact on the setting of Balquhain Castle (Scheduled Monument - SM90). As this alignment would form a new feature in the landscape, it is also possible that it could cause an impact on the setting of Category A Listed Pitcaple Castle (Listed Building - LB2830) which lies to the north.	Utilities	SW Distribution Main (Ch 1747-1765) NG High Pressure Pipeline (Ch 2047-2107).	Integration	The impacts on accessibility to LDP allocations is unchanged relative to an online-only route. OLI-002 does not utilise the existing network to the same extent as OLI-001 and therefore does not fit as well against that policy threat, but the level of policy integration is otherwise unchanged.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Plans and policies	At the southernmost point, which is located within Inverurie settlement boundary, this option passes immediately adjacent to an LDP allocated Opportunity Site for housing development.	Construction Access & Temporary Disruption/Traffic Management	Construction access is challenging and north of the railway line will likely be required from the c-class road intersection the alignment at chainage 900m. Access of this can be gained off the B9001 although improvements may be required to the c-class road to ensure suitability. Access from chainage 2250-A96 tie in would likely be via the existing A96. Traffic management will be required to facilitate access from the A96 and for construction of the tie in at Inveramsay Bridge. Disruption is likely to be primarily during construction of the tie in points.	Accessibility and social inclusion	The impacts on accessibility and social inclusion are unchanged relative to an online-only route.	
	Soil and geology	Large stretches of prime agricultural land. Contaminated Land (railway). Mineral resources.			Public acceptability	Relative to an online-only route, bringing the route partially offline may result in some opposition due to impact on properties, additional land take and costs involved.	
OLI-003	Landscape	While there are short sections of cutting 5-15m at ch. 400 and ch. 650 which falls within the Moderate category according to the metrics, these sections of cutting are relatively short and the loss of woodland is limited. The overall rating is therefore minor for this alignment.	Alignment	Alignment is 1756m in length.	Operation and inter-urban connectivity	This is a partial route offering an offline alternative to OLI-003 at its southern end. The change in journey times, reliability, freight efficiency and separation of strategic and local traffic relative to OLI-001 are negligible. It is anticipated a new grade-separated junction would be provided to replace the existing Port Elphinstone roundabout, but this may also form part of the junction strategy for OLI-001.	
	Water	No crossings of extensive floodplain. Route crosses several minor watercourses (minor adverse).	Earthworks	Bulk Cut- 113,241 m <sup>3</sup> Bulk Fill- 31,388 m <sup>3</sup> Deficit- 81,853 m <sup>3</sup>	Safety for motorised and non-motorised users	Provided a grade-separated junction is provided at Port Elphinstone in both OLI-001 and OLI-003, the impact on road safety and driver stress will not differ between the two alignments. There is no net impact on NMU safety relative to OLI-003.	
	Ecology	Two minor watercourse crossings.	Geotechnical	Cutting in area of made ground which is a potential contamination source (Ch 1550-1756).	Promoting regional economic growth	The impacts on regional economic growth are unchanged relative to an online-only route.	
	People and communities	Ardrennan House Hotel and Edgehill Kids centre (Pre-school nursery and after school club with activities for disabled children) within alignment. Non prime agricultural land located along section.	Structures	Minor structures required regular with scheme, not adjudged to have significant impact.	Facilitating active travel	The impacts on active travel are unchanged relative to an online-only route.	
	Noise and air quality	There is noticeable potential decrease to level of the existing noise climate in Inverurie resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.  Alignment moved up to >200m from the southern areas of Port Elphinstone receptors, though the northern tie-in is in line with the current alignment	Hydrology	Alignment passes through River Don floodplain (ch 0-100) regarded as having a moderate adverse impact.	Integration with public transport facilities	The impacts on integration with public transport facilities are unchanged relative to an online-only route.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		within 200m of the northern areas of Port Elphinstone. Large residential planning applications in the Inverurie settlement area.					
	Cultural heritage	An impact on the setting of Thainstone House may result from road widening, if it causes the loss of trees which currently form the edge of the non-inventory GDL which is the setting for Thainstone House.	Utilities	SW Distribution Mains (Ch 1-222, 1466-1756) SW Reservoirs (Ch 400)	Integration	The impacts on accessibility to LDP allocations is unchanged relative to an online-only route. OLI-003 does not utilise the existing network to the same extent as OLI-001 and therefore does not fit as well against that policy threat, but the level of policy integration is otherwise unchanged.	
	Plans and policies	Route passes through the settlement Port Elphinstone and directly through a number of associated LDP Opportunity Sites for residential development. With regards to committed development an application for 737 Dwelling houses, Business and Industrial Development, Community Facilities including Primary School and Associated Infrastructure, which is currently under consideration (ref: APP/2013/0267).	Construction Access & Temporary Disruption/Traffic Management	Access at this location would be via both the A96 and potentially the B993. Extensive traffic management and temporary works likely required at these locations with no alternative route readily identifiable. Temporary works around Port Elphinstone roundabout anticipated to cause major disruption.	Accessibility and social inclusion	The impacts on accessibility and social inclusion are unchanged relative to an online-only route.	
	Soil and geology	Small area of prime agricultural land. Contaminated Land (worked ground in two locations). Large areas of mineral resources.			Public acceptability	Relative to an online-only route, bringing the route partially offline may result in some opposition due to impact on properties in the Thainstone area, additional land take and costs involved.	

**Corridor OLS Assessment Review**

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
OLS-001	Landscape	The proposed alignment is predominantly online. It is likely that junction improvements can be accommodated within minimal impacts to existing landscape and visual receptors.	Alignment	Alignment length is 21,089m	Operation and inter-urban connectivity	The route offers faster journeys between Craibstone and Thainstone (2-3 minutes benefit). The existing route is already dual carriageway standard so all benefits to journey times and reliability are due only to removal of at-grade junctions. Overtaking opportunities are already present, so benefits for overtaking and for freight movements are minimal. Through regulating access to the trunk road, strategic and local traffic can however be better separated.	<p>There is one main First Fix Alignment within the OLS Corridor Option (OLS-001) which is the existing dualled section of the A96 from Port Elphinstone to Craibstone. There are multiple short First Fix Alignment links (OLS-002, OLS-003, OLS-004, OLS-005, OLS-006 and OLS-007) within the Corridor Option to test a series of offline options.</p> <p><b>Engineering</b></p> <ul style="list-style-type: none"> <li>The geometry of the existing dual carriageway has been assessed which has identified seven areas of the existing dual carriageway where the geometric design is less than the Desirable Minimum Standard for a Category 7A dual carriageway (as outlined in DMRB TD 9/93).</li> <li>Online realignments and localised offline alignments were developed for the areas where sub-standard geometry exists to test the feasibility of coming offline in these locations. The existing settlement constraints of Kintore and Blackburn, have limited the offline alignment options.</li> <li>Oil pipelines at the eastern end of the OLS Corridor Option may limited the ability to address the existing vertical profile on Alignment OLS-001. One of the key issues on alignment OLS-001 is the number of accesses and central reserve openings that need closed and the need to grade separate the junctions (particularly at Tyrebagger) which are space constrained.</li> </ul>
	Water	The existing A96 crosses extensive floodplain of the Bridgealehouse Burn (ch.10200m), an unnamed watercourse (ch.12300m) and Black Burn (ch.17150m) (moderate adverse).	Earthworks	Alignment is an entirely online option with no significant earthworks anticipated.	Safety for motorised and non-motorised users	The safety benefits associated with the route are due to the removal of junction conflicts and central reserve crossings, particularly for the cluster sites at Tyrebagger, Stoneywood and Broomhill, and resultant reductions in driver stress. Grade separation is also likely to allow NMU users better crossing facilities than the existing route, although the route does have three additional crossings of the Kintore core path network relative to the existing, that must be accommodated in the design.	
	Ecology	Impacts on ancient woodland adjacent to the current A96 and additional impacts of works required over minor watercourse.	Geotechnical	Alignment OLS_001 has approximately 8no. proposed cuts in made ground with a potential risk for contamination. These all score moderately or above and are generally circa 200m in length. Peat is also encountered between Ch. 11600-11750.	Promoting regional economic growth	Journey time improvements will enhance access to the key economic driver of Aberdeen including its airport, wider road network via the AWPR, its employment and service locations.	
	People and communities	<p>Receptors include: Cemetery north of Kintore Commercial units at Kintore Lodging at Kintore "The Firs" Marshalls Farm Shop, Kinellar Concraig Dairy Farm, Kinellar Commercial unit south of Blackburn Partial impact on areas: Inverurie Mill greenspace, small section at northern tip of alignment. Along Kintore two areas are Kintore West and Kintore. Area east of Blackburn is green belt within Aberdeen City Council. There are 17 instances of private property within the alignment. Some are scattered properties others are small clusters</p>	Structures	Online option which will reuse existing structures. Overbridge structure (Ch 10550-10570) has insufficient headroom for a high load route. Road alignment proposed to be lowered at this location. All other structures suitable or only minor alterations.	Facilitating active travel	There is an opportunity to improve NMU facilities in tandem with those on the road, although any design must accommodate crossings for the existing Core Path network in Kintore.	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		Two very small sections of prime land located at either end of Blackburn.					<p>Bridgealehouse Burn, Black Burn and Tuach Burn.</p> <ul style="list-style-type: none"> <li>All alignments are considered to have minor impacts on ecological receptors with the exception of OLS-007 which may result in the loss of and fragmentation to a sensitive area which currently forms a habitat corridor across the A96, linking into ancient woodland mosaic.</li> <li>Significant effects are expected for people and communities due to the large number of receptors and facilities at Kintore and Blackburn along with scattered properties along the alignments.</li> <li>OLS-001 may lead to a very noticeable increase in the level of the current noise climate for communities with a relative high population count, such as Blackburn and Kintore. Similarly, alignments OLS-001, OLS-003, OLS-006 and OLS-007 are expected to adversely affect air quality for a large number of receptors.</li> <li>The setting of a number of scheduled monuments are likely to be affected by alignments OLS-002, OLS-003 and OLS-004 with a direct impact on a scheduled monument expected from alignment OLS-001.</li> <li>Areas allocated in the LDP could be adversely affected by alignment OLS-001 and alignments OLS-004, OLS-005, OLS-006 and OLS-007 passing through the Aberdeen City Council green belt and green network.</li> </ul> <p><b>Traffic</b></p> <ul style="list-style-type: none"> <li>OLS is currently dual carriageway provision with a number of at-grade junctions and gaps in the central reserve.</li> <li>Limited journey time benefits, however, all options offer potential to reduce risk of accidents.</li> <li>The gradient of the existing A96 at Tyrebagger causes a resilience issue for heavy vehicles.</li> </ul> <p><b>The preferred option for the First Fix Alignments within the OLS Corridor Option would be to remain</b></p>
Noise and air quality		<p>Potential very noticeable increase to level of current noise climate as a result of introduction of new roads. This potential increase is identified upon communities with a relative high population count, such as Blackburn and Kintore.</p> <p>All alignments a broadly in line with the existing alignment and are &lt;200m from a densely populated area (&gt;20ppl/km2).</p>	Hydrology	The alignment passes through several floodplains. Most notable that of the Tuach Burn (Ch. 12300-12975) and Black Burn (Ch. 16600-17450). These flood plains have significant impacts, scoring between moderate and large adverse effect. Numerous small watercourse crossings.	Integration with public transport facilities	Provided a junction strategy is devised which permits the existing levels of access, journeys to public transport interchanges at Dyce Park and Ride and the proposed Kintore rail station will be improved due to journey time reductions.	
Cultural heritage		The alignment would likely have a direct impact upon Deer's Den roundhouses (Scheduled Monument - SM12465). There is limited space available for adjusting the alignment in this area during detailed design, and so it is assumed that a direct impact is likely. There are no other likely substantial impacts on cultural heritage assets as a result of the use of this alignment, which follows the existing A96 road.	Utilities	<p>300mm Scottish Water distribution main (Ch. 8200,</p> <p>219mm SGN High Pressure Gas Main (Ch. 8500)</p> <p>1200mm National Grid High Pressure Gas Pipeline crossing (Ch. 9500-9550)</p> <p>3no. 900mm National Grid High Pressure Gas Pipeline Crossing (Ch. 9550-9600, 15500-15550, 16500-16550)</p> <p>2no. 400mm Scottish Water distribution main (Ch. 11250-11300, 11250-11450)</p> <p>2no. 450mm Scottish Water distribution main (Ch. 16000-16100, 16150-16200)</p> <p>275kv SSE crossing (Ch. 12800-12850)</p> <p>132kv SSE crossing (Ch. 12950-1300)</p> <p>SSE Pylon within alignment (Ch. 12950)</p> <p>Shell Natural Gas Liquids Pipeline Crossing (Ch. 20450-20500)</p>	Integration	There are LDP allocations in Kintore and Blackburn to which access will be improved by the route, so long as a junction strategy is adopted which permits such. Journey time improvements fit well with policy, but accessibility policies may not be a good fit if the junction strategy does not permit the level of accessibility at present. OLS-001 utilises more of the existing road than its alternatives and therefore is a better fit for this policy thread.	
Plans and policies		This wholly online route passes through LDP allocated Greenbelt and adjacent to the settlements of Blackburn and Kintore (through both settlements for a small section. The route is immediately adjacent to, or in close proximity to a number of LDP land allocations including, Local Nature Conservation Site, and Opportunity Sites for residential, mixed use and business development, and Protected Areas of green/amenity space. In terms of committed development there are a number of development which have been granted planning permission or are currently under consideration, which are in close proximity or immediately adjacent to the route.	Construction Access & Temporary Disruption/Traffic Management	Temporary disruption at option OLS_001 would be extensive. The option is a completely online improvement of the existing A96. A network of alternative routes will be required and it is likely that extensive TM will be required throughout. Access to the site via. Existing A96. Temporary works accesses located throughout. Construction through traffic has potential to add to likely significant congestion.	Accessibility and social inclusion	The quality of accessibility is dependent on the junction strategy.	
Soil and geology		Small areas of prime agricultural land. Contaminated Land (landfill, infilled ground, artificial ground, worked ground, cemetery, others). Mineral resources over large areas of alignment.			Public acceptability	Support as the construction is less intrusive and costly, and will improve existing access to the A96. Likely to attract support due to limited land take, but will result in more disruption during construction.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
OLS-002	Landscape	The appraisal has identified 25% of the alignment as having Moderate adverse impacts with the majority of the alignment resulting in Minor adverse impacts. The overall rating of Moderate reflects the importance of the potential impacts on the Clovenstone area and the loss of woodland and the cumulative effects of road infrastructure in this area.	Alignment	Alignment length is 6940m.	Operation and inter-urban connectivity	OLS-002 is a partial route between Thainstone and Kinellar Roundabouts. The journey time, reliability, overtaking and freight efficiency improvements are unchanged relative to OLS-001. There would be some additional segregation of local and strategic traffic through the bypassing of Kintore.	<b>online as much as possible (OLS-001). The OLS-001 alignment will be reviewed and amended locally where required at the Second Fix Alignment development stage to accommodate junctions and address the sub-standard geometry. Alignment issues at Tyrebagger will continue to be investigated and options developed with alignment OLS-007 retained to provide alternative option to an online improvement.</b>
	Water	Route crosses the extensive floodplain of the Tuach Burn (ch.5250m) and is approximately perpendicular to flow (moderate adverse). Potential for active morphological at this location (moderate adverse).	Earthworks	Bulk Cut – 183,210 m <sup>3</sup> Bulk Fill – 214,467 m <sup>3</sup> Deficit – 31,256 m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	By removing some traffic from the Gauchhill Junction off-slip cluster site and bypassing the Broomhill Roundabout site, there may be some additional benefits to safety relative to an online-only option. Alignment offers the opportunity to utilise the existing A96 as NMU friendly route. Crosses 1 core path twice.	
	Ecology	Several minor watercourse crossings (likely some are field drains). Fragmentation of woodland mosaic, including areas of ancient woodland.	Geotechnical	Alignment has 3no. cuttings in made ground including a landfill at Ch. 1350-1550. These cuttings all have potential for contamination. Peat is also encountered between Ch. 2900-3000	Promoting regional economic growth	The impacts on regional economic growth are unchanged relative to an online-only route.	
	People and communities	A couple of small cluster of properties west of Kintore and scattered properties at south end of alignment.	Structures	Regular structures encountered for a scheme of this nature. All scored neutral or slight adverse during first fix assessment.	Facilitating active travel	The impacts on active travel are unchanged relative to an online-only route.	
	Noise and air quality	There is noticeable potential decrease to level of the existing noise climate in Kintore resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.  All alignments a broadly in line with the existing alignment and are <200m from a densely populated area (>20ppl/km <sup>2</sup> ). Alignment 002 impacts on slightly less receptors than 001, 003, 006 and 007.	Hydrology	Slight adverse impacts associated with the Bridgealehouse Burn and Sheriff Burn floodplains (Ch. 1200-1450, 5250-5450). Impact only regarded as slight. Numerous small watercourse crossings.	Integration with public transport facilities	The impacts on integration with public transport facilities are unchanged relative to an online-only route.	
	Cultural heritage	The alignment would pass in close proximity to Castle of Hallforest (SM92) and may have a significant impact on its setting. The alignment may affect the setting of Deer's Den roundhouses (SM12465), leading to it being situated within an 'island' of land between two major roads.	Utilities	1200mm National Grid High Pressure Gas Pipeline within alignment (Ch. 1750-2500, 3600-3750) 1200mm National Grid High Pressure Gas Pipeline crosses alignment (Ch.3050-3150) 900 mm National Grid High Pressure Gas Pipeline within alignment (Ch. 1800-1900) 900 mm National Grid High Pressure Gas Pipeline crosses alignment (Ch. 3100-3150) 400mm Scottish Water Distribution Main crossing (Ch. 1800-1950) 275kv SSE crossing (Ch. 3950-4000)	Integration	The impacts on accessibility to LDP sites are unchanged relative to an online-only route so long as a junction strategy is adopted which permits such. With an offline section, this route does not align with the policy thread of making most use of the existing infrastructure to the degree that an online-only route does.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
				SSE Pylon within alignment (Ch. 4000, 4100) 132kv SSE crossing (Ch. 3950-4000)			
	Plans and policies	This route does not pass through any LDP allocations, settlements or committed developments. It does pass in close proximity to a number of small scale committed development.	Construction Access & Temporary Disruption/Traffic Management	Site access from Ch. 0-1250 likely via existing A96. Access from the existing A96 likely to require traffic management. Access south of Bridgealehouse Burn via B994 with construction phased back toward northern tie in. Access at southern end of scheme likely via existing A96 with traffic management. Potential access off rural c-class roads although this may result in significant disruption to local residents.  Temporary disruption to the existing road network will be most severe around tie in points. Alignment is largely offline so temporary disruption not anticipated to be significant away from the existing A96.	Accessibility and social inclusion	The quality of accessibility is dependent on the junction strategy.	
	Soil and geology	Contaminated Land (landfill, infilled ground, worked ground, railway). Mineral resources.			Public acceptability	The offline section of OLS-002 might attract a mixed response due to the impact and costs of duplicating an existing dual carriageway, however there is public support for an active travel corridor for the A96 which could partially utilise the bypassed section.	
OLS-003	Landscape	The appraisal has identified 30% of the alignment as having Moderate adverse impacts with the majority of the alignment resulting in Minor adverse impacts. The overall rating of Moderate reflects the importance of the potential impacts on the Clovenstone area and the loss of woodland and the cumulative effects of road infrastructure in this area.	Alignment	Alignment length is 3008m.	Operation and inter-urban connectivity	OLS-003 is a partial route between Thainstone Roundabout and Gauchhill Junction. The journey time, reliability, overtaking and freight efficiency improvements are unchanged relative to OLS-001. There would be limited additional segregation of local and strategic traffic through the bypassing of northern Kintore.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse).	Earthworks	Bulk Cut – 247,105 m <sup>3</sup> Bulk Fill – 113,785 m <sup>3</sup> Deficit – 133,785 m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	Only one, already grade-separated, junction is bypassed by OLS-003 so additional benefits to safety relative to an online-only option are limited. Alignment offers the opportunity to utilise the existing A96 as NMU friendly route. Crosses 1 core path twice.	
	Ecology	Several minor watercourse crossings and skimming of ancient woodland.	Geotechnical	2no. cuttings in made ground including 1 cutting in landfill at Ch. 1150-1350. Cutting of up to 2.0m in peat (Ch. 2650-2800).	Promoting regional economic growth	The impacts on regional economic growth are unchanged relative to an online-only route.	
	People and communities	Small cluster of properties at north end of alignment and west of Kintore.	Structures	Regular structures encountered for a scheme of this nature. All scored neutral or slight adverse during first fix assessment.	Facilitating active travel	The impacts on active travel are unchanged relative to an online-only route.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Noise and air quality	<p>There is noticeable potential decrease to level of the existing noise climate in Kintore resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.</p> <p>All alignments a broadly in line with the existing alignment and are &lt;200m from a densely populated area &gt;20ppl/km2.</p>	Hydrology	No interactions with floodplain. Numerous small watercourse crossings.	Integration with public transport facilities	The impacts on integration with public transport facilities are unchanged relative to an online-only route.	
	Cultural heritage	The alignment may affect the setting of Castle of Hallforest (SM92). The alignment may affect the setting of Deer's Den roundhouses (SM12465), leading to it being situated within an 'island' of land between two major roads.	Utilities	<p>1200mm National Grid High Pressure Gas Pipeline within alignment (Ch. 650-800)</p> <p>1200mm National Grid High Pressure Gas Pipeline crossing (Ch.2150-2400)</p> <p>400mm Scottish Water Distribution main crossings (Ch. 1500-1650)</p> <p>900mm National Grid High Pressure Gas Pipeline crossing (Ch. 2450-2600)</p>	Integration	The impacts on accessibility to LDP sites are unchanged relative to an online-only route so long as a junction strategy is adopted which permits such. With an offline section, this route does not align with the policy thread of making most use of the existing infrastructure to the degree that an online-only route does, although the length of off-line section is shorter than for OLS-002.	
	Plans and policies	This route does not pass through any LDP allocations, settlements or committed developments. It does pass in close proximity to a number of small scale committed development and an area of protected green space.	Construction Access & Temporary Disruption/Traffic Management	<p>Short section of realignment approximately 3km. North and southern sections both tie in to existing A96 where temporary access will likely be provided.</p> <p>Potential access off rural c-class roads although this may result in significant disruption to local residents.</p> <p>Temporary disruption will be minimal except at the existing A96 where traffic management is likely to allow access.</p>	Accessibility and social inclusion	The quality of accessibility is dependent on the junction strategy.	
	Soil and geology	Contaminated Land (landfill, infilled ground). Mineral resources.			Public acceptability	The offline section of OLS-003 might attract a mixed response due to the impact and costs of duplicating an existing dual carriageway, however there is public support for an active travel corridor for the A96 which could partially utilise the (albeit short) bypassed section.	
OLS-004	Landscape	The appraisal has identified 30% of the alignment as having Major adverse impacts with 10% having a Moderate adverse impact. The overall rating of Major reflects the scale of the earthworks and the fact that woodland within a recreational area would be lost. While there would be loss of woodland and a cutting of 5-15m at Muir of Kinellar this would occur over a short section of the alignment.	Alignment	Alignment length is 6394m	Operation and inter-urban connectivity	OLS-004 is a partial route between Broomhill Roundabout and Tyrebagger. The journey time, reliability and overtaking and freight efficiency improvements are unchanged relative to OLS-001. There would be additional segregation of local and strategic traffic achieved through the bypassing of Blackburn, with a single grade separated junction likely to be provided for the town.	
	Water	Route crosses the extensive floodplain of the Black Burn (ch.3400m) and is perpendicular to flow (moderate adverse).	Earthworks	<p>Bulk Cut – 559,880 m<sup>3</sup></p> <p>Bulk Fill – 1,130,962 m<sup>3</sup></p> <p>Deficit – 571,081 m<sup>3</sup></p> <p>*no allowance for structures.</p>	Safety for motorised and non-motorised users	Only the existing Blackburn bypass and route to Tyrebagger is impacted by OLS-004 relative to OLS-001; as rationalisation of the Blackburn junctions would be anticipated as part of an online alignment, the additional impact on safety is limited. The impact on NMU users is increased relative to	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						an online-only route with a total of 2 core path crossings, requiring additional mitigation including re-alignment of one path.	
	Ecology	Loss of some ancient woodland currently adjacent to the A96. A couple of minor watercourse crossings.	Geotechnical	Embankments up to 22m high on non-identified geotechnical constraints (Ch. 5300-5450) 1 no. cutting in made ground with potential contamination (Ch. 6200-6300)	Promoting regional economic growth	The impacts on regional economic growth are unchanged relative to an online-only route.	
	People and communities	Alignment east of the Blackburn is within Aberdeen city council green belt area. Area of scattered private property at south end of alignment. Two small areas of prime land at north end of Blackburn and south of Blackburn.	Structures	Regular structures encountered for a scheme of this nature. All scored neutral or slight adverse during first fix assessment.	Facilitating active travel	Relative to an online only route, further accommodation is required for the intersection of core paths with the new route alignment.	
	Noise and air quality	Potential noticeable decrease to level of current noise climate at Blackburn, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads.  All alignments a broadly in line with the existing alignment and are <200m from a densely populated area (>20ppl/km2). Alignment 004 impacts on slightly less receptors than 001, 003, 006 and 007.	Hydrology	Alignment passes through the Blackburn floodplain and is regarded as having a large impact (Ch. 3100-3900). Diversionary works required to drainage ditches and tributary to Black Burn. (Ch. 3200-4000). Numerous small watercourse crossings.	Integration with public transport facilities	The impacts on integration with public transport facilities are unchanged relative to an online-only route.	
	Cultural heritage	The alignment may affect the setting of Category B Listed Kinellar House (LB9118), as it cuts through the remnants of the non-inventory GDL within which it is located. A site visit is required to gain a more complete understanding of the setting of Kinellar House.	Utilities	2no. 900mm National Grid High Pressure Gas Pipeline crossings (Ch. 1900, 2800-2850) 2no. 450mm Scottish Water Distribution Main crossings (Ch. 2300-2500)	Integration	The impacts on accessibility to LDP sites are unchanged relative to an online-only route so long as a junction strategy is adopted which permits such. With an offline section, this route does not align with the policy thread of making most use of the existing infrastructure to the degree that an online-only route does, with a longer offline section than for OLS-002 or -003.	
	Plans and policies	This largely offline route passes through Aberdeen City Council Green Belt, green Network and a local nature conservation site. In terms of committed development it passes through and in close proximity to smaller sites with consented development sites.	Construction Access & Temporary Disruption/Traffic Management	Construction access up to approximately Ch. 3000 via existing A96 at northern end of alignment. From Ch. 3000-5000 access limited to single c-class road. Construction potentially phased to continue accessing via A96. Southern access also via A96.  Temporary disruption is slightly more significant with this option. Two tie-ins will require traffic	Accessibility and social inclusion	The quality of accessibility is dependent on the junction strategy.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Soil and geology	Small areas of prime agricultural land. Contaminated Land (small area of artificial ground). Small areas of mineral resources.		management to facilitate access similar to the other options, however, additional crossing of the A96 at the northern Blackburn roundabout adds more significant complications to construction phasing and will likely result in significant delays in the area. Available diversion routes around Blackburn do not appear suitable.	Public acceptability	The offline section of OLS-004 might attract a mixed response due to the impact and costs of duplicating an existing dual carriageway, however there is public support for an active travel corridor for the A96 which could partially utilise the bypassed section.	
OLS-005	Landscape	The appraisal indicates 35% of the alignment as having Major adverse impacts.	Alignment	Alignment length is 3486m.	Operation and inter-urban connectivity	OLS-005 is a partial route between Kinellar Roundabout and Tyrebagger. The journey time, reliability and overtaking and freight efficiency improvements are unchanged relative to OLS-001. There would be additional segregation of local and strategic traffic achieved through the partial bypassing of Blackburn, with a single grade separated junction likely to be provided for the town.	
	Water	Route crosses the extensive floodplain of the Black Burn (ch.800m) and is perpendicular to flow (moderate adverse).	Earthworks	Bulk Cut – 3,635 m <sup>3</sup> Bulk Fill – 2,080,543 m <sup>3</sup> Deficit – 2,076,908 m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	Only the existing Blackburn bypass and route to Tyrebagger is impacted by OLS-005 relative to OLS-001; as rationalisation of the Blackburn junctions would be anticipated as part of an online alignment, the additional impact on safety is limited although some benefit may be achieved by reducing the gradient at Tyrebagger. The impact on NMU users is decreased relative to an online-only route and does not impact on any core paths. There are no NMU facilities along the length which would benefit from improvements.	
	Ecology	Loss of some ancient woodland currently adjacent to the A96. A couple of minor watercourse crossings.	Geotechnical	Embankments up to 29.1m high on non-identified geotechnical constraint. Historical tank also noted in area (Ch. 3100-3250).	Promoting regional economic growth	The impacts on regional economic growth are unchanged relative to an online-only route.	
	People and communities	Alignment east of the Blackburn is within Aberdeen City Council green belt area. A couple of private properties are located at Little Clinterty. Two small areas of prime land at north end of Blackburn and south of Blackburn.	Structures	Alignment crosses a floodplain with the possibility of a large structure such as a viaduct being required. Total length of the structure is approx. 700m (Ch. 500-1199)	Facilitating active travel	Relative to an online only route, there are fewer intersection of core paths with the new route alignment which will reduce the number of locations where mitigation is needed.	
	Noise and air quality	Potential noticeable decrease to level of current noise climate at Blackburn, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts only communities with a relative low population count.	Hydrology	Alignment passes through the Blackburn floodplain and is regarded as having a large impact (Ch. 400-1250). Diversionary works required to drainage ditches and tributary to Black Burn. (Ch. 350-1200 & 2750-3150).	Integration with public transport facilities	The impacts on integration with public transport facilities are unchanged relative to an online-only route.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		All alignments a broadly in line with the existing alignment and are <200m from a densely populated area (>20ppl/km2). Alignment 005 impacts on slightly less receptors than 001, 003, 006 and 007.		Numerous small watercourse crossings.			
	Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	450mm Scottish Water Distribution Main (Ch. 0) 900mm National Grid High Pressure Gas pipeline crossing (Ch. 300)	Integration	The impacts on accessibility to LDP sites are unchanged relative to an online-only route so long as a junction strategy is adopted which permits such. With an offline section, this route does not align with the policy thread of making most use of the existing infrastructure to the degree that an online-only route does.	
	Plans and policies	This largely offline route passes through Aberdeen City Council Green Belt, green Network and a local nature conservation site. No committed development constraints.	Construction Access & Temporary Disruption/ Traffic Management	Small localised offline section. Temporary access via. Northern roundabout at Blackburn. Southern access via. Existing A96.  Temporary disruption has the potential to be significant at tie in points with TM required to facilitate access, particularly round area at roundabout. Option largely offline other than this. Alternative routes exist for side roads which may be disrupted.	Accessibility and social inclusion	The quality of accessibility is dependent on the junction strategy.	
	Soil and geology	Small areas of prime agricultural land. Contaminated Land (tank in one location). Small areas of mineral resources.			Public acceptability	The offline section of OLS-005 might attract a mixed response due to the impact and costs of duplicating an existing dual carriageway, however there is public support for an active travel corridor for the A96 which could partially utilise the bypassed section (although the section is shorter than for OLS-004).	
OLS-006	Landscape	Approximately 50% of the alignment runs on embankment with a maximum height >15m.	Alignment	Alignment Length is 2243m	Operation and inter-urban connectivity	OLS-006 is a partial route between Clinterty Roundabout and Tyrebagger. The journey time, reliability and overtaking and freight efficiency improvements are unchanged relative to OLS-001. There would be additional segregation of local and strategic traffic achieved through the partial bypassing of Blackburn, with a single grade separated junction likely to be provided for the town.	
	Water	No crossings of extensive floodplain. Route crosses two minor burns / drains (minor adverse).	Earthworks	Bulk Cut – 6,616 m <sup>3</sup> Bulk Fill – 906,298 m <sup>3</sup> Deficit – 899,681 m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	Only part of the existing Blackburn bypass and the route to Tyrebagger is impacted by OLS-006 relative to OLS-001; as rationalisation of the Blackburn junctions would be anticipated as part of an online alignment, the additional impact on safety is limited although some benefit may be achieved by reducing the gradient at Tyrebagger. The impact on	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						NMU users is decreased relative to an online-only route and does not impact on any core paths. There are no NMU facilities along the length which would benefit from improvements.	
	Ecology	Loss of some ancient woodland currently adjacent to the A96.	Geotechnical	Cutting in area of made/worked ground with potential contamination (Ch. 600-700).	Promoting regional economic growth	The impacts on regional economic growth are unchanged relative to an online-only route.	
	People and communities	All the alignment is within Aberdeen City Council green belt area. Private properties are located at roadside cottages and Bishopton Farm. Small area of prime agricultural land at north end of alignment.	Structures	Regular structures encountered for a scheme of this nature. All scored neutral or slight adverse during first fix assessment.	Facilitating active travel	Relative to an online only route, there are fewer intersection of core paths with the new route alignment which will reduce the number of locations where mitigation is needed.	
	Noise and air quality	There is minor or negligible potential change to level of the existing noise climate at the most affected community of Blackburn, resulting from the introduction of new roads and rerouting of existing traffic.  All alignments a broadly in line with the existing alignment and are <200m from a densely populated area (>20ppl/km2).	Hydrology	No interactions with floodplain. Two small watercourse crossings. Diversionary works required to tributary to Black Burn. (Ch. 1750-1900)	Integration with public transport facilities	The impacts on integration with public transport facilities are unchanged relative to an online-only route.	
	Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	No major utility interface on this alignment.	Integration	The impacts on accessibility to LDP sites are unchanged relative to an online-only route so long as a junction strategy is adopted which permits such. With an offline section, this route does not align with the policy thread of making most use of the existing infrastructure to the degree that an online-only route does.	
	Plans and policies	This route passes through Aberdeen City Council Green Belt, green Network and a local nature conservation site. It also passes through a small scale consented development at Bishopton Farm.	Construction Access & Temporary Disruption/Traffic Management	Small localised offline section. Temporary access via. southern roundabout at Blackburn. Southern access via. Existing A96.  Temporary disruption has the potential to be significant at tie in points with TM required to facilitate access, particularly around area of roundabout. Option largely offline other than this. Alternative routes exist for side roads which may be disrupted.	Accessibility and social inclusion	The quality of accessibility is dependent on the junction strategy.	
	Soil and geology	Small area of prime agricultural land. Contaminated Land (worked ground, tank). Small areas of mineral resources.			Public acceptability	The offline section of OLS-006 might attract a mixed response due to the impact and costs of duplicating an existing dual carriageway, however there is public support for an active travel corridor for the A96 which could partially utilise the bypassed section	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						(although the section is shorter than for OLS-004 and -005).	
OLS-007	Landscape	The appraisal indicates that the majority of the alignment is Moderate due to the scale of earthworks and loss of woodland.	Alignment	Alignment length is 2444m	Operation and inter-urban connectivity	OLS-007 is a partial route between Clinterty Roundabout and east of Tyrebagger. The journey time, reliability and overtaking and freight efficiency improvements are unchanged relative to OLS-001. There would be additional segregation of local and strategic traffic achieved through the partial bypassing of Blackburn, with a single grade separated junction likely to be provided for the town, and at Tyrebagger.	
	Water	No watercourse crossings.	Earthworks	Bulk Cut – 1,979,843 m <sup>3</sup> Bulk Fill – 3,411 m <sup>3</sup> Deficit – 1,976,432 m <sup>3</sup> *no allowance for structures.	Safety for motorised and non-motorised users	Only part of the existing Blackburn bypass and the route to Tyrebagger is impacted by OLS-007 relative to OLS-001; as rationalisation of the Blackburn junctions and grade-separation at Tyrebagger would be anticipated as part of an online alignment, the additional impact on safety is limited although some benefit may be achieved by reducing the gradient at Tyrebagger. The impact on NMU users is decreased relative to an online-only route and does not impact on any core paths. There are no NMU facilities along the length which would benefit from improvements.	
	Ecology	Loss of and fragmentation to a sensitive area which currently forms a habitat corridor across the A96, linking into ancient woodland mosaic.	Geotechnical	2no. cuttings in made ground with potential contamination. One in are designated as landfill (Ch. 200-400).	Promoting regional economic growth	The impacts on regional economic growth are unchanged relative to an online-only route.	
	People and communities	All the alignment is within Aberdeen City Council green belt area. Private property located north of Bishopton Farm. Very small area of prime agricultural land at north end of alignment.	Structures	Regular structures encountered for a scheme of this nature. All scored neutral or slight adverse during first fix assessment.	Facilitating active travel	Relative to an online only route, there are fewer intersection of core paths with the new route alignment which will reduce the number of locations where mitigation is needed.	
	Noise and air quality	Potential minor decrease to level of current noise climate at Blackburn resulting from A rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative low population count. There is one Local Development Plan (LDP) allocation identified	Hydrology	No interactions with floodplain. No watercourse crossings.	Integration with public transport facilities	The impacts on integration with public transport facilities are unchanged relative to an online-only route.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		<p>in the area which is potentially affected by the proposed alignment: Blackburn OP1 - Caskieben Allocation: 50 homes.</p> <p>All alignments a broadly in line with the existing alignment and are &lt;200m from a densely populated area (&gt;20ppl/km2).</p>					
Cultural heritage		No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	No major utility interface on this alignment.	Integration	The impacts on accessibility to LDP sites are unchanged relative to an online-only route so long as a junction strategy is adopted which permits such. With an offline section, this route does not align with the policy thread of making most use of the existing infrastructure to the degree that an online-only route does.	
Plans and policies		This route passes through Aberdeen City Council Green Belt and Green Network. No committed development constraints.	Construction Access & Temporary Disruption/Traffic Management	<p>Temporary access via existing A96 at both north and southern extents of scheme.</p> <p>Temporary disruption likely to be significant on approach to Blackburn roundabout with circa 1km of online construction. Alternative routes do not appear suitable for traffic flows and therefore extensive traffic management may be required.</p>	Accessibility and social inclusion	The quality of accessibility is dependent on the junction strategy.	
Soil and geology		Small area of prime agricultural land. Contaminated Land (landfill, worked ground, artificial ground).			Public acceptability	The offline section of OLS-007 might attract a mixed response due to the impact and costs of duplicating an existing dual carriageway, however there is public support for an active travel corridor for the A96 which could partially utilise the bypassed section (although the section is shorter than for OLS-004 and -005).	

Corridor BN01 Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
BN01-001	Landscape	The appraisal has identified 68% of the alignment as having Major adverse impacts on landscape character. The major adverse impacts occur in the north of the alignment where a large structure will be required to cross the River Urie and in the south where a second large structure will be required to cross the River Don. There would be impacts on high quality undesignated landscape with cuttings and embankments greater than 15m depth/height.	Alignment	Approx. 14.9Km in length	Operation and inter-urban connectivity	Journey times are improved by an average of 2-3 minutes and a maximum of 4 minutes eastbound and 6 minutes westbound, due to elimination of delays at Blackhall and Port Elphinstone roundabouts. The removal of these transient delays and provision of a high-quality dual carriageway provides significant journey time reliability benefits. General freight traffic will be removed from the Inverurie urban area and better, shorter connections to existing commercial locations in the town will be provided (as well as for planned sites OP2 and OP3) as well as general improvements to speed and efficiency. The number of trips routing through Inverurie to reach the A96 will be reduced providing better segregation of strategic and local traffic.	<p>Traffic</p> <ul style="list-style-type: none"> <li>Preference would be for 001 as this is shortest distance and a junction with the B9170 could potentially connect most directly with the housing and mixed use development areas to the north of the town.</li> <li>Not much else to differentiate between alignments.</li> <li>From a traffic perspective, the closer the alignment is to Inverurie the more likely the new dual carriageway is to attract trips.</li> <li>The northernmost alignment may pick up more traffic from the A920 however traffic from the A920 will use any of the BN01 alignments.</li> <li>There is also the large LDP land allocation to the north of Inverurie. There is potential to use the current grade separated junction at Kintore.</li> </ul> <p>Engineering</p> <ul style="list-style-type: none"> <li>001 and 003 have the least overall earthworks</li> <li>004 has most earthworks but this is due to the longer length. In comparative /m earthworks it performs well against the other alignments.</li> <li>001, 002, 003, 003A and 004A all cross the River Urie and flood plain at western end (tie in at Pitcaple) and tie into the existing A96 at a constrained location. 003A provides the shortest crossing of the floodplain on approach to Pitcaple 004 avoids the floodplain and ties back further north on the A96.</li> <li>003 has pipelines which cross the alignment several times (e.g.ch700)</li> <li>All alignments require a viaduct crossing of the River Don and associated floodplain and the railway line – 004 has the shortest length of viaduct (650m). Maximum length of bridge 1km</li> </ul> <p>Environmental</p> <ul style="list-style-type: none"> <li>All BN01 alignments have major constraints at Pitcaple and then another constraint crossing the floodplain at the Lochter Burn.</li> <li>The corridor also contains Keith Hall GDL in the east of the corridor and Bourtie House in the central section. All the alignments tie into the existing A96 at the same location at the eastern end due to the various constraints between Inverurie and Kintore. The structure will have major visual and potential noise impacts.</li> </ul>
	Water	Route crosses the extensive floodplain of the River Urie (ch.550m) and River Don (ch.13600m) - these crossings are not perpendicular to flow (major adverse). Potential for active morphology at these crossings (moderate adverse). Potential requirement for realignment of River Urie upstream of crossing (moderate adverse). Route crosses extensive floodplain of Ides Burn (ch.2300m) and is perpendicular to flow (moderate adverse).	Earthworks	Bulk Cut – 2,654,643m <sup>3</sup> Bulk Fill - 2,327,340m <sup>3</sup> Surplus – 327,303 m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	All three existing A96 Inverurie Bypass junctions are accident cluster sites so removing the route from Inverurie offers significant safety benefits over and above those of a general high-quality, limited-access dual carriageway. Overtaking opportunities and fewer junctions will result in reduced driver stress and accident risk, and the reduction of traffic on the existing A96 will improve safety for NMUs in the Pitcaple and Inverurie areas, including those crossing the A96. The new BN01 route does not significantly impact any existing NMU routes.	
	Ecology	Two significant watercourse crossings (River Don and Lochter Burn) as well as a few minor watercourse crossings. Northern end minimally cuts into a sensitive area identified as an ancient woodland mosaic with a good habitat connection across the current A96, and skims the River Urie. It is assumed that no realignment of the watercourses is needed.	Geotechnical	Embankments >18m on potentially compressible soils Rock cuts >19m identified	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	
	People and communities	The following lie within the alignment: Bourtie Works Industrial Park (Ch. 5+300), off the B9170 an Cherry Croft, Mains of Inveramsay (1+700), and East Cottage, Lethenty (Ch. 4+250) lies partially within the alignment. No community facilities lie within the alignment.	Structures	6no. Underbridges 5no. Overbridges 2 no Viaducts New Viaduct crossing the River Urie and flood plain at Pitcaple - total Length is 900m	Facilitating active travel	The removal of strategic traffic from the Inverurie urban area will improve conditions for NMU use in the town, as well as those using the existing A96 corridor	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		Alignment passes through areas of class 3.1 agricultural land with some larger pockets north of Inverurie. The agricultural land is predominantly Class 3.2 but there is also pockets of 4.1. No Class 1 or 2 land.		New Viaducts crossing the River Don and flood plain at Kintore West- total Length is 900m			<ul style="list-style-type: none"> <li>The corridor also contains two Inventory Battlefield sites with the alignments having impacts on their setting. There are also numerous Listed Buildings and a major impact on the setting of Keith Hall GDL.</li> <li>There is a small scale LDP land allocation at Kinmuck and the A Listed Building at Balbithan House.</li> </ul> <p><b>Two alignments are to be taken forward.</b>  <b>Outer alignment - A hybrid of BN01-004 which avoids Pitcaple and ties into all the D Corridor alignments, tying into BN01-003B at the Don Crossing.</b></p> <p><b>Inner alignment - A hybrid of alignments BN01-001 and BN01_002 closer to Inverurie.</b></p>
Noise and air quality		There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and rerouting of existing traffic. Minor changes to the noise climate may take place, and these are identified upon communities with a relative high population count. There are also a number of Local Development Plan (LDP) allocations within 300m of the proposed alignment including OP7 (Uryside Phase 2 - 150 homes), OP8 (Uryside Phase 2 Allocation: 465 homes), OP3 (Phase 2 - Portstown Allocation: 250 homes), and OP9 (Portstown Phase 1 Allocation: 175 homes). In total, there could be up to 1040 homes affected by the new scheme.	Hydrology	2 active flood plain crossings – River Urie at Pitcaple and River Don at Kintore West Idles Burn crossing Numerous small crossings and tributary diversions	Integration with public transport facilities	The journey time improvement will make access to Inverurie rail stations and Dyce Park and Ride faster and more attractive.	
Cultural heritage		This alignment may have a significant impact upon the setting of Keith Hall Inventory Garden and Designed Landscape (GDL), as it runs around the eastern side of the GDL, on land that is slightly more elevated than the GDL. This alignment has the potential to impact upon the key views south from Category A Listed Bourtie House (Listed Building - LB2819). The alignment runs in close proximity to the Inventory Historic Battlefield of the Battle of Harlaw and may impact on its setting.	Utilities	3 No. Crossings of HP gas pipeline. Telecoms mast within 100m 2 No. SW water main crossings.	Integration	Route BN01 has the potential to provide vehicular access to significant LDP allocations in northwest Inverurie, and the benefits of reducing the volume of local and strategic trips in the urban area will improve access to all LDP allocations in Inverurie. BN01-001 could offer direct access to the development areas to the north of the town. Route BN01 is a good policy fit as it would reduce traffic congestion within the town and would eliminate the need for an eastern relief road.	
Plans and policies		Route entirely outwith settlement boundaries and LDP allocations. Southern most section immediately adjacent to land safeguarded by employment use by LDP at the north of Kintore. The route also passes in close proximity to LDP allocated housing opportunity sites along the northern edge of Inverurie. In terms of committed development it does pass within close proximity to small scale committed developments including a 200kg Explosive Storage Bunker and 10kg Deto	Construction Access & Temporary Disruption/Traffic Management	Predominately offline construction. Access is restricted by River Urie at Ch 600. Access possible from B9001 from CH2300 to CH 4500. Access possible from the B9170 at CH5300 and the B993 at CH9700. Access possible from five unclassified roads. Access from the B9001 and other routes would require construction vehicles to pass through Inverurie or Oldmeldrum. Access from other unclassified routes may require construction	Accessibility and social inclusion	Junction positioning will be crucial in measuring accessibility impact; provision of the B9170 junction may attract trips from Inverurie/Oldmeldrum and reduce the impact on the A947 corridor. The removal of strategic trips from the Inverurie urban area will reduce the impact of traffic on the urban environment, allowing easier access to and through the town for all users.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		Annexe at Schlumberger Depot Hillhead Of Lethenty.		vehicles to pass through smaller settlements such as Keithhall, Whiteford and Pitcaple. Access restricted by the River Don at CH 13750 and the Inverness to Aberdeen Rail Line at CH 14200 therefore access is not possible from the A96.			
	Soil and geology	Large stretches of prime agricultural land, with some contaminated land (railway, tanks, former canal), and small areas of mineral resources.			Public acceptability	There is significant public support for a route north and east of Inverurie to alleviate congestion and permit development. There is some public concern on the loss of prime agricultural land and the impact on floodplain. This option has lower community impact on Whiteford, Durno and Kinmuck than some BN01 options but still may impact Keithhall more than option BN01-002 as well as housing allocations.	
BN01-002	Landscape	The appraisal has identified 59% of the alignment as having Minor or Moderate adverse impacts with 41% resulting in Major adverse impacts. The overall rating of Major reflects the fact that there are along stretches of cutting some of which reach a maximum depth of >30m and loss of woodland that contributes to landscape character. While chainages with Major adverse impacts are relatively short and spaced widely apart they result in intensive impacts in a small area.	Alignment	Approx. 15.5Km in length	Operation and inter-urban connectivity	Journey times are improved by an average of 2-3 minutes and a maximum of 4 minutes eastbound and 6 minutes westbound, due to elimination of delays at Blackhall and Port Elphinstone roundabouts. The removal of these transient delays and provision of a high-quality dual carriageway provides significant journey time reliability benefits. General freight traffic will be removed from the Inverurie urban area and better, shorter connections to existing commercial locations in the town will be provided (although the link to proposed sites OP2 and OP3 will not be as favourable as in BN01-001) as well as general improvements to speed and efficiency. The number of trips routing through Inverurie to reach the A96 will be reduced providing better segregation of strategic and local traffic.	
	Water	Route crosses the extensive floodplain of the River Urie (ch.550m), Ides Burn (ch.2800) and River Don (ch.13900m) - these crossings are not perpendicular to flow (major adverse). Route crosses the extensive floodplain of the Lochter Burn (ch.4600m) and is perpendicular to flow (moderate adverse). Potential for active morphology at the crossings of the Lochter Burn and River Don (moderate adverse).	Earthworks	Bulk Cut – 3,117,028m <sup>3</sup> Bulk Fill - 2,721,856m <sup>3</sup> Surplus – 395,172m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	All three existing A96 Inverurie Bypass junctions are accident cluster sites so removing the route from Inverurie offers significant safety benefits over and above those of a general high-quality, limited-access dual carriageway. Overtaking opportunities and fewer junctions will result in reduced driver stress and accident risk, and the reduction of traffic on the	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						existing A96 will improve safety for NMUs in the Pitcaple and Inverurie areas, including those crossing the A96. The new BN01 route does not significantly impact any existing NMU routes.	
	Ecology	Cuts through a network of small ancient woodland sites. One major crossing of the River Don. The alignment is weaving through a network of small ancient woodland parcels and across a number of minor watercourses. Northern end fragments a sensitive area identified as an ancient woodland mosaic with a good habitat connection across the current A96, and crosses the River Urie.	Geotechnical	Embankments >19m on potentially compressible soils Rock cuts >up to 31m identified	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	
	People and communities	The following properties lie within the alignment: The Lodge (Pitcaple Castle), The Stables (No's 1 - 4 at Pitcaple Castle) (Ch. +350), and Hillhead of Lethenty (Ch. 3+750). Gunhill, Pitcaple (Ch. 2+050) and two properties at Millview, Lethenty (Ch. 4+100) fall partially within the alignment. No community facilities lie within the alignment. Southern section of alignment is predominantly agricultural land of class 3.2 with small areas of 3.1. Larger pockets of 3.1 north of Inverurie, but also pockets of 4.1. No Class 1 or 2.	Structures	10 no Underbridges 7 no. Overbridges 2no. Viaducts New Underbridge crossing the B9001 and flood plain at Gunhill - total Length is 500m New Viaduct over River Urie – length 250m New Viaduct crossing the River Don and flood plain at Kintore West- total Length is 1100m	Facilitating active travel	The removal of strategic traffic from the Inverurie urban area will improve conditions for NMU use in the town, as well as those using the existing A96 corridor	
	Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. Minor increase to the noise climate may take place upon communities with a relative medium population count. Additionally, a number of LDP allocations are potentially affected by the proposed alignment including OP7: Uryside Phase 2 150 homes, OP8: Uryside Phase 2 Allocation: 465 homes, OP3: Phase 2 Portstown Allocation: 250 homes, and OP9: Portstown Phase 1 Allocation: 175 homes. For a total of 1040 homes.  In relation to baseline, all routes are beneficial because the alignment is moved away from Inverurie which is high density land-use into areas of low density land use with good background air quality. None of the routes are major beneficial because some new exposures would occur for each route. Routes which are outside 100m of new agglomerations (10 people or more) are classed as moderate beneficial. This applies to 002, 003, 003A and 004A.	Hydrology	2 active flood plain crossings – River Urie at Pitcaple and River Don at Kintore West Idles Burn and flood plain crossing Numerous small crossings and tributary diversions	Integration with public transport facilities	The journey time improvement will make access to Inverurie rail stations and Dyce Park and Ride faster and more attractive.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Cultural heritage	This alignment may have a significant impact upon the setting of Pitcaple Castle (LB2830) as it runs through the non-inventory GDL which forms the Castle's setting. The alignment also runs through the non-inventory GDL which forms the setting for Bourtie House (LB2819). This alignment may have an impact upon the setting of the Hill of Selbie cairn (Scheduled Monument - SM12434). The alignment may have an impact on the setting of Keith Hall Inventory GDL, as it would run on the eastern side of the GDL on land which is at a higher elevation. The alignment runs in close proximity to the Inventory Historic Battlefield of the Battle of Harlaw and may impact on its setting.	Utilities	3 No. Crossings of HP gas pipeline. 2 No. SW water main crossings.	Integration	Route BN01 has the potential to provide vehicular access to significant LDP allocations in northwest Inverurie, and the benefits of reducing the volume of local and strategic trips in the urban area will improve access to all LDP allocations in Inverurie. BN01_002 could offer direct access to the proposed development areas to the north of the town. Route BN01 is generally a good policy fit as it would reduce traffic congestion within the town and would eliminate the need for an eastern relief road.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Southern-most section immediately adjacent to land safeguarded by employment use by LDP at the north of Kintore.	Construction Access & Temporary Disruption/Traffic Management	Access restricted by the River Urie at CH 550 therefore access is not possible from the A96. Access possible from B9001 at CH 2750, B9170 at CH 5650 and B993 at CH 9950. Access is possible from 5 unclassified roads. Access from the B9001 and other routes would require construction vehicles to pass through Inverurie or Oldmeldrum. Access from other unclassified routes may require construction vehicles to pass through smaller settlements such as Keithhall, Whiteford and Pitcaple.	Accessibility and social inclusion	Junction positioning will be crucial in measuring accessibility impact; provision of the B9170 junction may attract trips from Inverurie/Oldmeldrum and reduce the impact on the A947 corridor. The removal of strategic trips from the Inverurie urban area will reduce the impact of traffic on the urban environment, allowing easier access to and through the town for all users.	
	Soil and geology	Large stretches of prime agricultural land, some contaminated land (railway, worked ground, infilled ground), and mineral resources.		Access possible from the A96 at the eastern extent of the alignment however access to the eastern section of the alignment would be restricted by the River Don and Inverness Aberdeen Rail Line.	Public acceptability	There is significant public support for a route north and east of Inverurie to alleviate congestion and permit development. There is some public concern on the loss of prime agricultural land and the impact on floodplain. This option has lower community impact on Whiteford, Durno and Kinmuck than some BN01 options may offer less impact on Keithhall than option BN01-001.	
BN01-003	Landscape	The appraisal has identified 55% of the alignment as having Moderate or Major adverse impacts with 24% of the alignment resulting in Major impacts. The overall rating of Moderate is given as the impacts relate primarily to earthworks and structures rather than loss of woodland.	Alignment	Approx 17.5km in length	Operation and inter-urban connectivity	Journey times are improved by an average of 1-2 minutes and a maximum of 3 minutes eastbound and 5 minutes westbound, due to elimination of delays at Blackhall and Port Elphinstone roundabouts; this benefit is less than that for BN01-001 or -002. The removal of these transient delays and provision of a high-quality dual carriageway provides significant journey time reliability benefits. General freight traffic will be removed from the Inverurie urban area and better, shorter connections to existing commercial locations in the town will be provided (although the link to proposed sites OP2 and OP3 will not be as favourable as in BN01-	

Alignment	Environment	Engineering	Traffic	Discipline Review Assessment Commentary	
				001) as well as general improvements to speed and efficiency. The number of trips routing through Inverurie to reach the A96 will be reduced providing better segregation of strategic and local traffic.	
Water	Route crosses the extensive floodplain of the River Don (ch.15950m) - this crossing is not perpendicular to flow (major adverse). Route crosses the extensive floodplain of the River Urie (ch.450m) and Lochter Burn (ch.4000 and ch.5550m) - these crossings are perpendicular to flow (moderate adverse). Potential for active morphology at the crossings of the Lochter Burn and River Don (moderate adverse).	Earthworks	Bulk cut - 3,261,314 m3 Bulk fill -1,325,937 m3 Surplus - 1,935,376 m3 No allowance for structures	Safety for motorised and non-motorised users	All three existing A96 Inverurie Bypass junctions are accident cluster sites so removing the route from Inverurie offers significant safety benefits over and above those of a general high-quality, limited-access dual carriageway. Overtaking opportunities and fewer junctions will result in reduced driver stress and accident risk, and the reduction of traffic on the existing A96 will improve safety for NMUs in the Pitcaple and Inverurie areas, including those crossing the A96. The new route does not significantly impact any existing core paths but unlike BN01-001 and -002 it does cross the Oldmeldrum to Old Rayne cycle path via the local road network; it is assumed that connectivity will be retained
Ecology	Cuts through Sunnybrae Moss Local Nature Conservation Site (LNCS) and likely the network of other wetland and fen habitats within the local area. Northern end fragments sensitive area identified as an ancient woodland mosaic with a good connection across the current A96.	Geotechnical	Embankments >18m on potentially compressible soils Rock cuts >up to 21.8m identified Peat identified	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.
People and communities	Pitcaple Environmental Project and The Buzzard Café (Ch. 0+600) are community facilities that lie within the alignment. One property lies within the alignment: Chrisdavric (Ch. 3+350). Southern section of alignment predominantly 3.2 with small areas of 3.1. Larger pockets of 3.1 north of Inverurie, but also pockets of 4.1. No Class 1 or 2.	Structures	15 no Underbridges 8 no. Overbridges 3no. Viaducts  New Viaduct crossing the River Urie and flood plain at Pitcaple - total Length is 250m New Underbridge crossing the B9001 and flood plain at Gunhill - total Length is 50m New viaduct crossing the flood plain at Littlepark - Length is 500m New viaduct crossing the River Don and flood plain at Kintore West- total Length is 1200m	Facilitating active travel	The removal of strategic traffic from the Inverurie urban area will improve conditions for NMU use in the town, as well as those using the existing A96 corridor. However the Oldmeldrum to Old Rayne cycle network, which uses the existing road network, will need to be realigned.
Noise and air quality	There is noticeable potential decrease to level of the existing noise climate in Inverurie resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.	Hydrology	2 active flood plain crossings – River Urie at Pitcaple and River Don at Kintore West	Integration with public transport facilities	The journey time improvement will make access to Inverurie rail stations and Dyce Park and Ride faster and more attractive.



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		In relation to baseline, all routes are beneficial because the alignment is moved away from Inverurie which is high density land-use into areas of low density land use with good background air quality. None of the routes are major beneficial because some new exposures would occur for each routes. Routes which are outside 100m of new agglomerations (10 people or more) are classed as moderate beneficial. This applies to 002, 003, 003A and 004A.					
Cultural heritage		The alignment cuts across the non-designated designed landscape surrounding Pitcaple Castle and would cause significant negative impact to its setting, and would pose a potential risk to consent. The alignment would run in close proximity to the non-inventory GDL which forms the setting for Bourtie House (LB2819), and may impact on its setting. The alignment runs in close proximity to the Inventory Historic Battlefield of the Battle of Barra and may have an impact on its setting.	Utilities	6 No. Crossings of HP gas pipeline. Wind turbines (2 no. interfaces)  2 No. SW water main crossings.	Integration	Route BN01 has the potential to provide vehicular access to significant LDP allocations in northwest Inverurie, and the benefits of reducing the volume of local and strategic trips in the urban area will improve access to all LDP allocations in Inverurie. Route BN01 is a good policy fit as it would reduce traffic congestion within the town and would eliminate the need for an eastern relief road.	
Plans and policies		Route entirely outwith settlement boundaries and LDP allocations. Southern most section immediately adjacent to land safeguarded by employment use by LDP at the north of Kintore.	Construction Access & Temporary Disruption/Traffic Management	Access possible from the A96 at CH 0 and the C76C at CH 600 and an unclassified Road at CH 1250. The River Urie splits this section at CH 450 however access is possible from both ends of the alignment. Access possible from B9001 at CH 2400, B9170 at CH 7050 and B993 at CH 11500. Access is possible from 9 unclassified roads. Access from the B9001 and other routes would require construction vehicles to pass through Inverurie or Oldmeldrum. Access from other unclassified routes may require construction vehicles to pass through smaller settlements such as Keithhall, Whiteford and Pitcaple.	Accessibility and social inclusion	Junction positioning will be crucial in measuring accessibility impact; provision of the B9170 junction may attract trips from Inverurie/Oldmeldrum and reduce the impact on the A947 corridor. The removal of strategic trips from the Inverurie urban area will reduce the impact of traffic on the urban environment, allowing easier access to and through the town for all users.	
Soil and geology		Small areas of peat, large stretches of prime agricultural land, contaminated land (railway), and small areas of mineral resources.		Access possible from the A96 at the eastern extent of the alignment however access to the eastern section of the alignment would be restricted by the River Don and Inverness Aberdeen Rail Line.	Public acceptability	There is significant public support for a route north and east of Inverurie to alleviate congestion and permit development. There is some public concern on the loss of prime agricultural land, the impact on floodplain, and for the community impact on Whiteford, Durno and Kinmuck. There is likely to be concern for users of the Oldmeldrum to Old Rayne cycle route.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
BN01-003A	Landscape	The appraisal has identified 27% of the alignment as having Moderate or Major adverse impacts with a total of 20% having a Major adverse impact. The Major adverse impact occurs at Pitcaple and is a result of the combined impacts of a 1.25km section of the alignment where there will be a new structure crossing the River Urie, cuttings of greater than 15m, loss of woodland and potential impacts on the contribution of cultural heritage features to landscape character. The overall rating is therefore Moderate adverse.	Alignment	Approx 6.4km in length – sub alignment	Operation and inter-urban connectivity	Journey times are improved by an average of 1-2 minutes and a maximum of 3 minutes eastbound and 5 minutes westbound, due to elimination of delays at Blackhall and Port Elphinstone roundabouts; this benefit is less than that for BN01-001 or -002. The removal of these transient delays and provision of a high-quality dual carriageway provides significant journey time reliability benefits. General freight traffic will be removed from the Inverurie urban area and better, shorter connections to existing commercial locations in the town will be provided (although the link to proposed sites OP2 and OP3 will not be as favourable as in BN01-001) as well as general improvements to speed and efficiency. The number of trips routing through Inverurie to reach the A96 will be reduced providing better segregation of strategic and local traffic.	
	Water	Route crosses the extensive floodplain of the River Urie (ch.450m) - this crossing is not perpendicular to flow (major adverse). Route crosses the extensive floodplain of the Lochter Burn (ch.5000m) and is perpendicular to flow. Potential for active morphology at this crossing (moderate adverse).	Earthworks	bulk cut - 828,570 m3 bulk fill -658,394m3 Surplus - 170,176m3 No allowance for structures	Safety for motorised and non-motorised users	All three existing A96 Inverurie Bypass junctions are accident cluster sites so removing the route from Inverurie offers significant safety benefits over and above those of a general high-quality, limited-access dual carriageway. Overtaking opportunities and fewer junctions will result in reduced driver stress and accident risk, and the reduction of traffic on the existing A96 will improve safety for NMUs in the Pitcaple and Inverurie areas, including those crossing the A96. The new route does not significantly impact any existing core paths but unlike BN01-001 and -002 it does cross the Oldmeldrum to Old Rayne cycle path via the local road network (four times as opposed to two in BN01-003); it is assumed that connectivity will be retained.	
	Ecology	Northern end fragments a sensitive area identified as an ancient woodland mosaic with a good habitat connection across the current A96.	Geotechnical	Peat identified	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
People and communities	There are no community facilities or private properties within the alignment, Areas of 3.1, 3.2 and 4.1 along alignment.		Structures	5no. Underbridges 4no. Overbridges 3no. Viaducts New Underbridge crossing the River Urie and flood plain at Pitcaple - total Length is 300m Viaduct over Littlepark floodplain, 250m Local road crossings Viaduct over Lochter Burn and floodplain, 150m Local road crossings	Facilitating active travel	The removal of strategic traffic from the Inverurie urban area will improve conditions for NMU use in the town, as well as those using the existing A96 corridor. However the Oldmeldrum to Old Rayne cycle network, which uses the existing road network, will need to be realigned to a greater degree than in BN01-003.	
Noise and air quality	Potential noticeable decrease to level of current noise climate at Inverurie, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts only communities with a relative low population count.  In relation to baseline, all routes are beneficial because the alignment is moved away from Inverurie which is high density land-use into areas of low density land use with good background air quality. None of the routes are major beneficial because some new exposures would occur for each route. Routes which are outside 100m of new agglomerations (10 people of more) are classed as moderate beneficial. This applies to 002, 003, 003A and 004A.		Hydrology	Floodplain at River Urie Floodplain at Auchencleith Floodplain at Lochter Burn Numerous small crossings and tributary diversions	Integration with public transport facilities	The journey time improvement will make access to Inverurie rail stations and Dyce Park and Ride faster and more attractive.	
Cultural heritage	The alignment cuts across the non-designated designed landscape surrounding Pitcaple Castle and would cause significant negative impact to its setting and would pose a potential risk to consent. The alignment runs in close proximity to the Inventory Historic Battlefield of the Battle of Barra and may have an impact on its setting.		Utilities	Interface with reservoir 1 No. Crossings of HP gas pipeline. Wind turbine	Integration	Route BN01 has the potential to provide vehicular access to significant LDP allocations in northwest Inverurie, and the benefits of reducing the volume of local and strategic trips in the urban area will improve access to all LDP allocations in Inverurie. Route BN01 is a good policy fit as it would reduce traffic congestion within the town and would eliminate the need for an eastern relief road.	
Plans and policies	Route entirely outwith settlement boundaries and LDP allocations.		Construction Access & Temporary Disruption/Traffic Management	Access possible from B9001 at CH 2500 and B9170 at CH 6406. Access is possible from 5 C Class or unclassified roads. Access from the B9001 and other routes would require construction vehicles to pass through Inverurie or Oldmeldrum. Access from other unclassified routes may require construction vehicles to pass through smaller settlements such as Keithhall, Whiteford and Pitcaple. The River crosses this section at CH 450 however access is possible from the C76C at CH 650.	Accessibility and social inclusion	Junction positioning will be crucial in measuring accessibility impact; provision of the B9170 junction may attract trips from Inverurie/Oldmeldrum and reduce the impact on the A947 corridor. The removal of strategic trips from the Inverurie urban area will reduce the impact of traffic on the urban environment, allowing easier access to and through the town for all users.	
Soil and geology	Geological Site of Special Scientific Interest (SSSI), small areas of peat, large stretches of prime agricultural land, contaminated land (railway, landfill, made ground), and small areas of mineral resources.				Public acceptability	There is significant public support for a route north and east of Inverurie to alleviate congestion and permit development. There is some public concern on the loss of prime agricultural land, the impact on floodplain, and for the community	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						impact on Durno and Kinmuck (with reduced impact on Whiteford relative to BN01-003). There is likely to be concern for users of the Oldmeldrum to Old Rayne cycle route.	
BN01-003B	Landscape	The appraisal indicates 69% of the alignment as having Moderate or Major adverse impacts. Major adverse impacts are predicted for 43% of the alignment due to a combination of effects on Kinmuck, loss of woodland and sections of cutting and embankment >10m in depth and height. The large structure across the River Don also results in a Major adverse impact on landscape and a Moderate adverse impact on views across the River Don. The overall rating is therefore Major due to the amount of the alignment with a rating of Major.	Alignment	Approx 5km in length – sub alignment	Operation and inter-urban connectivity	Journey times are improved by an average of 1-2 minutes and a maximum of 3 minutes eastbound and 5 minutes westbound, due to elimination of delays at Blackhall and Port Elphinstone roundabouts; this benefit is less than that for BN01-001 or -002. The removal of these transient delays and provision of a high-quality dual carriageway provides significant journey time reliability benefits. General freight traffic will be removed from the Inverurie urban area and better, shorter connections to existing commercial locations in the town will be provided (although the link to proposed sites OP2 and OP3 will not be as favourable as in BN01-001) as well as general improvements to speed and efficiency. The number of trips routing through Inverurie to reach the A96 will be reduced providing better segregation of strategic and local traffic.	
	Water	No crossings of extensive floodplain by this route. A number of crossings of watercourses with floodplain <100m wide.	Earthworks	bulk cut – 554,493m3 bulk fill -516,167m3 Surplus - 38,326m3- No allowance for structures	Safety for motorised and non-motorised users	All three existing A96 Inverurie Bypass junctions are accident cluster sites so removing the route from Inverurie offers significant safety benefits over and above those of a general high-quality, limited-access dual carriageway. Overtaking opportunities and fewer junctions will result in reduced driver stress and accident risk, and the reduction of traffic on the existing A96 will improve safety for NMUs in the Pitcaple and Inverurie areas, including those crossing the A96. The new route does not significantly impact any existing core paths or cycle routes (unlike BN01-003 or -003A).	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Ecology	One significant watercourse crossing over the River Don.	Geotechnical	Embankments >14m on potentially compressible soils	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	
	People and communities	Hogholm Farm Stables (Ch. 3+500) lies partially within alignment. The following properties lie partially within the alignment: Hogholm Farmhouse (Ch. 3+500), New House, Burnside (Ch. 1+050), Whitelums Croft, Keith Hall (Ch. 0+500), The Friends Cottage, Kinmuck (Ch. 1+800), Bankhead Croft, Kinmuck (Ch. 1+750). Lindores, Kinmuck (Ch. 1+800). Alignment passes through two small areas of 3.1, but is predominantly Class 3.2.	Structures	2no. Underbridges 1no. Overbridges 2no. Viaducts New viaduct crossing floodplain at Newmill Burn 300m New viaduct crossing the River Don and flood plain at Kintore West- total Length is 1050m. Local road crossings	Facilitating active travel	The removal of strategic traffic from the Inverurie urban area will improve conditions for NMU use in the town, as well as those using the existing A96 corridor.	
	Noise and air quality	Potential noticeable decrease to level of current noise climate at Inverurie, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts only communities with a relative low population count.  In relation to baseline, all routes are beneficial because the alignment is moved away from Inverurie which is high density land-use into areas of low density land use with good background air quality. None of the routes are major beneficial because some new exposures would occur for each route. Route is <200m from Kinmuck settlement area, so is classed as minor beneficial.	Hydrology	Floodplain at River Urie Floodplain at Auchencleith Floodplain at Lochter Burn Numerous small crossings and tributary diversions	Integration with public transport facilities	The journey time improvement will make access to Inverurie rail stations and Dyce Park and Ride faster and more attractive.	
	Cultural heritage	Friend's Meeting House and Friend's Cottage (LB9141) is located within this sub-option. It would be possible to move the alignment to ensure that there is no direct impact on the Listed Building. The use of this sub-option would have a significant impact upon the setting of Friend's Meeting House and Friend's Cottage (LB9141) due to its immediate proximity to the building. This sub-option runs in close proximity to Balbithan House (LB9140) and its surrounding GDL.	Utilities	3 No. Crossings of HP gas pipeline. Wind turbine	Integration	Route BN01 has the potential to provide vehicular access to significant LDP allocations in northwest Inverurie, and the benefits of reducing the volume of local and strategic trips in the urban area will improve access to all LDP allocations in Inverurie. Route BN01 is a good policy fit as it would reduce traffic congestion within the town and would eliminate the need for an eastern relief road.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations, but passes adjacent to Kinmuck Settlement boundary.	Construction Access & Temporary Disruption/Traffic Management	Access possible from B993 at CH0. Access is possible from a C Class Road at CH 1800. Access from the B993 and other routes would require construction vehicles to pass through Inverurie or Oldmeldrum. Access possible from an unclassified road at CH 3350. Access restricted by the River Don and the Inverness to Aberdeen Rail Line therefore access is	Accessibility and social inclusion	Junction positioning will be crucial in measuring accessibility impact; provision of the B9170 junction may attract trips from Inverurie/Oldmeldrum and reduce the impact on the A947 corridor. The removal of strategic trips from the Inverurie urban area will reduce the impact of traffic on the urban	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
				not possible from the A96. There are no unclassified roads to gain access from in this section.		environment, allowing easier access to and through the town for all users.	
	Soil and geology	Small areas of prime agricultural land, and small areas of mineral resources.			Public acceptability	There is significant public support for a route north and east of Inverurie to alleviate congestion and permit development. There is some public concern on the loss of prime agricultural land, the impact on floodplain, and for the community impact on Durno, Kinmuck (reduced impact relative to BN01-003), Whiteford and Keithhall.	
BN01-004	Landscape	The appraisal indicates 58% of the alignment as having Moderate or Major adverse impacts. Major impacts occur along 25% of the alignment with the most severe impacts being at Lawel Hill where there is a 1km stretch of embankment with maximum height >10m leading to a 1km section of cutting with maximum depth of >35m within a high sensitivity undesignated landscape.	Alignment	Approx 23.4km in length	Operation and inter-urban connectivity	Journey times are improved by an average of less than 1 minute and a maximum of 2 minutes eastbound and 4 minutes westbound, due to elimination of delays at Blackhall and Port Elphinstone roundabouts; these impacts are much smaller than for BN01-001, -002 or -003. The removal of these transient delays and provision of a high-quality dual carriageway provides significant journey time reliability benefits. General freight traffic will be removed from the Inverurie urban area and better, shorter connections to existing commercial locations in the town will be provided, as well as general improvements to speed and efficiency. The number of trips routing through Inverurie to reach the A96 will be reduced providing better segregation of strategic and local traffic.	
	Water	Route crosses the extensive floodplain of the River Don (ch.22500m) and is perpendicular to flow (moderate adverse). Potential for active morphology at this crossing (moderate adverse). Route crosses the extensive floodplain of the Lochter Burn (ch.9500m) and is perpendicular to flow (moderate adverse). Crossing of River Urie occurs where floodplain is <100m wide (minor adverse).	Earthworks	bulk cut – 4,840,916m3 bulk fill - 2,694,101m3 Surplus - 2,146,815m3- No allowance for structures	Safety for motorised and non-motorised users	All three existing A96 Inverurie Bypass junctions are accident cluster sites so removing the route from Inverurie offers significant safety benefits over and above those of a general high-quality, limited-access dual carriageway. Overtaking opportunities and fewer junctions will result in reduced driver stress and accident risk, and the reduction of traffic on the existing A96 will improve safety for NMUs in the Pitcaple and Inverurie areas, including those crossing the	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						A96. The route has significant interaction with the core path network at Old Rayne, Whiteford and Durno and intersects the Oldmeldrum to Old Rayne cycle route four times; crossings and mitigation will be required to prevent safety disbenefits for NMUs.	
Ecology	The alignment cuts over watercourses which feed into Burreldale Moss LNCS (designated for its wetland habitats), and cuts through Pitscurry Moss LNCS which supports uncommon plants. Northern end cuts through several larger woodland blocks, including ancient woodland, which currently form a good habitat corridor across the current A96.	Geotechnical	Compressible material at river crossings and peat present where at proposed embankment over 9m high. Cutting in rock over 40m deep.	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.		
People and communities	The following properties lie within the alignment: West Lodge Logie (Ch. 0+000), Glenburn Cottage (Ch. 11+800), and Balcraig (Ch. 20+850) falls partially within the alignment. Farm buildings also lie within the alignment at Smidskot (Ch. 16+850) and to the east of Kinmuck (Ch.18+850). Agricultural land is predominantly 3.2 with three areas of 3.1, and also areas of 4.1 and 5.3.	Structures	23no. Underbridges 6no. Overbridges 3no. Viaducts New Viaduct over River Urie and floodplain, total length approx. 120m. Large Viaduct over floodplain at Lochter Burn. No significant span lengths. Total length approx. 600m. Length may be reduced to 400m by moving the alignment. New Viaduct crossing River Don over full length, associated floodplain, pipelines and the Railway, Total length 750m, potential large single spans over the Don watercourse and the railway line.	Facilitating active travel	The removal of strategic traffic from the Inverurie urban area will improve conditions for NMU use in the town, as well as those using the existing A96 corridor. Significant mitigation will be required to prevent disbenefits to NMUs using the Old Rayne, Whiteford and Durno core paths and the Oldmeldrum to Old Rayne cycle network.		
Noise and air quality	There is noticeable potential decrease to level of the existing noise climate in Inverurie resulting from the introduction of new roads and rerouting of existing traffic. However, changes to the noise climate may take place upon communities with a relative high population count, which are located close to the new roads.  In relation to baseline, all routes are beneficial because the alignment is moved away from Inverurie which is high density land-use into areas of low density land use with good background air quality. None of the routes are major beneficial because some new exposures would occur for each route. Route is <200m from Kinmuck and Daviot settlement areas, so is classed as minor beneficial.	Hydrology	3 active flood plain crossings – River Urie at Mill of Carden, Lochter Burn and the River Don Numerous small crossings and tributary diversions	Integration with public transport facilities	The journey time improvement will make access to Inverurie rail stations and Dyce Park and Ride faster and more attractive.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Cultural heritage	Stoneyhill cairn (SM12343) is situated within the alignment. It would be possible to move the alignment to ensure that there is no direct impact on the SM. The alignment is very close to Stoneyhill cairn and would have a significant adverse effect on its setting. The alignment runs in close proximity to Pitscurry cairn (SM12302) and may have an impact on its setting. The alignment would run in the immediate vicinity of Balbithan House (LB9140) and the Inventory GDL which forms its setting. The proximity of the alignment to the House and GDL would result in a significant impact on its setting. The alignment runs in close proximity to the Inventory Historic Battlefield of the Battle of Barra and may have an impact on its setting. The alignment would run through the centre of the non-inventory GDL which forms the setting for Logie House Hotel, and may have a significant impact on its setting and on the setting of other associated Listed Buildings. The alignment would be visible in the key view to the south-east from House of Daviot (LB2792) affecting its setting.	Utilities	SSE HV line 275kV interface 2 No. Pylons Telecoms Mast SW distribution main  4 No. Crossings of HP gas pipeline. 2 No. Wind turbines	Integration	Route BN01 has the potential to provide vehicular access to significant LDP allocations in northwest Inverurie, and the benefits of reducing the volume of local and strategic trips in the urban area will improve access to all LDP allocations in Inverurie. Route BN01 is a good policy fit as it would reduce traffic congestion within the town and would eliminate the need for an eastern relief road.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations, but passes adjacent to Kinmuck and Daviot Settlement boundaries. The route does pass through a number of sites which are subject to planning permission for small numbers of houses.	Construction Access & Temporary Disruption/Traffic Management	Access possible from the C825 at CH 3700 and unclassified roads at CH 2100 and 2850. Access from these routes would require construction vehicles to pass through Whiteford. Access possible from B9001 at CH 6000, B9170 at CH 11800 and B993 at CH 16450. Access is possible from 9 unclassified roads. Access from the B9001 and other routes would require construction vehicles to pass through Inverurie or Oldmeldrum. Access from other unclassified routes may require construction vehicles to pass through smaller settlements such as Keith Hall, Whiteford and Pitcaple. Access possible from the A96 at the eastern extent of the alignment however access to the eastern section of the alignment would be restricted by the River Don and Inverness Aberdeen Rail Line.	Accessibility and social inclusion	Junction positioning will be crucial in measuring accessibility impact; provision of the B9170 junction may attract trips from Inverurie/Oldmeldrum and reduce the impact on the A947 corridor. The removal of strategic trips from the Inverurie urban area will reduce the impact of traffic on the urban environment, allowing easier access to and through the town for all users.	
	Soil and geology	Large area of peat, large stretches of prime agricultural land, contaminated land (railway, tank, former canal), and mineral resources.			Public acceptability	There is significant public support for a route north and east of Inverurie to alleviate congestion and permit development. There is some public concern on the loss of prime agricultural land, the impact on floodplain, the impact on the settlements of Durno, Whiteford, Daviot and Kinmuck, and the recreational use of walking areas in the Logie Woods.	
BN01-004A	Landscape	The appraisal indicates 27% of the alignment as having Major adverse impacts primarily as a result of the combined effects at Pitcaple where there is a cutting >15m and at Lumphart Hill where there is also a cutting >15m. The overall rating is Moderate adverse as the majority of the alignment results in Minor adverse impacts.	Alignment	Approx 5.2km in length	Operation and inter-urban connectivity	Journey times are improved by an average of less than 1 minute and a maximum of 2 minutes eastbound and 4 minutes westbound, due to elimination of delays at Blackhall and Port Elphinstone roundabouts; these impacts are much smaller than for BN01-001, -002 or -003. The removal of these transient delays and provision of a high-quality dual carriageway	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						provides significant journey time reliability benefits. General freight traffic will be removed from the Inverurie urban area and better, shorter connections to existing commercial locations in the town will be provided, as well as general improvements to speed and efficiency. The number of trips routing through Inverurie to reach the A96 will be reduced providing better segregation of strategic and local traffic.	
Water		Route crosses the extensive floodplain of the River Urie (ch.850m) - the crossing is not perpendicular to flow (most of the route upstream of the crossing point is parallel to the channel within the floodplain) (major adverse). Potential for river realignment at this location.	Earthworks	bulk cut – 812,142m3 bulk fill - 265,480m3 Surplus - 546,662m3 No allowance for structures	Safety for motorised and non-motorised users	All three existing A96 Inverurie Bypass junctions are accident cluster sites so removing the route from Inverurie offers significant safety benefits over and above those of a general high-quality, limited-access dual carriageway. Overtaking opportunities and fewer junctions will result in reduced driver stress and accident risk, and the reduction of traffic on the existing A96 will improve safety for NMUs in the Pitcaple and Inverurie areas, including those crossing the A96. The route has some interaction with Oldmeldrum to Old Rayne cycle route; it is assumed that connectivity via the local road network will be maintained and therefore the impact on NMUs is reduced compared to BN01-004.	
Ecology		Northern end fragments a sensitive area identified as an ancient woodland mosaic with a good connection across the current A96.	Geotechnical	Compressible material at river crossings and peat present	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	
People and communities		The following fall within the alignment: Home Farm Pitcaple (Ch. 0+000), and The Stores at Pitcaple Quarry (Ch.0+900). An outbuilding at Pitcaple Castle also lies partially within the alignment (Ch,0+750). Agricultural land is predominantly 3.2 with three areas of 3.1, and also areas of 4.1 and 5.3.	Structures	9no. Underbridges 1no. Viaduct New Viaduct over River Urie and floodplain at Pitcaple, local road, total length approx 750m. Local road crossings.	Facilitating active travel	The removal of strategic traffic from the Inverurie urban area will improve conditions for NMU use in the town, as well as those using the existing A96 corridor. Mitigation will be required to prevent disbenefits to NMUs using the Oldmeldrum to Old Rayne cycle network.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Noise and air quality	<p>Potential noticeable decrease to level of current noise climate at Inverurie, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts only communities with a relative low population count.</p> <p>In relation to baseline, all routes are beneficial because the alignment is moved away from Inverurie which is high density land-use into areas of low density land use with good background air quality. None of the routes are major beneficial because some new exposures would occur for each route. Routes which are outside 100m of new agglomerations (10 people or more) are classed as moderate beneficial. This applies to 002, 003, 003A and 004A.</p>		Hydrology	<p>2 active flood plain crossings – River Urie at Pitcaple and Lochter Burn</p> <p>Numerous small crossings and tributary diversions</p>	Integration with public transport facilities	The journey time improvement will make access to Inverurie rail stations and Dyce Park and Ride faster and more attractive.	
Cultural heritage	The sub-option cuts across the non-designated designed landscape surrounding Pitcaple Castle and would cause significant negative impact to its setting and would pose a potential risk to consent.		Utilities	No major or moderate impacts	Integration	Route BN01 has the potential to provide vehicular access to significant LDP allocations in northwest Inverurie, and the benefits of reducing the volume of local and strategic trips in the urban area will improve access to all LDP allocations in Inverurie. Route BN01 is a good policy fit as it would reduce traffic congestion within the town and would eliminate the need for an eastern relief road.	
Plans and policies	Route entirely outwith settlement boundaries and LDP allocations.		Construction Access & Temporary Disruption/ Traffic Management	Access possible from the A96 at CH 0 and the C76C at CH 900 and an unclassified Road at CH 2150. The River Urie splits this section at CH 850 however access is possible from both ends of the alignment. Access possible from B9001 at CH 2700. Access is possible from 2 C Class roads and 2 unclassified roads. Access from the B9001 and other routes would require construction vehicles to pass through Inverurie or Oldmeldrum.	Accessibility and social inclusion	Junction positioning will be crucial in measuring accessibility impact; provision of the B9170 junction may attract trips from Inverurie/Oldmeldrum and reduce the impact on the A947 corridor. The removal of strategic trips from the Inverurie urban area will reduce the impact of traffic on the urban environment, allowing easier access to and through the town for all users.	
Soil and geology	Small areas of peat, small areas of prime agricultural land, contaminated land (railway), and small areas of mineral resources.				Public acceptability	There is significant public support for a route north and east of Inverurie to alleviate congestion and permit development. There is some public concern on the loss of prime agricultural land and the impact on floodplain. Impacts on the settlements of Durno, Whiteford, Daviot and Kinmuck, and the recreational use of walking areas in the Logie Woods, are still present but lower than for alignment BN01-004.	

Corridor BN+01 Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
BN+01-001	Landscape	The overall rating is assessed as large adverse due to the introduction of a large structure crossing the River Don within a landscape of high sensitivity to change.	Alignment	Approx. 5.8km in length	Operation and inter-urban connectivity	When considered in conjunction with BN01, total journey times are improved by an average of 3-4 minutes and a maximum of 5 minutes eastbound and 7 minutes westbound, due to elimination of delays at Blackhall and Port Elphinstone roundabouts. The benefits of reducing transient delays, providing a high-quality dual carriageway, providing better freight access to Inverurie and efficiency benefits, and the segregation of strategic and local traffic, are common to all the BN01 options and the added impact of BN+01, replacing the existing dual carriageway between Kintore and Kinellar, is limited to the impact of removing the at-grade Broomhill Roundabout from the A96. New junctions are unlikely, and traffic which routes via Gauchhill Junction will not benefit from the new route.	<p>Corridor Option was added to provide an alternative route between a northern bypass of Inverurie and the existing A96 dual carriageway in the event that a tie-in across the Don would be difficult.</p> <p>Traffic</p> <ul style="list-style-type: none"> <li>Limited additional benefit over the BN01 alignment, which captures most of the traffic benefits</li> <li>Some potential to attract strategic traffic away from eastern Inverurie</li> <li>Some impact on core path routes east of Kintore will require mitigation</li> </ul> <p>Engineering</p> <ul style="list-style-type: none"> <li>All alignments still have to cross the Don and there is no clear benefit to these alignments compared to BN01 alignments.</li> <li>Major impacts across all alignments</li> <li>Duplicates existing dual carriageway with no additional benefit.</li> </ul> <p>Environment</p> <ul style="list-style-type: none"> <li>Major impacts across all alignments</li> </ul> <p><b>Overall – alignments through BN+01 were not seen to add value or any additional benefit in comparison to BN01 and have been sifted out. No alignments taken forward to Second Fix.</b></p>
	Water	Route crosses the extensive floodplain of River Don (ch.3000m). Crossing is approximately perpendicular to flow and there is potential for active morphology at this crossing location (moderate adverse). At ch.2550m the route buffer extends over the River Don without crossing it - encroaching onto extensive floodplain without taking the shortest route and potential requirement for river realignment (major adverse).	Earthworks	Bulk Cut – 516,693m <sup>3</sup> Bulk Fill – 373,075m <sup>3</sup> Surplus – 143,618m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The safety benefits of removing accident cluster sites from the A96 mainline, providing overtaking opportunities, reducing driver stress, accident risk, traffic on the existing low-standard A96, and better providing for NMUs, are common to all the BN01 routes and the added impact of BN+01, replacing the existing dual carriageway between Kintore and Kinellar, is limited to the benefits at Broomhill Roundabout only. BN+01 additionally crosses core paths east of Kintore, and will require facilities for NMUs to prevent safety disbenefits.	
	Ecology	Ecological receptors/constraints include two water crossings.	Geotechnical	Embankments >10m (up to 10.6m) on potentially compressible soils. Rock cuttings >10m (up to 16.6m) identified. Potential for contaminated ground.	Promoting regional economic growth	The benefits of improved journey times making access to jobs, services and the wider transport network faster and more attractive, are common to all the BN01 routes. BN+01 provides an additional small benefit on top of this.	
	People and communities	The following properties are within the alignment: No's 9-12 and 14 Heathlands Park, Kinellar. Kintore Golf Course is severed by this alignment. The agricultural land is predominantly Class 3.2 with sections of 4.1. There is a small area of 3.1 within the middle section of this alignment.	Structures	1no. Underbridge 1no. Overbridge 1no. Grade Separated Junction overbridge for B-road over A96. 1no. Viaduct 3no. Culverts	Facilitating active travel	The benefits to NMU use between Pitcaple and Kintore are provided by the BN01 route section, while BN+01 requires mitigation to prevent severance of active travel routes on the core path network east of Kintore.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
				1no. Tie in with the existing A96 and B987. Details unknown but likely to be underbridges required.			
Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. Minor increase to the noise climate may take place upon communities with a relative medium population count. There are Local Development Plan (LDP) allocations in the area including OP1: Kintore East Allocation: A mix of uses including 600 homes and employment land.  In relation to the air quality baseline, all routes are beneficial because the alignment is moved away from Inverurie which is high density land-use into areas of low density land use with good background air quality. None of the routes are major beneficial because some new exposures would occur for each route. Routes which are outside 100m of new agglomerations (10 people or more) are classed as moderate beneficial.	Hydrology	1no. active flood plain crossing – River Don at Ch. 2000 – 3150. 1no. River Don watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	Benefits to integration with transport interchanges in Inverurie and Dyce are provided by the BN01 section, while BN+01 does not integrate well with the proposed station in Kintore.		
Cultural heritage	A direct impact on Aberdeenshire Canal (Scheduled Monument - SM675) would cause a likely substantial environmental effect (and risk to achieving consent). Likely impact on setting of Valleyview cairn (SM12435) due to proximity of alignment. Views to the west are an important part of setting of cairn, and the impact would be somewhat reduced if alignment was moved to the east of the SM.	Utilities	1no. crossing of NG high pressure gas pipelines 1no. crossing of SGN medium pressure gas pipelines 6no. crossing of SSE 11Kv lines 1no. crossing of SSE 132Kv lines 1no. crossing of SSE 275Kv lines 1no. crossing of SSE 33Kv lines 6no. crossing of SSE low voltage cables 1no. crossing of SSE low voltage lines 1no. SSE pylons within 100m of edge of alignment 3no. crossing of SW distribution main (100 to 300) 1no. crossing of SW distribution main (>300) 1no. crossing of SW distribution main (<100) 1no. impact on Traffic Scotland assets	Integration	Over and above the integration impacts of BN01, BN+01 allows better access to proposed developments on the east side of Inverurie and eliminates the need for an eastern relief road for Inverurie, offering better integration benefits.		
Plans and policies	Route entirely outwith settlement boundaries and LDP allocations.	Construction Access & Temporary Disruption/ Traffic Management	Multiple points of access from existing roads. Access possible from the B977 at CH 1900. Access restricted by the River Don and Inverness Aberdeen Rail Line. Access possible from the A96 at CH 3250 to eastern extent of alignment. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Extended closure of the unclassified road parallel to BN+01_001 from CH 500 to CH 1200 may be required. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	The impacts on accessibility and social inclusion for the Inverurie area are encompassed within the BN01 alignment. BN+01 offers no further benefits.		
Soil and geology	Small areas of prime agricultural land, contaminated land (worked ground), and mineral resources.			Public acceptability	Compared to BN01, BN+01 uses more prime agricultural land and may therefore have less public support here, but may attract support from those in eastern Inverurie who may perceive reduced congestion.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
BN+01-002	Landscape	The overall rating is assessed as large adverse due to the introduction of a large structure crossing the River Don within a landscape of high sensitivity to change.	Alignment	Approx. 6.1km in length	Operation and inter-urban connectivity	When considered in conjunction with BN01, total journey times are improved by an average of 3-4 minutes and a maximum of 5 minutes eastbound and 7 minutes westbound, due to elimination of delays at Blackhall and Port Elphinstone roundabouts. The benefits of reducing transient delays, providing a high-quality dual carriageway, providing better freight access to Inverurie and efficiency benefits, and the segregation of strategic and local traffic, are common to all the BN01 options and the added impact of BN+01, replacing the existing dual carriageway between Kintore and Kinellar, is limited to the impact of removing the at-grade Broomhill Roundabout from the A96. New junctions are unlikely, and traffic which routes via Gauchhill Junction will not benefit from the new route.	
	Water	Route crosses the extensive floodplain of River Don (ch.3300m). Crossing is approximately perpendicular to flow and there is potential for active morphology at this crossing location (moderate adverse).	Earthworks	Bulk Cut – 431,931m <sup>3</sup> Bulk Fill – 354,276m <sup>3</sup> Surplus – 77,655m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The safety benefits of removing accident cluster sites from the A96 mainline, providing overtaking opportunities, reducing driver stress, accident risk, traffic on the existing low-standard A96, and better providing for NMUs, are common to all the BN01 routes and the added impact of BN+01, replacing the existing dual carriageway between Kintore and Kinellar, is limited to the benefits at Broomhill Roundabout only. BN+01 additionally crosses core paths east of Kintore, and will require facilities for NMUs to prevent safety disbenefits.	
	Ecology	Ecological receptors/constraints include one ancient woodland, badgers, and one water crossing.	Geotechnical	Embankments >10m (up to 11.3m) on potentially compressible soils. Rock cuttings >10m identified. Potential for contaminated ground.	Promoting regional economic growth	The benefits of improved journey times making access to jobs, services and the wider transport network faster and more attractive, are common to all the BN01 routes. BN+01 provides an additional small benefit on top of this.	
	People and communities	The following properties are within the alignment: No's 9-12 and 14 Heathlands Park, at Kinellar, and Hedges, at Wester Fintray. Kintore Golf Course is severed by this alignment. Agricultural land is predominantly Class 3.2 and 4.1. There is a section of 3.1 within the middle section of this alignment.	Structures	1no. Underbridge 1no. Overbridge 1no. Grade Separated Junction over B977. 1no. Viaduct 2no. Culverts 1no. Tie in with the existing A96 and B987. Details unknown but likely to be underbridges required.	Facilitating active travel	The benefits to NMU use between Pitcaple and Kintore are provided by the BN01 route section, while BN+01 requires mitigation to prevent severance of active travel routes on the core path network east of Kintore.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Noise and air quality	<p>Potential noticeable decrease to level of current noise climate at Kintore, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads. It is noted however that there are a number of LDP in the area including the OP1: Kintore East Allocation: A mix of uses including 600 homes and employment land.</p> <p>In relation to the air quality baseline, all routes are beneficial because the alignment is moved away from Inverurie which is high density land-use into areas of low density land use with good background air quality. None of the routes are major beneficial because some new exposures would occur for each route. Routes which are outside 100m of new agglomerations (10 people or more) are classed as moderate beneficial.</p>	Hydrology	<p>1no. active flood plain crossing – River Don at Ch. 2950 – 3450.</p> <p>1no. River Don watercourse crossing</p> <p>Numerous culverted crossings and tributary diversions</p>	Integration with public transport facilities	Benefits to integration with transport interchanges in Inverurie and Dyce are provided by the BN01 section, while BN+01 does not integrate well with the proposed station in Kintore.	
	Cultural heritage	A direct impact on Aberdeenshire Canal (SM675) would cause a likely substantial environmental effect (and risk to achieving consent). Likely impact on setting of Hogholm Cottage (SM12443) due to proximity of alignment.	Utilities	<p>1no. crossing of AC private water supplies</p> <p>1no. crossing of NG high pressure gas pipelines</p> <p>1no. crossing of SGN medium pressure gas pipelines</p> <p>10no. crossing of SSE 11Kv lines</p> <p>1no. crossing of SSE 132Kv lines</p> <p>1no. crossing of SSE 275Kv lines</p> <p>1no. crossing of SSE 33Kv lines</p> <p>7no. crossing of SSE low voltage cables</p> <p>1no. crossing of SSE low voltage lines</p> <p>1no. SSE pylons within 100m of edge of alignment</p> <p>3no. crossing of SW distribution main (100 to 300)</p> <p>1no. crossing of SW distribution main (&gt;300)</p> <p>1no. crossing of SW distribution main (&lt;100)</p> <p>1no. impact on Traffic Scotland assets</p>	Integration	Over and above the integration impacts of BN01, BN+01 allows better access to proposed developments on the east side of Inverurie and eliminates the need for an eastern relief road for Inverurie, offering better integration benefits.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations.	Construction Access & Temporary Disruption/ Traffic Management	<p>Multiple points of access from existing roads. Access possible from the B977 at CH 2350. Access restricted by the River Don and Inverness Aberdeen Rail Line. Access possible from the A96 at CH 3500 to eastern extent of alignment. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Temporary access roads required to facilitate construction.</p>	Accessibility and social inclusion	The impacts on accessibility and social inclusion for the Inverurie area are encompassed within the BN01 alignment. BN+01 offers no further benefits.	
	Soil and geology	Small areas of prime agricultural land, contaminated land (disused canal crosses alignment at one point), and mineral resources are present.			Public acceptability	Compared to BN01, BN+01 uses more prime agricultural land and may therefore have less public support here, but may attract support from those in eastern Inverurie who may perceive reduced congestion.	
BN+01-003	Landscape	The overall rating is assessed as large adverse due to the introduction of a large structure crossing the River Don within a landscape of high sensitivity to change.	Alignment	Approx. 6.7km in length	Operation and inter-urban connectivity	When considered in conjunction with BN01, total journey times are improved by an average of 2-3 minutes and a maximum of 5 minutes eastbound and 7 minutes westbound, due to elimination of delays at	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						Blackhall and Port Elphinstone roundabouts. The average benefits are lower than for BN+01-001 and -002. The benefits of reducing transient delays, providing a high-quality dual carriageway, providing better freight access to Inverurie and efficiency benefits, and the segregation of strategic and local traffic, are common to all the BN01 options and the added impact of BN+01, replacing the existing dual carriageway between Kintore and Kinellar, is limited to the impact of removing the at-grade Broomhill Roundabout from the A96. New junctions are unlikely, and traffic which routes via Gauchhill Junction will not benefit from the new route.	
Water	Route crosses the extensive floodplain of River Don (ch.4000m). Crossing is approximately perpendicular to flow and there is potential for active morphology at this crossing location (moderate adverse).	Earthworks	Bulk Cut – 368,034m <sup>3</sup> Bulk Fill – 450,308m <sup>3</sup> Surplus – 82,274m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The safety benefits of removing accident cluster sites from the A96 mainline, providing overtaking opportunities, reducing driver stress, accident risk, traffic on the existing low-standard A96, and better providing for NMUs, are common to all the BN01 routes and the added impact of BN+01, replacing the existing dual carriageway between Kintore and Kinellar, is limited to the benefits at Broomhill Roundabout only. BN+01 additionally crosses core paths east of Kintore, and will require facilities for NMUs to prevent safety disbenefits.		
Ecology	Ecological receptors/constraints include one ancient woodland, badgers, and one water crossing.	Geotechnical	Embankments >10m (up to 10.5m) on potentially compressible soils. Cuttings <10m through non-compressible soils or rock.	Promoting regional economic growth	The benefits of improved journey times making access to jobs, services and the wider transport network faster and more attractive, are common to all the BN01 routes. BN+01 provides an additional small benefit on top of this.		
People and communities	The following properties are within the alignment: No's 9-12 and 14 Heathlands Park, Kinellar. Agricultural land is predominantly Class 3.2 and 4.1, with a section of 3.1 within the middle section of this alignment.	Structures	1no. Underbridge 1no. Overbridge 1no. Grade Separated Junction over B977. 1no. Viaduct 11no. Culverts 1no. Tie in with the existing A96 and B987. Details unknown but likely to be underbridges required.	Facilitating active travel	The benefits to NMU use between Pitcaple and Kintore are provided by the BN01 route section, while BN+01 requires mitigation to prevent severance of active travel routes on the core path network east of Kintore.		
Noise and air quality	Potential noticeable decrease to level of current noise climate at Kintore, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads. It is noted	Hydrology	2no. active flood plain crossings – River Don and Newmill Burn 1no. River Don watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	Benefits to integration with transport interchanges in Inverurie and Dyce are provided by the BN01 section, while BN+01 does not integrate well with the proposed station in Kintore.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		<p>however that there are a number of LDP in the area including the OP1: Kintore East Allocation: A mix of uses including 600 homes and employment land.</p> <p>In relation to the air quality baseline, all routes are beneficial because the alignment is moved away from Inverurie which is high density land-use into areas of low density land use with good background air quality. None of the routes are major beneficial because some new exposures would occur for each route. Routes which are outside 100m of new agglomerations (10 people or more) are classed as moderate beneficial.</p>					
	Cultural heritage	A direct impact on Aberdeenshire Canal (SM675) would cause a likely substantial environmental effect (and risk to achieving consent) Likely impact on setting of Larrick Cairn (SM12352), due to proximity of alignment.	Utilities	<p>1no. crossing of NG high pressure gas pipelines</p> <p>1no. crossing of SGN medium pressure gas pipelines</p> <p>6no. crossing of SSE 11Kv lines</p> <p>1no. crossing of SSE 132Kv lines</p> <p>1no. crossing of SSE 275Kv lines</p> <p>1no. crossing of SSE 33Kv lines</p> <p>6no. crossing of SSE low voltage cables</p> <p>1no. crossing of SSE low voltage lines</p> <p>2no. SSE pylons within 100m of edge of alignment</p> <p>3no. crossing of SW distribution main (100 to 300)</p> <p>1no. crossing of SW distribution main (&gt;300)</p> <p>1no. crossing of SW distribution main (&lt;100)</p> <p>1no. impact on Traffic Scotland assets</p>	Integration	Over and above the integration impacts of BN01, BN+01 allows better access to proposed developments on the east side of Inverurie and eliminates the need for an eastern relief road for Inverurie, offering better integration benefits.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations.	Construction Access & Temporary Disruption/Traffic Management	<p>Multiple points of access from existing roads. Access possible from the B977 at CH 2750. Access restricted by the River Don and Inverness Aberdeen Rail Line. Access possible from the A96 at CH 4150 to eastern extent of alignment. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Temporary access roads required to facilitate construction.</p>	Accessibility and social inclusion	The impacts on accessibility and social inclusion for the Inverurie area are encompassed within the BN01 alignment. BN+01 offers no further benefits.	
	Soil and geology	Small areas of prime agricultural land, contaminated land (disused canal crosses alignment at one point), and mineral resources are present.			Public acceptability	Compared to BN01, BN+01 uses more prime agricultural land and may therefore have less public support here, but may attract support from those in eastern Inverurie who may perceive reduced congestion.	
BN+01-004	Landscape	The overall rating is assessed as large adverse due to the introduction of a large structure crossing the River Don within a landscape of high sensitivity to change.	Alignment	Approx. 7.9km in length	Operation and inter-urban connectivity	When considered in conjunction with BN01, total journey times are improved by an average of 2-3 minutes and a maximum of 5 minutes eastbound and 7 minutes westbound, due to elimination of delays at Blackhall and Port Elphinstone roundabouts. The average benefits are lower than for BN+01-001 and -002. The benefits of reducing transient delays, providing a high-quality dual carriageway, providing better freight access to Inverurie and efficiency benefits, and the segregation of	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						strategic and local traffic, are common to all the BN01 options and the added impact of BN+01, replacing the existing dual carriageway between Kintore and Kinellar, is limited to the impact of removing the at-grade Broomhill Roundabout from the A96. New junctions are unlikely, and traffic which routes via Gauchhill Junction will not benefit from the new route.	
Water	Route crosses the extensive floodplain of River Don (ch.4250m), and an unnamed watercourse at ch.1750m. Crossings are approximately perpendicular to flow (moderate adverse). Potential for active morphology at crossing of River Don (moderate adverse).	Earthworks	Bulk Cut – 567,366m <sup>3</sup> Bulk Fill – 453,861m <sup>3</sup> Surplus – 113,505m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	The safety benefits of removing accident cluster sites from the A96 mainline, providing overtaking opportunities, reducing driver stress, accident risk, traffic on the existing low-standard A96, and better providing for NMUs, are common to all the BN01 routes and the added impact of BN+01, replacing the existing dual carriageway between Kintore and Kinellar, is limited to the benefits at Broomhill Roundabout only. BN+01 additionally crosses core paths east of Kintore, and will require facilities for NMUs to prevent safety disbenefits.		
Ecology	Ecological receptors/constraints include badger are known for badger activity, and one water crossing.	Geotechnical	Embankments >10m (up to 13m) on potentially compressible soils. Cuttings >10m (up to 13m) in non-identified geotechnical constraint. Rock cuttings <10m through non-compressible soils or rock.	Promoting regional economic growth	The benefits of improved journey times making access to jobs, services and the wider transport network faster and more attractive, are common to all the BN01 routes. BN+01 provides an additional small benefit on top of this.		
People and communities	The following properties are within the alignment: No's 9-12 and 14 Heathlands Park, Kinellar; Windsor Grove, Kinellar; Deystone Cottages, the Rushlach. Backhill also falls partially within the alignment. Agricultural land is predominantly Class 3.2 with two small pockets of 3.1, and areas of 4.1 and 4.2.	Structures	8no. Underbridges 2no. Overbridges 1no. Grade Separated Junction overbridge for B-road over A96. 1no. Viaduct 5no. Culverts 1no. Tie in with the existing A96 and B987. Details unknown but likely to be underbridges required.	Facilitating active travel	The benefits to NMU use between Pitcaple and Kintore are provided by the BN01 route section, while BN+01 requires mitigation to prevent severance of active travel routes on the core path network east of Kintore.		
Noise and air quality	Potential noticeable decrease to level of current noise climate at Kintore, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads. No LDPs have been identified in the area.  In relation to baseline, all routes are beneficial because the alignment is moved away from Inverurie which is high density land-use into areas of low density land use with good background air quality. None of the routes are major beneficial	Hydrology	2no. active flood plain crossings – River Don and Newmill Burn 1no. River Don watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	Benefits to integration with transport interchanges in Inverurie and Dyce are provided by the BN01 section, while BN+01 does not integrate well with the proposed station in Kintore.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		because some new exposures would occur for each route. Routes which are outside 100m of new agglomerations (10 people or more) are classed as moderate beneficial.					
	Cultural heritage	Although a number of cultural heritage assets lie within 2km of this alignment. No specific likely issues have been identified, and all effects are likely to be non-material.	Utilities	3no. crossing of NG high pressure gas pipelines 1no. crossing of SGN medium pressure gas pipelines 6no. crossing of SSE 11Kv lines 1no. crossing of SSE 132Kv lines 1no. crossing of SSE 275Kv lines 1no. crossing of SSE 33Kv lines 7no. crossing of SSE low voltage cables 1no. crossing of SSE low voltage lines 3no. SSE pylons within 100m of edge of alignment 3no. crossing of SW distribution main (100 to 300) 1no. crossing of SW distribution main (>300) 1no. crossing of SW distribution main (<100) 1no. impact on Traffic Scotland assets	Integration	Over and above the integration impacts of BN01, BN+01 allows better access to proposed developments on the east side of Inverurie and eliminates the need for an eastern relief road for Inverurie, offering better integration benefits.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations.	Construction Access & Temporary Disruption/Traffic Management	Multiple points of access from existing roads. Access possible from the B977 at CH 3300. Access restricted by the River Don and Inverness Aberdeen Rail Line. Access possible from the A96 at CH 4500 to eastern extent of alignment. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	The impacts on accessibility and social inclusion for the Inverurie area are encompassed within the BN01 alignment. BN+01 offers no further benefits.	
	Soil and geology	Small areas of prime agricultural land, contaminated land (disused canal crosses alignment at one point), and mineral resources are present.			Public acceptability	Compared to BN01, BN+01 uses more prime agricultural land and may therefore have less public support here, but may attract support from those in eastern Inverurie who may perceive reduced congestion.	

Corridor D02 Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
D02-001	Landscape	Moderate impacts are due to cuttings of 5-15m at locations along the alignment, loss of woodland to the east of Kirkton of Culsalmond and impacts on the setting of Durno. Major adverse effects occur at both ends of the alignment, due to the introduction of new structures across the River Urie, loss of woodland and earthworks. The overall assessment of the alignment is Moderate adverse.	Alignment	Approx. 13.6km in length	Operation and inter-urban connectivity	The journey time is reduced from 11 minutes to 8 consistently across all time periods. A high standard dual carriageway results in more overtaking opportunities, improved incident management (better journey time reliability) and faster and more efficient freight movements. Route D02 is distant from the existing A96 and is likely to attract strategic traffic, with local traffic to and from the Insch, Oyne and potentially northern Inverurie areas continuing to use the existing route.	Traffic <ul style="list-style-type: none"> <li>Journey time benefits of between 2 and 3 minutes, with very slight extra benefits in 001 and 002 relative to alternatives.</li> <li>D02-002 has the fewest public acceptability impacts due to proximity to urban areas, while D02-004 has the most.</li> <li>All options require crossings to be provided for core path and cycle networks to allow NMU accessibility.</li> <li>Journey time reliability and safety benefits for all users, although these are reduced in comparison to D01 as many local trips to/from Inverurie and Insch are likely to still use the existing route.</li> </ul>
	Water	Route crosses the extensive floodplain of the River Urie (ch.13400m) and is not perpendicular to flow (major adverse). Route crosses channel three times here due to sinuosity of channel (potential requirement for river realignment) and potential for active morphology (moderate adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.500m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 583,802m <sup>3</sup> Bulk Fill - 1,973,064m <sup>3</sup> Deficit – 1,389,262m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Strategic traffic will experience a safety benefit from a high-quality dual carriageway, with more overtaking opportunities, reduced driver stress, and a more consistent, predictable route. Anecdotally, some traffic routes from Colpy to Inverurie via the A920/B9001 route and is also likely to switch to route D02. Reduced use of the A96 and A920 might also improve safety for NMUs on the route, particularly in the villages along the route, so long as crossings are provided for them, particularly on the Oldmeldrum to Old Rayne cycle route. As route D02 is distant from the existing A96 local traffic to and from Insch, Oyne and potentially northern Inverurie will continue to use the existing A96 and fail to experience these benefits.	Engineering <ul style="list-style-type: none"> <li>Not much to differentiate between alignments.</li> <li>D02-001 has the least overall volume of earthworks.</li> <li>All have major impacts at either end associated with the large structure at the northern end and topography/hydrology at the southern end around Pitcaple.</li> <li>Attenuation required at Pitcaple but potential issues in accommodating storage due to the floodplain extents.</li> <li>Some moderate impacts through middle section associated with burn structures.</li> <li>All alignments have similar impacts on utilities – 1 no. 275KN crossing associated with each as well as numerous water and private apparatus crossings.</li> </ul>
	Ecology	Cuts through several watercourses which are likely to be field drains, cuts across a couple of very small areas of ancient woodland. Northern end cuts into Foudland Local Nature Conservation Site (LNCS) and ancient woodland mosaic. This is true of all the D02 options, however, as this one causes no other moderate adverse impacts, it has been scored as minor overall. It is assumed that no realignment of the watercourses is needed.	Geotechnical	Embankments >10m on potentially compressible soils Embankments on peat (0.7 – 2.4m high) identified at ch 11500 - 11600 & 11900 – 12000m	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	Environmental <ul style="list-style-type: none"> <li>Major impacts at both northern and southern ends of all alignments</li> <li>Through middle section, 001 and 002 are preferred due to lower impacts. 003 and 004 have major impacts on listed buildings, prime agricultural land. 004 is worst due to proximity to Warhill House. 001 and 002 have comparable impacts.</li> <li>At southern end, all alignments have major impacts across several criteria (including geomorphology, floodplain, agricultural land, visual landscape). More constraints identified at Pitcaple than for D01 but potential for less direct impact on Pitcaple Castle than D01.</li> </ul>
	People and communities	A total of three properties lie within the alignment: Residential properties: Kirkton, at Kirkton of Culsalmond Denovan Irelandbrae Farmhouse Prime and non prime agricultural land is located	Structures	14no. Underbridges New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 650m New Underbridge crossing the River Urie and flood plain at Pitcaple - total Length is 700m	Facilitating active travel	Crossings for the Oldmeldrum to Old Rayne cycle route must be incorporated into the design. Reduced traffic volumes on the A96 and A920 may encourage active travel on these routes, and opportunities to improve	<b>Overall, D02_001 selected as preferred alignment.</b> <ul style="list-style-type: none"> <li><b>One of the lowest overall environmental impact alignments</b></li> <li><b>Very little to differentiate in engineering terms</b></li> </ul>

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		along section, and the alignment passes through areas of class 3.1 land. There are no class 1 or 2 areas.				them will result (improved surfacing, segregation of cycles and pedestrians) although not all traffic from Colpy to Milton of Inveramsay will be attracted to route D02 due to its distance from the existing A96.	<ul style="list-style-type: none"> <li>• <b>Shorter alignment, therefore potential for lowest journey time</b></li> <li>• <b>Due to the constraints around Pitcaple, this alignment may not tie back into existing A96 and could be used to provide a link to BN01.</b></li> <li>• <b>Further investigation required around Pitcaple involving discipline specialists from both environmental and engineering to determine potential to achieve an acceptable solution</b></li> </ul>
Noise and air quality		There is minor or negligible potential change to level of the existing noise climate at Old Rayne, Whiteford and Colpy, resulting from the introduction of new roads and/or rerouting of existing traffic. Minor increase to the noise climate may take place upon communities with a relative medium population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignment is <200m from Durno settlement area so is classed as minor beneficial.	Hydrology	3 active flood plain crossings – River Urie at Colpy (450m), Bonnyton Burn (100m) and River Urie at Pitcaple (500m) Alignment runs adjacent to the Bonnyton Burn (250m), Den Burn (125m) and River Urie (57m) Numerous small crossings and tributary diversions Attenuation space limited at southern end tie to A96 at Inveramsay	Integration with public transport facilities	The journey time improvement will make access to Inverurie and Huntly rail stations faster and more attractive.	
Cultural heritage		The alignment intersects the northwest corner of the Battle of Harlaw Inventory Historic Battlefield, causing a direct impact. Even if moving the alignment enabled the direct impact to be avoided, the proximity of the alignment to the battlefield may cause an impact on its setting. The proximity of this alignment to Culsalmond Old Parish Church (Listed Building - LB2960) would result in a likely impact on its setting. The alignment also runs in close proximity to the Williamston House Inventory GDL and may have an impact on its setting, causing it to increasingly feel as though it is enclosed by major modern roads. Other assets whose settings may be impacted by the alignment are Mummer's Reive, cairn (Scheduled Monument - SM11629), Whiteinches cairn (SM12188), Pitscurry, cairn 410m N of (SM12302), The Law, cairn (SM12113), Black Cairn, cairn 990m NW of Tocherford (SM12172), Rayne Parish Church (LB16017), and Freefield House (LB16001).	Utilities	1no. crossing of SSE 275KV lines 2no. Pylons within 100m of edge of alignment SW Distribution Main crossings Private Water supply crossings	Integration	Route D02 does not impact any LDP allocations. Improving journey times and journey time reliability fits well with policy, and local accessibility policy should not be impacted provided appropriate crossing facilities and junctions are provided.	
Plans and policies		Route entirely outwith settlement boundaries and Local Development Plan (LDP) allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Predominately offline construction. Access possible from the A920 at northern end. Access is possible from the B992 at CH3350. The B992 does not pass through a settlement and links directly to the A96 and A920. Access possible from the C59S at CH 5650. Access from the C59S can either be taken from the B992 or through the settlement of Tocher. Access also possible from Unclassified Roads at CH 6400 (Access from A920), CH 6650 (Access from C59S). Access is restricted to an unclassified road at CH 9550. Some localised traffic management required.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to the service centres of Inverurie and Inch, although these can be partially accommodated on the existing A96, A920 and local road network.	
Soil and geology		One large stretch of prime agricultural land, and several smaller areas. Contaminated land (railway crosses alignment at one point) and small areas of mineral resources also present.			Public acceptability	There are public concerns for the loss of prime agricultural land and impact on properties in Durno and Whiteford. Some people showed a preference for a Strategy D corridor option in	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						preference to Strategy C as it is more remote from Bennachie.	
D02-002	Landscape	Moderate adverse effects are primarily due to earthworks 5-15m and some loss of woodland. Major adverse effects occur at both ends of the alignment and are due to the combined effect of cuttings of more than 15m in depth, the introduction of new large structures, in addition to potential impacts on the setting of Williamston House Garden and Designed Landscape (GDL) at the north end, and loss of ancient woodland at the south end. The overall assessment of the alignment is Moderate adverse.	Alignment	Approx. 14.3km in length	Operation and inter-urban connectivity	The journey time is reduced from 11 minutes to 8 consistently across all time periods. A high standard dual carriageway results in more overtaking opportunities, improved incident management (better journey time reliability) and faster and more efficient freight movements. Route D02 is distant from the existing A96 and is likely to attract strategic traffic, with local traffic to and from the Inch, Oyne and potentially northern Inverurie areas continuing to use the existing route.	
	Water	Route crosses the extensive floodplain of the River Urie (ch.14100m) and is not perpendicular to flow (major adverse). Potential for active morphology (moderate adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.500m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 1,521,998 m <sup>3</sup> Bulk Fill - 1,730,115m <sup>3</sup> Deficit – 208,117m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Strategic traffic will experience a safety benefit from a high-quality dual carriageway, with more overtaking opportunities, reduced driver stress, and a more consistent, predictable route. Anecdotally, some traffic routes from Colpy to Inverurie via the A920/B9001 route and is also likely to switch to route D02. Reduced use of the A96 and A920 might also improve safety for NMUs on the route, particularly in the villages along the route, so long as crossings are provided for them, particularly on the Oldmeldrum to Old Rayne cycle route. As route D02 is distant from the existing A96 local traffic to and from Inch, Oyne and potentially northern Inverurie will continue to use the existing A96 and fail to experience these benefits.	
	Ecology	Cuts across the River Urie twice in quick succession, cuts very close to Pitscurry Moss LNCS, cuts across several minor watercourses. It is assumed that no realignment of the watercourses is needed. 002, 003, 004 join together and clip the edge of Cairnhill LNCS and cross watercourses which feed into this LNCS. In this area, they also cut through the woodland and wetland mosaic habitat. The northern end of all options cuts into Foudland LNCS and ancient woodland mosaic.	Geotechnical	Embankments >10m on potentially compressible soils Embankments on peat (0.7 – 3.3m high) identified at ch 11550 – 11700 & 11750 – 1240m	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
People and communities	<p>A total of three properties lie within the alignment: Residential property Kirkton, at Kirkton of Culsalmond Denovan Legatesden House (borderline) Prime and non prime agricultural land is located along section, and the alignment passes through areas of class 3.1 land. There are no class 1 or 2 areas.</p>		Structures	<p>14no. Underbridges 1no. Overbridge New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 650m New Underbridge crossing the River Urie and flood plain at Pitcaple - total Length is 600m</p>	Facilitating active travel	<p>Crossings for the Oldmeldrum to Old Rayne cycle route must be incorporated into the design. Reduced traffic volumes on the A96 and A920 may encourage active travel on these routes, and opportunities to improve them will result (improved surfacing, segregation of cycles and pedestrians) although not all traffic from Colpy to Milton of Inveramsay will be attracted to route D02 due to its distance from the existing A96.</p>	
Noise and air quality	<p>Potential noticeable decrease to level of current noise climate at Old Rayne, Whiteford and Colpy, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area.</p>		Hydrology	<p>2 active flood plain crossings – River Urie at Colpy (450m) and River Urie at Pitcaple (450m) Alignment runs adjacent to the River Urie (400m &amp; 105m) Numerous small crossings and tributary diversions Attenuation space limited at southern end tie to A96 at Inveramsay</p>	Integration with public transport facilities	<p>The journey time improvement will make access to Inverurie and Huntly rail stations faster and more attractive.</p>	
Cultural heritage	<p>The alignment intersects the northwest corner of the Battle of Harlaw Inventory Historic Battlefield, causing a direct impact. Even if adjusting the alignment enabled the direct impact to be avoided, the proximity of the alignment to the battlefield may cause an impact on its setting. The proximity of this alignment to Culsalmond Old Parish Church (LB2960) would result in a likely impact on its setting. The alignment also runs in close proximity to the Williamston House Inventory GDL and may have an impact on its setting, causing it to increasingly feel as though it is enclosed by major modern roads. The alignment runs to the immediate south-west of Cat Cairn (SM12170), and its proximity to the SM would likely cause a significant effect on its setting. Other assets whose settings may be impacted by the alignment are Mummer's Reive, cairn (SM11629), Whiteinches cairn (SM12188), Pitscurry, cairn 410m N of (SM12302), Black Cairn, cairn 990m NW of Tocherford (SM12172), Rayne Parish Church (LB16017), and Freefield House (LB16001).</p>		Utilities	<p>1no. crossing of SSE 275KV lines 1no. Pylons within 100m of edge of alignment 2no. Wind turbines within 100m of edge of alignment SW Distribution Main crossings Private Water supply crossings</p>	Integration	<p>Route D02 does not impact any LDP allocations. Improving journey times and journey time reliability fits well with policy, and local accessibility policy should not be impacted provided appropriate crossing facilities and junctions are provided.</p>	
Plans and policies	<p>Route entirely outwith settlement boundaries and LDP allocations and committed development. Route is immediately adjacent to a small scale committed housing development.</p>		Construction Access & Temporary Disruption/Traffic Management	<p>Predominately offline construction. Access possible from the A920 at northern end. Access is possible from the B992 at CH3300. The B992 does not pass through a settlement and links directly to the A96 and A920.</p>	Accessibility and social inclusion	<p>There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to the service centres of Inverurie and Insch, although these can be partially</p>	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
				Access possible from the C59S at CH 5950. Access from the C59S can either be taken from the B992 or through the settlement of Tocher. Access also possible from Unclassified Roads at CH 5750 (Access from A920), CH 6200 (Access from C59S). Access is restricted to an unclassified road at CH 9550 and CH 12750. Some localised traffic management required.		accommodated on the existing A96, A920 and local road network.	
	Soil and geology	Geological Site of Special Scientific Interest (SSSI) within 5m of alignment. Many small areas of prime agricultural land. Contaminated Land (railway crosses alignment at one point) and small areas of mineral resources also present.			Public acceptability	There are public concerns for the loss of prime agricultural land and impact on properties in Durno, although the urban impact is smaller than for any alternative D02 alignment. Some people showed a preference for a Strategy D corridor option in preference to Strategy C as it is more remote from Bennachie.	
D02-003	Landscape	Moderate effects are due to earthworks of 5-15m and some loss of woodland in the north of the alignment and ancient woodland south of Bennachie House. Major effects are caused by large scale earthworks and introduction of large scale structures, potential impacts on the setting of Williamston House GDL at the north end, and loss of ancient woodland at the south end. The overall assessment of the alignment is Moderate adverse.	Alignment	Approx. 14.6km in length	Operation and inter-urban connectivity	The journey time is reduced from 11 minutes to 9 for most journeys (8 minutes for westbound AM and all IP journeys), slightly less benefit than D02-001 and D02-002. A high standard dual carriageway results in more overtaking opportunities, improved incident management (better journey time reliability) and faster and more efficient freight movements. Route D02 is distant from the existing A96 and is likely to attract strategic traffic, with local traffic to and from the Inch, Oyne and potentially northern Inverurie areas continuing to use the existing route.	
	Water	Route crosses the extensive floodplain of the River Urie (ch.14500m) and is not perpendicular to flow (major adverse). Potential for active morphology (moderate adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.500m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 987,279m <sup>3</sup> Bulk Fill - 1,991,757m <sup>3</sup> Deficit – 1,004,477m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Strategic traffic will experience a safety benefit from a high-quality dual carriageway, with more overtaking opportunities, reduced driver stress, and a more consistent, predictable route. Anecdotally, some traffic routes from Colpy to Inverurie via the A920/B9001 route and is also likely to switch to route D02. Reduced use of the A96 and A920 might also improve safety for NMUs on the route, particularly in the villages along the route, so long as crossings are provided for them, particularly on the Oldmeldrum to Old Rayne cycle route. As route D02 is distant from the existing A96 local traffic to and from Inch, Oyne and potentially northern Inverurie will continue to use the existing A96 and fail to experience these benefits.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	Several minor watercourse crossings. It is assumed that no realignment of the watercourses is needed. 002, 003, 004 join together and clip the edge of Cairnhill LNCS and cross watercourses which feed into this LNCS. In this area, they also cut through the woodland and wetland mosaic habitat. The northern end of all options cuts into Foudland LNCS and ancient woodland mosaic.	Geotechnical	Embankments >10m on potentially compressible soils Embankment on peat (6.9m high) identified at ch 12500 - 12650	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.		
People and communities	A total of two properties lie within the alignment: Residential property: Kirkton, at Kirkton of Culsalmond Denovan Prime and non prime land located along section - The alignment passes through areas of class 3.1 land. There are no class 1 or 2 areas.	Structures	14no. Underbridges 3no. Overbridges New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 650m New Underbridge crossing the River Urie and flood plain and a farm road at Pitcaple - Total Length is 600m	Facilitating active travel	Crossings for the Oldmeldrum to Old Rayne cycle route must be incorporated into the design. Reduced traffic volumes on the A96 and A920 may encourage active travel on these routes, and opportunities to improve them will result (improved surfacing, segregation of cycles and pedestrians) although not all traffic from Colpy to Milton of Inveramsay will be attracted to route D02 due to its distance from the existing A96.		
Noise and air quality	Potential noticeable decrease to level of current noise climate at Old Rayne, Whiteford and Colpy, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts only communities with a relative low population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area.	Hydrology	2 active flood plain crossings – River Urie at Colpy (450m) and River Urie at Pitcaple (450m) Alignment runs adjacent to the River Urie (400m & 110m) Numerous small crossings and tributary diversions Attenuation space limited at southern end tie to A96 at Inveramsay	Integration with public transport facilities	The journey time improvement will make access to Inverurie and Huntly rail stations faster and more attractive.		
Cultural heritage	The alignment intersects the northwest corner of the Battle of Harlaw Inventory Historic Battlefield, causing a direct impact. Even if adjusting the alignment enabled the direct impact to be avoided, the proximity of the alignment to the battlefield may cause an impact on its setting. The proximity of this alignment to Culsalmond Old Parish Church (LB2960) would result in a likely impact on its setting. The alignment also runs in close proximity to the Williamston House Inventory GDL and may have an impact on its setting, causing it to increasingly feel as though it is enclosed by major modern roads. Other assets whose settings may be impacted by the alignment are Mummer's Reive, cairn (SM11629), Pitscurry, cairn 410m N of (SM12302), Warthill House (LB16018), and Freefield House (LB16001).	Utilities	1no. crossing of SSE 275KV lines 1no. Pylons within 100m of edge of alignment SW Distribution Main crossings Private Water supply crossings	Integration	Route D02 does not impact any LDP allocations. Improving journey times and journey time reliability fits well with policy, and local accessibility policy should not be impacted provided appropriate crossing facilities and junctions are provided.		
Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development. Route passes through a small scale committed housing development.	Construction Access & Temporary Disruption/	Predominately offline construction. Access possible from the A920 at northern end. Access is possible from the B992 at CH3300. The B992 does not pass through a settlement and links directly to the A96 and A920.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to the		



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
			Traffic Management	Access possible from the C59S at CH 5950. Access from the C59S can either be taken from the B992 or through the settlement of Tocher. Access also possible from Unclassified Roads at CH 5750 (Access from A920), CH 6200 (Access from C59S). Access is restricted to unclassified roads at CH 6850, CH 7600, CH 9400 and CH 12650. Some localised traffic management required.		service centres of Inverurie and Insch, although these can be partially accommodated on the existing A96, A920 and local road network.	
	Soil and geology	Many small areas of prime agricultural land, contaminated land (railway crosses alignment at one point), and small areas of mineral resources all present.			Public acceptability	There are public concerns for the loss of prime agricultural land and impact on properties in Durno. Some people showed a preference for a Strategy D corridor option in preference to Strategy C as it is more remote from Bennachie.	
D02-004	Landscape	Major effects occur at the north and south ends of the alignment, due to earthworks and the introduction of new structures across the River Urie. Loss of ancient woodland at Warthill House and impacts on Meikle Wartle also cause Major effects. Moderate adverse effects are due to earthworks of 5-15m and moderate loss of woodland. The overall assessment is Major adverse.	Alignment	Approx. 14.9km in length	Operation and inter-urban connectivity	The journey time is reduced from 11 minutes to 9 for most journeys (8 minutes for westbound AM and IP journeys), less benefit than any alternative D02 route. A high standard dual carriageway results in more overtaking opportunities, improved incident management (better journey time reliability) and faster and more efficient freight movements. Route D02 is distant from the existing A96 and is likely to attract strategic traffic, with local traffic to and from the Insch, Oyne and potentially northern Inverurie areas continuing to use the existing route.	
	Water	Route crosses the extensive floodplain of the River Urie (ch.14600m) and is not perpendicular to flow (major adverse). Route crosses channel three times here due to sinuosity of channel (potential requirement for river realignment) and potential for active morphology (moderate adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.500m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 1,719,206m <sup>3</sup> Bulk Fill - 1,656,401m <sup>3</sup> Surplus – 62,805m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Strategic traffic will experience a safety benefit from a high-quality dual carriageway, with more overtaking opportunities, reduced driver stress, and a more consistent, predictable route. Anecdotally, some traffic routes from Colpy to Inverurie via the A920/B9001 route and is also likely to switch to route D02. Reduced use of the A96 and A920 might also improve safety for NMUs on the route, particularly in the villages along the route, so long as crossings are provided for them, particularly on the Wartle House core path and Oldmeldrum to Old Rayne cycle route. As route D02 is distant from the existing A96 local traffic to and from Insch, Oyne and potentially northern Inverurie will continue to use the existing A96 and fail to experience these benefits.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	<p>Cuts across the River Urie twice in quick succession and then cut over a few minor watercourses. It is assumed that no realignment of the watercourses is needed.</p> <p>Dissects an ancient woodland mosaic in the east which forms a southern buffer to Wartle Moss SSSI and LNCS.</p> <p>002, 003, 004 join together and clip the edge of Cairnhill LNCS and cross watercourses which feed into this LNCS. In this area, they also cut through the woodland and wetland mosaic habitat.</p> <p>The northern end of all options cuts into Foudland LNCS and ancient woodland mosaic.</p>		Geotechnical	<p>Embankments &gt;10m on potentially compressible soils</p> <p>Cutting up to 5.3m deep in possible contaminated ground ch 8150 – 8250 (former railway and made ground)</p> <p>Cutting up to 12.3 deep in possible contaminated ground ch 85600 – 9000 (former sewage works nearby)</p>	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	
People and communities	<p>A total of six properties lie within the alignment:</p> <p>Residential property:</p> <p>Kirkton, at Kirkton of Culsalmond</p> <p>Denovan</p> <p>Viewfield</p> <p>Riddlehead (borderline)</p> <p>Outbuilding on Wartle House land.</p> <p>Bennachie House</p> <p>Legatesden Farm</p> <p>Prime and non prime agricultural land is located along section, and the alignment passes through areas of class 3.1 land.</p> <p>There are no class 1 or 2 areas.</p>		Structures	<p>15no. Underbridges</p> <p>4no. Overbridges</p> <p>New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 650m</p> <p>New Underbridge crossing the River Urie and Burn of Durno flood plain at Pitcaple - Total Length is 500m</p>	Facilitating active travel	Crossings for the Old Rayne and Wartle House core paths must be incorporated into the design. Reduced traffic volumes on the A96 and A920 may encourage active travel on these routes, and opportunities to improve them will result (improved surfacing, segregation of cycles and pedestrians) although not all traffic from Colpy to Milton of Inveramsay will be attracted to route D02 due to its distance from the existing A96.	
Noise and air quality	<p>There is minor or negligible potential change to level of the existing noise climate at Old Rayne, Whiteford and Colpy, resulting from the introduction of new roads and/or rerouting of existing traffic. Minor increase to the noise climate may take place upon communities with a relative medium population count.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignment is &lt;200m from Meikle Wartle and Daviot settlement areas so is classed as minor beneficial.</p>		Hydrology	<p>2 active flood plain crossings – River Urie at Colpy (450m) and River Urie at Pitcaple (400m)</p> <p>Alignment runs adjacent to the River Urie (400m &amp; 144m)</p> <p>Numerous small crossings and tributary diversions</p> <p>Attenuation space limited at southern end tie to A96 at Inveramsay</p>	Integration with public transport facilities	The journey time improvement will make access to Inverurie and Huntly rail stations faster and more attractive.	
Cultural heritage	<p>The alignment intersects the northwest corner of the Battle of Harlaw Inventory Historic Battlefield, causing a direct impact. Even if adjusting the alignment enabled the direct impact to be avoided, the proximity of the alignment to the battlefield may cause an impact on its setting. The proximity of this alignment to Culsalmond Old Parish Church (LB2960) would result in a likely impact on its setting. The alignment also runs in close proximity to the Williamston House Inventory GDL and may have an impact on its setting, causing it to increasingly feel as though it is enclosed by major modern roads. The alignment cuts through the non-inventory GDL which forms the setting for</p>		Utilities	<p>1no. crossing of SSE 275KV lines</p> <p>1no. Pylons within 100m of edge of alignment</p> <p>1no. Wind turbines within 100m of edge of alignment</p> <p>Meikle Wartle WWTW (1957) within alignment at this point. Status is noted as Operational in Scottish Water GIS. This waste water treatment works serves the settlement of Meikle Wartle</p> <p>SW Distribution Main crossings</p> <p>Private Water supply crossings</p>	Integration	Route D02 does not impact any LDP allocations. Improving journey times and journey time reliability fits well with policy, and local accessibility policy should not be impacted provided appropriate crossing facilities and junctions are provided.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		<p>Warthill House (LB16018) and passes approximately 150m to the south of the house. A significant impact upon the setting of Warthill House is likely. Other assets whose settings may be impacted by the alignment are Mummer's Reive, cairn (SM11629), and Freefield House (LB16001).</p>					
	Plans and policies	<p>Route entirely outwith settlement boundaries and LDP allocations and committed development. Route passes through a small scale committed housing development.</p>	<p>Construction Access &amp; Temporary Disruption/Traffic Management</p>	<p>Predominately offline construction. Access possible from the A920 at northern end. Access is possible from the B992 at CH3300. The B992 does not pass through a settlement and links directly to the A96 and A920.            Access possible from the C59S at CH 5950. Access from the C59S can either be taken from the B992 or through the settlement of Tocher.            Access also possible from Unclassified Roads at CH 5200 (Access from A920). Access is restricted to unclassified roads at CH 6900, CH 8500, CH 8700 and CH 9100.            Some localised traffic management required.</p>	<p>Accessibility and social inclusion</p>	<p>There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to the service centres of Inverurie and Insch, although these can be partially accommodated on the existing A96, A920 and local road network.</p>	
	Soil and geology	<p>Many small areas of prime agricultural land. contaminated land (sewage works, railway), and small areas of mineral resources all present.</p>			<p>Public acceptability</p>	<p>There are public concerns for the loss of prime agricultural land and impact on properties in Durno, Miekle Wartle and Daviot; the overall impact on properties is greater than in any alternative D02 route. Some people showed a preference for a Strategy D corridor option in preference to Strategy C as it is more remote from Bennachie.</p>	

Corridor D03 Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
D03-001	Landscape	Moderate adverse effects occur due to earthworks, loss of woodland and ancient woodland, and potential impacts on setting of Daviot and cultural heritage. Major adverse effects are predicted due to earthworks of more than 15m in depth, introduction of a new structure across the River Urie, and loss of ancient woodland. Due to the earthworks, loss of woodland and impacts on setting of Williamston House Garden and Designed Landscape (GDL), and potential impacts on the setting of a scheduled monument and Daviot, the overall assessment for this alignment is Moderate adverse.	Alignment	Approx. 14.6km in length	Operation and inter-urban connectivity	When considered in conjunction with the BN01-004 alignment, journey times are reduced by an average of 3-4 minutes and a maximum of 7 minutes despite the overall journey length increasing. Much of this benefit is due to BN01 avoiding the existing congestion in Inverurie. A high standard dual carriageway results in more overtaking opportunities, improved incident management (better journey time reliability) and faster and more efficient freight movements. As D03 runs closer to the A920 corridor than either D01 or D02, it may attract traffic between Colpy and Oldmeldrum and provide these benefits to those trips, however it will not attract trips to and from Inch and Oyne which will continue to use the existing A96.	<p>Traffic</p> <ul style="list-style-type: none"> <li>All alignments are remote from the existing A96 and therefore may not be used by local traffic from Inch, Oyne and consequently would only serve as a link to a northern bypass of Inverurie.</li> <li>From a policy and public acceptability perspective, 003 utilises existing A920 route and therefore minimises the need for new land take in areas remote from existing infrastructure.</li> </ul> <p>Engineering</p> <ul style="list-style-type: none"> <li>All feature major impacts at northern end due to large structure required near Colpy junction.</li> <li>002 features a major river crossing to the north</li> <li>Through the central section, 001, 002 and 004 are better performing. Small moderate impacts associated with structures.</li> <li>003 (largely online) is slightly worse than other alignments due to disruption during construction</li> <li>Alignment 004 has the highest volume of earthworks.</li> <li>003 and 004 have National Grid crossing near the south/east</li> <li>002 runs across the floodplain and at the eastern end</li> </ul> <p>Environmental</p> <ul style="list-style-type: none"> <li>All have major impacts at the northern tie in associated with GDL and scheduled monuments (same as D01 and D02) but 004 is the worst.</li> <li>Through middle section 004 is the best.</li> <li>001 has most red along alignment and passes closest to the settlements of Meikle Wartle and Daviot</li> <li>003 shows a red section at the eastern end of the alignment associated with impact on the battlefield.</li> <li>Preference is 002 or perhaps 003.</li> </ul> <p><b>Overall, no single alignment is favourable therefore a hybrid solution taken forward.</b> <b>The hybrid alignment consists of a section of alignment 001 at northern end, moving on to 002 for the remainder of the route heading eastwards. The tie in to BN01 is to be considered further in 2<sup>nd</sup> fix development and may use a section of 003.</b></p>
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.500m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 1,620,132m <sup>3</sup> Bulk Fill - 1,103,668m <sup>3</sup> Surplus – 516,464m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Strategic traffic will experience a safety benefit from a high-quality dual carriageway, with more overtaking opportunities, reduced driver stress, and a more consistent, predictable route, as will some traffic between Colpy and Oldmeldrum on the A920. Reduced use of the A96 and A920 might also improve safety for NMUs on the route, particularly in the villages along the route, so long as crossings are provided for them, particularly on the Old Rayne core path network and the Oldmeldrum to Old Rayne cycle route. As route D03 is distant from the existing A96 local traffic to and from Inch, Oyne and potentially northern and central Inverurie will continue to use the existing A96 and fail to experience these benefits.	
	Ecology	Cutting through a number of minor watercourses. It is assumed that no realignment of the watercourses is needed. Fragments an area of ancient woodland which forms a habitat connection across the current A96 to Wartle Moss Site of Special Scientific Interest (SSSI). The northern end of all options cuts into Foudland Local Nature Conservation Site (LNCS) and ancient woodland mosaic.	Geotechnical	Embankments >10m on potentially compressible soils	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
People and communities	<p>A total of three properties lie within the alignment. Residential properties: The Old School on the A920 Hillbrae Property Barn - Potts of Rayne Prime and non prime agricultural land located along section, and the alignment passes through areas of class 3.1 land. There are no class 1 or 2 areas.</p>		Structures	<p>11no. Underbridges 6no. Overbridges New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 600m</p>	Facilitating active travel	<p>Crossings for the Old Rayne core path network and the Oldmeldrum to Old Rayne cycle route must be incorporated into the design. Reduced traffic volumes on the A96 and A920 may encourage active travel on these routes, and opportunities to improve them will result (improved surfacing, segregation of cycles and pedestrians) although not all traffic from Colpy to Milton of Inveramsay will be attracted to route D03 due to its distance from the existing A96.</p>	
Noise and air quality	<p>There is minor or negligible potential change to level of the existing noise climate at Old Rayne, Whiteford and Colpy, resulting from the introduction of new roads and/or rerouting of existing traffic. Minor increase to the noise climate may take place upon communities with a relative medium population count. There are Local Development Plan (LDP) allocations in the area which are potentially affected by the scheme including OP1: Land to the south east Allocation: eight homes.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignment is &lt;200m from Meikle Wartle and Daviot settlement areas.</p>		Hydrology	<p>2 active flood plain crossings – River Urie at Colpy (150m), Bonnyton Burn (125m). Alignment runs adjacent to the River Urie (250m) Numerous small crossings and tributary diversions</p>	Integration with public transport facilities	<p>The journey time improvement will make access to Inverurie and Huntly rail stations faster and more attractive.</p>	
Cultural heritage	<p>The alignment would run between the locations of Loanhead stone circle and enclosed cremation cemetery (Scheduled Monument - SM90202 and HES Property in Care) New Craig stone circle (SM37) and New Craig cupmarked boulder (SM12154) and would have a likely significant effect on their settings. The proximity of the alignment to Category A Listed Building Culsalmond Old Parish Church (LB2960) means that a significant impact on its setting is likely. Similarly, the alignment runs within 150m of Category B Listed Warthill House (LB16018) and is likely to have a significant impact on its setting. Other assets whose settings may be impacted by the alignment are Mummer's Reive, cairn (SM11629), Cat Cairn, cairn 255m south west of Smiddyhowe (SM12170), Woodside, hut circles 300m west of (SM11513), Black Cairn, cairn 990m north west of Tocherford (SM12172), Mounie Castle (LB2793), Williamston House Inventory GDL and Williamston House (LB2964), Inventory Historic Battlefield of the Battle of Harlaw, Inventory Historic Battlefield of the Battle of Barra, and Freefield House (LB16001).</p>		Utilities	<p>1no. crossing of SSE 275KV lines 1no. Pylons within 100m of edge of alignment SW Distribution Main crossings Private Water supply crossings</p>	Integration	<p>Route D03 allows for better access to and from the LDP developments at Oldmeldrum. Improving journey times and journey time reliability fits well with policy, and local accessibility policy should not be impacted provided appropriate crossing facilities and junctions are provided.</p>	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Route passes through small scale committed housing development.	Construction Access & Temporary Disruption/Traffic Management	Predominately offline construction. Access is possible from the A96 at northern end. Access is possible from the A920 at various locations. Access is possible from the B992 at CH3200 and the B9001 at CH 10250. The B992 does not pass through a settlement and links directly to the A96 and A920. Access possible from B992 via the C59S at CH 5800. Access from the C59S can either be taken from the B992 or through the settlement of Tocher. Access possible from the A920 via the C77C at CH 12700. Access also possible from Unclassified Roads at CH 11700 (Access from A920) and CH 14250 (Access from A920) Some localised traffic management required.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to the service centres of Inverurie and Insch, although these can be partially accommodated on the existing A96, A920 and local road network.	
	Soil and geology	Many small areas of prime agricultural land, and contaminated land (railway crosses alignment at one point) are present.			Public acceptability	There are public concerns for the loss of prime agricultural land and impact on properties in Durno, Meikle Wartle and Daviot; this route runs closer to more properties than any of the alternative D03 routes. Some people showed a preference for a Strategy D corridor option in preference to Strategy C as it is more remote from Bennachie.	
D03-002	Landscape	Moderate adverse impacts occur due to earthworks of 5-15m depth, and a moderate loss of woodland. Major adverse effects are due to earthworks of more than 15m in depth, the introduction of a new structure across the River Urie, loss of ancient woodland at Warthill House and potential impacts on setting of Williamston House GDL and a scheduled monument. Due to these factors the overall assessment for this alignment is Moderate adverse.	Alignment	Approx. 16km in length	Operation and inter-urban connectivity	When considered in conjunction with the BN01-004 alignment, journey times are reduced by an average of 3-4 minutes and a maximum of 7 minutes despite the overall journey length increasing. Much of this benefit is due to BN01 avoiding the existing congestion in Inverurie. A high standard dual carriageway results in more overtaking opportunities, improved incident management (better journey time reliability) and faster and more efficient freight movements. As D03 runs closer to the A920 corridor than either D01 or D02, it may attract traffic between Colpy and Oldmeldrum and provide these benefits to those trips, however it will not attract trips to and from Insch and Oyne which will continue to use the existing A96.	
	Water	Route crosses the extensive floodplain of the Bonnyton Burn (ch.3600m) and is not perpendicular to flow (major adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.500m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 1,890,928m <sup>3</sup> Bulk Fill - 1,534,804m <sup>3</sup> Surplus – 356,124m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Strategic traffic will experience a safety benefit from a high-quality dual carriageway, with more overtaking opportunities, reduced driver stress, and a more consistent, predictable route, as will some traffic between Colpy and Oldmeldrum on the A920. Reduced use of the A96 and A920 might also improve safety for NMUs on the route, particularly in the villages along the route, so long as crossings are provided for them, particularly on the Old Rayne core path network and the Oldmeldrum to	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						Old Rayne cycle route. As route D03 is distant from the existing A96 local traffic to and from Inch, Oyne and potentially northern and central Inverurie will continue to use the existing A96 and fail to experience these benefits.	
Ecology	Cuts through a number of minor watercourses. It is assumed that no realignment of the watercourses is needed. Cuts through Wartle Moss LNCS, ancient woodland and fragments habitat corridor across the current A96 route. Cuts through the Cairnhill LNCS. The northern end of all options cuts into Foudland LNCS and ancient woodland mosaic.	Geotechnical	Embankments >10m on potentially compressible soils Cutting in peat (3.6m - 5.1m high) identified at ch 7850 - 8100 Embankment on peat (5.3m high) identified at ch 14250 - 14400	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.		
People and communities	A total of 10 properties lie within the alignment. Residential property The Old School Hillbrae Viewfield Nether Tocher Colliehill Cottage Bennachie View Moss-side of Pardes - outbuilding New Craig Courtyards/Wicketslap Prime and non prime agricultural land located along section, and the alignment passes through areas of class 3.1 land. There are no class 1 or 2 areas.	Structures	14no. Underbridges 7no. Overbridge New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 600m New Viaduct crossing the Bonnyton Burn and flood plain at ch 3850 - total Length is 400m New Underbridge crossing the Lochter and flood plain at ch 16000 - total Length is 600m	Facilitating active travel	Crossings for the Old Rayne core path network and the Oldmeldrum to Old Rayne cycle route must be incorporated into the design. Reduced traffic volumes on the A96 and A920 may encourage active travel on these routes, and opportunities to improve them will result (improved surfacing, segregation of cycles and pedestrians) although not all traffic from Colpy to Milton of Inveramsay will be attracted to route D03 due to its distance from the existing A96.		
Noise and air quality	Potential noticeable decrease to level of current noise climate at Old Rayne, Whiteford and Colpy, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area.	Hydrology	3 active flood plain crossings – River Urie at Colpy (400m), Bonnyton Burn (400m) and Lochter Burn (350m) Alignment runs adjacent to the Kings Burn (300m) Numerous small crossings and tributary diversions	Integration with public transport facilities	The journey time improvement will make access to Inverurie and Huntly rail stations faster and more attractive.		
Cultural heritage	The alignment would run to the immediate east of New Craig stone circle (SM37) and New Craig cupmarked boulder (SM12154) and would have a likely significant effect on their settings. Its proximity to Loanhead stone circle (SM90202) would also likely result in a significant impact on its setting. The proximity of the alignment to Category A Listed Culsalmond Old Parish Church (LB2960) means that a significant impact on its setting is likely. Similarly, the alignment runs within 150m of	Utilities	1no. crossing of SSE 275KV lines 1no. Pylons within 100m of edge of alignment SW Distribution Main crossings Private Water supply crossings	Integration	Route D03 allows for better access to and from the major LDP developments at Oldmeldrum. Improving journey times and journey time reliability fits well with policy, and local accessibility policy should not be impacted provided appropriate crossing facilities and junctions are provided.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		Category B Listed Warhill House (LB16018) and is likely to have a significant impact on its setting. Other assets whose settings may be impacted by the alignment are Mummer's Reive, cairn (SM11629), Cat Cairn, cairn 255m south west of Smiddyhowe (SM12170), Woodside, hut circles 300m west of (SM11513), Black Cairn, cairn 990m north west of Tocherford (SM12172), Mounie Castle (LB2793), Williamston House Inventory GDL and Williamston House (LB2964), Inventory Historic Battlefield of the Battle of Harlaw, Inventory Historic Battlefield of the Battle of Barra, Fingask House (LB2797) and Freefield House (LB16001).					
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Route passes through small scale committed housing development.	Construction Access & Temporary Disruption/Traffic Management	Predominately offline construction. Access is possible from the A96 at northern end. Access is possible from the A920 at various locations. Access is possible from the B992 at CH3200 and the B9001 at CH 10000. The B992 does not pass through a settlement and links directly to the A96 and A920. Access possible from B992 via the C59S at CH 5800. Access from the C59S can either be taken from the B992 or through the settlement of Tocher. Access possible from the C77C at CH 12700 and the C76C at CH 15650. Access from the C77C and C76C can be taken from the A920. Access also possible from the A920 via unclassified Roads at CH 5100, CH 6550, CH 9100, CH 11250 and CH 15600. Some localised traffic management required.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to the service centres of Inverurie and Inch, although these can be partially accommodated on the existing A96, A920 and local road network.	
	Soil and geology	Two areas of peat (200m and 275m long). Many small areas of prime agricultural land. Contaminated land (railway crosses alignment at one point) and small area of mineral resources are present.			Public acceptability	There are public concerns for the loss of prime agricultural land and impact on properties in Durno, Miekle Wartle and Daviot. Some people showed a preference for a Strategy D corridor option in preference to Strategy C as it is more remote from Bennachie.	
D03-003	Landscape	Major adverse effects occur due to the introduction of a new structure and earthworks of more than 15m in depth on the north end, loss of ancient woodland at Warhill House and at Mounie Castle. Moderate adverse effects are predicted due to earthworks and loss of woodland. The overall assessment for the alignment is Moderate adverse.	Alignment	Approx. 17.3km in length	Operation and inter-urban connectivity	When considered in conjunction with the BN01-004 alignment, journey times are reduced by an average of 2-4 minutes and a maximum of 7 minutes despite the overall journey length increasing. Much of this benefit is due to BN01 avoiding the existing congestion in Inverurie and the overall benefits are slightly smaller than for D03-001 or D03-002. A high standard dual carriageway results in more overtaking opportunities, improved incident management (better journey time reliability) and faster and more efficient freight movements. As D03 runs closer to the A920 corridor than either D01 or D02, it may attract traffic between Colpy and Oldmeldrum and provide these benefits to those trips, however it will not attract trips to and from Inch and Oyne which will continue to use the existing A96.	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.500m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 951,404m <sup>3</sup> Bulk Fill – 1,056,893m <sup>3</sup> Deficit – 105,490m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Strategic traffic will experience a safety benefit from a high-quality dual carriageway, with more overtaking opportunities, reduced driver stress, and a more consistent, predictable route, as will traffic between Colpy and Oldmeldrum on the existing A920 which is upgraded online. Reduced use of the A96 might also improve safety for NMUs on the route, particularly in the villages along the route, although as this is primarily an online upgrade of the A920 provisions must be made for parallel NMU use here as well as on the Old Rayne core path network and the Oldmeldrum to Old Rayne cycle route. As route D03 is distant from the existing A96 local traffic to and from Inch, Oyne and potentially northern and central Inverurie will continue to use the existing A96 and fail to experience these benefits.	
	Ecology	Cuts through a number of minor watercourses. It is assumed that no realignment of the watercourses is needed. Cuts through Wartle Moss LNCS, ancient woodland and fragments habitat corridor across the current A96 route. Cuts through the Cairnhill LNCS. The northern end of all options cuts into Foudland LNCS and ancient woodland mosaic.	Geotechnical	Embankments >10m on potentially compressible soils Mix of Embankments and Cuttings in peat (up to 10m high) identified between ch 4580 - 9100	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	
	People and communities	A total of five properties lie within the alignment. Residential properties: Kirkton Farm (x3 buildings) Stavhuisje x1 building adjacent to Stavhuisje Barrum House Beaufield House Greenford Cottage Business properties: Farm Barn at Mid Tocher Inverurie Skip Hire, Causewayfold, Meikle Wartle Prime and non prime agricultural land located along section, and the alignment passes through areas of class 3.1 land. There are no class 1 or 2 areas.	Structures	19no. Underbridges 2no. Overbridge New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 600m New crossing of the A920 Bonnyton Burn and flood plain at ch 3600 - total Length is 400m	Facilitating active travel	Crossings for the Old Rayne core path network and the Oldmeldrum to Old Rayne cycle route must be incorporated into the design, as must a parallel NMU route to replace the A920 which is being upgraded online. Reduced traffic volumes on the A96 may encourage active travel on these routes, and opportunities to improve them will result (improved surfacing, segregation of cycles and pedestrians) although not all traffic from Colpy to Milton of Inveramsay will be attracted to route D03 due to its distance from the existing A96.	
	Noise and air quality	Potential noticeable decrease to level of current noise climate at Old Rayne, Whiteford and Colpy, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads.	Hydrology	2 active flood plain crossings – River Urie at Colpy (400m) and Kings Burn (500m) Alignment runs adjacent to the Kings Burn (100m) Numerous small crossings and tributary diversions	Integration with public transport facilities	The journey time improvement will make access to Inverurie and Huntly rail stations faster and more attractive.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignments 003 is within 200m of Wartle Moss SSSI which is fen habitat with Sphagnum and Juncus species sensitive to nitrogen deposition.					
	Cultural heritage	There is one SM, Mummer's Reive, cairn (SM11629), located within the alignment, but it is assumed that adjustment of the alignment would enable it to be preserved in situ. The alignment would pass within the immediate vicinity of Mummer's Reive cairn (SM11629) and would have a significant effect on its setting. Similarly the proximity of the alignment to Category A Listed Culsalmond Old Parish Church (LB2960) means that a significant impact on its setting is likely. The alignment would cut through the remnants of the non-inventory GDL which forms the setting for Mounie Castle (LB2793) and would have a likely significant effect on its setting. An impact on the setting of the other Category B Listed Buildings within the GDL may also occur. The alignment would be visible in the key view to the south-east from Fingask House (LB2797) and may impact upon its setting. The alignment would also cross the non-inventory GDL which forms the setting of Warthill House (LB16018) having a potentially significant effect upon the setting of the house. The proximity of the alignment to the Inventory Historic Battlefield of the Battle of Barra means that there may be a significant effect upon the setting of the battlefield. Other assets whose settings may be impacted by the alignment are Cat Cairn, cairn 255m south west of Smiddyhowe (SM12170), Woodside, hut circles 300m west of (SM11513), Black Cairn, cairn 990m north west of Tocherford (SM12172), Newcraig, stone circle 200m west of (SM37), New Craig, cupmarked boulder 230m west-north-west of (SM12154), Loanhead, stone circle and enclosed cremation cemetery (SM90202), Barra Castle (LB2821), Williamston House Inventory GDL and Williamston House (LB2964), Inventory Historic Battlefield of the Battle of Harlaw, and Freefield House (LB16001).	Utilities	1no. crossing of SSE 275KV lines 1no. Pylons within 100m of edge of alignment SW Distribution Main crossings Private Water supply crossings National grid gas main crossing at southern extent of alignment	Integration	Route D03 allows for better access to and from the major LDP developments at Oldmeldrum. Improving journey times and journey time reliability fits well with policy, and it is noted that this is primarily an online upgrade of the A920 and therefore makes more use of existing infrastructure. Local accessibility policy should not be impacted provided appropriate crossing facilities and junctions are provided.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. Route passes through small scale committed housing development.	Construction Access & Temporary Disruption/Traffic Management	Access possible from the A96 at CH 0 and the A920 at CH 1500. From CH 1350 to 12200 access possible from the A920 at multiple locations as alignment is online widening. From CH 12200 to 13900 this section of alignment is parallel to the existing A920 approximately 150m from the A920. Therefore, access is possible from multiple locations if temporary access roads are provided. Access	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance is likely to be less of an issue than for the alternative D03 routes as this route is mostly an online upgrade of the existing A920.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Soil and geology	Several areas of peat, up to 400m in size. Large stretches of prime agricultural land, contaminated land (historic railway, fuel storage), and small area of mineral resources are all present.		possible from the C76C at CH 15650. Access from the C76C can be taken from the A920. Access also possible from an unclassified road at CH 13600. Traffic management will be required to facilitate access from A920 throughout the duration of the works. Temporary speed limits and average speed cameras may be required.	Public acceptability	This route minimises the use of additional land by using the existing alignment of the A920 and may therefore meet with more public acceptability than an alternative route using prime agricultural land. Individual private properties are likely to be affected. Some people showed a preference for a Strategy D corridor option in preference to Strategy C as it is more remote from Bennachie.	
D03-004	Landscape	Moderate adverse impacts occur due to earthworks of 5-15m in depth, loss of woodland and potential impacts on visual amenity in the north of the alignment. Major adverse effects are predicted due to earthworks of more than 15m in depth, the introduction of a new large structure across the river Urie and loss of ancient woodland. The overall assessment of the alignment is Moderate adverse.	Alignment	Approx. 18.5km in length	Operation and inter-urban connectivity	When considered in conjunction with the BN01-004 alignment, journey times are reduced by an average of 2-3 minutes and a maximum of 6 minutes, the smallest benefits for any D03 alignment. Much of this benefit is due to BN01 avoiding the existing congestion in Inverurie. A high standard dual carriageway results in more overtaking opportunities, improved incident management (better journey time reliability) and faster and more efficient freight movements. As D03 runs closer to the A920 corridor than either D01 or D02, it may attract traffic between Colpy and Oldmeldrum and provide these benefits to those trips, however it will not attract trips to and from Insch and Oyne which will continue to use the existing A96.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential requirement for river realignment and potential active morphology at crossing of River Urie at ch.500m (moderate adverse). There may be limited scope for realignment at this location due to confined nature of the floodplain.	Earthworks	Bulk Cut – 2,579,092m <sup>3</sup> Bulk Fill - 1,440,986m <sup>3</sup> Surplus – 1,138,106m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Strategic traffic will experience a safety benefit from a high-quality dual carriageway, with more overtaking opportunities, reduced driver stress, and a more consistent, predictable route, as will some traffic between Colpy and Oldmeldrum on the A920. Reduced use of the A96 and A920 might also improve safety for NMUs on the route, particularly in the villages along the route, so long as crossings are provided for them, particularly on the Old Rayne core path network and the Oldmeldrum to Old Rayne cycle route. As route D03 is distant from the existing A96 local traffic to and from Insch, Oyne and potentially northern and central Inverurie will continue to use the existing A96 and fail to experience these benefits.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
Ecology	Cuts through the Cairnhill LNCS. The northern end of all options cuts into Foudland LNCS and ancient woodland mosaic. It is assumed that no realignment of the watercourses is needed.		Geotechnical	Embankments and cuttings >10m on potentially compressible soils Mix of Embankments and Cuttings in peat (up to 1.8m high) identified between ch 4750 – 8050 Rock cut (up to 10m)	Promoting regional economic growth	The journey time improvement will make access to jobs, services and the wider transport network faster and more attractive.	
People and communities	A total of eight properties lie within the alignment. Residential properties: Kirkton Farm (x3) Barrum House Gillahill Willow Cottage Broombrae House Saphock Cottage Business property Drum Inn Drum Garage and Petrol Station Prime and non prime agricultural land located along section, and the alignment passes through class 2 and 3.1 areas. There are no class 1 areas.		Structures	18no. Underbridges 8no. Overbridge New Underbridge crossing the River Urie and flood plain at Colpy - total Length is 650m	Facilitating active travel	Crossings for the Old Rayne core path network and the Oldmeldrum to Old Rayne cycle route must be incorporated into the design. Reduced traffic volumes on the A96 and A920 may encourage active travel on these routes, and opportunities to improve them will result (improved surfacing, segregation of cycles and pedestrians) although not all traffic from Colpy to Milton of Inveramsay will be attracted to route D03 due to its distance from the existing A96.	
Noise and air quality	Potential noticeable decrease to level of current noise climate at Old Rayne, Whiteford and Colpy, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative medium population count, which are located close to the new roads.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignments 004 is within 200m of Wartle Moss SSSI which is fen habitat with Sphagnum and Juncus species sensitive to nitrogen deposition.		Hydrology	1 active flood plain crossings – River Urie at Colpy (400m) Alignment runs adjacent to the Lochter (Balcairn Burn) (250m) Numerous small crossings and tributary diversions	Integration with public transport facilities	The journey time improvement will make access to Inverurie and Huntly rail stations faster and more attractive.	
Cultural heritage	There is one SM, Mummer's Reive, cairn (SM11629), located within the alignment, but it is assumed that adjusting the alignment would enable it to be preserved in situ. The alignment would pass within the immediate vicinity of Mummer's Reive cairn (SM11629) and would have a significant effect on its setting. The proximity of the alignment to Category A Listed Culsalmond Old Parish Church (LB2960) means that a significant impact on its setting is likely. The proximity of the alignment to the Inventory Historic Battlefield of the Battle of Barra means that there may be a significant effect upon the setting of the battlefield. The alignment would be visible in the key view to the south-east from Fingask House (LB2797) and may impact upon its setting. The alignment would also cross the non-inventory GDL which forms the setting of Warthill House		Utilities	1 no. crossing of 1050mm National Grid Pipeline 1no. crossing of SSE 275KV lines 1no. Pylons within 100m of edge of alignment SW Distribution Main crossings Private Water supply crossings	Integration	Route D03 allows for better access to and from the major LDP developments at Oldmeldrum. Improving journey times and journey time reliability fits well with policy, and local accessibility policy should not be impacted provided appropriate crossing facilities and junctions are provided.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		(LB16018) having a potentially significant effect upon the setting of the house. Other assets whose settings may be impacted by the alignment are Cat Cairn, cairn 255m south west of Smiddyhowe (SM12170), Woodside, hut circles 300m west of (SM11513), Black Cairn, cairn 990m north west of Tocherford (SM12172), Hillhead of Barra, standing stone 240m west of (SM12393), The Hill of Barra, fort (SM3997), Four Braehead Cottages, standing stone 195m south east of (SM12112), Newcraig, stone circle 200m west of (SM37), Loanhead, stone circle and enclosed cremation cemetery (SM90202), Mounie Castle (LB2793), Barra Castle (LB2821), Williamston House Inventory GDL and Williamston House (LB2964), Inventory Historic Battlefield of the Battle of Harlaw.					
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development. Route is immediately adjacent to a small scale committed housing development.	Construction Access & Temporary Disruption/Traffic Management	<p>Predominately offline construction. Access is possible from the A96 at northern end. Access is possible from the A920 at various locations.</p> <p>From Ch 1350 to 3750, this section of alignment is remote from the existing A920 however access is possible from the A920 at CH 4750 and CH 9500. Access is possible from the B992 at CH 4050 and the B9001 at CH 9450. The B992 does not pass through a settlement and links directly to the A96 and A920.</p>	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to the service centres of Inverurie and Insch, although these can be partially accommodated on the existing A96, A920 and local road network.	
	Soil and geology	Peat is found in 750m of the alignment. Large stretches of prime agricultural land are present. Contaminated land (railway, spoil heap) and a small area of mineral resources are also present.		<p>Access from the C59S at CH 5900. Access from the C59S can either be taken from the B992 or through the settlement of Tocher.</p> <p>Access limited to unclassified roads at CH 11200 and CH 13600. Alignment runs parallel to an unclassified road from CH 12000 to CH 13600.</p> <p>From 13750 to 15750, access is difficult and may require temporary road construction. Access possible from the A920 at CH 15150.</p> <p>Some localised traffic management required.</p>	Public acceptability	There are public concerns for the loss of prime agricultural land and impact on local properties. Some people showed a preference for a Strategy D corridor option in preference to Strategy C as it is more remote from Bennachie.	

Corridor D+01 Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
D+01-001	Landscape	The appraisal has identified 47% of the alignment as having Moderate adverse impacts. The moderate impacts occur in areas of medium sensitivity with earthworks of 5-15m, causing a loss of woodland and tree lines. Major adverse impacts are predicted for 39% of the alignment, due to long cuttings of up to 36m in depth and the introduction of a large structure. The long sections of large scale earthworks mean that the overall rating is Major adverse.	Alignment	Approx. 15.7km in length	Operation and inter-urban connectivity	A high standard dual carriageway results in a small journey time improvement of around 1 minute, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic. High standard junctions as Huntly and Colpy will reduce conflicts and local connectivity will be maintained through grade separation.	<p>Traffic</p> <ul style="list-style-type: none"> <li>All alignments increase the travel distance but have slightly improved journey times due to increased speeds</li> <li>Improvement of alignment provides benefits to all users including strategic and local traffic, freight users and NMUs, with resultant small benefits for economy and integration</li> <li>Almost no differentiation between options in the corridor</li> </ul> <p>Engineering</p> <ul style="list-style-type: none"> <li>Challenging topography across majority of alignments, requiring large amounts of earthworks.</li> <li>004 significantly better performing in engineering terms than other alignments</li> <li>All alignments at similar height to existing A96 so no clear benefit in terms of winter resilience.</li> </ul> <p>Environmental</p> <ul style="list-style-type: none"> <li>No major environmental concerns</li> <li>Some landscape and visual impacts and area is within wildcat priority area, however, this is fairly widespread and affects all alignments.</li> </ul> <p><b>Overall, a hybrid of D+01_004 and D+0-003 is the best performing in engineering terms and no major concerns from environmental appraisal. This alignment is to be taken forward to Second Fix.</b></p>
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse).	Earthworks	Bulk Cut – 7,355,143m <sup>3</sup> Bulk Fill – 1,981,361m <sup>3</sup> Surplus – 5,373,782m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts and addresses the cluster site at Bainshole Bends directly. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. Indirect benefits for NMUs through reduced traffic on existing A96. Opportunities to cross A96 at grade-separated locations but existing NMU use is low. No change in elevation so still susceptible to winter weather.	
	Ecology	Wildcat priority area, two local designated sites and eight water crossings.	Geotechnical	Embankments >19m (up to 25.1m) on non-identified geotechnical constraint. Embankments up to 4.3m on potentially compressible soils. Rock cuttings >19m (up to 36.9m) identified. Peat identified at Ch. 7950 – 8350.	Promoting regional economic growth	Slight improvement in access to jobs and wider strategic transport network due to journey time reduction.	
	People and communities	Residential receptor: Greystone property	Structures	6no. Underbridges 4no. Overbridges 1no. Tie in with the existing A96. Details unknown but likely to be underbridges required.	Facilitating active travel	Reduced traffic on the existing A96 will make this alignment more attractive to NMUs. Opportunities to encourage cycle journeys to Huntly, but existing population density is very low.	
	Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. The small increase in noise around Fisherford is identified at communities with a relative low population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignment is distant from inhabited areas with population seemingly <10ppl/km.	Hydrology	1no. Burn of Drumblade watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations. The impact on bus services is dependent on junction strategy but there is potential for improvements to express services on the new route and to local services due to the separation of strategic and local traffic.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Cultural heritage	There is a potential for this alignment to cause an impact upon the setting of Stonefield Stone Circle (SM48).	Utilities	1no. crossing of AC private water supplies 12no. crossing of SSE 11Kv lines 1no. crossing of SSE low voltage cables 1no. crossing of SSE low voltage lines 2no. crossing of SW distribution main (<100)	Integration	Faster journey times have the potential to improve access to the Huntly LDP allocations. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Multiple points of access from existing roads. No access for construction at CH 5250 – 8250 and CH 9250 – 10750, therefore extensive temporary works required. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Limited closure of existing local routes. Extended closure of local roads and extended diversion routes required at CH 10750 – 15737. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Huntly and Inch and result in lengthy diversions for local traffic.	
	Soil and geology	No negative impacts.			Public acceptability	Alignments north of the Glens of Foudland were highlighted by some members of the public as an alternative which could mitigate against winter weather impacts.	
D+01-001A	Landscape	The appraisal has identified 82% of the alignment as having Major adverse impacts. These are due to the large scale of the earthworks, with cuttings reaching depths of over 25m, the introduction of at least one large structure, and the loss of woodland. Moderate adverse impacts are assessed for 18% of the alignment. The overall rating of this alignment is Major adverse.	Alignment	Approx. 4.4km in length	Operation and inter-urban connectivity	A high standard dual carriageway results in a small journey time improvement of around 1 minute, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic. High standard junctions as Huntly and Colpy will reduce conflicts and local connectivity will be maintained through grade separation.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse).	Earthworks	Bulk Cut – 4,003,714m <sup>3</sup> Bulk Fill – 991,808m <sup>3</sup> Surplus – 3,011,906m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts and addresses the cluster site at Bainshole Bends directly. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. Indirect benefits for NMUs through reduced traffic on existing A96. Opportunities to cross A96 at grade-separated locations but existing NMU use is low. No change in elevation so still susceptible to winter weather.	
	Ecology	Wildcat priority area and three water crossings.	Geotechnical	Embankments >10m (up to 19m) on non-identified geotechnical constraint. Rock cuttings >19m (up to 36.2m) identified.	Promoting regional economic growth	Slight improvement in access to jobs and wider strategic transport network due to journey time reduction.	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	People and communities	Residential receptor: Greystone property	Structures	2no. Underbridges 1no. Overbridge 1no. Tie in with the existing A96. Details unknown but likely to be underbridges required.	Facilitating active travel	Reduced traffic on the existing A96 will make this alignment more attractive to NMUs. Opportunities to encourage cycle journeys to Huntly, but existing population density is very low.	
	Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. The small increase in noise around Fisherford is identified at communities with a relative low population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignment is distant from inhabited areas with population seemingly <10ppl/km.	Hydrology	1no. Burn of Drumblade watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations. The impact on bus services is dependent on junction strategy but there is potential for improvements to express services on the new route and to local services due to the separation of strategic and local traffic.	
	Cultural heritage	There is a potential for this alignment to cause an impact upon the setting of Stonefield Stone Circle (SM48).	Utilities	1no. crossing of SSE 11Kv lines	Integration	Faster journey times have the potential to improve access to the Huntly LDP allocations. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Multiple points of access from existing roads. No access for construction at CH 2250 – 4429, therefore extensive temporary works required. Traffic management will be required to facilitate access from local roads. Temporary diversions and temporary speed limits may be required. Limited closure of existing local routes. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Huntly and Inch and result in lengthy diversions for local traffic.	
	Soil and geology	No negative impacts.			Public acceptability	Alignments north of the Glens of Foudland were highlighted by some members of the public as an alternative which could mitigate against winter weather impacts.	
D+01-002	Landscape	The extension of large scale earthworks of >15m and the impacts on residential properties lead to an overall impact that will be Major adverse.	Alignment	Approx. 15.4km in length	Operation and inter-urban connectivity	A high standard dual carriageway results in a small journey time improvement of around 1 minute, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic. High standard junctions as Huntly and Colpy will reduce conflicts and local connectivity will be maintained through grade separation.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse).	Earthworks	Bulk Cut – 7,554,923m <sup>3</sup> Bulk Fill – 3,132,966m <sup>3</sup> Surplus – 4,421,957m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts and addresses the cluster site at Bainshole Bends directly. A high standard, more predictable dual carriageway alignment allows for	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						overtaking opportunities which reduces accident risk and driver stress. Indirect benefits for NMUs through reduced traffic on existing A96. Opportunities to cross A96 at grade-separated locations but existing NMU use is low. No change in elevation so still susceptible to winter weather.	
Ecology	One local designated site and 5 water crossings.	Geotechnical	Embankments >19m (up to 19.3m) on rock. Embankments > 19m (up to 21.3m) in non-identified geotechnical constraint. Embankments up to 9.7m on potentially compressible soils. Rock cuttings >39m (up to 42.1m) identified. Peat identified at Ch. 7200 – 7500.	Promoting regional economic growth	Slight improvement in access to jobs and wider strategic transport network due to journey time reduction.		
People and communities	Non-prime land located along the entire alignment. 3.2 or above.	Structures	8no. Underbridges 2no. Overbridges 1no. Bridge/Viaduct 1no. Tie in with the existing A96. Details unknown but likely to be underbridges required.	Facilitating active travel	Reduced traffic on the existing A96 will make this alignment more attractive to NMUs. Opportunities to encourage cycle journeys to Huntly, but existing population density is very low.		
Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. The small increase in noise around Fisherford is identified at communities with a relative low population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignments 002 is within <200m from populated areas >10ppl/km, hence Minor beneficial.	Hydrology	Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations. The impact on bus services is dependent on junction strategy but there is potential for improvements to express services on the new route and to local services due to the separation of strategic and local traffic.		
Cultural heritage	There is a potential for this alignment to cause an impact upon the setting of Stonefield Stone Circle (SM48).	Utilities	1no. crossing of AC private water supplies 15no. crossing of SSE 11Kv lines 1no. crossing of SSE low voltage cables 1no. crossing of SSE low voltage lines 3no. crossing of SW distribution main (<100) 1no. wind turbines within 100m of edge of alignment	Integration	Faster journey times have the potential to improve access to the Huntly LDP allocations. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.		
Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Multiple points of access from existing roads. No access for construction at CH 4750 – 7750, therefore extensive temporary works required. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required.  Limited closure of existing local routes. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Huntly and Inch and result in lengthy diversions for local traffic.		
Soil and geology	Area of peat (525m) which forms small proportion of overall alignment length.			Public acceptability	Alignments north of the Glens of Foudland were highlighted by some members of the public as an alternative which could mitigate against winter weather impacts.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
D+01-003	Landscape	The appraisal identifies 40% of the alignment as having Moderate adverse effects. These occur at the south end of the alignment, and are due to long sections of earthworks of over 5m and proximity of visual receptors, such as Fisherford. Major adverse effects are predicted for the 29% of the alignment due to long sections of large scale earthworks, with cuttings of over 40m and the introduction of a new large structure across Garlet Burn. The long sections of large scale earthworks give an overall assessment of Major adverse.	Alignment	Approx. 16.3km in length	Operation and inter-urban connectivity	A high standard dual carriageway results in a small journey time improvement of less than 1 minute, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic. High standard junctions as Huntly and Colpy will reduce conflicts and local connectivity will be maintained through grade separation.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse).	Earthworks	Bulk Cut – 11,867,396m <sup>3</sup> Bulk Fill – 1,636,209m <sup>3</sup> Surplus – 10,231,186m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts and addresses the cluster site at Bainshole Bends directly. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. Indirect benefits for NMUs through reduced traffic on existing A96. Opportunities to cross A96 at grade-separated locations but existing NMU use is low. No change in elevation so still susceptible to winter weather.	
	Ecology	Ecological constraints/receptors include five water crossings.	Geotechnical	Embankments > 10m (up to 15.5m) in non-identified geotechnical constraint. Embankments > 10m (up to 25m) on potentially compressible soils. Rock cuttings >39m (up to 43.8m) identified.	Promoting regional economic growth	Slight improvement in access to jobs and wider strategic transport network due to journey time reduction.	
	People and communities	Alignment passes through mainly non-prime agricultural land. Chainage 15+750 to 16+250 is class 3.1.	Structures	11no. Underbridges 4no. Overbridges 1no. Tie in with the existing A96. Details unknown but likely to be underbridges required.	Facilitating active travel	Reduced traffic on the existing A96 will make this alignment more attractive to NMUs. Opportunities to encourage cycle journeys to Huntly, but existing population density is very low.	
	Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. The small increase in noise around Fisherford is identified at communities with a relative low population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. Alignments 003 is within <200m from populated areas >10ppl/km, hence Minor beneficial.	Hydrology	Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations. The impact on bus services is dependent on junction strategy but there is potential for improvements to express services on the new route and to local services due to the separation of strategic and local traffic.	
	Cultural heritage	There is a potential for this alignment to cause an impact on the setting of Gerrieswell long barrow and round cairn (SM4908). There is a potential for this alignment to cause an impact on Category B Listed Building Waddies Cottage LB43964.	Utilities	21no. crossing of SSE 11Kv lines 2no. crossing of SSE low voltage cables 1no. crossing of SSE low voltage lines 8no. crossing of SW distribution main (<100)	Integration	Faster journey times have the potential to improve access to the Huntly LDP allocations. Improving journey times and reliability fits with policy. There should be no negative	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
				2no. wind turbines within 100m of edge of alignment		impact on local accessibility policy as long as appropriate junctions and crossing points are provided.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations. The route does pass in close proximity to small scale committed developments and the settlement boundary of Fisherford.	Construction Access & Temporary Disruption/Traffic Management	Multiple points of access from existing roads. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Limited closure of existing local routes. Extended closure of local roads and extended diversion routes required at CH 13250 – 14500. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Huntly and Inch and result in lengthy diversions for local traffic.	
	Soil and geology	Small area of prime agricultural land.			Public acceptability	Alignments north of the Glens of Foudland were highlighted by some members of the public as an alternative which could mitigate against winter weather impacts.	
D+01-003A	Landscape	The extension of large scale earthworks of >15m and the impacts on residential properties lead to an overall impact that will be Major adverse.	Alignment	Approx. 4.7km in length	Operation and inter-urban connectivity	A high standard dual carriageway results in a small journey time improvement of less than 1 minute, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic. High standard junctions as Huntly and Colpy will reduce conflicts and local connectivity will be maintained through grade separation.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse).	Earthworks	Bulk Cut – 6,602,760m <sup>3</sup> Bulk Fill – 2,643,682m <sup>3</sup> Surplus – 3,959,078m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts and addresses the cluster site at Bainshole Bends directly. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. Indirect benefits for NMUs through reduced traffic on existing A96. Opportunities to cross A96 at grade-separated locations but existing NMU use is low. No change in elevation so still susceptible to winter weather.	
	Ecology	Ecological constraints/receptors include three water crossings.	Geotechnical	Embankments > 19m (up to 31.8m) in non-identified geotechnical constraint. Embankments >19m (up to 22.9m) on potentially compressible soils. Rock cuttings >39m (up to 45m) identified.	Promoting regional economic growth	Slight improvement in access to jobs and wider strategic transport network due to journey time reduction.	
	People and communities	Alignment passes through mainly non-prime agricultural land. Chainage 15+750 to 16+250 is class 3.1.	Structures	3no. Underbridges 1no. Overbridges	Facilitating active travel	Reduced traffic on the existing A96 will make this alignment more attractive to NMUs. Opportunities to encourage cycle journeys to Huntly, but existing population density is very low.	
	Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from	Hydrology	Numerous culverted crossings and tributary diversions	Integration with public	The journey time reduction improves access to Inverurie and Huntly rail	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		<p>the introduction of new roads and/or rerouting of existing traffic. The small increase in noise around Fisherford is identified at communities with a relative low population count.</p> <p>The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. This alignment is distant from inhabited areas with population seemingly &lt;10ppl/km.</p>			transport facilities	stations. The impact on bus services is dependent on junction strategy but there is potential for improvements to express services on the new route and to local services due to the separation of strategic and local traffic.	
	Cultural heritage	There is a potential for this alignment to cause an impact upon the setting of Stonefield Stone Circle (SM48). There is a potential for this alignment to cause an impact on Category B Listed Building Waddies Cottage LB43964. There is a potential for this alignment to cause an impact on the setting of Black Cairn (SM12172).	Utilities	4no. crossing of SSE 11Kv lines 4no. crossing of SW raw water mains	Integration	Faster journey times have the potential to improve access to the Huntly LDP allocations. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Access for construction limited to unclassified and C roads. Traffic management will be required to facilitate access from local roads. Temporary diversions and temporary speed limits may be required. Limited closure of existing local routes. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Huntly and Insch and result in lengthy diversions for local traffic.	
	Soil and geology	No negative impacts.			Public acceptability	Alignments north of the Glens of Foudland were highlighted by some members of the public as an alternative which could mitigate against winter weather impacts.	
D+01-004	Landscape	Major adverse effects are expected due to the scale of earthworks, impacts on ridges in the west of the alignment and impacts on scenic quality. Moderate adverse effects are predicted where the alignment passes between Robin's Height and Newtongarry wood where there will be a cutting of 5-15m. Moderate adverse effects are predicted where the alignment passes along the valley floor due to residents. Earthworks at Castle Heugh and crossing the Garlet Burn will result in major adverse effects. There is a long section of considerable earthworks between ch. 6+750 and 11+300 including a large embankment to the south of Ythanwells. Between Dry Burn and ch. 17+051 the effects are predicted to be low adverse as the alignment is predominantly at grade. The exception being moderate adverse effects to the north of Fisherford.	Alignment	Approx. 17.1km in length	Operation and inter-urban connectivity	A high standard dual carriageway results in a small journey time improvement of less than 1 minute, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic. High standard junctions as Huntly and Colpy will reduce conflicts and local connectivity will be maintained through grade separation.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse).	Earthworks	Bulk Cut – 4,649,858m <sup>3</sup> Bulk Fill – 1,482,000m <sup>3</sup> Surplus – 3,167,857m <sup>3</sup> *no allowance for structures	Safety for motorised and non-	Improving the quality and reducing the frequency of junctions removes conflicts and addresses the cluster site at Bainshole Bends directly. A high	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
					motorised users	standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. Indirect benefits for NMUs through reduced traffic on existing A96. Opportunities to cross A96 at grade-separated locations but existing NMU use is low. No change in elevation so still susceptible to winter weather.	
Ecology	Ecological constraints/receptors include four water crossings, and one small area ancient woodland.	Geotechnical	Embankments > 10m (up to 19m) in non-identified geotechnical constraint. Embankments >25m (up to 27.5m) on potentially compressible soils. Rock cuttings >19m (up to 28.5m) identified. Peat identified at Ch. 7200 – 7500.	Promoting regional economic growth	Slight improvement in access to jobs and wider strategic transport network due to journey time reduction.		
People and communities	Residential receptors: Glen Vista property grounds. Duffton Julian/Broomfold of Drumdollo Farm. Mains of Drumdollo residential property with farm outbuildings. Residential property on B922 located between Netherton and Netherton Cottages. Braestairie Farm and residential property. Residential property located just 200m from Braestairie farm. Alignment passes through mainly non-prime agricultural land. Chainage 17-000- to 17+051 is class 3.1.	Structures	10no. Underbridges 4no. Overbridges 1no. Tie in with the existing A96. Details unknown but likely to be underbridges required.	Facilitating active travel	Reduced traffic on the existing A96 will make this alignment more attractive to NMUs. Opportunities to encourage cycle journeys to Huntly, but existing population density is very low.		
Noise and air quality	There is minor or negligible potential change to level of the existing noise climate, resulting from the introduction of new roads and/or rerouting of existing traffic. Minor changes to the noise climate at Fisherford may take place, though this is a community with a medium population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. This alignment is distant from inhabited areas with population seemingly <10ppl/km.	Hydrology	Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations. The impact on bus services is dependent on junction strategy but there is potential for improvements to express services on the new route and to local services due to the separation of strategic and local traffic.		
Cultural heritage	There is a potential for this alignment to cause an impact on the setting of Gerrieswell long barrow and round cairn (SM4908). There is a potential for this alignment to cause an impact on the setting of Black Cairn (SM12172).	Utilities	2no. crossing of AC private water supplies 17no. crossing of SSE 11Kv lines 3no. crossing of SSE low voltage cables 4no. crossing of SSE low voltage lines 5no. crossing of SW distribution main (100 to 300) 14no. crossing of SW distribution main (<100) 1no. crossing of SW reservoirs 3no. wind turbines within 100m of edge of alignment	Integration	Faster journey times have the potential to improve access to the Huntly LDP allocations. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.		

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Multiple points of access from existing roads. No access for construction at CH 9750 – 11250, therefore extensive temporary works required. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Limited closure of existing local routes.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Huntly and Insch and result in lengthy diversions for local traffic.	
	Soil and geology	Small area of prime agricultural land. Small areas of mineral resources.		Extended closure of local roads and extended diversion routes required at CH 13250 – 13750. Temporary access roads required to facilitate construction.	Public acceptability	Alignments north of the Glens of Foudland were highlighted by some members of the public as an alternative which could mitigate against winter weather impacts.	

Corridor D+02 Assessment Review

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
D+02-001	Landscape	The appraisal indicates that 65% of the alignment has a Moderate adverse impact, due to long sections of earthworks of 5-15m. Major impacts occur along 15% of the alignment due to a cutting of 30m in depth, and the introduction of a new structure across Glen Water. The overall rating is Moderate adverse.	Alignment	Approx. 4km in length	Operation and inter-urban connectivity	A high standard dual carriageway, combined with a shorter distance than the existing alignment, results in a journey time improvement of 2 minutes westbound and 3 minutes eastbound, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic. High standard junctions as Huntly and Skares/Colpy will reduce conflicts and local connectivity will be maintained through grade separation.	<p><b>All alignments are dependent on linkage to D+01 alignment to complete connection north-west to Huntly.</b></p> <p><b>The preferred alignment for D+01 (D+001_004) is furthest from the D+02 alignments and a tie-in to D+02 would require crossing the same challenging terrain as the poorer performing D+01 alignments.</b></p> <p><b>There are significant difficulties in achieving a tie-in at Glens of Foudland and there appears no real benefit to pursuing this option further as it does not offer any additional advantage in terms of winter resilience. This Corridor Option is not being progressed to Second Fix.</b></p>
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential for active morphology at the crossing of the River Urie (ch.3700m) (moderate adverse).	Earthworks	Bulk Cut – 1,394,817m <sup>3</sup> Bulk Fill – 845,259m <sup>3</sup> Surplus – 549,558m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts and addresses the cluster site at Bainshole Bends directly. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. Indirect benefits for NMUs through reduced traffic on existing A96. Opportunities to cross A96 at grade-separated locations but existing NMU use is low. No change in elevation so still susceptible to winter weather.	
	Ecology	Ecological receptors/constraints include two local designated sites (Local Nature Conservation Sites), one small area of ancient woodland, and one water crossing.	Geotechnical	Embankments >25m (up to 29.9m) on potentially compressible soils. Rock cuttings >19m (up to 30m) identified.	Promoting regional economic growth	Slight improvement in access to jobs and wider strategic transport network due to journey time reduction.	
	People and communities	Demolition of Lambhill residential property. Alignment passes through areas of non-prime agricultural land ranging from class 3.2-4.2.	Structures	2no. Underbridges 1no. Overbridge	Facilitating active travel	Reduced traffic on the existing A96 will make this alignment more attractive to NMUs. Opportunities to encourage cycle journeys to Huntly, but existing population density is very low.	
	Noise and air quality	Potential minor decrease to level of current noise climate at the largest communities identified in the study area, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative low population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distant from inhabited areas with population seemingly <10ppl/km.	Hydrology	1no. River Urie watercourse crossing Numerous culverted crossings	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations. The impact on bus services is dependent on junction strategy but there is potential for improvements to express services on the new route and to local services due to the separation of strategic and local traffic.	
	Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	2no. crossing of SSE 11Kv lines 1no. crossing of SSE low voltage cables 1no. impact on Traffic Scotland assets	Integration	Faster journey times have the potential to improve access to the Huntly LDP allocations. Improving	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.	
	Plans and policies	Route entirely outwith settlement boundaries and Local Development Plan (LDP) allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	No access routes to section CH 0 – 1750 of proposed alignment. Access possible from the C87S at CH 1750 – 3750. Access possible from the existing A96 at CH 4005. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Huntly and Inch and result in lengthy diversions for local traffic.	
	Soil and geology	No negative impacts.			Public acceptability	Alignments north of the Glens of Foudland were highlighted by some members of the public as an alternative which could mitigate against winter weather impacts.	
D+02-002	Landscape	The appraisal indicates approximately 20% of the alignment as having a Major adverse impact, due to earthworks of more than 15m in depth and the introduction of at least one large structure. Moderate adverse impacts are predicted for 37% of the alignment, due to earthworks of 5-15m depth. The overall effect predicted for this alignment is Moderate adverse.	Alignment	Approx. 3.6km in length	Operation and inter-urban connectivity	A high standard dual carriageway, combined with a shorter distance than the existing alignment, results in a journey time improvement of 1-2 minutes westbound and 2-3 minutes eastbound, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic. High standard junctions as Huntly and Skares/Colpy will reduce conflicts and local connectivity will be maintained through grade separation.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential for active morphology at the crossing of the River Urie (ch.3150m) (moderate adverse).	Earthworks	Bulk Cut – 530,840m <sup>3</sup> Bulk Fill – 1,796,552m <sup>3</sup> Surplus – 1,265,713m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts and addresses the cluster site at Bainshole Bends directly. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. Indirect benefits for NMUs through reduced traffic on existing A96. Opportunities to cross A96 at grade-separated locations but existing NMU use is low. No change in elevation so still susceptible to winter weather.	
	Ecology	Ecological receptors/constraints include two local designated sites, and one water crossing.	Geotechnical	Embankments >25m (up to 35.5m) on potentially compressible soils. Rock cuttings >10m (up to 15.4m) identified. Peat identified at Ch. 0 – 150.	Promoting regional economic growth	Slight improvement in access to jobs and wider strategic transport network due to journey time reduction.	
	People and communities	Alignment passes through areas of non-prime agricultural land ranging from 3.2-4.2.	Structures	2no. Underbridges 1no. Overbridge	Facilitating active travel	Reduced traffic on the existing A96 will make this alignment more attractive to NMUs. Opportunities to encourage cycle journeys to Huntly, but existing population density is very low.	



Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Noise and air quality	Potential minor decrease to level of current noise climate at the largest communities identified in the study area, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative low population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distant from inhabited areas with population seemingly <10ppl/km.	Hydrology	1no. River Urie watercourse crossing 1no. culverted crossing	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations. The impact on bus services is dependent on junction strategy but there is potential for improvements to express services on the new route and to local services due to the separation of strategic and local traffic.	
	Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	1no. crossing of SSE 11Kv lines	Integration	Faster journey times have the potential to improve access to the Huntly LDP allocations. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	No access routes to section CH 0 – 3250 of proposed alignment. Access possible from the existing A96 at CH 3590. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Huntly and Inch and result in lengthy diversions for local traffic.	
	Soil and geology	Small area of peat, and a small area of mineral resources are present.			Public acceptability	Alignments north of the Glens of Foudland were highlighted by some members of the public as an alternative which could mitigate against winter weather impacts.	
D+02-003	Landscape	The appraisal has identified 46% of the alignment as having Moderate adverse impacts, due to a combination of earthworks of 5-15m, loss of ancient woodland and potential effects on visual receptors. Major adverse impacts are predicted for 35% of the alignment, due to the introduction of a large structure across Glen Water. The overall assessment of the alignment is therefore Moderate adverse.	Alignment	Approx. 3.2km in length	Operation and inter-urban connectivity	A high standard dual carriageway, combined with a shorter distance than the existing alignment, results in a journey time improvement of 1-2 minutes westbound and 2-3 minutes eastbound, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic. High standard junctions as Huntly and Skares/Colpy will reduce conflicts and local connectivity will be maintained through grade separation.	
	Water	No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential for active morphology at the crossing of the River Urie (ch.2800m) (moderate adverse).	Earthworks	Bulk Cut – 355,811m <sup>3</sup> Bulk Fill – 633,013m <sup>3</sup> Surplus – 277,202m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts and addresses the cluster site at Bainshole Bends directly. A high standard, more predictable dual carriageway alignment allows for	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
						overtaking opportunities which reduces accident risk and driver stress. Indirect benefits for NMUs through reduced traffic on existing A96. Opportunities to cross A96 at grade-separated locations but existing NMU use is low. No change in elevation so still susceptible to winter weather.	
	Ecology	Ecological receptors/constraints include one local designated site, one small area ancient woodland, and one water crossing.	Geotechnical	Embankments >10m (up to 19.6m) on potentially compressible soils. Cuttings >10m (up to 14.3m) identified.	Promoting regional economic growth	Slight improvement in access to jobs and wider strategic transport network due to journey time reduction.	
	People and communities	Mid Millburn residential property with outbuildings require to be demolished. Alignment passes through areas of non-prime agricultural land ranging from class 3.2-4.2.	Structures	3no. Underbridges 1no. Viaduct	Facilitating active travel	Reduced traffic on the existing A96 will make this alignment more attractive to NMUs. Opportunities to encourage cycle journeys to Huntly, but existing population density is very low.	
	Noise and air quality	Potential minor decrease to level of current noise climate at the largest communities identified in the study area, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative low population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distant from inhabited areas with population seemingly <10ppl/km.	Hydrology	1no. River Urie watercourse crossing Numerous culverted crossings and tributary diversions	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations. The impact on bus services is dependent on junction strategy but there is potential for improvements to express services on the new route and to local services due to the separation of strategic and local traffic.	
	Cultural heritage	No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	5no. crossing of SSE 11Kv lines 2no. crossing of SSE low voltage cables 1no. crossing of SSE low voltage lines	Integration	Faster journey times have the potential to improve access to the Huntly LDP allocations. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as long as appropriate junctions and crossing points are provided.	
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/Traffic Management	Construction is online and/or runs parallel to the existing C87S, therefore multiple points of access from the existing road. Access also possible from the existing A96 at CH 2750. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Extended closure of C87S and extended diversion routes required throughout. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Huntly and Insch and result in lengthy diversions for local traffic.	
	Soil and geology	Small area of mineral resources present.			Public acceptability	Alignments north of the Glens of Foudland were highlighted by some members of the public as an alternative which could mitigate against winter weather impacts.	
D+02-004	Landscape	The appraisal has identified the majority of the alignment as having Major adverse impacts, with	Alignment	Approx. 2.8km in length	Operation and inter-	A high standard dual carriageway, combined with a shorter distance than	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
		cuttings reaching depths of over 20m, and the introduction of a new large structure.			urban connectivity	the existing alignment, results in a journey time improvement of 1-2 minutes westbound and 2-3 minutes eastbound, better overtaking provision and incident management improving journey time reliability, and increased speed and efficiency of freight traffic. High standard junctions as Huntly and Skares/Colpy will reduce conflicts and local connectivity will be maintained through grade separation.	
Water		No crossings of extensive floodplain. A number of watercourse crossings of floodplain <100m wide (minor adverse). Potential for active morphology at the crossing of the River Urie (ch.2300m) (moderate adverse).	Earthworks	Bulk Cut – 1,187,099m <sup>3</sup> Bulk Fill – 1,838,655m <sup>3</sup> Surplus – 651,556m <sup>3</sup> *no allowance for structures	Safety for motorised and non-motorised users	Improving the quality and reducing the frequency of junctions removes conflicts and addresses the cluster site at Bainshole Bends directly. A high standard, more predictable dual carriageway alignment allows for overtaking opportunities which reduces accident risk and driver stress. Indirect benefits for NMUs through reduced traffic on existing A96. Opportunities to cross A96 at grade-separated locations but existing NMU use is low. No change in elevation so still susceptible to winter weather.	
Ecology		Ecological receptors/constraints include one local designated site, and one water crossing.	Geotechnical	Embankments >25m (up to 34.1m) on potentially compressible soils. Rock cuttings >19m (up to 23.3m) identified.	Promoting regional economic growth	Slight improvement in access to jobs and wider strategic transport network due to journey time reduction.	
People and communities		Alignment passes through areas of non-prime agricultural land ranging from 3.2-4.2.	Structures	1no. Viaduct	Facilitating active travel	Reduced traffic on the existing A96 will make this alignment more attractive to NMUs. Opportunities to encourage cycle journeys to Huntly, but existing population density is very low.	
Noise and air quality		Potential minor decrease to level of current noise climate at the largest communities identified in the study area, resulting from rerouting traffic via new roads. The increase to noise from the new roads, potentially impacts communities with a relative low population count.  The baseline alignment between Huntly and Inverurie is sparsely populated. The new alignment moves the road to a similarly sparsely populated area. All of the alignments are distant from inhabited areas with population seemingly <10ppl/km.	Hydrology	1no. River Urie watercourse crossing	Integration with public transport facilities	The journey time reduction improves access to Inverurie and Huntly rail stations. The impact on bus services is dependent on junction strategy but there is potential for improvements to express services on the new route and to local services due to the separation of strategic and local traffic.	
Cultural heritage		No potential for significant impacts resulting from the use of this alignment has been identified.	Utilities	9no. crossing of SSE 11Kv lines 1no. crossing of SSE low voltage lines	Integration	Faster journey times have the potential to improve access to the Huntly LDP allocations. Improving journey times and reliability fits with policy. There should be no negative impact on local accessibility policy as	

Alignment	Environment		Engineering		Traffic		Discipline Review Assessment Commentary
	Plans and policies	Route entirely outwith settlement boundaries and LDP allocations and committed development.	Construction Access & Temporary Disruption/ Traffic Management	No access routes to section CH 0 – 1500 of proposed alignment. Access possible from unclassified road at CH 1900. Access possible from the existing A96 at CH 2757. Traffic management will be required to facilitate access from A96 and local roads. Temporary diversions and temporary speed limits may be required. Extended closure of C87S and extended diversion routes required at CH 2300 – 2757. Temporary access roads required to facilitate construction.	Accessibility and social inclusion	long as appropriate junctions and crossing points are provided.  There should be no negative impact on accessibility as long as appropriate junctions and crossing points are provided. Local road network severance could impact access to services in Huntly and Inch and result in lengthy diversions for local traffic.	
	Soil and geology	No negative impacts.			Public acceptability	Alignments north of the Glens of Foudland were highlighted by some members of the public as an alternative which could mitigate against winter weather impacts.	