Appendix C

Second Fix Discipline Methodologies

Second Fix Assessment Matrix

Second Fix Appraisal Summary Sheets

Second Fix Combined Discipline Appraisal

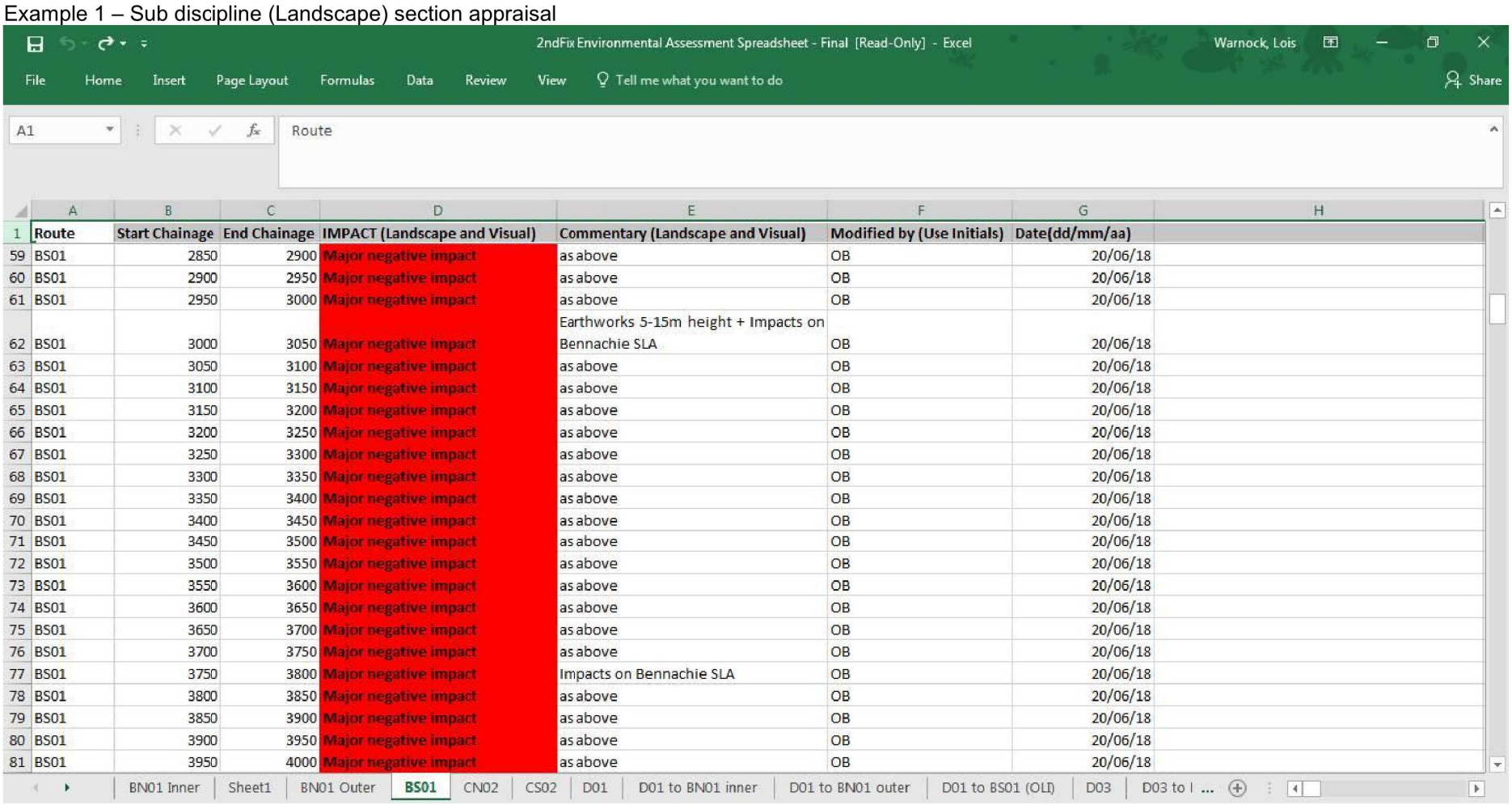
C1 Second Fix Appraisal Methodology - Environment

Appendix A – Environmental Appraisal Methodology

The environmental team methodology is consistent with the engineering team.

- Each section was broken down into 50m chainage segments
- Each environmental sub discipline used the 2nd fix metrics to assess the impacts for each 50m segment. (See Example 1 below)
- The assessment outcome for each discipline was recorded and uploaded into a master spreadsheet showing all disciplines side by side (Example 3).
- The overall environmental impact/score for each 50m was based on the following:
  - Where any discipline identified a major impact, the overall impact was major
  - Where any discipline identified a moderate impact, and there were no major impacts the overall impact was moderate
  - Where any discipline identified a minor impact, and there were no major or moderate impacts the overall impact was minor.
- The total environmental score for each 50m segment was mapped on GIS. (See 7-point scale maps also in Appendix A)
- The appraisals were supported by commentary text to explain the impacts assessed. (See Example 2 below)
- Each end to end alignment appraisal was then created by collating the sectional appraisals for each 50m segment. (See Example 3 below)
- A ranking score for each end to end alignment was obtained by taking the sum of the total score for all 50m segments in each alignment. These scores were then used to rank the end to end alignments. (See Example 4 below)

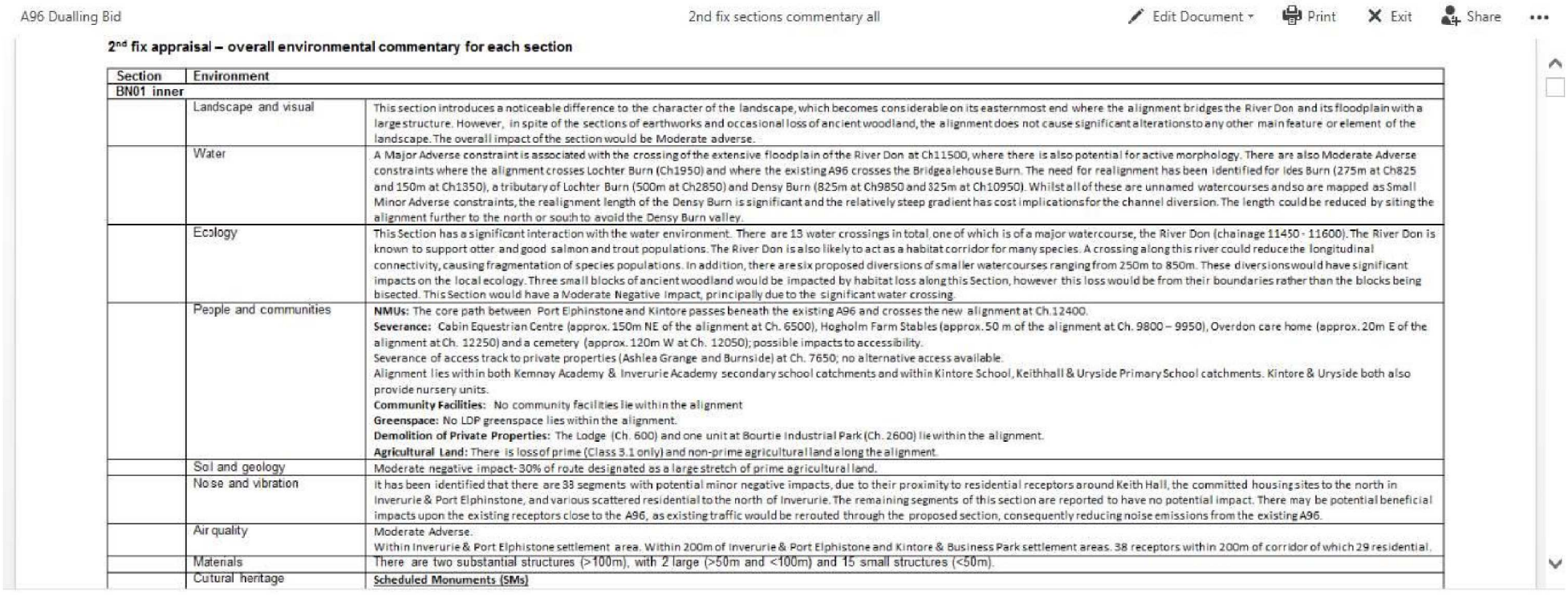
Example 1 – Sub discipline (Landscape) section appraisal



	A	B	C	D	E	F	G	H
1	Route	Start Chainage	End Chainage	IMPACT (Landscape and Visual)	Commentary (Landscape and Visual)	Modified by (Use Initials)	Date(dd/mm/aa)	
59	BS01	2850	2900	Major negative impact	as above	OB	20/06/18	
60	BS01	2900	2950	Major negative impact	as above	OB	20/06/18	
61	BS01	2950	3000	Major negative impact	as above	OB	20/06/18	
62	BS01	3000	3050	Major negative impact	Earthworks 5-15m height + Impacts on Bennachie SLA	OB	20/06/18	
63	BS01	3050	3100	Major negative impact	as above	OB	20/06/18	
64	BS01	3100	3150	Major negative impact	as above	OB	20/06/18	
65	BS01	3150	3200	Major negative impact	as above	OB	20/06/18	
66	BS01	3200	3250	Major negative impact	as above	OB	20/06/18	
67	BS01	3250	3300	Major negative impact	as above	OB	20/06/18	
68	BS01	3300	3350	Major negative impact	as above	OB	20/06/18	
69	BS01	3350	3400	Major negative impact	as above	OB	20/06/18	
70	BS01	3400	3450	Major negative impact	as above	OB	20/06/18	
71	BS01	3450	3500	Major negative impact	as above	OB	20/06/18	
72	BS01	3500	3550	Major negative impact	as above	OB	20/06/18	
73	BS01	3550	3600	Major negative impact	as above	OB	20/06/18	
74	BS01	3600	3650	Major negative impact	as above	OB	20/06/18	
75	BS01	3650	3700	Major negative impact	as above	OB	20/06/18	
76	BS01	3700	3750	Major negative impact	as above	OB	20/06/18	
77	BS01	3750	3800	Major negative impact	Impacts on Bennachie SLA	OB	20/06/18	
78	BS01	3800	3850	Major negative impact	as above	OB	20/06/18	
79	BS01	3850	3900	Major negative impact	as above	OB	20/06/18	
80	BS01	3900	3950	Major negative impact	as above	OB	20/06/18	
81	BS01	3950	4000	Major negative impact	as above	OB	20/06/18	

BN01 Inner | Sheet1 | BN01 Outer | BS01 | CN02 | CS02 | D01 | D01 to BN01 inner | D01 to BN01 outer | D01 to BS01 (OLI) | D03 | D03 to I ...

Example 2 - Supporting Commentary



2nd fix appraisal – overall environmental commentary for each section

Section	Environment	
BN01 inner		
	Landscape and visual	This section introduces a noticeable difference to the character of the landscape, which becomes considerable on its easternmost end where the alignment bridges the River Don and its floodplain with a large structure. However, in spite of the sections of earthworks and occasional loss of ancient woodland, the alignment does not cause significant alterations to any other main feature or element of the landscape. The overall impact of the section would be Moderate adverse.
	Water	A Major Adverse constraint is associated with the crossing of the extensive floodplain of the River Don at Ch11500, where there is also potential for active morphology. There are also Moderate Adverse constraints where the alignment crosses Lochter Burn (Ch1950) and where the existing A96 crosses the Bridgealehouse Burn. The need for realignment has been identified for Ides Burn (275m at Ch825 and 150m at Ch1350), a tributary of Lochter Burn (500m at Ch2850) and Densy Burn (825m at Ch9850 and 325m at Ch10950). Whilst all of these are unnamed watercourses and so are mapped as Small Minor Adverse constraints, the realignment length of the Densy Burn is significant and the relatively steep gradient has cost implications for the channel diversion. The length could be reduced by siting the alignment further to the north or south to avoid the Densy Burn valley.
	Ecology	This Section has a significant interaction with the water environment. There are 13 water crossings in total, one of which is of a major watercourse, the River Don (chainage 11450 - 11600). The River Don is known to support otter and good salmon and trout populations. The River Don is also likely to act as a habitat corridor for many species. A crossing along this river could reduce the longitudinal connectivity, causing fragmentation of species populations. In addition, there are six proposed diversions of smaller watercourses ranging from 250m to 850m. These diversions would have significant impacts on the local ecology. Three small blocks of ancient woodland would be impacted by habitat loss along this Section, however this loss would be from their boundaries rather than the blocks being bisected. This Section would have a Moderate Negative Impact, principally due to the significant water crossing.
	People and communities	**NMUs:** The core path between Port Elphinstone and Kintore passes beneath the existing A96 and crosses the new alignment at Ch.12400. **Severance:** Cabin Equestrian Centre (approx. 150m NE of the alignment at Ch. 6500), Hogholm Farm Stables (approx. 50 m of the alignment at Ch. 9800 – 9950), Overdon care home (approx. 20m E of the alignment at Ch. 12250) and a cemetery (approx. 120m W at Ch. 12050); possible impacts to accessibility. Severance of access track to private properties (Ashlea Grange and Burnside) at Ch. 7650; no alternative access available. Alignment lies within both Kemnay Academy & Inverurie Academy secondary school catchments and within Kintore School, Keithhall & Uryside Primary School catchments. Kintore & Uryside both also provide nursery units. **Community Facilities:** No community facilities lie within the alignment **Greenspace:** No LDP greenspace lies within the alignment. **Demolition of Private Properties:** The Lodge (Ch. 600) and one unit at Bourtie Industrial Park (Ch. 2600) lie within the alignment. **Agricultural Land:** There is loss of prime (Class 3.1 only) and non-prime agricultural land along the alignment.
	Soil and geology	Moderate negative impact- 30% of route designated as a large stretch of prime agricultural land.
	Noise and vibration	It has been identified that there are 38 segments with potential minor negative impacts, due to their proximity to residential receptors around Keith Hall, the committed housing sites to the north in Inverurie & Port Elphinstone, and various scattered residential to the north of Inverurie. The remaining segments of this section are reported to have no potential impact. There may be potential beneficial impacts upon the existing receptors close to the A96, as existing traffic would be rerouted through the proposed section, consequently reducing noise emissions from the existing A96.
	Air quality	Moderate Adverse. Within Inverurie & Port Elphistone settlement area. Within 200m of Inverurie & Port Elphistone and Kintore & Business Park settlement areas. 38 receptors within 200m of corridor of which 29 residential.
	Materials	There are two substantial structures (>100m), with 2 large (>50m and <100m) and 15 small structures (<50m).
	Cultural heritage	**Scheduled Monuments (SMs)**

Appendix A – Environmental Appraisal Methodology

Example 3 - End to End Appraisal created from sectional analysis

End to End Alignments (Values Only) Rev 2 [Read-Only] - Excel — Warnock, Lois

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do

AA1203 -99

	END TO END	Chainage			SECTIONS	Chainage			Cross Check																		
	Alignment_22	Start Chainage	End Chainage			Start Chainage	End Chainage		Section	Start Chainage	Comment		Landscape and visual	Water	Ecology	People and community	Ncise	Air quality	Cultural heritage	Plans and policies	Soil and geology	Other	Other	Other		Total Score	Moderated score	Comments
454	Alignment_22	22500	22550		OLC-BIN	2100	2150		OLC-BIN	2100	OK		-1	0	0	-2	0	0	-3	0	-2	0	0	0		-3	0	0
455	Alignment_22	22550	22600		OLC-BIN	2150	2200		OLC-BIN	2150	OK		-1	0	0	-2	0	0	-3	0	-2	0	0	0		-3	0	0
456	Alignment_22	22600	22650		OLC-BIN	2200	2250		OLC-BIN	2200	OK		-1	0	0	-2	0	0	-3	0	-2	0	0	0		-3	0	0
457	Alignment_22	22650	22700		OLC-BIN	2250	2300		OLC-BIN	2250	OK		-1	0	0	-2	0	0	-3	0	-2	0	0	0		-3	0	0
458	Alignment_22	22700	22750		OLC-BIN	2300	2350		OLC-BIN	2300	OK		-1	0	0	-2	0	0	-3	0	-2	0	0	0		-3	0	0
459	Alignment_22	22750	22800		OLC-BIN	2350	2400		OLC-BIN	2350	OK		-1	0	0	-2	0	0	-3	0	-2	0	0	0		-3	0	0
460	Alignment_22	22800	22850		OLC-BIN	2400	2450		OLC-BIN	2400	OK		-3	0	-2	-2	0	0	-3	0	-2	0	0	0		-3	0	0
461	Alignment_22	22850	22900		OLC-BIN	2450	2500		OLC-BIN	2450	OK		-3	-3	-2	-2	0	0	-3	0	-2	0	0	0		-3	0	0
462	Alignment_22	22900	22950		OLC-BIN	2500	2550		OLC-BIN	2500	OK		-3	-3	-2	-1	0	0	-3	0	0	0	0	0		-3	0	0
463	Alignment_22	22950	23000		OLC-BIN	2550	2600		OLC-BIN	2550	OK		-3	-3	-2	-1	0	0	-3	0	0	0	0	0		-3	0	0
464	Alignment_22	23000	23050		OLC-BIN	2600	2650		OLC-BIN	2600	OK		-3	0	-2	-1	0	0	-3	0	0	0	0	0		-3	0	0
465	Alignment_22	23050	23100		OLC-BIN	2650	2700		OLC-BIN	2650	OK		-3	0	-2	-1	0	0	-3	0	0	0	0	0		-3	0	0
466	Alignment_22	23100	23150		OLC-BIN	2700	2750		OLC-BIN	2700	OK		-3	0	-2	-1	0	0	-3	0	0	0	0	0		-3	0	0
467	Alignment_22	23150	23200		OLC-BIN	2750	2800		OLC-BIN	2750	OK		-3	0	-2	-2	0	0	-3	0	0	0	0	0		-3	0	0
468	Alignment_22	23200	23250		OLC-BIN	2800	2850		OLC-BIN	2800	OK		-3	0	-2	-2	0	0	-3	0	0	0	0	0		-3	0	0

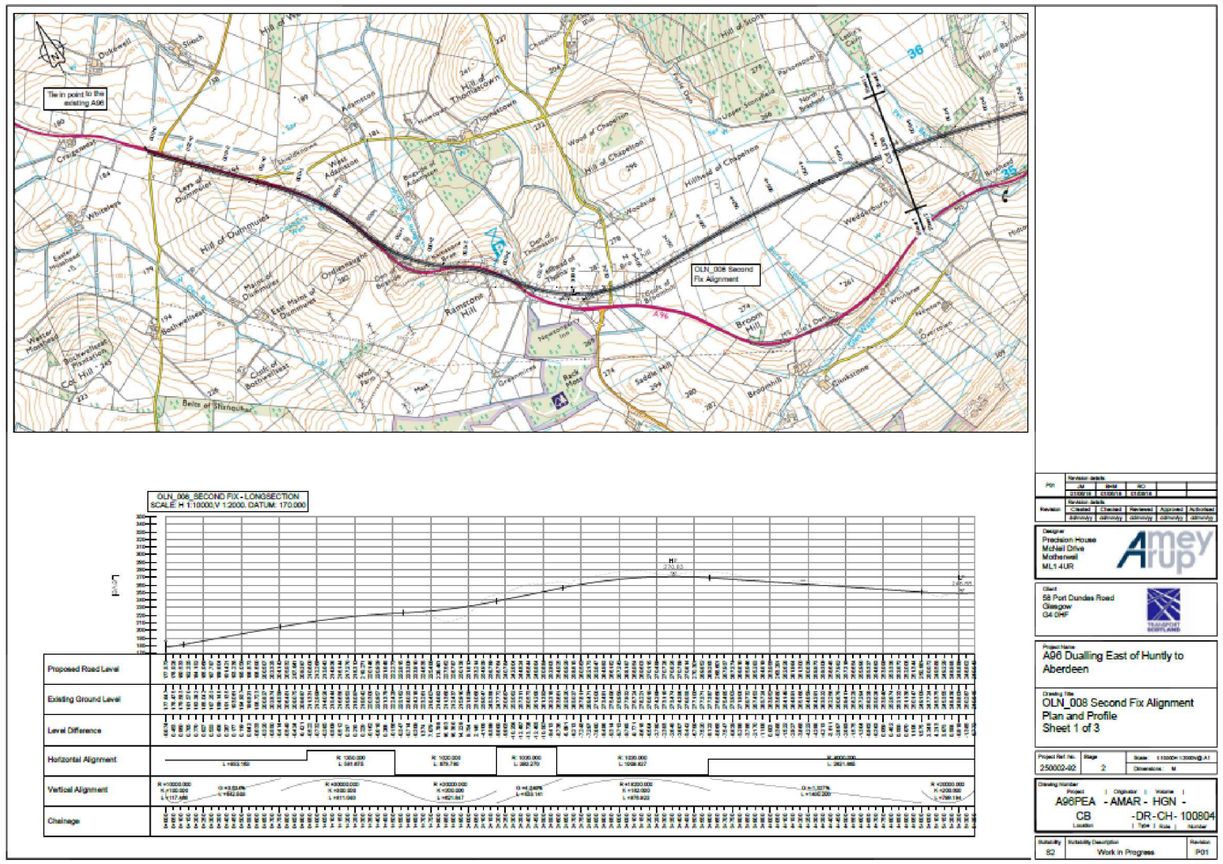
Example 4 - Alignment total scores

A96 Dualling Bid — End to End Alignments (Values Only) Rev 2

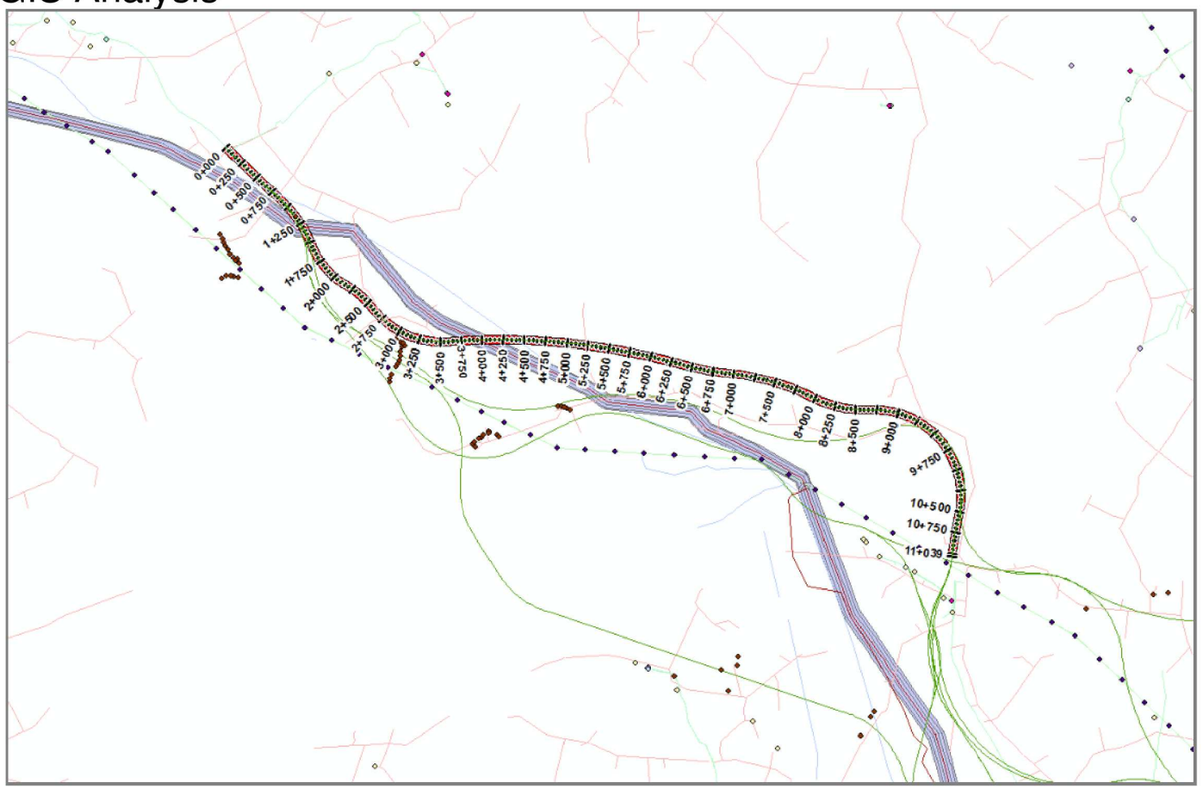
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Alignment	Total Score	Proposed road length (km)											
2	Alignment_21	-1600	39.036											
3	Alignment_67	-1612	39.479											
4	Alignment_20	-1631	39.195											
5	Alignment_93	-1642	39.21											
6	Alignment_66	-1645	39.704											
7	Alignment_10	-1662	33.299											
8	Alignment_58	-1676	33.796											
9	Alignment_92	-1677	39.435											
10	Alignment_191	-1689	39.069											
11	Alignment_190	-1700	34.204											
12	Alignment_185	-1702	33.627											
13	Alignment_60	-1703	39.569											
14	Alignment_89	-1708	33.53											
15	Alignment_196	-1720	34.703											
16	Alignment_187	-1729	39.4											
17	Alignment_188	-1729	39.977											
18	Alignment_173	-1735	39.303											
19	Alignment_194	-1749	40.476											

C2 Second Fix Appraisal Methodology - Engineering

Engineering Drawings



GIS Analysis



Level Difference

OLNN Level Differences	Rating	Numerical Rating	Lower Value	Upper Value
	Neutral	0	0	2
	Slight Adverse	-1	2	10
	Moderate Adverse	-2	10	20
	Major Adverse	-3	20	9999

Corridor	Alignment	Alignment	Start Ch	Finish Ch	Level Difference	Absolute Value	Comment	Rating
OLN	008	OLN-008	5250	5300	-0.919	0.919		0
OLN	008	OLN-008	5300	5350	-1.385	1.385		0
OLN	008	OLN-008	5350	5400	-0.772	0.772		0
OLN	008	OLN-008	5400	5450	2.008	2.008		-1
OLN	008	OLN-008	5450	5500	5.333	5.333		-1
OLN	008	OLN-008	5500	5550	8.573	8.573		-1
OLN	008	OLN-008	5550	5600	11.262	11.262		-2
OLN	008	OLN-008	5600	5650	15.258	15.258		-2
OLN	008	OLN-008	5650	5700	23.48	23.48		-3
OLN	008	OLN-008	5700	5750	27.918	27.918		-3
OLN	008	OLN-008	5750	5800	16.621	16.621		-2
OLN	008	OLN-008	5800	5850	8.468	8.468		-1
OLN	008	OLN-008	5850	5900	0.127	0.127		0
OLN	008	OLN-008	5900	5950	-8.254	8.254		-1
OLN	008	OLN-008	5950	6000	-11.23	11.23		-2
OLN	008	OLN-008	6000	6050	-11.517	11.517		-2

Geotechnical Assessment

						Material								
Start Chainage	End Chainage	Length	Earthwork	Level Difference at start chainage	Sand and/or Gravel soils	Category 1 Very Compressible or Challenging Soils	Category 2 Potentially Compressible or	Peat	Shallow Rock	Till	Artificial Ground	Landfill	RATING	Impact/Benefit
0	50	50	Cutting	-0.074						-0.074			0	No Benefit or Impact
50	100	50	Type D Structure on Till	0.453						0.453			0	No Benefit or Impact
100	150	50	Embankment	0.95						0.95			0	No Benefit or Impact
150	200	50	Embankment	0.765						0.765			0	No Benefit or Impact
200	250	50	Embankment	0.77						0.77			0	No Benefit or Impact
250	300	50	Embankment	0.927						0.927			0	No Benefit or Impact
300	350	50	Embankment	6.6						6.6			-1	Minor Negative Impact
350	400	50	Embankment	8.2						8.2			-1	Minor Negative Impact
400	450	50	Embankment	10.1						10.1			-2	Moderate Negative Impact
450	500	50	Embankment	9.7						9.7			-1	Minor Negative Impact
500	550	50	Embankment	8.8						8.8			-1	Minor Negative Impact
550	600	50	Embankment	8.2						8.2			-1	Minor Negative Impact

Standards Compliance

OLNN Standards Compliance

Rating	Numeric	Comments
Neutral	0	No deviations from the standards.
Slight Adverse	-1	Horizontal geometry relaxation (radius of 720m).
Moderate Adverse	-2	N/A
Major Adverse	-3	N/A

Corridor	Alignment	Alignment	Start Ch	Finish Ch	Comment	Rating
OLN	008	OLN-008	0	50	no	0
OLN	008	OLN-008	50	100	no	0
OLN	008	OLN-008	100	150	no	0
OLN	008	OLN-008	150	200	no	0
OLN	008	OLN-008	200	250	no	0
OLN	008	OLN-008	250	300	no	0
OLN	008	OLN-008	300	350	no	0
	008	OLN-008	350	400	no	0
	008	OLN-008	400	450	no	0
	008	OLN-008	450	500	no	0
	008	OLN-008	500	550	no	0
	008	OLN-008	550	600	no	0
	008	OLN-008	600	650	no	0
	008	OLN-008	650	700	no	0

Drainage and Hydrology

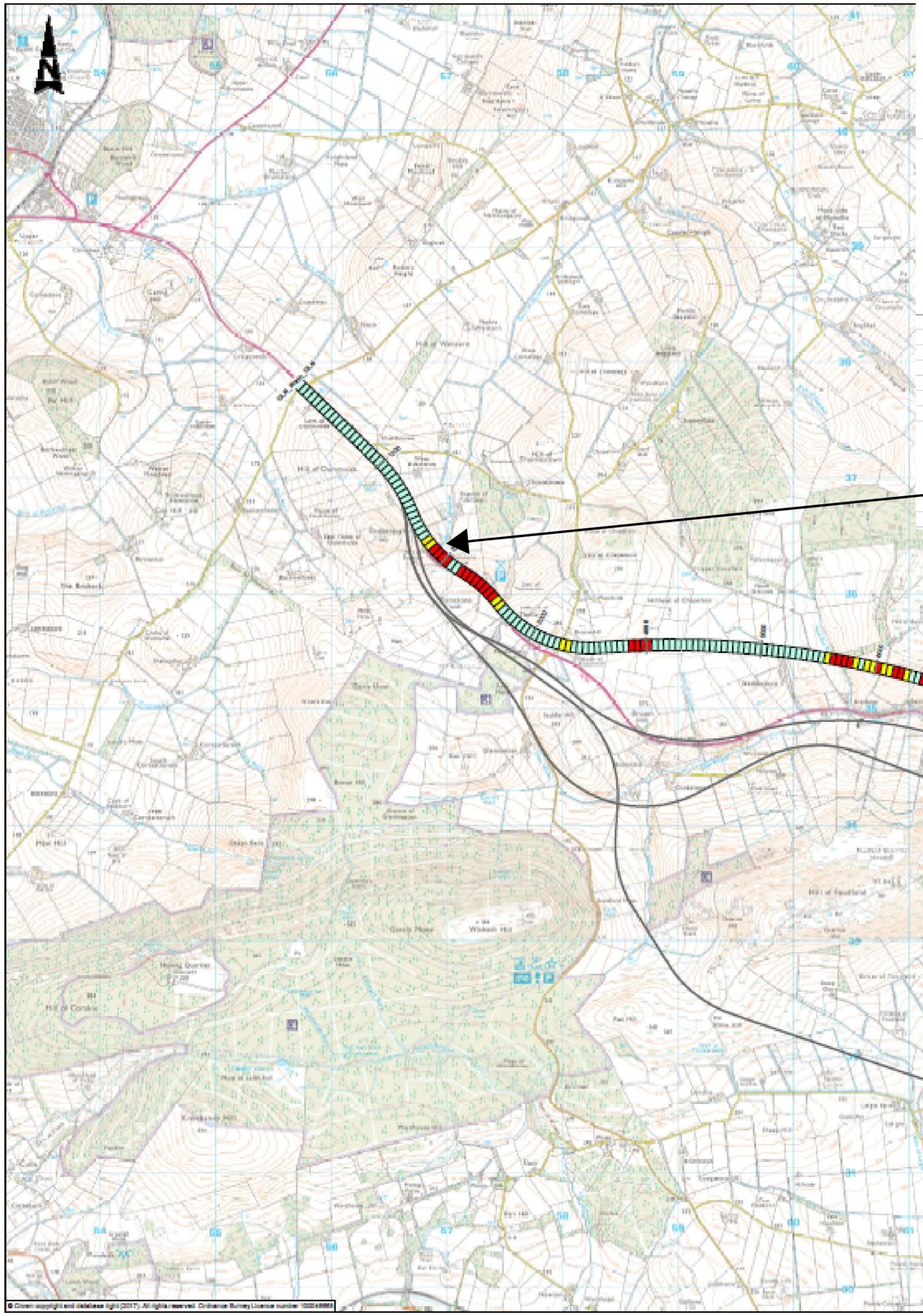
Alignment	Start Chainage	End Chainage	Length (m	Single Point Issue Chainage	Criteria	Discipline	Sub Discipline	Watercourse Name	Crossing Type	Comment	Rating
OLN-008	9000	9100	100		Feasibility	Hydrology	Floodplain	River Urie			Major Adverse
OLN-008				1875	Feasibility	Hydrology	Watercourse Crossings	Burn of Bogside	Small ø culvert		Neutral/Marginal
OLN-008				2675	Feasibility	Hydrology	Watercourse Crossings	Tributary	Small ø culvert	NOTE: The proposed road level is 6m lower than existing ground level Ch2750 – Ch2650: Assumes a 100m diversion of the Mill Burn to the north of the alignment	Neutral/Marginal
OLN-008				5100	Feasibility	Hydrology	Watercourse Crossings	Tributary	Small ø culvert		Neutral/Marginal
OLN-008				5675	Feasibility	Hydrology	Watercourse Crossings	Peterden Burn	Large Ø culvert		Neutral/Marginal
OLN-008				7300	Feasibility	Hydrology	Watercourse Crossings	Tributary	Small ø culvert	Ch9000 – Ch9100: Assumes a 100m diversion of the Mill Burn to the north of the alignment	Neutral/Marginal
OLN-008				9100	Feasibility	Hydrology	Watercourse Crossings	River Urie	Bridge		Neutral/Marginal
OLN-008				0	Feasibility	Hydrology	Attenuation	Burn of Slioch			Neutral/Marginal
OLN-008				5275	Feasibility	Hydrology	Attenuation	Glen Water			Neutral/Marginal
OLN-008				9025	Feasibility	Hydrology	Attenuation	Glen Water		There is no space at the proposed low point for attenuation. There are adjacent areas where attenuation could be provided.	Slight Adverse
OLN-008				11039	Feasibility	Hydrology	Attenuation	River Urie			Neutral/Marginal

Structures

			Start chainage	End chainage	Criteria	Discipline	Sub discipline	Comment	Rating
OLN	8	OLN-008	0	49	6. Feasibility	Structures	No structure		Neutral impact
OLN	8	OLN-008	50	79	6. Feasibility	Structures	New bridges	New underbridge over local road. Span <30m	Neutral impact
OLN	8	OLN-008	80	1649	6. Feasibility	Structures	No structure		Neutral impact
OLN	8	OLN-008	1650	1679	6. Feasibility	Structures	New bridges	New underbridge over farm road. Span <30m	Neutral impact
OLN	8	OLN-008	1680	1749	6. Feasibility	Structures	No structure		Neutral impact
OLN	8	OLN-008	1750	2049	6. Feasibility	Structures	New bridges	The appraisal assumes that large embankments will carry the elevated A96 in this location rather than a bridge	Neutral impact
OLN	8	OLN-008	2050	3249	6. Feasibility	Structures	No structure		Neutral impact
OLN	8	OLN-008	3250	3314	6. Feasibility	Structures	New bridges	New Overbridge over the A96 (Local Road) Span <65m	Slight adverse
OLN	8	OLN-008	3315	5499	6. Feasibility	Structures	No structure		Neutral impact
OLN	8	OLN-008	5500	5799	6. Feasibility	Structures	New bridges	The appraisal assumes that large embankments will carry the elevated A96 in this location rather than a bridge	Neutral impact
OLN	8	OLN-008	5800	6049	6. Feasibility	Structures	No structure		Neutral impact
OLN	8	OLN-008	6050	6114	6. Feasibility	Structures	New bridges	New Overbridge over the A96 (Farm Road) Span <65m	Slight adverse
OLN	8	OLN-008	6115	7249	6. Feasibility	Structures	No structure		Neutral impact
OLN	8	OLN-008	7250	7399	6. Feasibility	Structures	New Culvert	The appraisal assumes that large embankments will carry the elevated A96 in this location rather than a bridge	Neutral impact
OLN	8	OLN-008	7400	8849	6. Feasibility	Structures	No structure		Neutral impact
OLN	8	OLN-008	8850	9149	6. Feasibility	Structures	New bridges	New underbridge over River Urie, flood plane and local road. Length 250 m (and variable topography). Pier Height approx 22m	Moderate adverse
OLN	8	OLN-008	9150	9699	6. Feasibility	Structures	No structure		Neutral impact
OLN	8	OLN-008	9700	9764	6. Feasibility	Structures	New bridges	New Overbridge over the A96 (Local Road) Span <65m	Slight adverse

Utilities

								Rating	Start	Finish	Score
								Neutral	0	50	0
								Neutral	0	50	0
								Slight Adverse	450	450	-1
								Slight Adverse	600	850	-1
								Neutral	800	850	0
								Moderate Adverse	1300	1350	-2
								Neutral	2600	2750	0
								Neutral	2750	2750	0
								Neutral	2750	2850	0
								Neutral	2750	2800	0
								Neutral	3400	3450	0
								Major Adverse	3850	4050	-3
OLN_North_OLN	4345	4493		6. Feasibility	Utilities	SSE_HighVoltageLine33Kv	Slight Adverse Impact	Slight Adverse	4350	4500	-1
OLN_North_OLN	5216	5238		6. Feasibility	Utilities	SSE_HighVoltageLine11Kv	Neutral Impact	Neutral	5200	5250	0
OLN_North_OLN	6049	6070		6. Feasibility	Utilities	SSE_HighVoltageCable33Kv	Slight Adverse Impact	Slight Adverse	6050	6050	-1
OLN_North_OLN	6049	6070		6. Feasibility	Utilities	SSE_HighVoltageCable33Kv	Slight Adverse Impact	Slight Adverse	6050	6050	-1
OLN_North_OLN	9172	9263		6. Feasibility	Utilities	SSE_HighVoltageLine11Kv	Neutral Impact	Neutral	9150	9250	0
OLN_North_OLN	10866	10884		6. Feasibility	Utilities	SSE_HighVoltageLine11Kv	Neutral Impact	Neutral	10850	10900	0
OLN_North_OLN	11038	11038	11038	6. Feasibility	Utilities	SSE_Pylon	Pylon within 100m of end of section. Moderate adverse impact but will be within alignment of adjacent section.	Moderate Adverse	11050	11050	-2



SECTION	Chainage			Alignment	Earthworks	Geotechnics	Structures	Flooding and Drainage	Watercourse Crossings	Attenuation requirement	Utilities		Moderated Score	Comments
OLNN				Standards Compliance	Level Difference	Geotechnics	Structures	Flood Plain	Watercourse Crossings	Attenuation requirement	Utilities	Total Score		
OLNN	1650	1700	OLNN	0	0	0	0	0	0	0	0	0	0	
OLNN	1700	1750	OLNN	0	0	0	0	0	0	0	0	0	0	
OLNN	1750	1800	OLNN	0	-1	-2	0	0	0	0	0	-3	-3	Embankment of up to 12m high on Till.
OLNN	1800	1850	OLNN	0	-2	-2	0	0	0	0	0	-4	-4	Embankment of up to 16.2m high on Till.
OLNN	1850	1900	OLNN	0	-2	-3	0	0	0	0	0	-9	-9	Embankment of up to 20.7m high on Till.
OLNN	1900	1950	OLNN	0	-2	-3	0	0	0	0	0	-9	-9	Embankment of up to 24m high on Till.
OLNN	1950	2000	OLNN	0	-2	-3	0	0	0	0	0	-9	-9	Embankment of up to 23.4m high on Till.
OLNN	2000	2050	OLNN	0	-1	-3	0	0	0	0	0	-9	-9	Embankment of up to 20.4m high on Till. Embankment chases slope resulting in an overall embankment height of 20.4m, however the maximum embankment height is 12.8m
OLNN	2050	2100	OLNN	0	-1	-1	0	0	0	0	0	-2	-2	
OLNN	2100	2150	OLNN	0	-1	-1	0	0	0	0	0	-2	-2	

Kilometres 0 2 4

P01	Revision details				
	SSE	Checked	Reviewed	Approved	Authorised
	09/07/18	dd/mm/yy	dd/mm/yy	dd/mm/yy	dd/mm/yy
Revision	Revision details				
	Created	Checked	Reviewed	Approved	Authorised
	dd/mm/yy	dd/mm/yy	dd/mm/yy	dd/mm/yy	dd/mm/yy

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Project Name
A96 Dualling: East of Huntly to Aberdeen

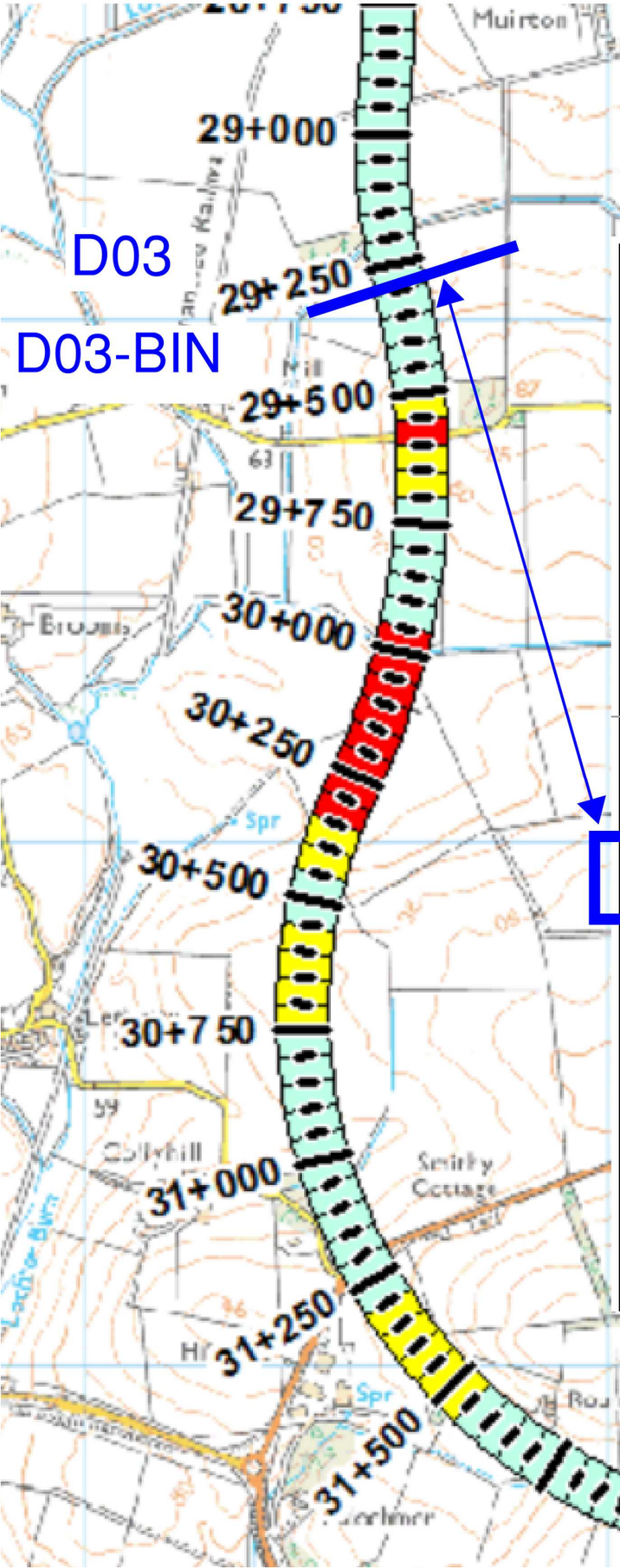
Drawing Title
OLN_North_OLN
Second Fix Alignments (Sections)
Engineering Appraisal

Project Ref. No.	Stage	Scale : 1:20,000 @A1
250002-92	Stage 2	Dimensions :

Drawing Number

Project	Originator	Volume			
A96PEA	- #	- #	-		
#	- #	- #	-	19	
Location		Type	Role	Number	

Suitability	Suitability Description	Revision
S0	Work In Progress	P01.1



END TO END	Chainage			SECTIONS	Chainage			Alignment	Earthworks	Geotechnics	Structures	Flooding and Drainage		Utilities				
Alignment_20	Start Chainage	End Chainage			Start Chainage	End Chainage		Standards Compliance	Level Difference	Geotechnics	Structures	Flood Plain	Watercourse Crossings	Attenuation requirement	Utilities	Total Score	Moderated score	Comments
Alignment_20	28950	29000		D03	14550	14600		0	0	0	0	0	0	0	0	0	0	0
Alignment_20	29000	29050		D03	14600	14650		0	0	-1	0	0	0	0	0	-1	-1	0
Alignment_20	29050	29100		D03	14650	14700		0	0	-1	0	0	0	0	0	-1	-1	0
Alignment_20	29100	29150		D03	14700	14750		0	0	-1	0	0	0	0	0	-1	-1	0
Alignment_20	29150	29200		D03	14750	14800		0	0	-1	0	0	0	0	0	-1	-1	0
Alignment_20	29200	29250		D03	14800	14850		0	-1	-1	0	0	0	0	0	-2	-2	0
Alignment_20	29250	29300		D03	14850	14900		0	-1	-1	0	0	0	0	0	-2	-2	0
Alignment_20	29300	29350		D03-BIN	0	50		0	-1	0	0	0	0	0	0	-1	-1	0
								0	-1	0	0	0	0	0	0	-1	-1	0
Alignment_20	29400	29450		D03-BIN	100	150		0	-1	0	0	0	0	0	0	-1	-1	0
Alignment_20	29450	29500		D03-BIN	150	200		0	-1	-1	0	0	0	0	0	-2	-2	0
Alignment_20	29500	29550		D03-BIN	200	250		0	-1	-2	0	0	0	0	0	-3	-3	Cutting of up to -12.2m deep through Shallow Rock. Serpentinite and Tremolite
Alignment_20	29550	29600		D03-BIN	250	300		0	-2	-2	0	0	0	0	-3	-9	-9	National Grid 1050mm pipeline crossing. Proposed road level between 10 and 11m lower than existing. Diversion will be required to accommodate this crossing. Cutting of up to -14.3m deep through Shallow Rock. Serpentinite and Tremolite
Alignment_20	29600	29650		D03-BIN	300	350		0	-2	-1	-1	0	0	0	-1	-5	-5	Overbridge for local road over A96. Spans <65m through Shallow Rock. Serpentinite and

Engineering marking 1-52 then undertaken by summing the clusters of red and amber scores to determine the order of impact.

C3 Second Fix Appraisal Methodology - Transportation

Appendix A – Traffic Appraisal Methodology

Traffic Appraisal Process

- 12 sub-criteria for the Scheme Objectives and 5 STAG Criteria assessed both qualitatively and quantitively as detailed in Tables T1 and T2 overleaf
- Quantitative appraisal uses outputs from A96 traffic model (CRAM v1.3) to determine changes in travel time, veh-kms, and traffic volumes between the 2030 Do-Min and Do-Something models.
- 52 alignments were aggregated into 20 groups with similar characteristics for modelling in CRAM
- Journey times have been extracted both along the whole route, (A96 Huntly to Craibstone) and between major trip attractors and generators (e.g Insch to Inverurie, Inverurie to Aberdeen).
- Transport user benefits calculated over 60 year period using TUBA to monetise changes in journey time and vehicle operating costs. Outputs were used to generate a relative scale of Cost-Benefit (indexed), rather than using absolute monetary values.
- Accident benefits calculated using changes in veh-km's and local accident rate on the existing A96, accident benefits not monetised at this stage.
- BCR index for each of the 52 alignments calculated using high level construction costs provided by engineering team.

Modelled Routes- Grouped Alignments

Routes Modelled	Grouped Routes		Routes Modelled	Grouped Routes
164	*164, 41 & 138*		27	*27, 22 & 135*
118	*118*		195	*195, 186 & 189*
129	*129,45,83*		126	*126, 125 & 127*
193	*193, 28 & 140*		66	*66, 92 & 20*
108	*108*		192	*192, 73 & 144*
131	*131, 31 & 53*		181	*181*
58	*58, 10 & 89*		55	*55, 26 & 136*
190	*190, 185 & 196*		187	*187, 188 & 194*
143	*143, 23 & 72*		60	*60, 173 & 191*
180	*180*		93	*93, 21 & 67*

Traffic Ranking Process

- Each of the metrics have been appraised using the 7 point scale and scored from -3 (Major Negative) to +3 (Major Positive).
- Some alignments are less successful than others in attracting traffic, for example alignment 181 which is quite circuitous, routing via CN02, OLC offline and BN01. To take account of this the following metrics have been reduced by 1 step accordingly:
    - SO1.5 - Reduced conflicts between local traffic and strategic journeys
    - SO2.3 - Reduced potential conflicts between motorised and non-motorised users

The 17 scores for each of the alignments have been added together to give an overall total for the traffic appraisal and ranked from highest (best performing) to lowest (poorer performing). Note: this produces a number of equally ranked alignments.

Traffic Appraisal – Summary

- All alignments produce positive scores, mainly as they are all modern dual carriageways with grade separated junctions.
- The only criteria that had negative scores for some alignments is Public Acceptability. For example, the impact of an alignment on Bennachie was identified as a major concern at public consultation.
- Routes that travel around the north of Inverurie succeed in relieving congestion in Inverurie, whilst routes to the south do not.
- Routes to the south of Inverurie, (particularly CS02), deliver the greatest improvements in end-to-end journey times, but are also likely to gain the least public support.

Appendix A – Traffic Appraisal Methodology

Table T1 – Second Fix Traffic Metrics Applied to Scheme Objectives

Scheme Objective	Sub-Objectives	Metric Applied	Scale of Metric
SO1 - To improve the operation of the A96 and inter-urban connectivity through:	Reduced journey times (JTs)	Quantitative – 2030 peak modelled JTs between Huntly and Craibstone compared to Do Min (CRAM v1.3)	Major Benefit = Average JT savings > 10 mins Moderate Benefit = Average JT savings of 8 - 10 mins No JT savings less than 8 mins
	Improved journey time reliability	Quantitative – Difference between 2030 Inter peak and 2030 peak modelled JTs between Huntly and Craibstone compared to Do Min (CRAM v1.3)	Major Benefit = Difference in average JTs reduced by over 5 mins. (Difference in average JTs reduced from 8.5 mins in the Do Min to approximately 2 mins in all options)
	Increased overtaking opportunities	Quantitative – Percentage increase in the number of vehicle kilometres (veh/kms) travelled on dual carriageways in 2030 relative to the Do-Min (CRAM v1.3)	Major Benefit = Increased veh/kms travelled greater than 224M (110%). Moderate Benefit = Increase in veh/kms travelled between 212M (100%) and 224M (110%). Minor Benefit = Increase in veh kms travelled < 212M (100%). (Lowest percentage increase is 86%)
	*Improved efficiency of freight movement along the transport corridor	2 part assessment Part 1: Quantitative – Freight User Benefits estimated using TUBA (from CRAM v1.3 outputs for Do min v Do Something) and scaled to give major, moderate and minor benefit relative to other options. Part 2: The scale of the freight user benefits is adjusted to take account of the impacts of uphill gradients of 2% or more on driving efficiency.	Part 1: Initial estimate of Major, Moderate or Minor Impact based on TUBA outputs Part 2: Major Impact = >5.5km of gradient at 2% or more (move down a scale) Moderate Impact = 3 to 5.5km of gradient at 2% or more (no change in scale) Minor Impact = 1 to 3km of gradient at 2% or more (move up a scale)
	*Reduced conflicts between local traffic and strategic journeys	2 part assessment Part 1: Quantitative – Select Link Analysis in 2030 CRAM v1.3 to determine average peak hr trip length of journeys on existing A96 passing through links at Pitmachie, Pitcaple and north of Blackhall compared to the Do Min. Reductions in average trip lengths for vehicles remaining on the existing A96 and passing through the links are an indication of the level of strategic trips reassigning to the new dual carriageway. Part 2: The scale of the benefit is adjusted by moving down a step when low levels of traffic (< 27%) re-assigning away from the existing A96 at Inverurie to the new dual carriageway	Part 1: Major Benefit = percentage reduction in average trip length>50% Moderate Benefit = percentage reduction in average trip length between 30% - 50% Minor Benefit = percentage reduction in average trip length between 10% and 30% (Lowest percentage reduction in trip lengths remaining on the existing A96 is 26%) Part 2: Alignments which attract <27% of traffic away from existing A96 through Inverurie are moved down one step on the benefit scale.
	Improved network resilience	*Assessed by Engineering*	~
SO2 - To improve safety for motorised and non-motorised users through:	Reduced accident rates and severity	Quasi Quantitative – Net reduction in Personal Injury Accidents (PIA) per year. Change in existing accident rate on the existing A96 assumed to be proportionate to change in traffic volumes (from 2030 CRAM v1.3). COBA default accident rates applied to length of new dual carriageway. Change in accident severities not quantified at this stage. Quantitative appraisal using COBALT will be undertaken at Full DMRB Stage 2 to monetise the change in accident rates and severity for each of the alignments.	Major Benefit = Net reduction in personal injury accidents (PIA) per year > 17.5 Moderate Benefit = Net reduction in personal injury accidents (PIA) per year > 15.5 < 17.5 Minor Benefit = Net reduction in personal injury accidents (PIA) per year < 15.5.
	Reduced driver stress	Qualitative - Driver stress likely to be reduced through; - provision of consistent overtaking opportunity - improvement in layout reduction in number of junction and accesses - dual carriageway allows consistent and predictable driving conditions - potential reduction in peak time congestion - avoids peak time congestion at Port Elphinstone and Blackhall Roundabouts at Inverurie Driver stress will be assessed quantitatively at a later stage as part of the Case for Investment.	All 52 alignments offer Major Benefits and reduce driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.
	*Reduced potential conflicts between motorised and non-motorised users	2 Part Assessment Part 1: There are a number of locations where each alignment would cross existing footways, footpaths and cycle paths, however, at this stage it is assumed that suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. For the purposes of this assessment it is assumed that all alignments will offer a 'Minor benefit'. Part 2: The scale of the benefit is adjusted by moving it down a step when low levels of traffic (< 27%) re-assigning away from the existing A96 at Inverurie to the new dual carriageway	Part 1: All 52 alignments have the potential to generate Minor Benefits in the reduction of conflicts between motorised and non-motorised users as a result of improvements in NMU facilities and traffic reassigning away from the existing A96 to the new dual carriageway. Part 2: Alignments which attract <27% of traffic away from existing A96 through Inverurie are moved down one step on the benefit scale (scored neutral)
SO3 – To provide opportunities to grow the regional economies on the corridor through:	Improved access to the wider strategic transport network	Quantitative – Change in journey times from key trip generators to reach strategic transport infrastructure. Scoring based on the average change in AM plus PM peak journey times between a wide-ranging sample of population centres and other strategic transport networks. (AWPR, railway stations, Aberdeen Port, Craibstone Park and Choose)	Major Benefit = Average JT savings > 13% (about 3 minutes) Moderate Benefit = Average JT savings between 8% (about 1 minute 45 seconds) and 13% No JT savings less than 8%
	Enhanced access to jobs and services	Quantitative – Change in journey times from key trip generators to reach centres for jobs and services. Scoring based on the average change in AM plus PM peak journey times between a wide-ranging sample of population centres to town centres, industrial and employment areas.	Major Benefit = Average JT savings > 13% (about 3 minutes) Moderate Benefit = Average JT savings between 8% (about 1 minute 45 seconds) and 13% No JT savings less than 8%
SO4 – To facilitate active travel in the corridor	~	Qualitative – Reductions in traffic on local roads may result in conditions that could encourage more active travel to be undertaken within the corridor. The impact of the change in vehicles per day (vpd) is looked at for Insch (Drumrossie Street) and Inverurie (Blackhall Road, Burghmuir Drive, Oldmeldrum Road and Port Elphinstone Road)	Major Benefit = Aggregate change in vpd of >7000 fewer vehicles. Moderate Benefit = Aggregate change in vpd of >4000 and <7000 fewer vehicles. Minor Benefit = Aggregate change in vpd of >1000 and <4000 fewer vehicles. No alignment creates < 1000 fewer vpd.
SO5 – To facilitate integration with public transport facilities	~	Quantitative – Change in journey times from key trip generators to reach public transport interchanges. Scoring based on average change in AM plus PM peak journey times between a wide-ranging sample of population centres and key public transport interchanges (Railway stations at Huntly, Insch, Inverurie and Kintore. Bus services from Inverurie and Craibstone Park and Choose). (Average is -14%)	Major Benefit = Average JT savings > 13% (about 3 minutes) All JT savings to public transport facilities are in excess of 13%

SO6 - To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:	The communities and people in the corridor	*Assessed by Environmental under STAG1*	~
	Natural and cultural heritage assets		~

Table T2 – Second Fix Traffic Metrics Applied to STAG Criteria

STAG Criteria	**Sub-Criteria**	**Metric Applied**	**Scale of Metric**
STAG1 - Environment	See Environmental Appraisal Methodology	Assessed by Environmental	~
STAG2 - Safety	Reduced accident rates and severity	Considered under SO2.1	~
	Security	Qualitative – Improved laybys and NMU facilities will improve personal security for all road users	All 52 alignments offer Minor Benefits in personal security equally.
STAG3 - Economy	Transport Economic Efficiencies (TEE)	Estimated costs and benefits (the latter derived from TUBA using outputs from CRAM v1.3 Do min v Do Something models) on a scale of major, moderate and minor (relative to all other alignments).	Initial estimate of Major, Moderate or Minor
	Wider Economic Impacts (WEIs)	Considered under Case for Investment	~
STAG4 - Integration	Transport Integration	Considered under SO5	~
	Policy and Land-Use Integration	3 part assessment: Part 1: Qualitative - fit with National, Regional and Local policies and directives Part 2: Quantitative - The Aberdeenshire LDP identifies the reduction of traffic congestion in Inverurie as a key aspiration. Part 2 compares traffic flows in Inverurie town centre using CRAMv1.3 Do Min and Do Something models to inform change in traffic levels in the town centre to determine how well the option contributes to the LDP aim.. Part 3: Qualitative: The Aberdeenshire LDP identifies a desire for an eastern bypass of Inverurie. If the option does not accommodate an eastern bypass, the score is dropped by one mark.	Part 1: All alignments align with current policy and landuse allocations Part 2: Major Benefit = Traffic reduction of >1000 veh/day in Inverurie town centre Moderate Benefit = Traffic reduction of 700-1000 veh/day in Inverurie town centre Minor Benefit = Traffic reduction of 400-700 veh/day in Inverurie town centre Part 3: If alignment does not provide an eastern bypass of Inverurie, score is dropped by one mark.
STAG5 – Accessibility and Social Inclusion	Reduce conflicts between strategic traffic and Non-Motorised Users in urban areas	Quasi Quantitative – changes in traffic on local roads may result in conditions that could encourage more active travel to be undertaken within the corridor. The aggregated impact of the change in vehicle volumes during the modelling periods is looked at for Insch (Drumrossie Street) and Inverurie (east of Blackhall Roundabout, Oldmeldrum Road approach to potential junction locations and east of Port Elphinstone Roundabout)	Major Benefit = Reduction in traffic flows routing through urban areas to access new dual carriageway in modelled periods > 850 vehicles Moderate Benefit Reduction in traffic flows routing through urban areas to access new dual carriageway between 500 and 850 vehicles. Minor Benefit = Reduction in traffic flows routing through urban areas to access new dual carriageway between 150 and 500 vehicles. Neutral = As above with change in traffic flows routing through urban areas to access new dual carriageway between +150 and – 150 vehicles. There are no increase in traffic flows in urban areas in excess of 150 vehicles.
STAG5 – Accessibility and Social Inclusion	Environmental impact of people and communities	Assessed by Environmental under STAG1	~
STAG6 – Feasibility	See Engineering Appraisal Methodology	Assessed by Engineering	~
STAG7 – Affordability	See Engineering Appraisal Methodology	Assessed by Engineering	~
STAG8 - Public Acceptability	Feedback from DMRB Stage 1 Public and Stakeholder Consultation and AmeyArup Meet the Team event	Qualitative – Potential to generate public concern over proximity to properties, agricultural land, scheduled monuments, historic battlefields, woodlands habitats and recreational areas, in particular Bennachie. Inability to relieve congestion in Inverurie and failure to maximise re-use of existing road infrastructure.	Major Benefit = Proactively addresses concerns and facilitates opportunities. Very likely to receive public support. Moderate Benefit = Proactively addresses many concerns. Likely to receive public support. Minor Benefit = Addresses key concerns identified in feedback. Likely to receive public support. Neutral = option does not impact on key issues identified Minor Negative =Does not address some key concerns identified in feedback. Public support may be limited. Moderate Negative = Does not address many key concerns identified in feedback. Unlikely to receive public support. Major Negative = Does not address most key concerns identified in feedback. Unlikely to receive public support.

C4 Second Fix Assessment Metrics

A96 East of Huntly to Aberdeen

Second Fix Assessment Matrix

		Criteria		Metric Owner	Metric Type	Assessment method: Whole Alignment / Chainage Specific	Metric	Major Adverse Impact	Moderate Adverse Impact	Minor Adverse Impact	Neutral Impact	Minor Beneficial Impact	Moderate Beneficial Impact	Major Beneficial Impact	Notes
Scheme Objectives	1	**To improve the operation of the A96 and inter-urban connectivity through:**	Reduced journey times	Traffic & Economics	Quantitative	By Whole Alignment	Change in peak period journey time between Huntly to Craibstone and vice versa in PM peak relative to Do Minimum.	Increase in JT of over 10 mins	Increase in JT of 8-10 mins	Increase in JT of 2 - 8mins	0 -2 mins	Reduction in JT of 2 - 8 mins	Reduction in JT of 8-10 mins	Reduction in JT of over 10 mins	CRAM model journey times in year of opening. CRAM v1.3 cordoned to the scheme area.
			Improved journey time reliability	Traffic & Economics	Quantitative	By Whole Alignment	Difference between peak period and interpeak modelled journey times in the Do Something compared to the equivalent in the Do Minimum. Uses journey times from CRAM v1.3 cordoned to the scheme area.	N/A	N/A	N/A	variation of 7.5 to 9 minutes	variation of 5 to 7.5 minutes	variation of 2.5 to 5 minutes	variation of <2.5 minutes	CRAM model journey times in year of opening. CRAM v1.3 cordoned to the scheme area.
			Increased overtaking opportunities;	Traffic & Economics	Quantitative	By Whole Alignment	Increase in the number of vehicle kilometres (veh/kms) travelled on dual carriageways in the Scheme Opening Year (2030) relative to the Do-Min.	N/A	N/A	N/A	No change	Increase of <90%	Increase of 90 to 105%	Increase of 105 to 120%	This method takes account of both the increase in length of dual carriageway provided and the increase in the number of vehicles using dual carriageway in the Do Something.
			Improved efficiency of freight movements along the transport corridor;	Traffic & Economics	Quantitative	By Whole Alignment	Economic benefits to freight based on CRAM v1.3 outputs for freight users (BCR indexed to 100).	N/A	N/A	N/A	0	0-33	33-66	66-100	This metric is used as Part 1 Assessment for Scheme Objective 1.4. Benefits to freight traffic is calculated using outputs from CRAM v1.3 and TUBA economic appraisal software. TUBA BCR outputs were indexed to 100 to provide a scale for comparison (BCRs are not to be reported as absolute values at this stage).
				Traffic & Economics	Quantitative	By Whole Alignment	Potential impact of steep gradients/undulating profile on freight speeds.Proportion of alignment with gradient of >2%.	> 4.5km of gradient >2%	3-4.5km of gradient >2%	1-3km of gradient >2%	0-1km of gradient >2%	N/A	N/A	N/A	This metric is used to adjust the score for economic impact on freight (Part 2 Assessment against SO 1.4). - Where hilliness is 'Major' (> 4.5km), the scale of benefit from Part 1 is moved down 1 scale. - Where hilliness is 'Moderate' (3-4.5km), no change to scale of benefit. - Where hilliness is 'Minor' the scale of the benefit is moved up one level.
			Reduced conflicts between local traffic and strategic journeys	Traffic & Economics	Quantitative	By Whole Alignment	Change in trip lengths for trips passing through links at Pitmachie, Pitcaple and north of Blackhall on the existing A96, compared to the Do Min (for average peak hour).	N/A	N/A	N/A	reduction in average trip length <10%*	reduction in average trip length 10-30%*	reduction in average trip length 30-50%*	reduction in average trip length >50%*	Two Part assessment Part 1 - change in trip length at Pitmachie, Pitcaple and north of Blackhall which are considered key locations for local traffic joining, leaving or crossing the existing A96. Select link analysis is used to identify reductions in trip lengths for vehicles remaining on the existing A96 as an indication of the level of strategic trips reassigning to the new dual carriageway. Part 2 - The scale of the benefit is adjusted by moving it down one grade when low levels of traffic (< 27%) re-assigning away from the existing A96 at Inverurie to the new dual carriageway. *metric for Part 1 assessment
			Improved network resilience	Engineering & Environmental	Qualitative	By Corridor	1. Does the route have adequate operational resilience? 2. Does the route have adequate winter resilience? 3. Does the route have adequate climate change resilience?	A comparative appraisal of resilience is not made within the Second Fix Appraisal. Resilience is considered as Operational resilience, Winter resilience and Climate change resilience. As described below, a new dual carriageway on any of the alignments will deliver a major beneficial impact in relation to resilience in comparison to the existing A96. 1. Operational resilience - All alignments will utilise a consistent cross section of a Category 7A dual carriageway designed in compliance with standards. This has the following benefits: - Second lane allows safe overtaking opportunities, reducing likelihood of traffic accidents - High standard alignment design reduces likelihood of accidents - Second lane allows continued use of route in event of routine maintenance, breakdown or minor traffic accident - Second lane limits the likelihood of full closure and need to utilise alternative diversion routes. - Second lane, or contraflow running, allows routine or exceptional maintenance to be carried out safely and efficiently. 2. Winter resilience - All alignments will be designed to minimise incursion of drifting snow onto the highway. - Second lane allows clearance of snow - All alignments will be designed to minimise disruption to the road by onerous rainfall events, in line with established best practice. - High standard alignment design will avoid steep gradients and consider the effects of wind in exposed areas 3. Cimate change resilience - All alignments will be designed in accordance with current best practice in relation to exceedance drainage events and other weather related issues (wind, rainfall)							
	2	**To improve safety for motorised and Non-Motorised Users through:**	Reduced accident rates and severity	Traffic & Economics	Quantitative	By Whole Alignment	Change in the number of Personal Injury Accidents (PIA) on the new dual carriageway and detrunked A96 routes	N/A	N/A	N/A	No change	Net reduction in personal injury accidents (PIA) per year < 15.5	Net reduction in personal injury accidents (PIA) per year 15.5 - 17.5	Net reduction in personal injury accidents (PIA) per year > 17.5	High level accident analysis based on Personal Injury Accident (PIA) data provided by Transport Scotland and COBA default accident rates by road type. Change in the number of PIA on the existing A96 is assumed to be proportionate to change in traffic volumes (from 2030 CRAM v1.3). On the new A96, COBA default accident rates to be applied to length of new dual carriageway and anticipated traffic volumes from CRAM used to quantify the number of accidents on the new A96. Change in accident severities not quantified at this stage. Quantitative appraisal using COBALT will be undertaken at Full DMRB Stage 2 to monetise the change in accident rates and severity for each of the alignments.
			Reduced driver stress	Traffic & Economics	Quantitative	By Whole Alignment	Provision of consistent overtaking opportunity and more predictable driving conditions, improved alignment, reduced number of junctions and accesses, and the avoidance of peak time congestion at Port Elphinstone and Blackhall Roundabouts at Inverurie	N/A	N/A	N/A	N/A	All alignments	N/A	N/A	Driver stress is assumed to be reduced similarly in all alignments through provision of consistent overtaking opportunity and more predictable driving conditions, improved alignment, reduced number of junctions and accesses, and the avoidance of peak time congestion at Port Elphinstone and Blackhall Roundabouts at Inverurie
			Reduced potential conflicts between Motorised and Non Motorised Users	Traffic & Economics	Quantitative	By Whole Alignment	% re-assignment to new A96 at Inverurie	N/A	N/A	N/A	All alignments which have <27% re-assignment away from existing A96 at Inverurie	All alignments which have >27% re-assignment away from existing A96 at Inverurie	N/A	N/A	At this stage it is assumed that suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users and all alignments are assumed to offer minor benefit. The scale of the benefit has been adjusted down one step when low levels of traffic (< 27%) re-assigning away from the existing A96 at Inverurie to the new dual carriageway.

A96 East of Huntly to Aberdeen
Second Fix Assessment Matrix

		Criteria		Metric Owner	Metric Type	Assessment method: Whole Alignment / Chainage Specific	Metric	Major Adverse Impact	Moderate Adverse Impact	Minor Adverse Impact	Neutral Impact	Minor Beneficial Impact	Moderate Beneficial Impact	Major Beneficial Impact	Notes
	3	**To provide opportunities to grow the regional economies on the corridor through:**	Improved access to the wider strategic transport network	Traffic & Economics	Quantitative	By Whole Alignment	Change in journey times from key trip generators to reach strategic transport infrastructure	Average journey time increase of > 13%	Average journey time increase of 8 - 13%	Average journey time increase of <8%	No change	Average journey time savings <8%	Average journey time savings of 8 - 13%	Average journey time savings of > 13%	Main access points to the wider strategic transport network assumed to be Aberdeen city centre, Dyce Park and Ride, Craibstone Roundabout (AWPR), Inverurie and Huntly. These access points represent key interchanges for private and public transport modes. Scoring based on the average change in AM plus PM peak journey times between a wide-ranging sample of population centres and strategic transport access points.
			Enhanced access to jobs and services	Traffic & Economics	Quantitative	By Whole Alignment	Change in journey time between main population centres and key employment and service areas	Average journey time increase of > 13%	Average journey time increase of 8 - 13%	Average journey time increase of <8%	No change	Average journey time savings <8%	Average journey time savings of 8 - 13%	Average journey time savings of > 13%	Similar assessment to SO3.1. Key origin/destinations are Aberdeen, Dyce, Kintore, Inverurie, Oldmeldrum, Kemnay, Insch and Huntly.
	4	**To facilitate active travel in the corridor.**		Traffic & Economi	Quantitative	By Whole Alignment	Change in traffic volumes in Insch and Inverurie town centres.	Aggregate increase in traffic flows of >7000 vpd	Aggregate increase in traffic flows of 4000 - 7000 vpd	Aggregate increase in traffic flows of <4000 vpd	No change	Aggregate reduction in traffic flows of <4000 vpd	Aggregate reduction in traffic flows of 4000 - 7000 vpd	Aggregate reduction in traffic flows of >7000 vpd	Potential to encourage greater uptake of walking and cycling in urban areas where traffic flows are reduced. There is also potential to accommodate on-road cycle facilities where traffic flows are lower. The impact of the change in vehicles per day (vpd) is considered at Insch (Drumrossie Street) and Inverurie (Blackhall Road, Burghmuir Drive, Oldmeldrum Road and Port Elphinstone Road) and reported as an absolute change in the volume of traffic at these locations.
	5	**To facilitate integration with Public Transport Facilities.**		Traffic & Economi	Quantitative	By Whole Alignment	Change in journey times from key trip generators to reach public transport interchanges.	Average journey time increase of > 13%	Average journey time increase of 8 - 13%	Average journey time increase of <8%	No change	Average journey time savings <8%	Average journey time savings of 8 - 13%	Average journey time savings of > 13%	Scoring based on average change in AM plus PM peak journey times between a wide-ranging sample of population centres and key public transport interchanges (Railway stations at Huntly, Insch, Inverurie and Kintore. Bus services from Inverurie and Craibstone Park and Choose).
	6	**To avoid significant environmental impacts and, where this is not possible, to minimise**	the communities and people in the corridor;	Environmental				n/a (see STAG Environmental)	n/a (see STAG Environmental)	n/a (see STAG Environmental)	n/a (see STAG Environmental)	n/a (see STAG Environmental)	n/a (see STAG Environmental)	n/a (see STAG Environmental)	
			natural and cultural heritage assets.	Environmental				n/a (see STAG Environmental)	n/a (see STAG Environmental)	n/a (see STAG Environmental)	n/a (see STAG Environmental)	n/a (see STAG Environmental)	n/a (see STAG Environmental)	n/a (see STAG Environmental)	
STAG Criteria	1	**Environment**	Air quality	Environmental	Quantitative	By whole alignment with constraints identified at particular chainages		Adverse to large number of receptors and route <50m from new agglomeration	Adverse to large number of receptors and route 50-200m from new agglomeration Adverse to medium number of receptors and route <200 from new agglomeration	Adverse to low number of receptors and route <200m from new agglomeration	Adverse/benefit to low number of receptors and route >200m from new agglomeration	Benefit to low number of receptors and route <200m from new agglomeration	Benefit to large number of receptors and route <200m from new agglomeration Benefit to medium number of receptors and route <200 from new agglomeration	Benefit to large number of receptors and route >200m from new agglomeration	
			Noise and vibration	Environmental	Quantitative	By whole alignment with contraints identified at particular chainages		Introduction of roads and increase of noise to large population count	Introduction of roads and increase of noise to medium population count	Introduction of roads and increase of noise to low population count	No considerable difference between existing situation and proposed alignment	Decrease of noise at low population count	Decrease of noise at medium population count	Decrease of noise at high population count	
			People & Communities	Environmental	Qualitative	By whole alignment with constraints identified at particular chainages		Demolition of any community facility (e.g hospital, school, doctor surgery, church, aged person home, shops). Demolition of private property.	3 or more interactions or crossings of the same core path, PROW and/or cycle path. Loss of LDP protected greenspace. Loss of prime agricultural land.	Up to 2 crossings or interactions with the same core path, PROW and/or Cycle path. Loss of LDP greenspace. Loss of non-prime agricultural land.	No crossing of core paths and/or cycle routes. No community facilities located within alignment. No recognised greenspace impacted. No demolition of private property required.	NA	NA	NA	
			Policies and Plans	Environmental	Quantitative	By whole alignment with contraints identified at particular chainages		Alignments which pass through land subject to LDP allocations and/or land subject to local or major development planning permission.	Alignments which pass in close proximity to LDP allocations and/or and subject to local or major development planning permission.	Alignments which pass in proximity to LDP allocations and/or land subject to local or major development planning permission.	Alignments which do not pass through, or in close proximity to, LDP allocations or land subject to local or major development planning permission.	NA	NA	NA	
			Materials	Environmental	Quantitative	By whole alignment with contraints identified at particular chainages		Not part of Second Fix Appraisal - N/A	Not part of Second Fix Appraisal - N/A	Not part of Second Fix Appraisal - N/A	Not part of Second Fix Appraisal - N/A	Not part of Second Fix Appraisal - N/A	Not part of Second Fix Appraisal - N/A	Not part of Second Fix Appraisal - N/A	
			Cultural Heritage	Environmental	Quantitative	By whole alignment with contraints identified at particular chainages		A change to the fabric or setting of heritage assets that leads to a substantial environmental effect.	Changes to the fabric or setting of heritage assets that leads to a material environmental effect.	Changes to the fabric or setting of heritage assets that lead to a detectable but non-material environmental effect.	Changes to the fabric or setting of heritage asset that leads to, at most a negligible environmental effect	NA	NA	NA	
			Landscape & visual	Environmental	Quantitative	By whole alignment with contraints identified at particular chainages	Change to landscape character, quality and condition and change to quality of visual amenity.	Long length of alignment within SLA/GDL or large proportion within high sensitivity undesignated landscapes. Substantial impact on setting of SLA/GDL. Poor fit with topography – presence of cuttings/embankments >15m in depth/height Introduction of large structure(s) into baseline (excludes earthworks). Substantial loss of woodland/trees/hedges. Very large number of visual receptors affected (estimate). Very limited potential for mitigation.	Medium length of alignment within SLA/GDL or long length within high sensitivity undesignated landscapes. Moderate impact on setting of SLA/GDL. Partial fit with topography – presence of cuttings/embankments 5-15m in depth/height Introduction of medium sized structure(s) into baseline (excludes earthworks). Moderate loss of woodland/trees/hedges. Moderate number of visual receptors affected (estimate). Limited potential for mitigation.	Short length of alignment within SLA/GDL or medium length within undesignated landscapes. Limited impact on setting of SLA/GDL. Reasonable fit with topography – presence of cuttings/embankments <5m in depth/heightIntroduction of small structure(s) into baseline (excludes earthworks). Limited loss of woodland/trees/hedges. Small number of visual receptors affected (estimate). Potential for mitigation.	No alignment within SLA/GDL or short length within undesignated landscapes. Negligible impact on setting of SLA/GDL. Good fit with topography either through use of existing landform or limited earthworks. Very little loss of woodland/trees/hedges. Few visual receptors affected (estimate). Good opportunities for embedded mitigation and enhancement.	NA	NA	NA	
			Nature Conservation	Environmental	Qualitative	By whole alignment with contraints identified at particular chainages		Wildcat priority area, SSSI or other nationally designated site	Sensitive areas, large blocks of ancient woodland and local designated sites	Small blocks of ancient woodland, water crossings	NA	NA	NA	NA	

A96 East of Huntly to Aberdeen
Second Fix Assessment Matrix

		Criteria		Metric Owner	Metric Type	Assessment method: Whole Alignment / Chainage Specific	Metric	Major Adverse Impact	Moderate Adverse Impact	Minor Adverse Impact	Neutral Impact	Minor Beneficial Impact	Moderate Beneficial Impact	Major Beneficial Impact	Notes
			Geology, Soils & Contaminated Land and Groundwater	Environmental	Quantitative	By whole alignment with contraints identified at particular chainages	Geological SSSIs Prime Agricultural Land Sand and Gravel Resource Contaminated Land High Quality Aquifers Presence of Peat	Area of route constains a geological SSSI or three or more of the metrics	Area of route contains two of the metrics	Area of route contains one of the metrics	Area of the route contains none of the metrics	NA	NA	NA	
			Road Drainage and the Water Environment	Environmental	Qualitative	By whole alignment with contraints identified at particular chainages	1. Does the alignment impact on the functional floodplain? 2. Could the river crossings impact on channel morphology? 3. Is there a potential need for channel realignment?	1. Alignment passes through an area of extensive functional floodplain and is not perpendicular to direction of flow. 3. Potential realignment needed for a named waterbody, where the total length of realignment is more than 200m (as a single length or cumulatively for the waterbody).	1. Alignment passes through an area (or areas) of extensive functional floodplain by taking the shortest route. 2. One or more crossings located in an area of potential active morphology of a named waterbody. 3. Potential realignment needed for a named waterbody, where the total length of realignment is less than 200m (as a single length or cumulatively for the waterbody).	1. Alignment passes through areas of narrow floodplain / encroaches only along the edge of the floodplain. 2. All other watercourse crossings. 3. Potential realignment needed for an unnamed waterbody.	1. Alignment does not encroach on the functional floodplain of any watercourses. 2. Alignment does not require any watercourse crossings. 3. Realignment unlikely to be required.	NA	NA	NA	
	2	**Safety**	Accidents (addressed within Objective 2)	Traffic & Economics			See Objective 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	STAG Safety Criteria looks at 2 elements; Accidents and Security. Accident rates and severities are considered under Objective 2 and, to avoid duplication, will not be considered again under the STAG criteria.
			Security	Traffic & Economics	Qualitative		Remoteness from settlements/services/rest areas	N/A	N/A	N/A	N/A	All alignments	N/A	N/A	Improved laybys and NMU facilities will improve personal security for all road users on all alignments. All alignment are therefore considered to offer minor benefit and will be reviewed in more detail as the design progresses.
	3	**Economy**	Transport Economic Efficiency	Traffic & Economics	Quantitative		Indexed Benefit-Cost Ratio estimated based on high level costs and TEE outputs from TUBA (excluding accident savings).	N/A	N/A	N/A	0	BCR index 0-150	BCR index 150-200	BCR index >200	The potential cost-benefit assessment of each alignment is estimated using high level cost estimates and benefits calculated in TUBA (using the outputs from CRAM v3.1 Do Min vs Do Something modelling). No accident savings were included at this stage. BCRs are not to be reported as absolute values at this stage therefore the results were indexed to 100 (by assuming the lowest value is equivalent to 100, and scaling the other values accordingly).
			Wider Economic Impacts	Traffic & Economics	Qualitative		Not part of appraisal until DMRB Stage 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Wider Area Impacts are being considered by Aecom at programme level - methodology currently under development. However, to assist with sifting, methodology developed by Aecom/LTEA will be applied to our section during DMRB Stage 2 Assessment.
	4	**Integration**	Transport Integration	Traffic & Economics			see Objective 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Integration with existing and proposed transport infrastructure is considered under Scheme Objective 5.
			Transport and Land-use Integration	Traffic & Economics	Qualitative		Ability to accommodate existing and proposed land-use	N/A	N/A	N/A	N/A	All alignments	N/A	N/A	All options were considered to have potential to accommodate proposed development for the area.
			Policy Integration	Traffic & Economics	Quantitative		Alignment with economic, environmental and other policies as they relate to transport, at national, regional and local level	Increase in traffic flows of >1000 vpd in Inverurie town centre*	Increase in traffic flows of 700-1000 vpd in Inverurie town centre*	Increase in traffic flows of 400-700 vpd in Inverurie town centre*	No change	Reduction in traffic flows of 400-700 vpd in Inverurie town centre*	Reduction in traffic flows of 700-1000 vpd in Inverurie town centre*	Reduction in traffic flows of >1000 vpd in Inverurie town centre*	3 part assessment Part 1 - All options were considered to align with national, regional and local policy Part 2 - Since the Aberdeenshire LDP identifies the reduction of traffic congestion in Inverurie as a key aspiration, the assessment compares traffic flows in Inverurie town centre using CRAMv1.3 Do Min and Do Something models to inform change in traffic levels in the town centre to determine how well the option contributes to the LDP aim. Scoring is reported as the level of traffic reduction within the town. Part 3 - The Aberdeenshire LDP also identifies a desire for an eastern bypass of Inverurie. If the option does not accommodate an eastern bypass, the score is dropped by one scale. *Part 2 score (which may then be adjusted according to Part 3 assessment)
	5	**Accessibility & Social Inclusion**	Community accessibility to services and public transport	Traffic & Economics	Quantitative		Change in traffic flows within Insch and Inverurie indicative of improved ease of movement around urban areas by motorised or non-motorised means.	Aggregate increase in traffic flows of >850 vpd	Aggregate increase in traffic flows of <500 - 850 vpd	Aggregate increase in traffic flows of <150 - 500 vpd	Aggregate change in traffic flows of <150 vpd	Aggregate reduction in traffic flows of <150 - 500 vpd	Aggregate reduction in traffic flows of <500 - 850 vpd	Aggregate reduction in traffic flows of >850 vpd	The aggregate impact of the change in vehicle volumes during the modelling periods is looked at for Insch (Drumrossie Street) and Inverurie (east of Blackhall Roundabout, Oldmeldrum Road approach to potential junction locations and east of Port Elphinstone Roundabout).
	6	**Feasibility**	Alignment	Engineering	Quantitative	Alignment	Alignment Compliance with standards	Geometric departure required (includes departures resulting from a combination of relaxations)	Alignment requires combinations of relaxations of standards (but does not lead to departures)	Alignment requires isolated single relaxations of standards	No relaxations or departures				
			Earthworks	Engineering	Quantitative	By chainage	Degree to which alignment reflects existing topography - indicative of earthworks effort and cost	Alignment >20m above/below local topography (cut or fill)	Alignment between 10-20m from local topography (cut or fill)	Alignment between 2 and 10m of local topography (cut or fill)	Alignment between 0-2m of local topography (cut or fill)	N/A	N/A	N/A	

A96 East of Huntly to Aberdeen													
Second Fix Assessment Matrix													
Criteria		Metric Owner	Metric Type	Assessment method: Whole Alignment / Chainage Specific	Metric	Major Adverse Impact	Moderate Adverse Impact	Minor Adverse Impact	Neutral Impact	Minor Beneficial Impact	Moderate Beneficial Impact	Major Beneficial Impact	Notes
	Geotechnical	Engineering	Qualitative	By chainage	Metric addresses likely extent and complexity of engineering works required to facilitate the alignment through known ground conditions: - **Peat** (plan areas of compressible peat deposit identified) - **Potentially Compressible Soils** split into two categories: (i) (**Very compressible/challenging materail**) Glaciolacurstrine Deposits / Lacustrine Depostis / Head Deposits Glyn Dye Silts Formation and (ii)**Compressible/potentially challenging material**) River Terrace Deposits / Alluvium / Alluvial Fan Deposits / Hummocky Ground - **Sand and Gravel deposits** (Glaciofluvial Deposits and Lochton Sand and Gravel Formation) with a potential for high proportion of re-use without processing [positive]) - **Shallow Rock** (areas of near-surface rock identified resulting in potentially hard/slow digging within road cuttings). - **Glacial Till** - **Made ground** - Contamination (Made ground/Worked Ground/Infilled Ground and Landfill). Consideration of H&S issues associated with construction and maintenance	- 20m+ high embankments Glacial Till or Rock - 15m+ embankment on compressible soils [Category 2] - 5m+ embankment on compressible soils [category 1] - 5m+ embankment on peat - 20m+ high cutting in rock - 25m+ cuttings in Glacial Till - 15m+ high cuttings within compressible soils [Category 2] - 5m+ high cuttings in compressible soils [category 1]. -5m+ high cuttings within peat - Cutting within registered landfill or other high designated iste source. - Large earthworks have complex and bespoke operation and maintenance requirements, due to the large volumes of material involved additional construction risk and access	- 10m to 20m high embankments on Glacial Till or Rock - 5m to 15m embankment on compressible soils [Category 2] - 0m to 5m embankment on compressible soils [category 1] - 0m to 5m high embankment on peat. - 10m to 20m high cuttings in rock - 10m to 25m high cuttings in Glacial Till - 5m to 15m high cuttings within compressible soils [Category 2] - 0m to 5m high cuttings in compressible soils [category 1]. - 0m to 5m high cuttings within peat - Cutting within areas of made ground. -Embankment or at grade construction on a Landfill. - Complex operation and maintenance requirements for earthworks, due to the large volumes of material involved additional construction risk.	- 5m to 10m high embankments on Glacial Till and rock - 0m to 5m embankment on compressible soils [category 2] - At grade construction on Compressible material [Category 1 and 2] (including peat). - 5m to 10m high cuttings in Glacial Till and rock - 0m to 5m high cuttings in compressible soils [category 2] - Embankment or at grade construction on areas of made ground. - reduced operation and maintenance requirements, due to smaller scale of proposed earthworks.	- 0m to 5m high embankments on Glacial Till or Rock - At grade construction on Glacial Till and Rock - 0m to 5m high cutting in Glacial Till or rock - Standard operation and maintenance requirements.	- 0m to 5m high cuttings within sand and gravel that has the potential to be re-used (there is a possibility that cuttings within rock could be a benefit depending on the volume of rock generated).	N/A	N/A	- Appraisal to be based on a combination of size of earthworks and ground conditions. Note: size of Earthworks are measured as the overall maximum cutting and embankment height, not the earthworks height at the centreline of the road. At this stage all slopes have been modelled at 1:3. Appropriate commentary will be added to the appraisal where unusual earthworks situations are identified. - Note: Any one of the constraints identified within the metric trigger that impact or benefit (for example a 20m to 29m high cutting in rock would be a Moderate Negative Impact for that section of the alignment). - The ground conditions are based on the published BGS Geological Soild and Drift Maps, which indicate the material type at the surface. At this stage limited infomration is available on the drift deposit thickness or succession, as a result the appraisal is based on the surface geology. (i.e. if Alluvium is shown to be present at the surface it is assumed (conservitively) that material is present for the full depth (in the case of a cutting)). - The metric criteria are not cumulative. - H&S: Health and safety has been considered during the development of these metrics.
					Appraisal to be based on a combination of at surface ground conditions and complexity of structure (defined by structures appraisal)	- Type A Structure - All ground conditions - Type B Structure - At surface ground conditions comprise peat or potentially compressible material (Category 1 and 2)	- Type B Structures - At surface ground conditions comprise Glacail Till or Shallow Rock or Sand and Gravel. - Type C Structures - At surface ground conditions comprise peat or potentially compressible material (Category 1 and 2)	- Type C Structures - At surface ground conditions comprise Glacail Till or Shallow Rock or Sand and Gravel. - Type D Structures - t surface ground conditions comprise peat or potentially compressible material (Category 1 and 2)	- Type D Structures - At surface ground conditions comprise Glacail Till or Shallow Rock or Sand and Gravel.	N/A	N/A	N/A	Structures are defined in four main categories: - Type A: Very Large and/or Complex structure - Typically spans greater than 85m - Type B: Large or Unconventional strucutre - Typically spans greater than 65m - Type C: Structures are not complex or large - Typically spans are between 30m and 65m - Type D: Simple Structures - Typically spans less than 30m
	Structures	Engineering	Quantitative	By chainage	Would potential alignments within this corridor option require: 1. Complex structural solutions or solutions which are off a substantial size 2. Structural solutions that are difficult to operate and and maintain. 3. Existing structures to be demolished or modified? 4. Significant interfaces with third-parties (eg Network Rail, SEPA or Local Councils) that may introduce constraints (eg on programme, construction sequence). 5. Construction and / or maintenance activities that introduce significant H&S hazards	1. Very large and / or complex structure required such as tunnels, cable-stayed bridges and major viaducts. 2. Extremely complex, bespoke operation and maintenance requirements for major bridges. 3. Highly significant and complex demolition of existing structures required 4. Third-party requirements have a large adverse impact on construction programme and / or result in very complex construction methodologies 5. Major adverse H&S hazards associated with construction and / or maintenance of structure	1. Large or unconventional structure required. 2. Complex operation and maintenance requirements. 3. Significant and complex demolition or modification of existing structures required . 4. Third-party requirements have an adverse impact on construction programme and / or result in complex construction methodologies 5. Moderately adverse H&S hazards associated with construction and / or maintenance of structure	1. Structures are not complex or large and can be constructed using conventional construction techniques. 2. Straightforward pperation and maintenance requirements but may require significant third-party interfaces. 3. Straightforward demolition or modification to existing structures required. Existing structures can be retained for future use. 4. Third-party requirements likely to introduce only minor constraints that are easily managed 5. Slight adverse H&S hazards associated with construction and / or maintenance of structure	1. Structures are not complex or large and can be constructed using conventional construction techniques. 2. Straightforward operation and maintenance requirements. 3. Very limited demolition and / or modification of existing structures required. Existing structures can be retained for future use. 4. Limited third-party interface with no significant constraints. 5. H&S hazards associated with construction and / or maintenance of structure are routine and not significant and easily addressed by a competent contractor.	N/A	N/A	N/A	Any one of the constraints identified within the metric trigger that impact or benefit. The metric criteria are not cumulative (i.e. you do not need more than one of the constraints to trigger that impact or benefit. The metric will be used to identify the impact or benefit along stretches of the alignment. At this stage, embankments and cuttings will generally be provided if possible, rather than viaducts and tunnels. Viaducts will only be provided where there are clear advantages over embankments such as crossings over a steep valley or crossings over multiple obstacles. The choice will be based on engineering judgement. Assumptions: 1. Bridges are required to cross the full extents of all floodplains. Culverts appraised in flooding appraisal (not structures). Supports should not be provided within watercourse and if possible, placed behind river banks. 2.Bridges crossing over the A96 and other trunk roads will have an "open" profile with revetment slopes of 1V:3H and a maximum exposed abutment height of 3m (from beam soffit to top of revetment). Bridges over council roads will have full height abutments at back of verge. 3. Bridges over the A96 will have a headroom of 6.6m to accommodate a 20' high load route (6.45m + allowance for sag curve, settlement and future surfacing). Bridges over other roads will have a headroom of 5.8m (5.7m + allowance). 4. Bridges over all roads will not have supports placed in central reserves. Supports may be provided in central reserves only if there is a clear benefit (eg reducing spans for skewed bridges). 5. Where viaducts are provided, they will generally extend until the proposed road level becomes less than 6m above existing ground level (at which point the viaduct ends and embankment begins). 6. A96 road cross-section is 26.1m between back of verges.
	Flood Risk, Flood Plain, River Crossings & Drainage	Engineering	Qualitative	By chainage	1. Does the proposed alignment pass through, or immediately adjacent to, areas of existing active flood plain, potentially impacting on flood risk and require associated abnormal engineering works with associated safety implications during construction or maintenance?	The proposed alignment passes through areas of active flood plain. Significant abnormal works, such as bridges and compensatory storage, are likely to be required to meet flood risk criteria.	The proposed alignment passes immediately adjacent to areas of active flood plain. Abnormal works, such as retaining structures and raised road geometry b, are likely to be required to meet flood risk criteria.	The proposed alignment passes immediately adjacent to areas of active flood plain. Abnormal works may be required, but are not considered likely based on the current proposed profile.	The proposed alignment does not pass through, or immediately adjacent to, areas of existing active flood plain. No significant abnormal engineering works are anticipated.	N/A	N/A	N/A	
				By chainage	2. Will water course crossings, particularly culverts, be required for this alignment? Each crossing has health and safety risks associated with working in and around watercourses, with cumulative impact assessed accordingly.	Singularly; a culvert is required within a flood plain. Cumulatively; a large number of culverted watercourse crossings are likely to be required for this alignment.	Cumulatively; a moderate number of culverted watercourse crossings are likely to be required for this alignment.	Cumulatively; a small number of culverted watercourse crossings are likely to be required for this alignment	Cumulatively; a very small number of culverted watercourse crossings are likely to be required for this alignment	N/A	N/A	N/A	
				By chainage	3. Attenuation will be required prior to the discharge of surface water. Based on the alignment profile, is there adequate space at the low points to accommodate an assumed storage?	The areas adjacent to the low points are either already developed or are in the active flood plain. It is not clear how the required storage could be accommodated.	The areas adjacent to the low points are either already developed or are in the active flood plain, but there are areas nearby that could potentially provide the required space. Additional abnormal engineering works with associated safety implications during construction or maintenance may be required.	The areas adjacent to the low points are either already developed or are in the active flood plain, but there are suitable areas nearby that could provide the required space. Additional abnormal engineering works are unlikely to be required.	There are areas adjacent to the low points that are both undeveloped and outwith the active flood plain, with the space available to accommodate the assumed storage volume required.	N/A	N/A	N/A	

A96 East of Huntly to Aberdeen													
Second Fix Assessment Matrix													
	Criteria		Metric Owner	Metric Type	Assessment method: Whole Alignment / Chainage Specific	Metric	Major Adverse Impact	Moderate Adverse Impact	Minor Adverse Impact	Neutral Impact	Minor Beneficial Impact	Moderate Beneficial Impact	Major Beneficial Impact	Notes
		Utilities	Engineering	Quantitative	By chainage	Does the option require onerous utility diversions? Does the option require diversions or utility works that represent an unacceptable risk to the project?	Impact on Strategic Utility Infrastructure or multiple impacts on Regional Utility Infrastructure. Impact on Strategic Utility Infrastructure or multiple impacts on Regional Utility Infrastructure. Strategic / Regional utility has potential to cause significant harm during the construction phase. Diversion of this asset would also represent a complex and high risk project with the potential for harm during the construction phase. Strategic / Regional utility remains in place under/over/adjacent to proposed alignment. There is potential for conflict with this asset during routine maintenance works. Failure of this asset during operation of the road would have potential to cause significant harm and risk to life. (Refer To Impact Ratings Table)	Impact on Regional Utility Infrastructure Impact on Regional Utility Infrastructure. Regional utility has potential to cause harm during the construction phase. Diversion of this asset would also represent a reasonably complex and high risk project with relatively high degree of risk during the construction phase. Regional utility remains in place under/over/adjacent to proposed alignment. There is potential for conflict with this asset during routine maintenance works. Failure of this asset during operation of the road would have potential to cause harm and risk to life but represent a regularly encountered risk. (Refer To Impact Ratings Table)	Minor Impact on Regional Utility Infrastructure or Major impact on Local Utility Infrastructure. Minor Impact on Regional Utility Infrastructure or Major impact on Local Utility Infrastructure. Minor utilities are present at this location. Utility has little potential to cause harm or risk to life during the construction phase. Straightforward commonly undertaken diversionary works considered low risk. Minor utility remains in place under/over/adjacent to proposed alignment. There is potential for conflict with this utility during routine maintenance works . This utility have some potential to cause harm or risk to life but represent regularly a encountered risk. (Refer To Impact Ratings Table)	Impact on Local Utility Infrastructure Only. Impact on Local Utility Infrastructure Only. (Refer To Impact Ratings Table)	N/A	N/A	N/A	
7	**Affordability**	Scheme Cost	Engineering	Qualitative	By whole alignment		Affordability is not assessed in the Second Fix Appraisal. There is insufficient information available at this stage to determine a reliable comparative measure based on affordability criteria. Key engineering elements which will result in higher costs are identified within engineering appraisal criteria. Affordability will be considered within the DMRB Stage 2 process							
8	**Public Acceptability**		Traffic & Economics	Qualitative		Alignments were appraised qualitatively against their ability to address seven key themes highlighted in feedback from DMRB Stage 1 Public Exhibitions and DMRB Stage 2 Meet the Team events. The seven themes are; concern over proximity to Bennachie; support for use of existing A96; support for route to the east of Inverurie; concern over proximity to woodland/recreation areas; concern over proximity to historical buildings and monuments; concern for impact on agricultural land; proximity to properties.	Does not address most key concerns identified in feedback. Unlikely to receive public support.	Does not address many key concerns identified in feedback. Unlikely to receive public support.	Does not address some key concerns identified in feedback. Public support may be limited.	Option does not impact on key issues identified	Addresses key concerns identified in feedback. Likely to receive public support.	Proactively addresses many concerns. Likely to receive public support.	Proactively addresses concerns and facilitates opportunities. Very likely to receive public support.	

C5 Second Fix Appraisal Summary Sheets

Alignment No. 10 – OLN North, D01 Kirkton, BS01, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; offline to the north of existing A96 between Colpy and Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 48.2km (Shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).

Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria		

STAG Criteria							
STAG 1 - Environment	**STAG 2- Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7- Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Major Beneficial	Minor Beneficial	Minor Beneficial	Major Adverse Refer to Engineering Summary	Refer to below	Minor Adverse

Environment Summary of Impacts

Overall Environmental Mark = 4.25

Landscape – impacts throughout alignment. 4km of alignment is within SLA to the west of Inverurie. Impacts associated with large structures at watercourse crossings (Glen Water, Peterden Burn, River Urie) and earthworks, along with impacts on the setting of various scheduled monuments (SM), listed buildings (LB) and garden and designed landscapes (GDL).

Water – impacts on extensive River Urie floodplain. 30 watercourse crossings.

Ecology – impacts on Wildcat Priority area and fragmentation of habitat around Wishach Hill and Hills of Foudland.

People and Com. – seven properties (Leys of Dummuies, Hill of Scares, Old Mill and further four properties west of Inverurie) within 100m alignment corridor and impact on Snipefield woods recreation area.

Soil and Geology – direct impact on SSSI Pitcaple and Legatsden Quarry. Approximately 7.9km of alignment within prime agricultural land.

Cultural Heritage – direct impacts on the north-western corner of the Battle of Harlaw Inventory Historic Battlefield (BTL11) and Drimmies, symbol

Engineering Summary of Impacts

Overall Engineering Mark = 2.25

Engineering Impacts

Total no of Major Adverse impacts: 189
Total no of Major Adverse Impact Clusters: 36
Total no of Moderate Adverse impacts: 251
Total no of Moderate Adverse Impact Clusters: 75

Earthworks

Bulk Cut: 5,013,000 m^3
Bulk Fill: 3,346,000 m^3
Earthworks Balance: 1,667,000 m^3 (surplus)

Geotechnical Key Issues

Up to 33m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
350m stretch of Peat near Pitcaple

Structures

Number of Major Adverse structures: 3
Burn of Durno and associated floodplain
River Urie and associated floodplain
River Don – west of Inverurie
Number of Moderate Adverse Structures: 5

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44.5 to 33.5 minutes, saving 11 minutes.

SO1.2 – Change in JT variability = from 8:37 to 3.36.

SO1.3 – 243M veh-kms (114%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Moderate Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length through urban links over AM and PM peak= 46.2kms (57%). 42% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and reduction in congestion on the existing A96 around Inverurie.

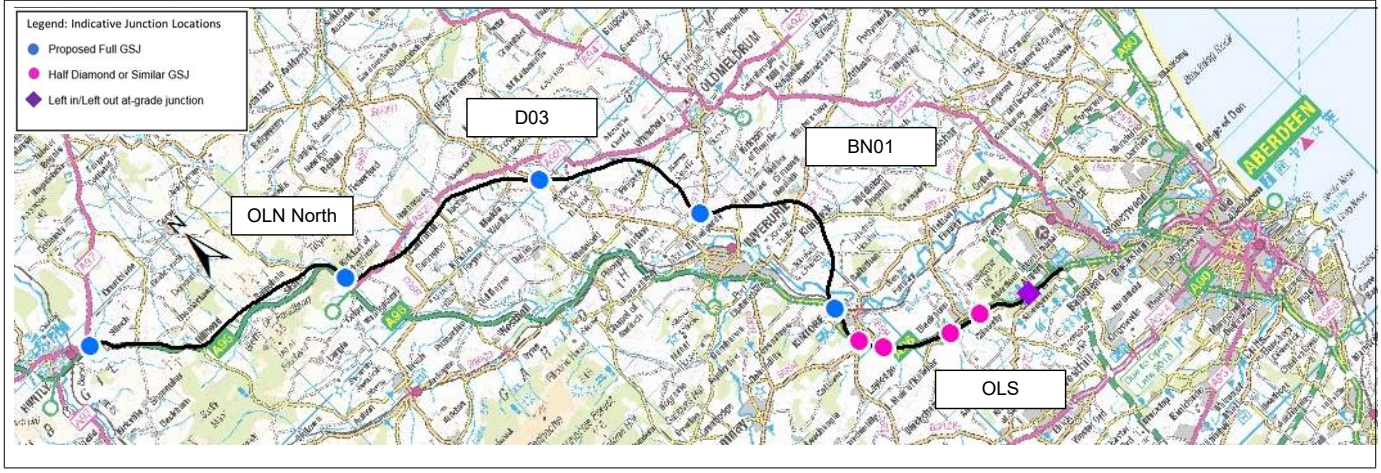
SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may indirectly reduce potential for conflicts between motorised and non-motorised users.

stone (SM70) with setting impacts on Mummer's Reive, cairn (SM11629) situated 0.1km to the north of the alignment, Category A listed Cusalmond Old Parish Church (LB2960) situated c. 0.1km to the north of the alignment, Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), The Law, cairn (SM12113), Pitscurry, cairn (SM12302), St Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure 510m WNW of (SM12195) and Bruce's Camp, hillfort (SM12523). **Plans and Policies** – small scale committed developments north of Inverurie with the main concern being a largescale LDP housing and employment allocation to the south east of Port Elphinstone. **Overall end-to-end Environmental conclusion** **Although the main ecological constraints are located to the north of the alignment, there is a concentration of issues in the southern area of this alignment related to the BS01 section and primarily associated with the Bennachie SLA. Direct impacts on cultural heritage features, proximity of property, geological SSSI and the large-scale housing and employment LDP area.**	**Hydrology** Floodplain 3 Major Adverse Impacts associated with crossing the River Urie 2 Moderate Adverse Impacts associated with crossing the River Urie Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation – No Major/Moderate Adverse Impacts **Utilities** Number of Major Adverse Impacts: 12 1 National Grid Pipeline crossing 2 SGN High Pressure Pipeline crossings 5 SSE 275 crossings 4 SEE pylons within 100m of alignment Number of Moderate Adverse Impacts: 4 **Overall end-to-end Engineering conclusion** **This alignment recorded 36 clusters of Major Adverse Impacts marking it similar to three alternative alignments. However, the 75 clusters of Moderate Adverse Impacts determined its final engineering mark.**	**SO3.1** – Average change in peak journey times from population centres to reach other strategic transport networks = -3:21 mins (-14%). **SO3.2** – Average change in peak journey time from population centres to regional trip attractors = -2:35mins (-11.5%). **SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 700 vpd. Inverurie: Decrease of 4200 vpd. Overall change: -3500vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3mins (-14%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a high level of economic benefits **STAG 4** – Aligns with the majority of policies and land use allocations. Offers moderate reductions in flows within Inverurie town centre (902 veh/day) however fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Cumulative impact over three links in Inverurie and one in Insch, aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public concern over the route's proximity to historic buildings/monuments, proximity to woodland/recreational areas and on loss of agricultural land. Significant lengths of the alignment are offline, away from the existing A96 alignment which may be less well received than alignments which follow the existing route more closely. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major Beneficial Impacts across 9 of the 13 Scheme Objectives, and offers comparatively high level economic benefits under the STAG economy criteria. Generally moderate to major improvements in journey times. Minor accident savings.**
Health and Safety: 36 Major Hazards, 13 Moderate Hazards & 60 Minor Hazards		
Overall Combined Mark = 9.75 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 20 – OLN North, D03, BN01 Inner, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; offline Colpy to Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.0km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Minor Beneficial	Moderate Beneficial	Minor Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Neutral	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2- Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7- Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Neutral – Refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 4.25

Landscape – impacts associated with large structures at watercourse crossings (River Don, Glen Water, Peterden Burn, River Urie) and earthworks, along with impact on the setting of various scheduled monuments, listed buildings and garden and designed landscapes.

Water – impacts on extensive floodplains of River Urie and River Don. 29 watercourse crossings.

Ecology – issues in north and related to Wildcat Priority Area and fragmentation of habitat around Wishach Hill and Hills of Foudland.

People and Com. – five properties and Snipefield woods recreation area within 100m alignment corridor.

Soil and Geology – 11.1km of alignment within prime agricultural land.

Cultural Heritage – direct impact on north-easternmost corner of Keith Hall Inventory GDL. Setting impacts on Mummer's Reive, cairn (SM11629), Category A listed Cusalmond Old Parish Church (LB2960), Loanhead, stone circle and enclosed cremation cemetery (SM90202) and Property in Care (PIC) (PIC255), Newcraig, stone circle (SM37), New Craig, cupmarked boulder

Engineering Summary of Impacts

Overall Engineering Mark = 4.25

Engineering Impacts
Total no of Major Adverse impacts: 138
Total no of Major Adverse Impact Clusters: 25
Total no of Moderate Adverse impacts: 224
Total no of Moderate Adverse Impact Clusters: 68

Earthworks
Bulk Cut: 4,773,000 m^3
Bulk Fill: 3,308,000 m^3
Earthworks Balance: 1,465,000 m^3 (surplus)

Geotechnical Key Issues
Up to 33m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
500m stretch of Category 1 Very compressible or challenging soils near Lochend of Barra

Structures
Number of Major Adverse structures: 1
New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.

Number of Moderate Adverse Structures: 6

Transportation Summary of Impacts

Overall Transportation Mark = 1.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:50 minutes, saving 8:47 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:40

SO1.3 – 204M veh-kms (96%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 27.0kms (34%). 23% reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 16 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Proportion of trips re-assigning from existing A96 to dual-carriageway around Inverurie is low therefore unlikely to significantly impact potential for conflicts on detrunked section of A96 through Inverurie.

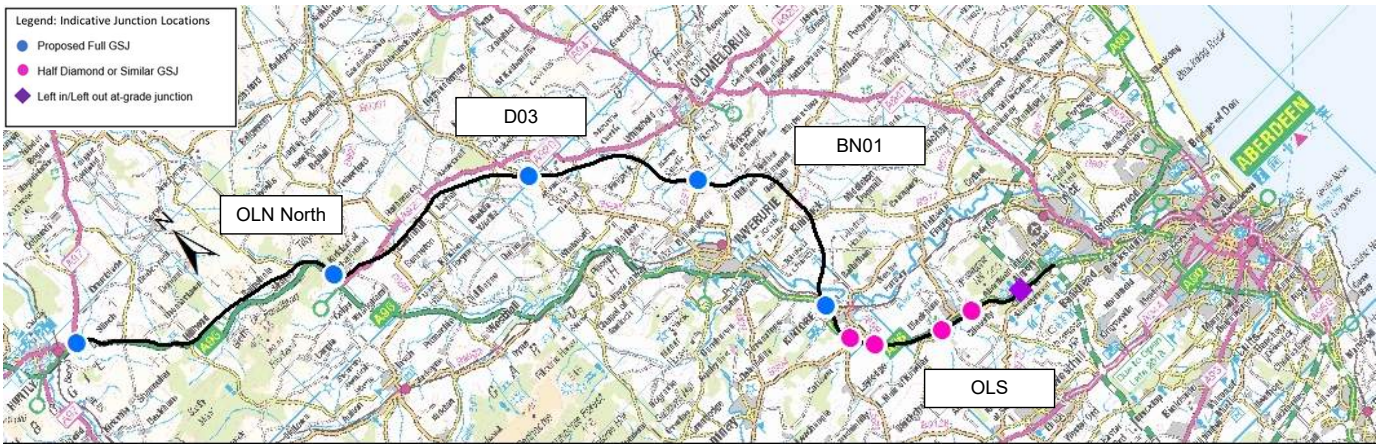
SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3mins (-12%).

(SM12154), Category A listed Mounie Castle, Original Block (LB2793), Hill of Selbie, cairn (SM12434) and Battle of Harlaw Inventory Historic Battlefield (BTL11). **Plans and Policies** – LDP land reserved for Northern Link Road and significant large-scale consented development exist to the northern edge of Inverurie. A development for additional explosives storage has been consented within BN01 Inner section. **Overall end-to-end Environmental conclusion** **Landscape and community constraints on this alignment are fairly widespread with ecological constraints located to the north. A number of issues in the mid to southern areas of this alignment (D03 and BN01 Inner sections) are associated with the River Don crossing. Direct impacts on cultural heritage features and impacts on LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie. Development for additional explosives storage has been consented at BN01 Inner section.**	**Hydrology** Floodplain 3 Major Adverse Impacts associated with crossing the River Urie, River Don and Lochter Burn 2 Moderate Adverse Impacts associated with crossing the Bonnyton and Kings Burns Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation: 1 Moderate Adverse Impacts due to coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 7 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 1 SSE 275Kv crossing 1 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 4 **Overall end-to-end Engineering conclusion** **This alignment recorded 25 clusters of Major Adverse Impacts which is one of the lowest number of Major Adverse Impacts and hence performs better in the engineering discipline and similar to one other alignment (Alignment 21).**	**SO3.2** – Average change in peak journey time from population centres to regional trip attractors= -2mins (-8%). **SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: No increase in vpd. Inverurie: Decrease of 5400 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:23mins (-15%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (offers moderate reductions in flows within Inverurie town centre (730 veh/day)) and offers a northern bypass. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Cumulative impact over three links in Inverurie and one in Insch = modelled traffic flows reduce by between 500 and 850 pcus per day. **STAG 6** – Likely to be significant public support over the route's impact on reducing congestion in Inverurie and minimal/no impact on Bennachie. Likely to be some public concerns over the route making limited use of the existing A96 and on loss of agricultural land. May also be some concerns over proximity to properties, historical buildings and landmarks, and woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers predominantly Moderate Beneficial Impacts across Scheme and STAG objectives and offers moderate level of economic benefits. Generally moderate improvements in journey times. Moderate accident savings.**
Health and Safety: 29 Major Hazards, 26 Moderate Hazards & 62 Minor Hazards		
Overall Combined Mark = 10.25 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 21 – OLN North, D03, BN01 Outer, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; offline Colpy to Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 51.9km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**		
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria		

STAG Criteria							
STAG 1 - Environment	**STAG 2- Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7- Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Neutral – Refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 4.25

Landscape – impacts associated with large structures at watercourse crossings (Glen Water, Peterden Burn) and earthworks, along with impact on the setting of various schedule monuments, listed buildings and garden and designed landscapes.

Water – extensive floodplains of River Urie and Lochter Burn. 29 watercourse crossings.

Ecology – issues in north related to Wildcat Priority Area and fragmentation of habitat around Wishach Hill and Hills of Foudland.

People and Com. – four properties and Snipefield woods recreation area within 100m alignment corridor.

Soil and Geology – 10.2km of alignment within prime agricultural land.

Cultural Heritage – direct impact on Battle of Barra Inventory Historic Battlefield with setting impacts on Mummer's Reive, cairn (SM11629), Category A listed Cusalmond Old Parish Church (LB2960), Loanhead, stone circle and enclosed cremation cemetery (SM90202) and PIC (PIC255), Newcraig, stone circle (SM37), New Craig, cupmarked boulder (SM12154) and Category A listed Mounie Castle, Original Block (LB2793).

Engineering Summary of Impacts

Overall Engineering Mark = 4.25

Engineering Impacts
Total no of Major Adverse impacts: 136
Total no of Major Adverse Impact Clusters: 25
Total no of Moderate Adverse impacts: 235
Total no of Moderate Adverse Impact Clusters: 68

Earthworks
Bulk Cut: 4,831,000 m^3
Bulk Fill: 3,947,000 m^3
Earthworks Balance: 884,000 m^3 (surplus)

Geotechnical Key Issues
Up to 33m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse structures: 1
New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.

Number of Moderate Adverse Structures: 6

Transportation Summary of Impacts

Overall Transportation Mark = 2.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:29 minutes, saving 9 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:44.

SO1.3 – 229M veh-kms (108%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 30.8kms (39%). 28% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:12mins (-13%).

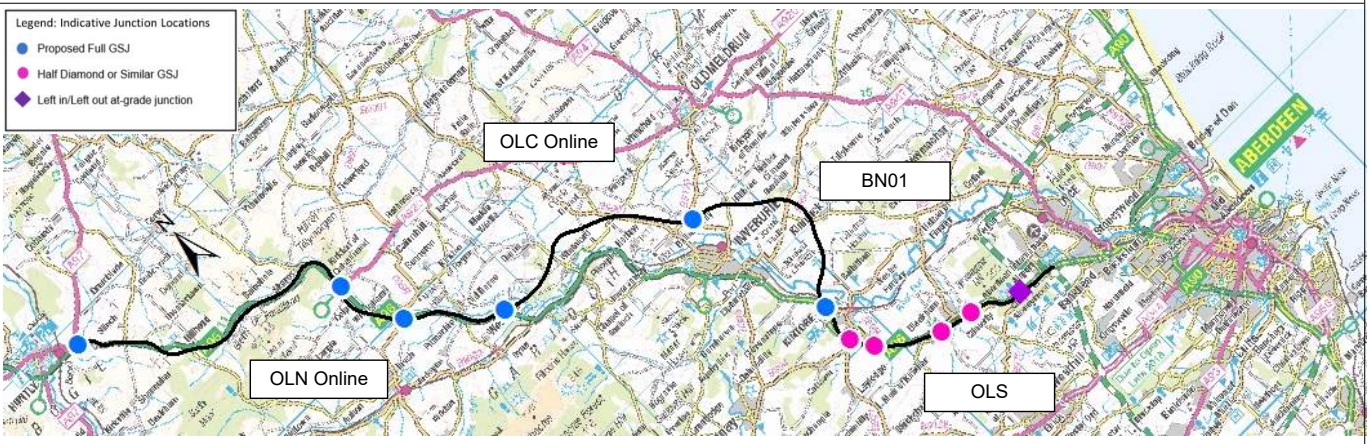
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:07mins (-9%).

Plans and Policies – small scale developments along D03 section. **Overall end-to-end Environmental conclusion** **The main constraints along this alignment relating to landscape, water and community are fairly limited but widespread. There is a concentration of impacts on cultural heritage features associated with section D03.**	**Hydrology** Floodplain 3 Major Adverse Impacts associated with the River Urie (twice) and River Don 2 Moderate Adverse Impacts associated with the Bonnyton and Kings Burns Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation: 1 Moderate Adverse Impacts due to coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 7 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 1 SSE 275Kv crossing 1 SSE pylon within 100m of alignment Number of Moderate Adverse Impacts: 4 **Overall end-to-end Engineering conclusion** **This alignment recorded 25 clusters of Major Adverse Impacts which one of the lowest number of Major Adverse Impacts and hence performs better in the engineering discipline and similar to one other alignment (Alignment 20).**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: No increase in vpd. Inverurie: Decrease of 5300 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:33mins (-16%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits. **STAG 4** – Offers moderate reductions in flows within Inverurie town centre (988 veh/day) and offer a northern bypass. Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (reduces traffic in Inverurie by 998vpd) and offers a northern bypass. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Cumulative impact over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be moderate public support over the route's impact on reducing congestion in Inverurie and minimal/no impact on Bennachie. Likely to be some public concerns over the route making limited use of the existing A96 and on loss of agricultural land. May also be some concerns over proximity to properties, historical buildings and landmarks, and woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers predominantly Moderate Beneficial Impacts across Scheme and STAG objectives and offers moderate level of economic benefit. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 27 Major Hazards, 20 Moderate Hazards & 57 Minor Hazards		
Overall Combined Mark = 11.25 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 22 – OLN Online, OLC Online, BN01 Inner, OLS

Description: Online via Hill of Skares to Colpy; online from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.8km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria		

STAG Criteria							
STAG 1 - Environment	**STAG 2- Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7- Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Major Beneficial**	**Moderate Beneficial**	**Minor Adverse – refer to Engineering summary**	**N/A at this stage**	**Major Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 0.75

Landscape – impacts associated with large structure at River Don crossing, earthworks, sensitive character of Deveron and upper Ythan Valleys and receptor setting impacts around Colpy, Little Lediken and the GDLs.

Water – issues throughout with realignment of Glen Water, crossing of The Kellock and extensive floodplains of River Urie, Ides Burn and River Don. 30 watercourse crossings.

Ecology – Wildcat Priority Area. 30 watercourse crossings. Three waterbodies removed and several watercourse diversions. Impacts on Pitscurry Moss LNCS, loss of ancient woodland and habitat fragmentation.

People and Com. – six properties within 100m alignment corridor.

Soil and Geology – 15.2km of alignment within prime agricultural land.

Cultural Heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and north-easternmost corner of Keith Hall Inventory GDL. Setting impact on Williamston House GDL (GDL00386), Newton House GDL (GDL00300), Hill of Selbie, cairn (SM12434), Durno, Roman

Engineering Summary of Impacts

Overall Engineering Mark = 3.25

Engineering Impacts
Total no of Major Adverse impacts: 181
Total no of Major Adverse Impact Clusters: 32
Total no of Moderate Adverse impacts: 299
Total no of Moderate Adverse Impact Clusters: 84

Earthworks
Bulk Cut: 3.182,000 m^3
Bulk Fill: 3,934,000 m^3
Earthworks Balance: -752,000 m^3 (deficit)

Geotechnical Key Issues
450m stretch of peat near Hillhead
350m stretch of peat near Pitcaple

Structures
Number of Major Adverse structures: 1
New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.

Number of Moderate Adverse Structures: 6

Hydrology
Floodplain
6 Major Adverse Impacts associated with The Kellock, River Urie, Ides Burn (twice), Lochter Burn and River Don.
1 Moderate Adverse Impacts associated with the Ides Burn.

Transportation Summary of Impacts

Overall Transportation Mark = 4.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:18 minutes, saving 9:19 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:42.

SO1.3 – 227M veh-kms (107%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 33.3kms (39%).27% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 16 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

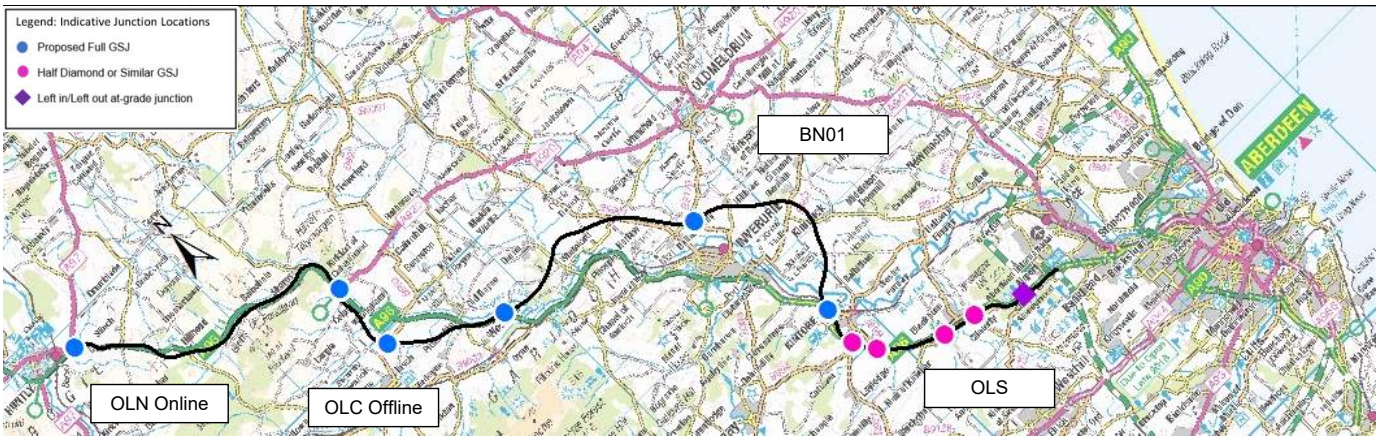
SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3.5mins (-14.5%).

temporary camp (SM4123), Pitscurry, cairn (SM12302) and Battle of Harlaw (BTL11). **Plans and Policies** – LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie. Development for additional explosives storage has been consented within BN01 Inner section. **Overall end-to-end Environmental conclusion** **Extensive widespread issues relating to watercourse crossings, ecological impacts, proximity of property and cultural heritage features. Additionally, LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie will be impacted in the southern area. Development for additional explosives storage has been consented BN01 Inner.**	Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation: 4 Moderate Adverse Impacts due to: Coinciding with River Don floodplain Proposed low point would struggle for levels with outfall into River Urie Proposed low point would struggle for levels with outfall into Jordan Burn Location for attenuation in developed area with existing A96 and buildings. **Utilities** Number of Major Adverse Impacts: 12 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 8 **Overall end-to-end Engineering conclusion** **This alignment recorded 32 clusters of Major Adverse Impacts similar to three alternative alignments (alignment 53, 195, 196). However, the 84 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO3.2** – Average change in peak journey time from population centres to regional trip attractors= -3:29mins (-14.3%). **SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 700 vpd. Inverurie: Decrease of 6200. Overall change: -550vpd vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -4mins (-17.5%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (reduces traffic in Inverurie by 1058vpd) and offers a northern bypass. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Cumulative impact over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be major public support over the route's potential to reduce congestion in Inverurie and significant public support for the route making best use of the existing A96. The route also minimises impact on Bennachie and surrounding areas. May be some concerns over loss of agricultural land and proximity to woodland and recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across Scheme Objectives and STAG criteria, and offers a comparatively low level of economic benefit. Generally, offers moderate journey time and accident savings.**
Health and Safety: 31 Major Hazard, 41 Moderate Hazards & 72 Minor Hazards		
Overall Combined Mark = 8.25 (Poorer Performing – Decision taken at workshop to take alignment forward as this alignment features a section of online dualling between Colpy and Oyne that performs well and can be linked to another better performing section) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 23 – OLN Online, OLC Offline, BN01 Inner, OLS

Description: Online via Hill of Skares to Colpy; offline to the south of the existing A96 from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 53.6km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives														
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Minor Beneficial	Major Beneficial	Minor Beneficial	Major Adverse – refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 0.75

Landscape – impacts associated with large structure at River Don crossing, earthworks, sensitive character of Deveron and upper Ythan Valleys, scheduled monuments and receptor setting impacts around Colpy.

Water – issues throughout with realignment of Glen Water, crossing the Shevock and extensive floodplains of the River Urie and Ides Burn, and River Don. 33 watercourse crossings.

Ecology – Wildcat Priority Area. 33 water crossings, three waterbodies removed and several watercourse diversions. Impacts on Pitscurry Moss LNCS, loss of ancient woodland and habitat fragmentation.

People and Com. – four properties within 100m alignment corridor.

Soil and geology – 12.4km of alignment in prime agricultural land.

Cultural Heritage – direct impact on north-easternmost corner of Keith Hall Inventory GDL. Setting impacts on Colpy Cottage, palisaded enclosure 300m S of (SM11511), Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM1230), Hill of Selbie, cairn (SM12434) and Battle of Harlaw (BTL11).

Engineering Summary of Impacts

Overall Engineering Mark = 1.25

Engineering Impacts
Total no of Major Adverse impacts: 235
Total no of Major Adverse Impact Clusters: 43
Total no of Moderate Adverse impacts: 359
Total no of Moderate Adverse Impact Clusters: 101

Earthworks
Bulk Cut: 4,275,000 m^3
Bulk Fill: 5,740,000 m^3
Earthworks Balance: -1,465,000 m^3 (deficit)

Geotechnical Key Issues
550m Stretch of peat near Hillhead
250m Stretch of Category very compressible or challenging soils near Brownhills
350m Stretch of peat near Pitcaple

Structures
Number of Major Adverse structures: 3
New bridge to span Burn of Durno and local road, length 600m, High Piers (approx 17m)
New underbridge over Ides Burn and B9001, high skew, length 400 m
New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew

Number of Moderate Adverse Structures (150m to 300m long): 9

Transportation Summary of Impacts

Overall Transportation Mark = 2.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 36:13 minutes, saving 8:24 minutes

SO1.2 – Change in JT variability from 8:37 to 1:40

SO1.3 - 219M veh-kms (103%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=24.7kms (31%). 28% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 16 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:23mins (-14%).

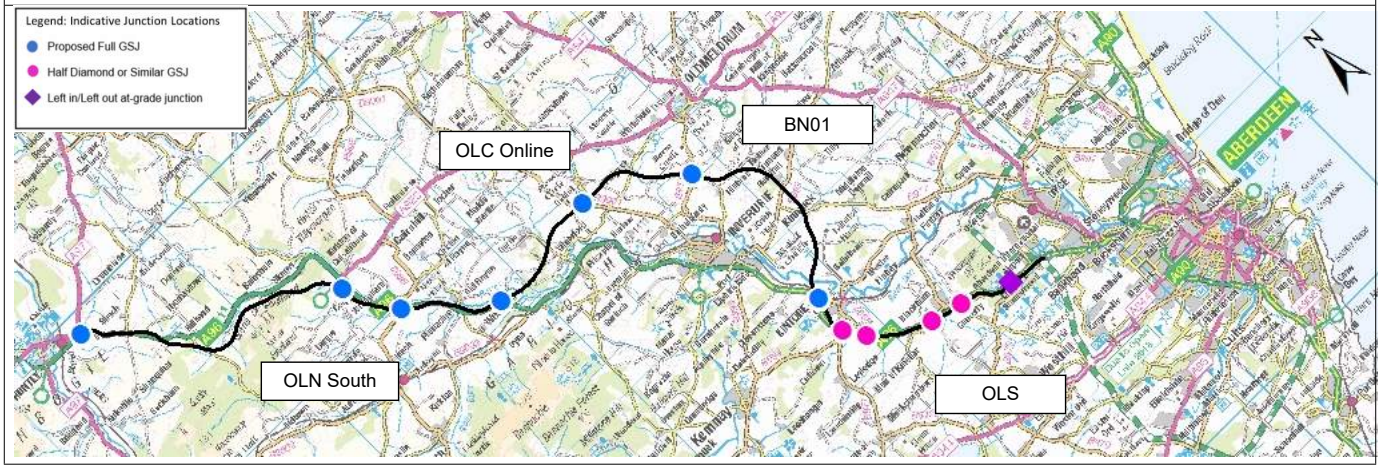
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3mins (-13.5%).

Plans and Policies – LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie. Development for additional explosives storage has been consented at BN01 Inner section. **Overall end-to-end Environmental conclusion** **Extensive widespread issues relating to landscape, water, ecology, proximity of property and impacts on cultural heritage features. Additionally, LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie will be impacted in the southern area. Note consent for development for additional explosives storage has been consented BN01 Inner.**	**Hydrology** Floodplain 6 Major Adverse Impacts associated with The Shevock, River Urie, Ides Burn (twice), Lochter Burn and River Don 2 Moderate Adverse Impacts associated with The Shevock and the Ides Burn. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation: 3 Moderate Adverse Impacts due to: Proposed low point would struggle for levels with outfall into River Urie Proposed low point would struggle for levels with outfall into Tributary Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 17 3 National Grid Pipeline crossings 6 SGN High Pressure Pipeline crossings 3 SSE 275 crossings 5 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 8 **Overall end-to-end Engineering conclusion** **This alignment recorded 43 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (101) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1400 vpd. Inverurie: Decrease of 6200 vpd. Overall change: -4800 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:45mins (-17%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (reduced traffic in Inverurie by 1083 vpd) and offers a northern bypass. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public support over the route's potential to reduce congestion in Inverurie and minimise impact on Bennachie. May be concerns over loss of agricultural land and proximity to woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria and offers a comparatively low level of economic benefit. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 36 Major Hazards, 40 Moderate Hazards & 77 Minor Hazards		
Overall Combined Mark = 4.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 26 – OLN South, OLC Online, BN01 Outer, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; online from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 53.1km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives														
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Minor Beneficial	Minor Beneficial	Neutral	Moderate Adverse	Minor Beneficial	Major Beneficial	Neutral	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2- Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7- Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Minor Beneficial	Moderate Beneficial	Major Beneficial	Minor Adverse – refer to Engineering Summary	N/A at this stage	Moderate Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 2.75

Landscape – impacts associated with earthworks, new structures, loss of ancient woodland especially between Durno and Whiteford. Setting impacts on receptors at Colpy, Little Lediken, Durno and Whiteford.

Water – crossing of The Kellock, extensive floodplains of the River Urie and Lochter Burn. 36 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from crossing of Glen Water and tributaries. Impacts on Pitscurry Moss LNCS and significant impact on habitat connectivity along this corridor which extends to Bennachie.

People and Com. – seven properties within 100m alignment corridor.

Soil and Geology – 12.7km of alignment is within prime agricultural land.

Cultural Heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and south-western most corner of the Battle of Barra Inventory Historic Battlefield (BTL18). Setting impacts on Woodside, hut circles 300m W of (SM11513), Williamston House GDL (GDL00386),

Engineering Summary of Impacts

Overall Engineering Mark = 3.25

Engineering Impacts

Total no of Major Adverse impacts: 213
Total no of Major Adverse Impact Clusters: 33
Total no of Moderate Adverse impacts: 304
Total no of Moderate Adverse Impact Clusters: 83

Earthworks

Bulk Cut: 5,037,000 m^3
Bulk Fill: 4,597,000 m^3
Earthworks Balance: 440,000 m^3 (surplus)

Geotechnical Key Issues

400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

700m Stretch of Category 1 very compressible or challenging soils near Westhall

Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures

Number of Major Adverse structures (over 300m long): 3

New bridge to span Burn of Durno and local road, length 600m, High Piers (approx 17m)

Transportation Summary of Impacts

Overall Transportation Mark = 0.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 36:26 minutes, saving 8:11 minutes.

SO1.2 – Change in JT variability from 8:37 to 0:43.

SO1.3 – 183M veh-kms (86%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 4 km of more than 2% uphill (moderate hilliness). Together gives 'Minor' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 23.8kms (26%).

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 13 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Proportion of trips re-assigning to dual-carriageway around Inverurie is low (11%).

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -2:49mins (-12.5%).

SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:32mins (-12%).

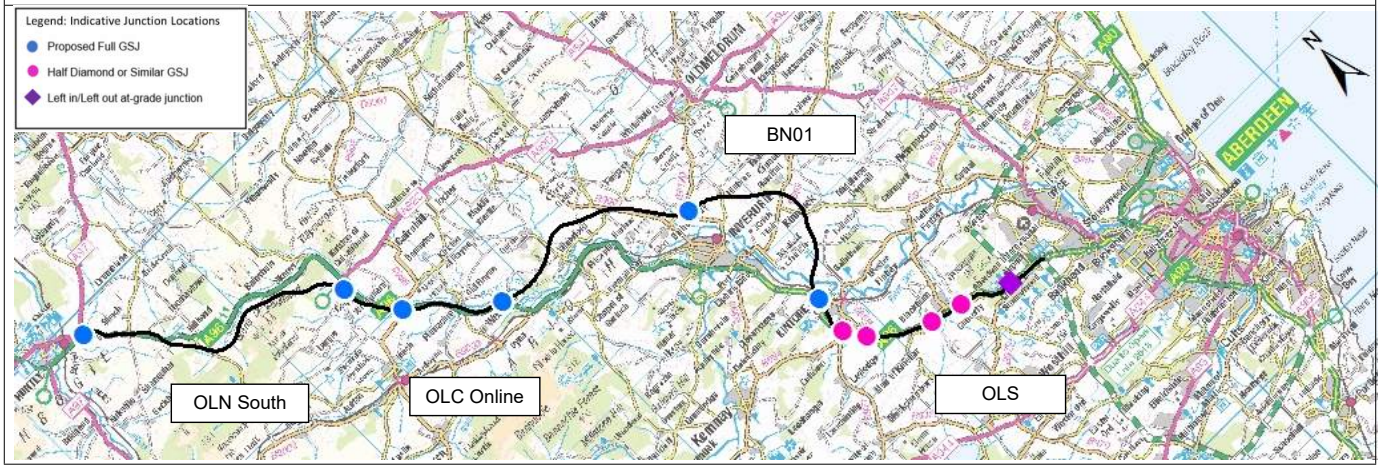
SO4 – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of

Newton House GDL (GDL00300), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), and Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826). **Plans and Policies** – committed small scale developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **Areas of concern relating to landscape, water, ecology, community and cultural heritage are mostly located in the northern and central sections of this alignment with only a few localised areas of concern on the south along BN01 Outer.**	New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m). New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures (150m to 300m long): 5 **Hydrology** Floodplain 4 Major Adverse Impacts associated with The Lochter Burn (twice), River Urie and River Don No Moderate Adverse Impacts. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts due to: Proposed low point would struggle for levels with outfall into River Urie Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 17 3 National Grid Pipeline crossings 3 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 6 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 33 clusters of Major Adverse Impacts marking it similar to two other alignments (185, 186). However, the 83 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	400 vpd. Inverurie: Decrease of 6200 vpd. Overall change: -5800vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:23mins (-17%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (713 vpd reduction in Inverurie) and provides a northern bypass. **STAG5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by more than 850 pcus, offering Major Beneficial. **STAG6** – Likely to be significant public support over the route's potential to reduce congestion in Inverurie and minimal impact on Bennachie. May be some public concerns over loss of agricultural land, proximity to woodland/agricultural areas and cultural heritage features. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Minor to Moderate Beneficial Impacts over the Scheme Objectives and STAG criteria and offers the lowest comparative economic benefit of all options. Generally moderate to major improvements in journey times. Minor accident savings.**
Health and Safety: 36 Major Hazards, 26 Moderate Hazards & 52 Minor Hazards		
Overall Combined Mark = 6.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 27 – OLN South, OLC Online, BN01 Inner, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; online from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.0km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Moderate Adverse – refer to Engineering Summary	N/A at this stage	Major Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 1.25

Landscape – impacts on landscape character at River Don and floodplain crossing from large structure, sensitive character of Deveron and Upper Ythan Valleys, earthworks, new structures and setting impacts around Colpy.

Water – crossing of The Kellock and extensive floodplains of River Urie, Ides Burn and River Don. 32 watercourse crossings.

Ecology – Wildcat Priority Area, ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings. Impacts on Pitscurry Moss LNCS.

People and Com. – nine properties within 100m alignment corridor.

Soil and Geology – 15km of alignment in prime agricultural land.

Cultural Heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and north-easternmost corner of Keith Hall Inventory GDL. Setting impacts on Woodside, hut circles 300m W of (SM11513), Williamston House GDL (GDL00386), Newton House GDL (GDL00300), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), Hill of Selbie, cairn (SM12434) and Battle of Harlaw (BTL11).

Engineering Summary of Impacts

Overall Engineering Mark = 2.75

Engineering Impacts

Total no of Major Adverse impacts: 194
Total no of Major Adverse Impact Clusters: 35
Total no of Moderate Adverse impacts: 296
Total no of Moderate Adverse Impact Clusters: 81

Earthworks

Bulk Cut: 4,387,000 m^3
Bulk Fill: 3,919,000 m^3
Earthworks Balance: 468,000 m^3 (surplus)

Geotechnical Key Issues

400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

350m Stretch of peat near Pitcaple

Structures

Number of Major Adverse structures (over 300m long): 3
New bridge to span Burn of Durno and local road, length 600m, High Piers (approx 17m)
New underbridge over Ides Burn and B9001, high skew, length 400 m
New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew

Number of Moderate Adverse Structures (150m to 300m long): 7

Transportation Summary of Impacts

Overall Transportation Mark =4.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:18minutes, saving 9:19 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:42

SO1.3 – 227M veh-kms (107%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 33.3kms (39%). 27% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 16 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:29 mins (-14.3%).

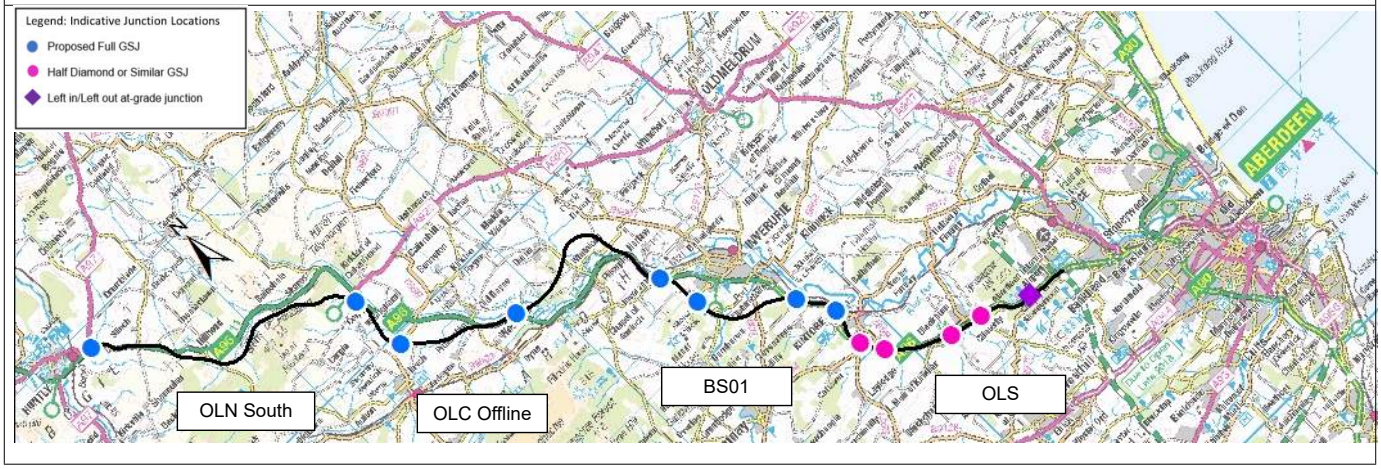
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -3:03 mins (-13.5%).

Plans and Policies – LDP land reserved for Northern Link Road and significant large scale consented development to the northern edge of Inverurie. Development for additional explosives storage has been consented at BN01 Inner. **Overall end-to-end Environmental conclusion** **Extensive widespread issues relating to landscape, water, ecology, proximity of property and impacts on cultural heritage features. Additionally, LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie will be impacted in the southern area. Development for additional explosives storage has been consented BN01 Inner.**	**Hydrology** Floodplain - 6 Major Adverse Impacts associated with: The Kellock, River Urie, Ides Burn (twice), Lochter Burn and River Don 1 Moderate Adverse Impacts associated with the Ides Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts due to: Proposed low point would struggle for levels with outfall into Jordan Burn Proposed low point would struggle for levels with outfall into River Urie **Utilities** Number of Major Adverse Impacts: 18 3 National Grid Pipeline crossings 3 SGN High Pressure Pipeline crossings 5 SSE 275 crossings 7 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 35 clusters of Major Adverse Impacts marking it similar to one other alignments. However, the 81 clusters of Moderate Adverse Impacts determined its final engineering mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 700 vpd. Inverurie: Decrease of 6200 vpd. Overall change -5500 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -4mins (-17.5%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (traffic in Inverurie reduced by -1058 vpd) and provides a northern bypass of Inverurie **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be major public support over the route's potential to reduce congestion in Inverurie, has minimal impact on Bennachie and follows sections of the existing A96 (e.g. through OLC). May be public concerns over loss of agricultural land and proximity to woodland/recreational areas and, to a lesser extent, proximity to cultural heritage features. **Overall end-to-end Transportation conclusion** **Overall the alignment Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria and offers comparatively low economic benefits. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 45 Major Hazards, 29 Moderate Hazards & 60 Minor Hazards		
Overall Combined Mark = 8.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 28 – OLN South, OLC Offline, BS01, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline to the south of the existing A96 from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 50.1km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Minor Beneficial**	**Neutral**	**Major Adverse – refer to Engineering Summary**	**N/A at this stage**	**Moderate Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 1.75

Landscape – 4km within Bennachie SLA. Impacts within the Don Valley, earthworks of >15m, introduction of large structures and loss of ancient woodland.

Water – crossing of the Shevock and River Urie floodplain. 36 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings. Impacts on Pitscurry Moss LNCS and habitat fragmentation along corridor that extends to Bennachie.

People and Com. – 11 properties within 100m alignment corridor.

Soil and Geology – 150m of alignment in Pitcaple and Legatsden Quarry and 10km of alignment within prime agricultural land.

Cultural Heritage – direct impact on Battle of Harlaw Inventory Historic Battlefield (BT11) and Drimmies, symbol stone (SM70). Setting impacts on Woodside, hut circles 300m W of (SM11513), Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826), St

Engineering Summary of Impacts

Overall Engineering Mark = 0.75

Engineering Impacts
Total no of Major Adverse impacts: 236
Total no of Major Adverse Impact Clusters: 46
Total no of Moderate Adverse impacts: 362
Total no of Moderate Adverse Impact Clusters: 98

Earthworks
Bulk Cut: 5,902,000 m^3
Bulk Fill: 5,560,000 m^3
Earthworks Balance: 342,000 m^3 (surplus)

Geotechnical Key Issues
400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

250m Stretch of Category 1 very compressible or challenging soils near Brownhills

750m Stretch of Category 1 very compressible or challenging soils near Harthill

Structures
Number of Major Adverse structures (Over 300m long): 3

New bridge to span local road, Burn of Durno and floodplain, length 600m, Pier Height 17m

New bridge to span Railway line, River Urie and flood plain, length 800m at Inveramsay

Transportation Summary of Impacts

Overall Transportation Mark = 1.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:3 to 34:41 minutes, saving 9:56 minutes.

SO1.2 – Change in JT variability from 8:37 to 2:07.

SO1.3 – 249M veh-kms (117%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.6kms (60%). 42% traffic reduction on the existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:17 mins (-13.5%).

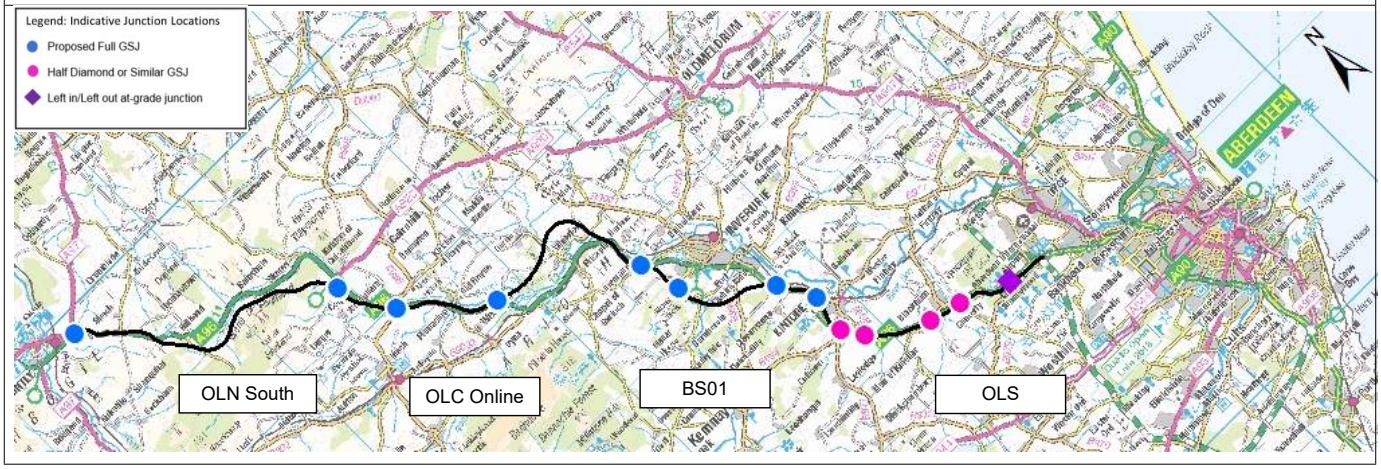
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:46mins (-12%).

Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure 510m WNW of (SM12195) and Bruce's Camp, hillfort (SM12523). **Plans and Policies** – infringes upon key large scale LDP housing and employment allocations to the south east of Port Elphinstone which are key areas of strategic settlement growth. **Overall end-to-end Environmental conclusion** **Extensive and widespread issues especially in the southern parts of the route associated with section BS01 in relation to landscape, cultural heritage features and large scale LDP development land for housing and employment.**	New viaduct approximately 375m length over River Don and its floodplains. Very high piers (36m) required due to difference level diff Number of Moderate Adverse Structures (150m to 300m long): 5 **Hydrology** Floodplain 3 Major Adverse Impacts associated with The Shevock and the River Urie (twice) 2 Moderate Adverse Impacts associated with the Shevock and the River Don Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts due to: Amendments required to ensure proposed low point would outfall into Tributary **Utilities** Number of Major Adverse Impacts: 24 1 National Grid Pipeline crossings 7 SGN High Pressure Pipeline crossings 7 SSE 275 crossings 9 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 3 **Overall end-to-end Engineering conclusion** **This alignment recorded 46 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (98) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1700 vpd. Inverurie: Decrease of 4000 vpd. Overall change: -2300 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:07mins (-14%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-899 vpd in Inverurie town centre) and fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows change by plus or minus 150 pcus. **STAG 6** – Likely to be public concerns over the route's impact on Bennachie and low use of the existing A96. May be concern that a northern bypass of Inverurie has not been provided, and concern over proximity to woodland/recreational areas and impact on agricultural land. Potential for some concern over proximity to cultural heritage features. **Overall end-to-end Transportation conclusion** **Overall the alignment Moderate to Major Beneficial Impact against Scheme Objectives and STAG criteria. Generally moderate improvements in journey times. Major accident savings.**
Health and Safety: 51 Major Hazards, 28 Moderate Hazards & 67 Minor Hazards		
Overall Combined Mark = 3.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 31 – OLN South, OLC Online, BS01, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; online from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 49.4km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Minor Beneficial	Minor Beneficial	Moderate Adverse – refer to Engineering Summary	N/A at this stage	Minor Adverse

Environment Summary of Impacts

Overall Environmental Mark = 2.75

Landscape – 4km within Bennachie SLA. Impacts within the Don Valley, earthworks of >15m, introduction of large structures, loss of ancient woodland and setting impacts in the Colpy area.

Water – crossing of The Kellock, extensive floodplain of the River Urie. 32 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossing. Impacts on Pitscurry Moss LNCS and habitat fragmentation along corridor that extends to Bennachie.

People and Com. – 14 properties within 100m alignment corridor.

Soil and Geology – 150m of alignment in Pitcaple and Legatsden Quarry. 11.5km of alignment in prime agricultural land.

Cultural Heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Drimmies, symbol stone (SM70). Setting impact on Woodside, hut circles 300m W of (SM11513), Williamston House GDL (GDL00386), Newton House GDL (GDL00300), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), and Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826) 0.2km south.

Engineering Summary of Impacts

Overall Engineering Mark = 2.75

Engineering Impacts

Total no of Major Adverse impacts: 186

Total no of Major Adverse Impact Clusters: 35

Total no of Moderate Adverse impacts: 304

Total no of Moderate Adverse Impact Clusters: 84

Earthworks

Bulk Cut: 4,861,000 m^3

Bulk Fill: 3,751,000 m^3

Earthworks Balance: 1,110,000 m^3 (surplus)

Geotechnical Key Issues

400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

750m Stretch of Category 1 very compressible or challenging soils near Harthill

Structures

Number of Major Adverse structures (Over 300m long): 3

New bridge to span local road, Burn of Durno and floodplain, length 600m, Pier Height 17m

New bridge to span Railway line, River Urie and flood plain, length 800m at Inveramsay

Transportation Summary of Impacts

Overall Transportation Mark = 2.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 34:15 minutes, saving 10:22 minutes.

SO1.2 – Change in JT variability from 8:37 to 2:12.

SO1.3 – 250M veh-kms (118%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.7kms (60%).

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:20mins (-13.7%).

SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -2:36mins (-11.5%).

SO4 – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of

Plans and Policies – infringes upon key large scale LDP housing and employment allocations to the south east of Port Elphinstone which are key areas of strategic settlement growth. **Overall end-to-end Environmental conclusion** **Widespread issues relating to landscape, water, ecology, cultural heritage and community. There is a concentration of impacts in the southern end of the alignment relating to landscape, water, ecology, community, cultural heritage and large-scale LDP housing and employment allocations to the south east of Port Elphinstone.**	New viaduct approximately 375m length over River Don and its floodplains. Very high piers (36m) required due to difference level diff Number of Moderate Adverse Structures (150m to 300m long): 5 **Hydrology** Floodplain 3 Major Adverse Impacts associated with The Kellock and the River Urie (twice) 1 Moderate Adverse Impacts associated with the River Don Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts due to: Proposed low point would struggle for levels with outfall into Jordan Burn **Utilities** Number of Major Adverse Impacts: 19 1 National Grid Pipeline crossing 3 SGN High Pressure Pipeline crossings 7 SSE 275Kv crossings 8 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 3 **Overall end-to-end Engineering conclusion** **This alignment recorded 35 clusters of Major Adverse Impacts marking it similar to one other alignments. However, the 84 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	1300 vpd. Inverurie: Decrease of 4200 vpd. Overall change: -2900 vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:09mins (-14%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to the LDP aspirations to reduce congestion in Inverurie (reduction of 906 vpd in Inverurie) however, fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public concerns over the route's impact on Bennachie and failure to provide a northern bypass of Inverurie. Route follows existing alignment through OLC which may be received positively. Potential for some concerns over impact on agricultural land, proximity to woodland/recreational area and cultural heritage features. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts against Scheme Objectives and STAG criteria, with a comparatively moderate level of economic benefit. Generally major to moderate improvements in journey times. Major accident savings.**
Health and Safety: 46 Major Hazards, 28 Moderate Hazards & 61 Minor Hazards		
Overall Combined Mark = 7.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 41 – OLN South, OLC Offline, CS02, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline to the south of the existing A96 from Colpy to Chapel of Garioch; offline west and south of Inverurie to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 47.5km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).

Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**		
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria		

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Moderate Beneficial	Neutral	Major Adverse – refer to Engineering Summary	N/A at this Stage	Major Adverse

Environment Summary of Impacts

Overall Environmental Mark = 1.25

Landscape – 10km within Bennachie SLA, earthworks > 15m, loss of ancient woodland, impact on setting of scheduled monuments, and new large structure across the River Don.

Water – crossing of Shevock Burn and extensive floodplain of Gadie Burn and realignments. 36 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings, including the River Don, the cumulative impact on ancient woodland and a reduction in habitat connectivity.

People and Com. – seven properties within 100m alignment corridor.

Soil and Geology – 7km of alignment in prime agricultural land.

Cultural Heritage – direct impact on Deer's Den, roundhouses (SM12465). Setting impact on Woodside, hut circles 300m W of (SM11513), Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115), St Apolinaris' Chapel and burial ground (SM12118), East Aquhorthies, stone circle (SM90126) and PIC (PIC242), and Maiden Stone (SM90210) and PIC (PIC256).

Engineering Summary of Impacts

Overall Engineering Mark = 0.75

Engineering Impacts
Total no of Major Adverse impacts: 281
Total no of Major Adverse Impact Clusters: 51
Total no of Moderate Adverse impacts: 291
Total no of Moderate Adverse Impact Clusters: 85

Earthworks
Bulk Cut: 6,422,000 m^3
Bulk Fill: 5,999,000 m^3
Earthworks Balance: 423,000 m^3 (surplus)

Geotechnical Key Issues
400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

250m Stretch of Category 1 very compressible or challenging soils near Brownhills

900m Stretch of Category 1 very compressible or challenging soils near Westhall

300m Stretch of peat near Westhall

350m Stretch of Landfill near Westhall

Up to 31m Cutting through shallow rock near Mellanbrae

Structures
Number of Major Adverse structures (over 300m): 3

Transportation Summary of Impacts

Overall Transportation Mark = 2.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 33:08 minutes, saving 11:29 minutes

SO1.2 – Change in JT variability from 8:30 to 1:51

SO1.3 – 239M veh-kms (113%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Major Beneficial'. 5 km of more than 2% uphill (moderate hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.3kms (59%).36% reduction in trips on the existing A96 Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:18mins (-13.6%).

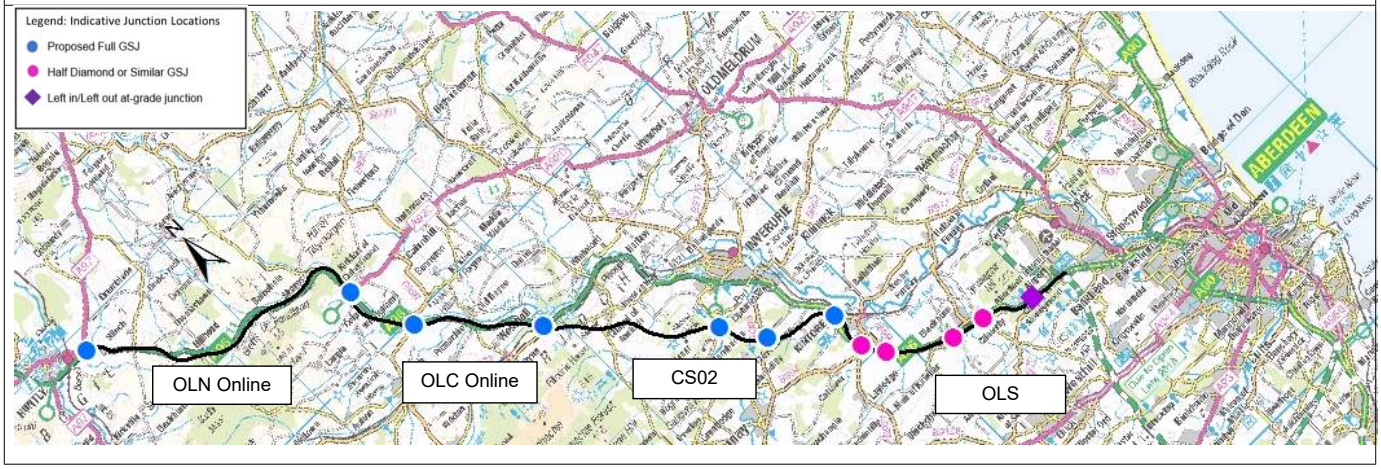
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:16mins (-14.4%).

Plans and Policies – committed medium scale and small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **Extensive and widespread issues throughout the alignment in relation to landscape, ecology and cultural heritage features, however the most severe of these are in the south section CS02 as 10km of the alignment passes through the Bennachie SLA. There is a direct impact on a scheduled monument and large earthworks impact on the setting of four further cultural heritage features. There are a large number of water crossings and reduction in habitat connectivity.**	Viaduct over the Gadie Burn, flood plain, B9002 at Ch. 3050 and railway at Ch. 3150. Approx. 850m total length. Viaduct over B-class Road and River Don. Total length approx. 775 m. High piers (up to 30m). Viaduct over Bridgealehouse watercourse, flood plain and local road. Viaduct total length approx. 425 m. Number of Moderate Adverse Structures 150m to 300m long): 3 **Hydrology** Floodplain 4 Major Adverse Impacts associated with the Shevock, Gadie Burn, Bridgealehouse Burn and the River Don. 2 Moderate Adverse Impacts associated with the Gadie Burn and The Shevock. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation – no major/Moderate Adverse Impacts. **Utilities** Number of Major Adverse Impacts: 24 3 National Grid Pipeline crossings 8 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 8 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 3 **Overall end-to-end Engineering conclusion** **This alignment recorded 51 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (85) resulting in a poorer performing engineering mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1100 vpd. Inverurie: Decrease of 3200 vpd. Overall change: -2100 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:18mins (-14.7%). Does not provide easier access to Inverurie Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (-1120 vpd through Inverurie), however, fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows change by plus or minus 150 pcus. **STAG 6** – Likely to be major public concerns over the route's proximity to Bennachie and significant concerns over its proximity to historic buildings/monuments and to ancient woodland/recreational areas. Route does not offer a northern bypass of Inverurie and does not make use of the existing A96. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major Beneficial Impacts across 10 of the Scheme Objectives and Neutral to Moderate Beneficial Impacts against STAG criteria. It also offers a comparatively moderate level of economic benefit. Generally major improvements in journey times. Major accident savings.**
Health and Safety: 50 Major Hazards, 25 Moderate Hazards & 70 Minor Hazards		
Overall Combined Mark = 4.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 45 – OLN Online, OLC Online, CS02, OLS

Description: Online via Hill of Skares to Colpy; online from Colpy to Chapel of Garioch; offline west and south of Inverurie to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 47.7km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Minor Adverse – refer to Engineering Summary	N/A at this stage	Moderate Adverse

Environment Summary of Impacts

Overall Environmental Mark = 2.25

Landscape – 10km within Bennachie SLA, earthworks > 15m, loss of ancient woodland, impact on setting of receptors at Little Lediken, Colpy and scheduled monuments, and new large structure across the River Don.

Water – realignment of Glen Water, crossing of The Kellock and extensive floodplain of the Gadie Burn and realignments required. 29 watercourse crossings.

Ecology – Wildcat Priority Area. 8 water crossings. Impacts from watercourse crossings including the River Don. Three waterbodies removed and several watercourse diversions. Habitat fragmentation, cumulative impact on ancient woodland and a reduction in habitat connectivity.

People and Com. – eight properties within 100m alignment corridor.

Soil and Geology – 8.7km of alignment within prime agricultural land.

Cultural Heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Deer's Den, roundhouses (SM12465). Setting impact on Williamston House GDL (GDL00386), Newton House GDL (GDL00300), St Apolinaris' Chapel and burial ground (SM12118), East Aquhorthies, stone circle (SM90126) and PIC

Engineering Summary of Impacts

Overall Engineering Mark = 2.75

Engineering Impacts
Total no of Major Adverse impacts: 215
Total no of Major Adverse Impact Clusters: 36
Total no of Moderate Adverse impacts: 230
Total no of Moderate Adverse Impact Clusters: 74

Earthworks
Bulk Cut: 4,176,000 m^3
Bulk Fill: 4,204,000 m^3
Earthworks Balance: -28,000 m^3 (deficit)

Geotechnical Key Issues
450m Stretch of peat Near Hillhead

350m Stretch of Category 1 very compressible or challenging soils near Westhall

300m Stretch of peat near Westhall

350m Stretch of Landfill near Westhall

Up to 31m Cutting through shallow rock near Mellanbrae

Structures
Number of Major Adverse structures (over 300m long): 3
Viaduct over the Gadie Burn, flood plain, B9002 at Ch. 3050 and railway at Ch. 3150. Approx. 850m total length.

Viaduct over B-class Road and River Don. Total length approx. 775 m. High piers (up to 30m).

Transportation Summary of Impacts

Overall Transportation Mark = 3.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 32:22 minutes, saving 12:15 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:50.

SO1.3 – 238M veh-kms (112%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Major Beneficial'. 4 km of more than 2% uphill (moderate hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.2kms (59%).36% reduction in trips on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:29mins (-14.3%).

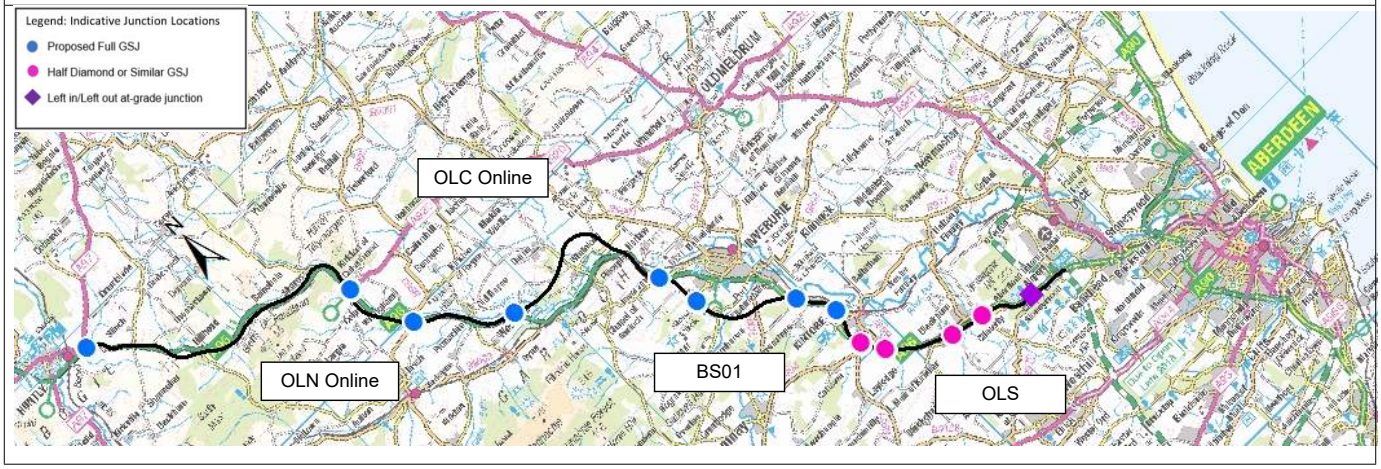
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:19mins (-14.6%).

(PIC242), and Maiden Stone (SM90210) and PIC (PIC256) **Plans and Policies** – committed medium scale and small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **Although there are issues throughout the alignment there is a concentration of impacts at the southern end in relation to section CS02 and associated primarily with the 10km of alignment that passes through the Bennachie SLA, the numerous watercourse crossings and impacts on cultural heritage features.**	Viaduct over Bridgealehouse watercourse, flood plain and local road. Viaduct total length approx. 425 m. Number of Moderate Adverse Structures (150m to 300m long): 4 **Hydrology** Floodplain 4 Major Adverse Impacts associated with The Kellock, Gadie Burn, Bridgealehouse Burn and the River Don 1 Moderate Adverse Impacts associated with the Gadie Burn. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts due to: Proposed low point would struggle for levels with outfall into River Urie Proposed low point would struggle for levels with outfall into Jordan Burn **Utilities** Number of Major Adverse Impacts: 12 3 National Grid Pipeline crossings 3 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 6 **Overall end-to-end Engineering conclusion** **This alignment recorded 36 clusters of Major Adverse Impacts marking it similar to three other alignments. However, the 74 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 600 vpd. Inverurie: Decrease of 3200 vpd. Overall change: -2600 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:27mins (-15.4%). Does not provide easier access to Inverurie Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a high level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (traffic reduces by 1131 vpd in Inverurie). However, it fails to meet the LDP aspiration to provide a northern bypass of the town. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be significant concerns over the route's proximity to Bennachie, historic buildings/monuments, agricultural land and to ancient woodland. May gain some public support for the route making best use of the existing A96 through OLC. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major to Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively high level of economic benefit. Generally major improvements in journey times. Major accident savings.**
Health and Safety: 29 Major Hazards, 36 Moderate Hazards & 75 Minor Hazards		
Overall Combined Mark = 8.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 53 – OLN Online, OLC Online, BS01, OLS

Description: Online via Hill of Skares to Colpy; online from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 50.2km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 -Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Moderate Beneficial**	**Minor Beneficial**	**Minor Beneficial**	**Minor Adverse – refer to Engineering summary**	**N/A at this stage**	**Minor Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 1.75

Landscape – 4km within Bennachie SLA, landscape character, the Don Valley, large scale earthworks of >15m, loss of ancient woodland, two new structures across Burn of Durno and River Urie and impact on receptors at Little Lediken, Colpy and scheduled monuments.

Water – realignment of Glen Water, crossing of The Kellock, extensive floodplain of the River Urie. 29 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings, including the River Urie. Three waterbodies removed and several watercourse diversions. Habitat fragmentation and impacts on Pitscurry Moss LNCS, loss of ancient woodland, habitat fragmentation along corridor that extends to Bennachie.

People and Com. – 12 properties within 100m alignment corridor.

Soil and Geology – 150m of alignment in Pitcaple and Legatsden Quarry, 11.7km within prime agricultural land.

Cultural Heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Battle of Harlaw Inventory Historic Battlefield (BT11). Setting impact on Williamston House GDL (GDL00386), Newton House GDL (GDL00300), Durno, Roman temporary camp (SM4123),

Engineering Summary of Impacts

Overall Engineering Mark = 3.25

Engineering Impacts

Total no of Major Adverse impacts: 173
Total no of Major Adverse Impact Clusters: 32
Total no of Moderate Adverse impacts: 307
Total no of Moderate Adverse Impact Clusters: 87

Earthworks

Bulk Cut: 3,656,000 m^3
Bulk Fill: 3,767,000 m^3
Earthworks Balance: -111,000 m^3 (deficit)

Geotechnical Key Issues

450m Stretch of peat near Hillhead
750m Stretch of Category 1 very compressible or challenging soils near Harthill

Structures

Number of Major Adverse structures (Over 300m long or complex): 3
New 600m bridge to span local road, Burn of Durno and floodplain, Pier Height 17m

New bridge to span Railway line, River Urie and flood plain, length 800m at Inveramsay

New viaduct approximately 375m length over River Don and its floodplains. Very high piers (36m) required due to difference level diff
Number of Moderate Adverse Structures: 6

Transportation Summary of Impacts

Overall Transportation Mark = 2.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 34:15 minutes, saving 10:22 minutes.

SO1.2 – Change in JT variability from 8:37 to 2:12.

SO1.3 – 250M veh-kms (118%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.7kms (60%). 42% reduction in traffic on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

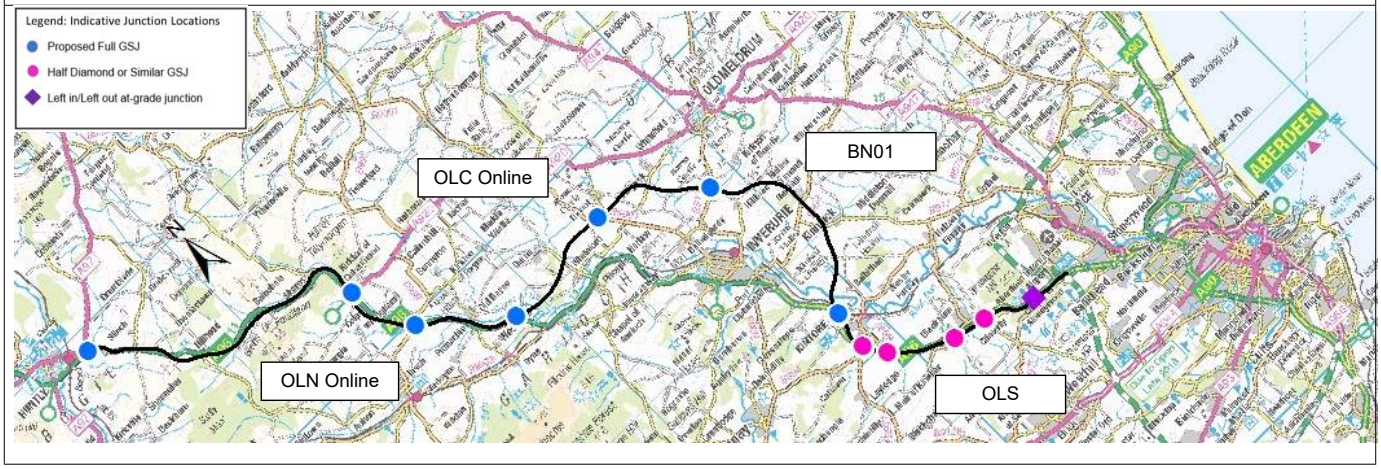
SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:20mins (-13.7%).

Pitscurry, cairn (SM12302), Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826), St Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure 510m WNW of (SM12195) and Bruce's Camp, hillfort (SM12523). **Plans and Policies** – infringes upon key large scale LDP housing and employment allocations to the south east of Port Elphinstone. **Overall end-to-end Environmental conclusion** **Extensive issues throughout the route with a higher concentration of issues in the southern areas associated with OLC and BS01 sections. These impacts include 4km of the route passing through the Bennachie SLA, Don Valley, direct and setting impacts on cultural heritage features and impact on a key large-scale LDP housing and employment allocation to the south east of Port Elphinstone.**	**Hydrology** Floodplain 3 Major Adverse Impacts associated with the Kellock, River Urie (twice) 1 Moderate Adverse Impacts associated with. The River Don Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 3 Moderate Adverse Impacts due to: Proposed low point would struggle for levels with outfall into River Urie Proposed low point would struggle for levels with outfall into Jordan Burn Proposed low point would struggle for levels with outfall into River Urie **Utilities** Number of Major Adverse Impacts: 12 1 National Grid Pipeline crossing 2 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded 32 clusters of Major Adverse Impacts marking it similar to four other alignments. However, the 87 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO3.2** – Average change in peak journey time from population centres to regional trip attractors= -2:36mins (-11.5%). **SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1300 vpd. Inverurie: Decrease of 4200 vpd. Overall change: -2900 vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:09mins (-14.1%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to reduction of congestion in Inverurie (-906 vpd travel through the town), however, it fails to meet the LDP aspiration for a northern Inverurie bypass. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public support for the route closely following the existing A96. Likely to be significant public concerns over the route's proximity to historic buildings/monuments, impact on woodland/recreational areas, and to a lesser extent, the proximity to Bennachie. The route does not provide a northern bypass of Inverurie. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major to Moderate Beneficial Impacts over the Scheme objectives and Minor to Moderate Beneficial Impacts against the STAG criteria. Option offers comparatively moderate level of economic benefit. Generally moderate to major improvements in journey times. Major accident savings.**
Health and Safety: 32 Major Hazards, 40 Moderate Hazards, 73 Minor Hazards		
Overall Combined Mark = 7.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 55 – OLN Online, OLC Online, BN01 Outer, OLS

Description: Online via Hill of Skares to Colpy; online from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 53.9km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Minor Beneficial	Moderate Beneficial	Neutral	Moderate Adverse	Minor Beneficial	Major Beneficial	Neutral	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2- Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7- Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Moderate Beneficial**	**Major Beneficial**	**Neutral – refer to Engineering summary**	**N/A at this stage**	**Moderate Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 2.25

Landscape – landscape character affected in areas of ancient woodland between Durno and Whiteford, numerous receptors and two new structures. Setting impacts on receptors at Little Lediken, Colpy and scheduled monuments.

Water – realignment of Glen Water, crossing of The Kellock, extensive floodplain of the River Urie and Lochter Burn. 33 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation impacts on Pitscurry Moss LNCS and the cumulative impact on blocks of ancient woodland. Significant impact on habitat connectivity along this corridor which extends to Bennachie.

People and Com. – five properties within 100m alignment corridor.

Soil and Geology – 13.5km of alignment is within prime agricultural land.

Cultural Heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and south-western most corner of the Battle of Barra Inventory Historic Battlefield (BTL18). Setting impact on Williamston House GDL (GDL00386), Newton House GDL (GDL00300), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302) and Category B listed Logie Durno Churchyard,

Engineering Summary of Impacts

Overall Engineering Mark = 3.75

Engineering Impacts
Total no of Major Adverse impacts: 200
Total no of Major Adverse Impact Clusters: 30
Total no of Moderate Adverse impacts: 304
Total no of Moderate Adverse Impact Clusters: 86

Earthworks
Bulk Cut: 3,816,000 m^3
Bulk Fill: 4,612,000 m^3
Earthworks Balance: -796,000 m^3 (deficit)

Geotechnical Key Issues
450m Stretch of peat near Hillhead
700m Stretch of Category 1 very compressible or challenging soils near Westhall
Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse structures (over 300m long):4

New bridge to span Burn of Durno and local road, length 600m

New viaduct required over Lochter burn, flood plain and local road at Ch.1200 (approx total length 700m).
New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.

Transportation Summary of Impacts

Overall Transportation Mark = 1.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 36:26 minutes, saving 8:11 minutes.

SO1.2 – Change in JT variability from 8:37 to 0:43

SO1.3 – 183M veh-kms (86%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 23.8kms (26%). 11% reduction in traffic on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 13 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Proportion of trips re-assigning to dual-carriageway around Inverurie is low, limiting the potential to reduce conflicts between motorised and non-motorised users on the de-trunked sections of the A96 in Inverurie.

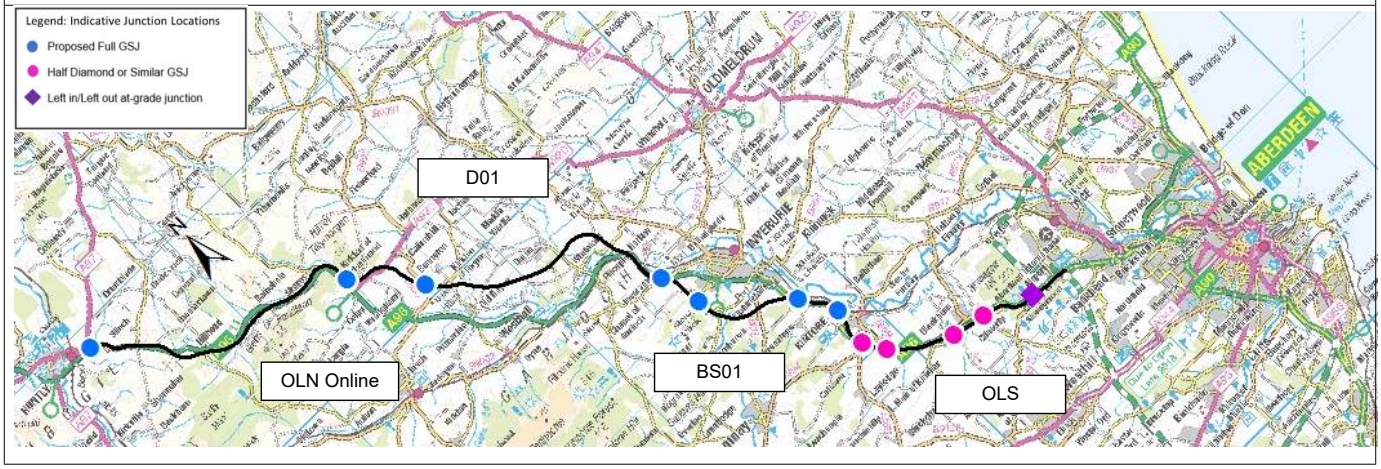
SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -2:49mins (-12.5%).

Dalrymple Horn Elphinstone Burial Enclosure (LB2826). **Plans and Policies** – committed small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **The majority of the issues along this route are located around the central sections and relate to the landscape, ecology, water, the community and cultural heritage features. The issues in the south are limited and localised whilst the ecology impact in the north related to the wild cat priority area is more extensive.**	Number of Moderate Adverse Structures (150m to 300m long): 6 **Hydrology** Floodplain - 4 Major Adverse Impacts associated with: Lochter Burn (twice), River Don, River Urie and the Kellock No Moderate Adverse Impacts. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 4 Moderate Adverse Impacts due to: Proposed low point would struggle for levels with outfall into Jordan Burn Proposed low point would struggle for space with outfall into River Urie Proposed low point would struggle for levels with outfall into River Urie Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 11 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 8 **Overall end-to-end Engineering conclusion** **This alignment recorded 30 clusters of Major Adverse Impacts (similar to alignment 194) but with a larger number of Moderate Adverse Impacts (86) determining its overall engineering discipline mark.**	**SO3.2** – Average change in peak journey time from population centres to regional trip attractors = -2:32mins (-11.9%). **SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 400 vpd. Inverurie: Decrease of 6200 vpd. Overall change: -5800 vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:23mins (-16.7%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-713vpd travel through Inverurie and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by more than 850 pcus. **STAG 6** – Likely to be significant public support over the route's potential to reduce congestion in Inverurie and for the route making best use of the existing A96. May also be public concerns over loss of agricultural land, proximity to woodland/recreational areas and cultural heritage sites. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively low level of economic benefit. Generally Moderate to Major improvements in journey times. Minor accident savings.**
Health and Safety: 33 Major Hazards, 48 Moderate Hazards & 76 Minor Hazards		
Overall Combined Mark = 7.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 58 – OLN Online, D01 (Kirkton), BS01, OLS

Description: Online via Hill of Skares to Colpy; offline to the north of existing A96 between Colpy and Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 48.9km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Major Beneficial**	**Minor Beneficial**	**Minor Beneficial**	**Neutral – refer to Engineering Summary**	**N/A at this stage**	**Minor Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 4.25

Landscape – 4km within Bennachie SLA affecting character of Don Valley. Earthworks of >15m, loss of ancient woodland and large watercourse crossing structures. Setting of Category A LB in Kirkton of Culsalmond, Williamston House GDL and scheduled monuments.

Water – realignment of Glen Water, extensive floodplain of River Urie. 32 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation.
People and Com. – six properties and Snipefield woods recreation area are within 100m alignment corridor.

Soil and Geology – direct impact on SSSI Pitcaple and Legatsden Quarry. 8km of alignment within prime agricultural land.

Cultural Heritage – direct impact on the north-western corner of the Battle of Harlaw Inventory Historic Battlefield (BTL11) and Drimmies, symbol stone (SM70). Setting impact on Mummer's Reive, cairn (SM11629), Category A listed Cusalmond Old Parish Church (LB2960), Durno, Roman temporary camp (SM4123, Newton of Lewesk, enclosure (SM12137), The Law, cairn (SM12113), Pitscurry, cairn (SM12302), St Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure 510m WNW

Engineering Summary of Impacts

Overall Engineering Mark = 3.75

Engineering Impacts
Total no of Major Adverse impacts: 173
Total no of Major Adverse Impact Clusters: 31
Total no of Moderate Adverse impacts: 265
Total no of Moderate Adverse Impact Clusters: 79

Earthworks
Bulk Cut: 3,630,000 m^3
Bulk Fill: 3,220,000 m^3
Earthworks Balance: 410,000 m^3 (surplus)

Geotechnical Key Issues
450m Stretch of peat near Hillhead
350m Stretch of peat near Pitcaple

Structures
Number of Major Adverse structures (Over 300m long): 3

New bridge to span local road, Burn of Durno and floodplain, length 600m, Pier Height 17m

New bridge to span Railway line, River Urie and flood plain, length 800m at Inveramsay

New viaduct approximately 375m length over River Don and its floodplains. Very high piers (36m) required due to difference level diff

Number of Moderate Adverse Structures (150m to 300m): 6

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 33:33 minutes, saving 11:03 minutes.

SO1.2 – Change in JT variability from 8:37 to 3:36.

SO1.3 – 243M veh-kms (114%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Moderate Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 46.2kms (57%). 42% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:21mins (-13.8%)

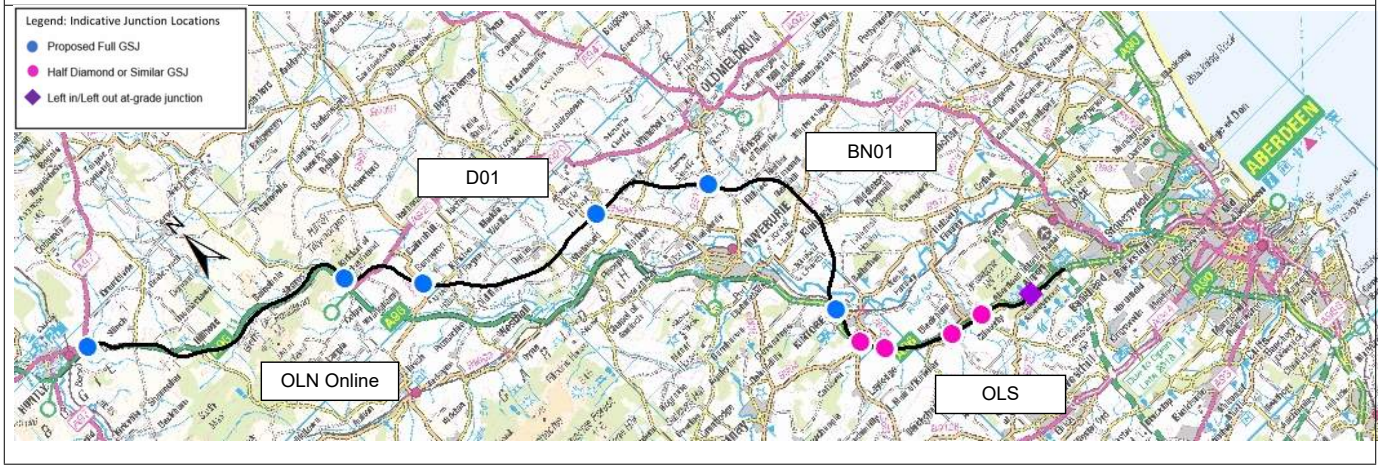
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -2:35mins (-11.4%)

of (SM12195) and Bruce's Camp, hillfort (SM12523). **Plans and Policies** – small scale local committed developments within alignment and key large-scale LDP housing and employment allocation to the south east of Port Elphinstone. **Overall end-to-end Environmental conclusion** **Issues throughout the alignment although those in the north sections are fairly limited apart from ecology. There is a concentration of impacts around the southern part of the route in relation to 4km of the route passing through the Bennachie SLA, impacts on cultural heritage features, the geological SSSI, community and key large scale LDP housing and employment allocation to the south east of Port Elphinstone.**	**Hydrology** Floodplain 2 Major Adverse Impacts associated with the River Urie (twice) 2 Moderate Adverse Impacts associated with the River Urie and the River Don Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts due to: Proposed low point would struggle for space with outfall into River Urie **Utilities** Number of Major Adverse Impacts: 13 1 National Grid Pipeline crossing 2 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 5 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 6 **Overall end-to-end Engineering conclusion** **This alignment recorded 31 clusters of Major Adverse Impacts marking it similar to four other alignments. However, the 79 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 700 vpd. Inverurie: Decrease of 4200 vpd. Overall change: -3500vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:08mins (-14.1%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a high level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (-902 vpd travel through the town) but fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be mixed response with some support for a northern bypass of Inverurie and potential reduction in congestion. Also likely to be some public concern over impact on agricultural land, and proximity to historic buildings/monuments and woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major to Moderate Beneficial Impact across the Scheme Objectives and STAG criteria, and a comparatively high level of economic benefit. Generally moderate to major improvements in journey times. Minor accident savings.**
Health and Safety: 27 Major Hazards, 25 Moderate Hazards & 75 Minor Hazards		
Overall Combined Mark = 11.25 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 60 – OLN Online, D01 (Kirkton), BN01 Outer, OLS

Description: Online via Hill of Skares to Colpy; offline to the north of existing A96 between Colpy and Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.6km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Moderate Beneficial**	**Moderate Beneficial**	**Major Beneficial**	**Neutral – refer to Engineering summary**	**N/A at this stage**	**Minor Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 3.75

Landscape – loss of ancient woodland, earthworks >15, impacts on receptors and new structure across Burn of Durno, setting of Category A LB in Kirkton of Culsalmond, Williamston House GDL and scheduled monuments.

Water – realignment of Glen Water, extensive floodplain of River Urie. 35 watercourse crossings.
Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation.

People and Com. – two properties and Snipefield woods recreation area within 100m alignment corridor.

Soil and Geology – 9.8km of alignment within prime agricultural land.

Cultural Heritage – direct impact on the south-western most corner of the Battle of Barra Inventory Historic Battlefield (BTL18). Impact on setting Mummer's Reive, cairn (SM11629), Category A listed Cusalmond Old Parish Church (LB2960), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), the Law, cairn (SM12113) and Pitscurry, cairn (SM12302).

Plans and Policies – consented small scale local developments within 100m alignment corridor.

Engineering Summary of Impacts

Overall Engineering Mark = 4.25

Engineering Impacts
Total no of Major Adverse impacts: 196
Total no of Major Adverse Impact Clusters: 29
Total no of Moderate Adverse impacts: 257
Total no of Moderate Adverse Impact Clusters: 79

Earthworks
Bulk Cut: 3,689,000 m^3
Bulk Fill: 4,010,000 m^3
Earthworks Balance: -321,000 m^3 (deficit)

Geotechnical Key Issues
450m Stretch of peat near Hillhead
300m Stretch of peat near Pitcaple
Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse structures (over 300m long): 3
New bridge to span local road, Burn of Durno and flood plain, length 550m, Pier Height approx 18m

New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m).
New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.

Number of Moderate Adverse Structures (150m to 300m long): 6

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:07 minutes, saving 9:30 minutes.

SO1.2 – Change in JT variability from 8:30 to 1:47.

SO1.3 – 230M veh-kms (108%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 37.2kms (46%). 31% reduction in traffic on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:21mins (-13.8%).

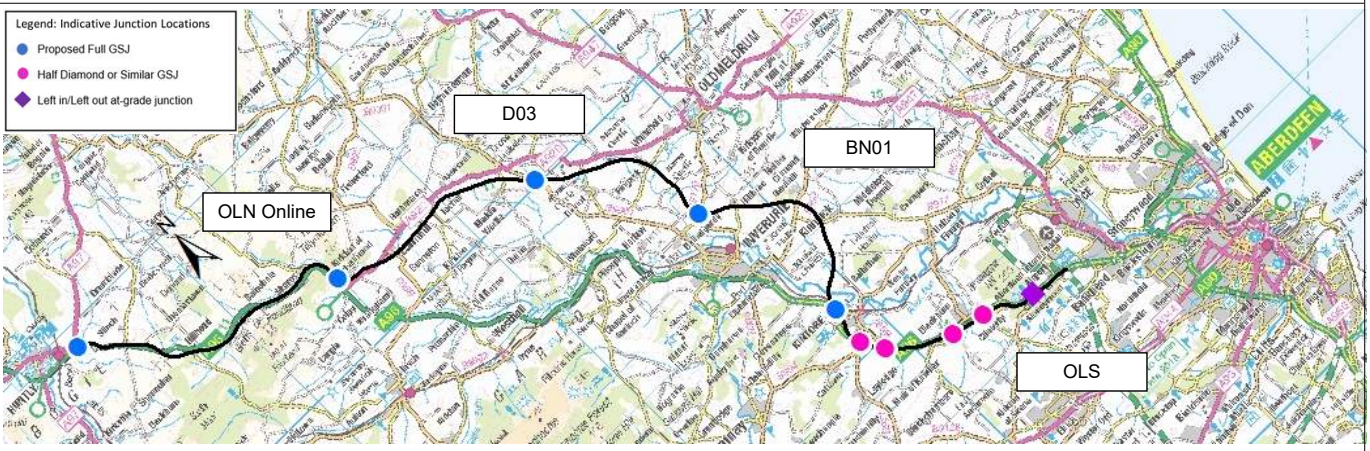
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:47mins (-12.3%).

Overall end-to-end Environmental conclusion **Issues throughout this route are fairly evenly distributed. Issues in the south are limited and localised, in the central section earthworks cause some setting issues with the landscape and cultural heritage features. There are no large-scale developments consented.**	**Hydrology** Floodplain 3 Major Adverse Impacts associated with the River Urie, The Lochter Burn and The River Don No Moderate Adverse Impacts. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts due to: Proposed low point would struggle for space with outfall into River Urie Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 11 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded 29 clusters of Major Adverse Impacts marking it similar to three other alignments. However, the 79 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 100 vpd. Inverurie: Decrease of 6400 vpd. Overall change: -6300vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:45mins (-16.7%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-895 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by more than 850 pcus. **STAG 6** – Likely to be significant public support over the route's potential to reduce congestion in Inverurie and minimal impact on Bennachie, however there is likely to be some concern over loss of agricultural land and proximity to woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impact across the Scheme Objectives and STAG criteria and offers a comparatively moderate level of economic benefit. Generally moderate improvements in journey times. Moderate accident savings.**
Health and Safety: 27 Major Hazards, 33 Moderate Hazards & 76 Minor Hazards		
Overall Combined Mark = 11.25 (Better performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 66 - OLN Online, D03, BN01 Inner, OLS

Description: Online via Hill of Skares to Colpy; offline to the north of existing A96 between Colpy and Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.7km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives														
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 –To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Minor Beneficial	Moderate Beneficial	Minor Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Neutral	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Minor Beneficial	Moderate Beneficial	Major Beneficial	Neutral – refer to Engineering summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 4.25

Landscape – impacts on landscape character at River Don and floodplain crossing from large structure, setting of several scheduled monuments and residential receptors. Earthworks >15m, loss of ancient woodland, setting of Category A LB in Kirkton of Culsalmond and Williamston House GDL.

Water – realignment of Glen Water, extensive floodplain of River Urie and River Don. 31 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation.

People and Com. – five properties and Snipefield Woods recreational walks within 100m alignment corridor.

Soil and Geology – 11km of alignment in prime agricultural land.

Cultural Heritage – direct impact on the north-easternmost corner of Keith Hall Inventory GDL. Impact on setting of Hill of Selbie, cairn (SM12434), Battle of Harlaw (BTL11), Loanhead, stone circle and enclosed cremation cemetery (SM90202) and PIC (PIC255), Mummer's Reive, cairn (SM11629), Newcraig, stone circle (SM37), New Craig, cupmarked boulder (SM12154), Category A listed Mounie Castle, Original Block (LB2793) and

Engineering Summary of Impacts

Overall Engineering Mark = 4.25

Engineering Impacts

Total no of Major Adverse impacts: 122
Total no of Major Adverse Impact Clusters: 20
Total no of Moderate Adverse impacts: 238
Total no of Moderate Adverse Impact Clusters: 72

Earthworks

Bulk Cut: 3,390,000 m^3
Bulk Fill: 3,182,000 m^3
Earthworks Balance: 208,000 m^3 (surplus)

Geotechnical Key Issues

450m Stretch of peat near Hillhead
500m Stretch of Category 1 very compressible or challenging soils Near Lochend of Barra

Structures

Number of Major Adverse structures (over 300m long): 1
New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.
Number of Moderate Adverse Structures 150m to 300m long): 7

Hydrology

Floodplain
2 Major Adverse Impacts associated with the River Urie and the River Don.

Transportation Summary of Impacts

Overall Transportation Mark = 1.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:50 minutes, saving 8:47 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:40

SO1.3 – 204M veh-kms (96%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 27.0kms (34%). 23% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 16 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Proportion of trips re-assigning to dual-carriageway around Inverurie is low.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -2:55mins (-12%).

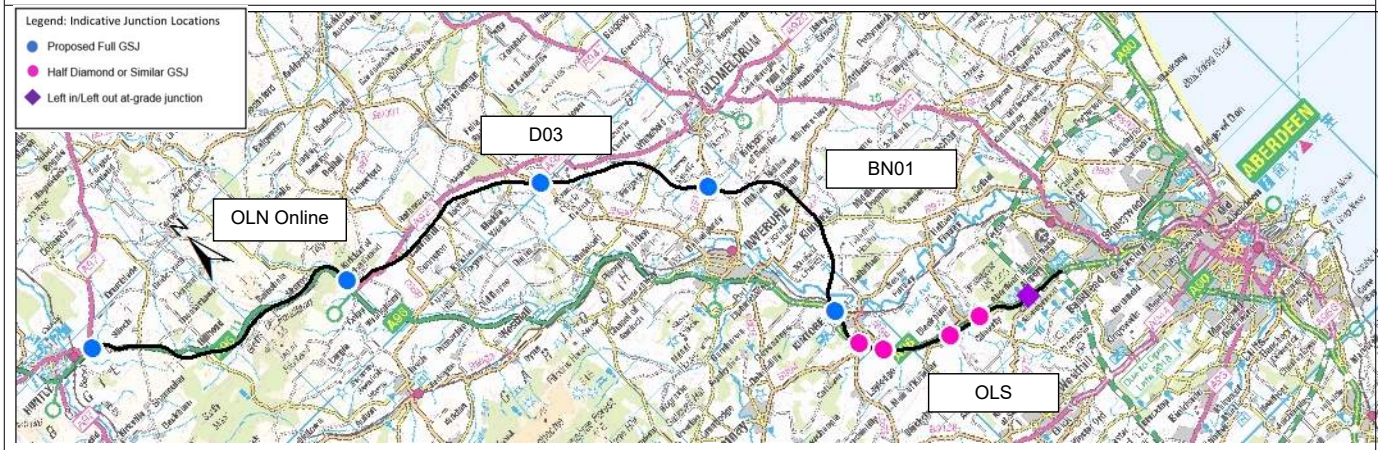
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -1:51mins (-8.2%).

Category A listed Cusalmond Old Parish Church (LB2960). **Plans and Policies** – committed small scale development and LDP land reserved for Northern Link Road and significant large scale consented development to the northern edge of Inverurie**.** Development for additional explosives storage has been consented at BN01 Inner. **Overall end-to-end Environmental conclusion** **Issues throughout this alignment are fairly evenly distributed in relation to the landscape, cultural heritage and community however in the southern section this also impacts the River Don floodplain and the LDP land reserved for Northern Link Road and significant large scale consented development to the northern edge of Inverurie. Development for additional explosives storage has been consented at BN01 Inner.**	2 Moderate Adverse Impacts associated with the Bonnyton Burn and Kings Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts due to: Proposed low point would struggle for space with outfall into River Urie Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 7 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 1 SSE 275Kv crossings 1 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded the lowest number of clusters of Major Adverse Impacts (20) and scored the highest mark in the engineering discipline, similar to one other alignment (Alignment 67).**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumoissie Street: No increase in vpd. Inverurie: Decrease of 5400 vpd. Overall change: -5400vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:23mins (-15.1%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-730vpd in Inverurie town centre), and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be major public support over the route's impact on reducing congestion in Inverurie and distance from Bennachie. However, may raise some concerns over loss of agricultural land and impact on cultural heritage features. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria and offers a comparatively low level of economic benefit. Generally moderate improvements in journey times. Moderate accident savings.**
Health and Safety: 17 Major Hazards; 36 Moderate Hazards & 68 Minor Hazards		
Overall Combined Mark = 9.75 (Better performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 67 – OLN Online, D03, BN01 Outer, OLS

Description: Online via Hill of Skares to Colpy; offline to the north of existing A96 between Colpy and Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.6km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Moderate Beneficial**	**Moderate Beneficial**	**Moderate Beneficial**	**Neutral – refer to Engineering summary**	**N/A at this stage**	**Minor Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 4.25

Landscape – setting of several scheduled monuments and residential receptors. Earthworks >15m, loss of ancient woodland, setting of Category A LB in Kirkton of Culsalmond and Williamston House GDL.

Water – realignment of Glen Water extensive floodplain of River Urie and Lochter Burn. 31 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation.

People and Com. – three properties and Snipefield woods recreation area within 100m alignment corridor.

Soil and Geology – 10.1km of alignment in prime agricultural land.

Cultural heritage – direct impact with the south-western most corner of Battle of Barra Inventory Historic Battlefield (BTL18). Setting impacts on Loanhead, stone circle and enclosed cremation cemetery (SM90202) and PIC (PIC255), Mummer's Reive, cairn (SM11629), Newcraig, stone circle (SM37), New Craig, cupmarked boulder (SM12154), Category A listed Mounie Castle, Original Block (LB2793) and Category A listed Cusalmond Old Parish Church (LB2960).

Engineering Summary of Impacts

Overall Engineering Mark = 4.25

Engineering Impacts
Total no of Major Adverse impacts: 120
Total no of Major Adverse Impact Clusters: 20
Total no of Moderate Adverse impacts: 249
Total no of Moderate Adverse Impact Clusters: 72

Earthworks
Bulk Cut: 3,449,000 m^3
Bulk Fill: 3,821,000 m^3
Earthworks Balance: -372,000 m^3 (deficit)

Geotechnical Key Issues
450m Stretch of peat Near Hillhead
Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse structures (over 300m long): 1
New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.
Number of Moderate Adverse Structures 150m to 300m long): 7

Hydrology
Floodplain
2 Major Adverse Impacts associated with the River Urie and the River Don.
2 Moderate Adverse Impacts associated with the Bonnyton Burn and Kings Burn

Transportation Summary of Impacts

Overall Transportation Mark = 2.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:29 minutes, saving 9:08 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:44

SO1.3 – 229M veh-kms (108%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 30.8kms (39%). 28% traffic reduction on existing A96 through Inverurie

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:12mins (-13.2%).

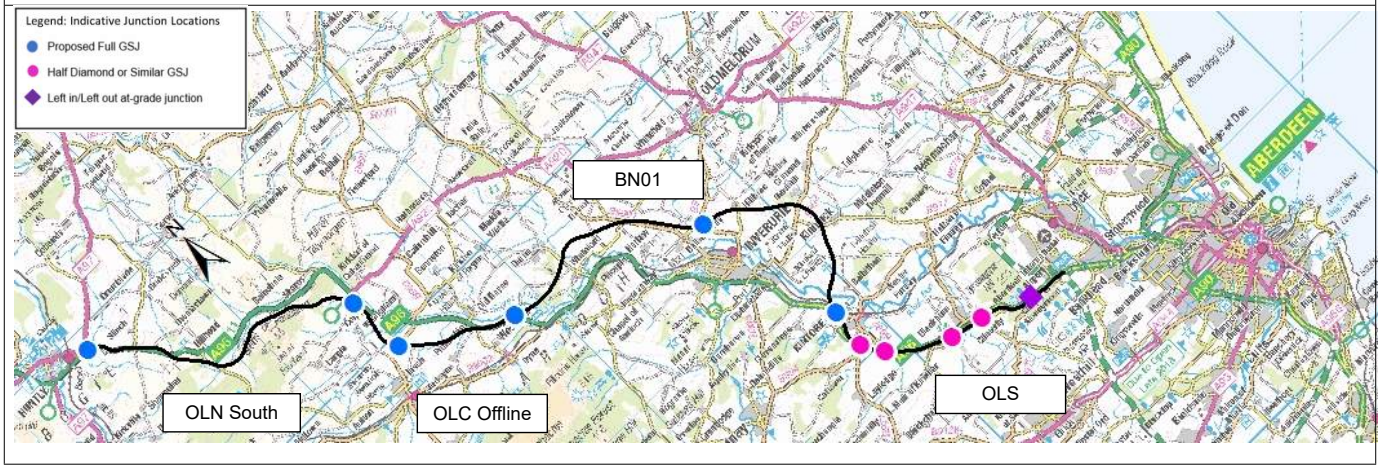
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:07mins (-9.3%).

Plans and Policies - committed small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **Issues along this route are fairly limited in number however there is a major concentration of impacts on cultural heritage features associated with section D03. Large earthworks in this area also affect the landscape character of the area.**	Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts due to: Proposed low point would struggle for space with outfall into River Urie Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 7 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 1 SSE 275Kv crossings 1 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded the lowest number of clusters of Major Adverse Impacts (20) and scored the highest mark in the engineering discipline, similar to one other alignment (Alignment 66).**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: No increase in vpd. Inverurie: Decrease of 5300 vpd. Overall change: -5300vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3.33mins (-15.9%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (-998 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to gain public support over the route's potential to reduce congestion in Inverurie and avoiding impact on Bennachie. However, there may be some concern over loss of agricultural land and impact on cultural heritage sites. **Overall end-to-end Transportation conclusion** **Overall the alignment offers a Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria and offers a comparatively moderate level of economic benefit. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 18 Major Hazards, 32 Moderate Hazards & 72 Minor Hazards		
Overall Combined Mark = 11.25 (Better performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 72 – OLN south, OLC Offline, BN01 inner, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline to the south of the existing A96 from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 53.0km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Major Beneficial**	**Minor Beneficial**	**Major Adverse – refer to Engineering summary**	**N/A at this stage**	**Minor Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 0.75

Landscape – impacts on landscape character at River Don and floodplain crossing from large structure, sensitive character of Deveron and Upper Ythan Valleys, earthworks >15m, structures and loss of ancient woodland.

Water – crossing of Shevock Burn, extensive floodplains of River Urie, Ides Burn and River Don. 36 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings, including Glen Water. Impacts on Pitscurry Moss LNCS, loss of ancient woodland and habitat fragmentation.

People and Com. – six properties within 100m alignment corridor.

Soil and geology – 13.4km of the alignment is prime agricultural land.

Cultural heritage – direct impact on the north-easternmost corner of Keith Hall Inventory GDL. Impact on setting of Hill of Selbie, cairn (SM12434), Battle of Harlaw (BTL11), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115) and Woodside, hut circles 300m W of (SM11513).

Engineering Summary of Impacts

Overall Engineering Mark = 1.25

Engineering Impacts

Total no of Major Adverse impacts: 244

Total no of Major Adverse Impact Clusters: 46

Total no of Moderate Adverse impacts: 352

Total no of Moderate Adverse Impact Clusters: 94

Earthworks

Bulk Cut: 5,429,000 m^3

Bulk Fill: 5,728,000 m^3

Earthworks Balance: -299,000 m^3 (deficit)

Geotechnical Key Issues

400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

250m Stretch of Category 1 very compressible or challenging soils near Brownhills

350m Stretch of Peat near Pitcaple

Structures

Number of Major Adverse structures (over 300m long): 3

New bridge to span Burn of Durno and local road, length 600m, High Piers (approx 17m)

New underbridge over Ides Burn and B9001, high skew, length 400 m

Transportation Summary of Impacts

Overall Traffic Mark = 2.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 36:13 minutes, saving 8:24 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:40.

SO1.3 – 219M veh-kms (103%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=24.7kms (31%).28% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 16 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:23mins (-13.9%).

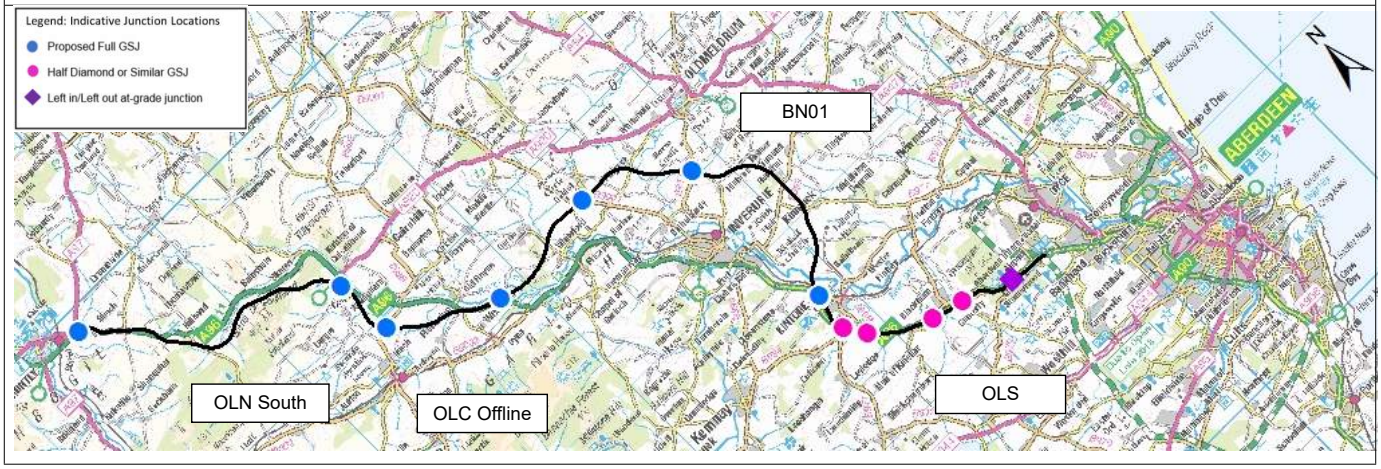
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:04mins (-13.5%).

Plans and Policies - LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie. A development for additional explosives storage has been consented at BN01 inner. **Overall end-to-end Environmental conclusion** **There are extensive and widespread issues along this route. There are large earthworks and new structures along every section and additionally in the south there is LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie.**	New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures (150m to 300m long): 7 **Hydrology** Floodplain 6 Major Adverse Impacts associated with The Shevock, River Urie, Ides Burn (Twice), Lochter Burn and River Don. 2 Moderate Adverse Impacts associated with the Shevock and The Ides Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts due to: Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 24 3 National Grid Pipeline crossings 7 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 9 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 46 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (94) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1400 vpd. Inverurie: Decrease of 6200 vpd. Overall change: -4800vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:45mins (-16.8%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-1083 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus **STAG 6** – Likely to be public support over the route's potential to reduce congestion in Inverurie through a northern bypass, however may be some concerns over impact on woodland/recreational areas and agricultural land. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria and offers a comparatively low level of economic benefit. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 50 Major Hazards, 30 Moderate Hazards & 66 Minor Hazards		
Overall Combined Mark = 4.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 73 – OLN South, OLC Offline, BN01 Outer, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline to the south of the existing A96 from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 54.1km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 –To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**		
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.	
Moderate Beneficial	Major Beneficial	Minor Beneficial	Minor Beneficial	Minor Beneficial	Moderate Adverse	Minor Beneficial	Major Beneficial	Neutral	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria		

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Minor Beneficial	Moderate Beneficial	Moderate Beneficial	Major Adverse – refer to Engineering Summary	N/A at this stage	Minor Adverse

Environment Summary of Impacts

Overall Environmental Mark = 1.25

Landscape – landscape character affected in areas of ancient woodland between Durno and Whiteford, numerous receptors and new structures with earthworks of >15m.

Water – crossing of Shevock Burn, extensive floodplains of the River Urie and Lochter Burn. 40 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings, including Glen Water. Impacts on Pitscurry Moss LNCS and the cumulative impact on blocks of ancient woodland. Significant impact on habitat connectivity along this corridor which extends to Bennachie.

People and Com. – four properties within 100m alignment corridor.

Soil and geology – 11.7km of alignment is prime agricultural land.

Cultural heritage – direct impact with the south-western most corner of Battle of Barra Inventory Historic Battlefield (BTL18). Setting impact on Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826), Brownhills, cairns

Engineering Summary of Impacts

Overall Engineering Mark = 1.25

Engineering Impacts
Total no of Major Adverse impacts: 263
Total no of Major Adverse Impact Clusters: 44
Total no of Moderate Adverse impacts: 357
Total no of Moderate Adverse Impact Clusters: 96

Earthworks
Bulk Cut: 6,063,000 m^3
Bulk Fill: 6,407,000 m^3
Earthworks Balance: -344,000 m^3 (deficit)

Geotechnical Key Issues
400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

250m Stretch of Category 1 very compressible or challenging soils near Brownhills

700m Stretch of Category 1 very Compressible or Challenging Soil near Westhall

Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse structures (over 300m long): 3

Transportation Summary of Impacts

Overall Transportation Mark = 0.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 36:24 minutes, saving 8:12 minutes.

SO1.2 – Change in JT variability from 8:37 to 0:43.

SO1.3 – 194M veh-kms (91%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 4 km of more than 2% uphill (moderate hilliness). Together gives 'Minor' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=26.9kms (31%). 19% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 14 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Proportion of trips re-assigning to dual-carriageway around Inverurie is low, limiting the potential to reduce conflict between motorised and non-motorised users on the detrunked section of the A96.

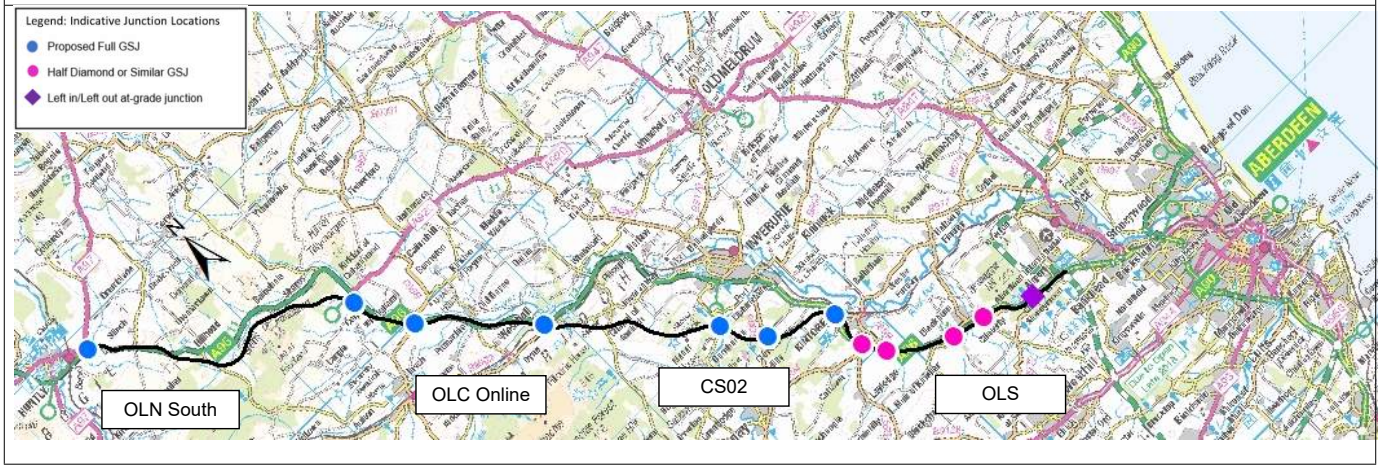
SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -2:58mins (-12.2%).

(SM12116), Wester Shevock, cairn (SM12115) and Woodside, hut circles 300m W of (SM11513). **Plans and Policies** – committed small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **The main issues along this route appear to be concentrated in the northern sections. BN01 Outer in the south has limited and localised issues, while those to the north are more extensive and widespread.**	New bridge to span Burn of Durno and local road, length 600m, High Piers (approx 17m) New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m). New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures (150m to 300m long): 7 Number of Major Adverse Structures: 3 Number of Moderate Adverse Structures: 5 **Hydrology** Floodplain 4 Major Adverse Impacts associated with The Shevock, The River Urie, Lochter Burn and The River Don. 1 Moderate Adverse Impacts associated with the Shevock. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts due to: Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 23 3 National Grid Pipeline crossings 7 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 8 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 44 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (96) resulting in a poorer performing engineering discipline mark.**	**SO3.2** – Average change in peak journey time from population centres to regional trip attractors = -2:54mins (-12.8%). **SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1300 vpd. Inverurie: Decrease of 6400 vpd. Overall change: -5100vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:33mins (-15.9%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (-830vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus **STAG 6** – Likely to be public support over the route's potential to reduce congestion in Inverurie but may raise some concern over the route making limited use of the existing A96, impact on woodland/recreational areas and on loss of agricultural land. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Minor to Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively low level of economic benefit. Generally moderate to major improvements in journey times. Minor accident savings.**
Health and Safety: 52 Major Hazards, 37 Moderate Hazards & 70 Minor Hazards		
Overall Combined Mark = 3.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 83 – OLN South , OLC Online, CS02, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; online from Colpy to Chapel of Garioch; offline west and south of Inverurie to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 46.8km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 –To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Moderate Adverse – refer to Engineering summary	N/A at this stage	Moderate Adverse

Environment Summary of Impacts

Overall Environmental Mark = 2.75

Landscape – 10km within Bennachie SLA, earthworks > 15m, loss of ancient woodland and new large structure across the river Don. Setting of receptors at Little Lediken, Colpy and scheduled monuments.

Water – crossing of The Kellock, extensive floodplain of the Gadie Burn and realignments required. 32 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings, including the River Don and Glen Water. Cumulative impact on ancient woodland and a reduction in habitat connectivity.

People and Com. – ten properties within 100m alignment corridor.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Deer's Den, roundhouses (SM12465). Setting impact on St Apolinaris' Chapel and burial ground (SM12118), East Aquhorthies, stone circle (SM90126) and PIC (PIC242), Maiden Stone (SM90210) and PIC (PIC256), Williamston House GDL (GDL00386), Newton House GDL (GDL00300) and Woodside, hut circles 300m W of (SM11513).

Plans and Policies – committed medium scale and small scale local developments within 100m alignment corridor.

Engineering Summary of Impacts

Overall Engineering Mark = 2.25

Engineering Impacts
Total no of Major Adverse impacts: 225
Total no of Major Adverse Impact Clusters: 38
Total no of Moderate Adverse impacts: 229
Total no of Moderate Adverse Impact Clusters: 70

Earthworks
Bulk Cut: 5,381,000 m^3
Bulk Fill: 4,189,000 m^3
Earthworks Balance: 1,192,000 m^3 (surplus)

Geotechnical Key Issues
400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

300m Stretch of peat near Westhall

350m Stretch of Landfill near Westhall

Up to 31m Cutting through shallow rock near Mellanbrae

Structures
Number of Major Adverse Structures: 3
Viaduct over the Gadie Burn, flood plain, B9002 at Ch. 3050 and railway at Ch. 3150. Approx. 850m total length.

Viaduct over B-class Road and River Don. Total length approx. 775 m. High piers (up to 30m).

Transportation Summary of Impacts

Overall Transportation Mark = 3.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 32:22 minutes, saving 12:15 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:50.

SO1.3 – 238M veh-kms (112%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Major Beneficial'. 5 km of more than 2% uphill (moderate hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.2kms (59%).36% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:29mins (-14.3%).

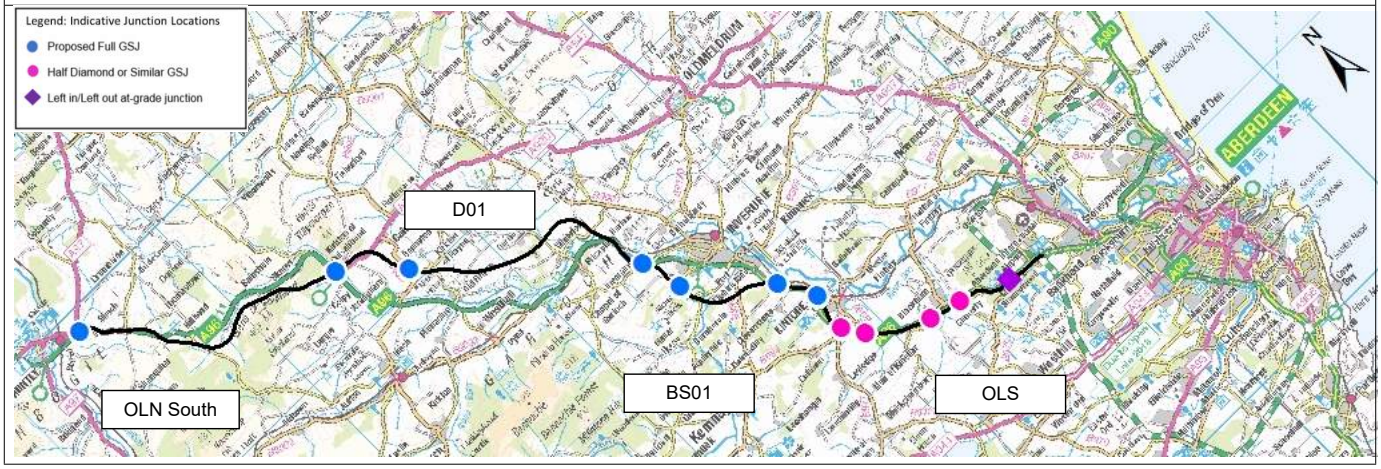
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:19mins (-14.6%).

Overall end-to-end Environmental conclusion **Along this route the issues are fairly widespread and extensive. In the north there are impacts on the Wildcat Priority Area and this is exaggerated by a series of water crossings. In the south the alignment passes through 10km of the Bennachie SLA with large earthworks and new crossing of the River Don. Landscape issues are apparent the length of this route due to earthworks and new structures. There is no large scale LDP development.**	Viaduct over Bridgealehouse watercourse, flood plain and local road. Viaduct total length approx. 425 m. Number of Moderate Adverse Structures: 3 **Hydrology** Floodplain 4 Major Adverse Impacts associated with The Kellock, Gadie Burn, River don and Bridgealehouse Burn. 1 Moderate Adverse Impacts associated with the Gadie Burn. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation – no major or Moderate Adverse Impacts. **Utilities** Number of Major Adverse Impacts: 18 3 National Grid Pipeline crossings 4 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 6 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 3 **Overall end-to-end Engineering conclusion** **This alignment recorded 38 clusters of Major Adverse Impacts resulting in a poorer performing engineering mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumossie Street: Increase of 600 vpd. Inverurie: Decrease of 3200 vpd. Overall change: -2600vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:27mins (-15.4%). Does not provide easier access to Inverurie Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a high level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-1131 vps in Inverurie town centre) but fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be significant public concerns over the route's proximity to Bennachie, proximity to historic buildings/monuments and ancient woodland/recreational areas. Potential for concerns over impact on agricultural land. However, there may be some support for the section of the route which follows the existing A96 (OLC) **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major to Moderate Beneficial Impacts across Scheme Objectives and STAG criteria, offering a comparatively high level of economic benefit. Generally major improvements in journey times. Major accident savings.**
Health and Safety: 43 Major Hazards, 24 Moderate Hazards & 62 Minor Hazards		
Overall Combined Mark = 8.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 89 – OLN South, D01 (Kirkton), BS01, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline to the north of existing A96 between Colpy and Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 48.7km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Major Beneficial	Minor Beneficial	Minor Beneficial	Moderate Adverse – refer to Engineering Summary	N/A at this stage	Minor Adverse

Environment Summary of Impacts

Overall Environmental Mark = 3.75

Landscape – 4km within Bennachie SLA, landscape character, the Don Valley, earthworks of >15m, loss of ancient woodland and large watercourse crossing structures. Impacts on the settings of scheduled monuments, a Category A Listed building and Williamston House GDL. A new structure, loss of woodland and impacts on residential receptors.

Water – crossing River Urie. 34 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings, including Glen Water.

People and Com. – eight properties and the Snipefield woods recreation area are within 100m alignment corridor.

Soil and geology – direct impact on SSSI Pitcaple and Legatsden Quarry. 8km of alignment in prime agricultural land.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure (SM11511), Drimmies, symbol stone (SM70). Setting impact on St Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure 510m WNW of (SM12195) and Bruce's Camp, hillfort (SM12523).

Engineering Summary of Impacts

Overall Engineering Mark = 1.75

Engineering Impacts:
Total no of Major Adverse impacts: 203
Total no of Major Adverse Impact Clusters: 38
Total no of Moderate Adverse impacts: 247
Total no of Moderate Adverse Impact Clusters: 76

Earthworks
Bulk Cut: 4,972,000 m^3
Bulk Fill: 2,991,000 m^3
Earthworks Balance: 1,981,000 m^3 (surplus)

Geotechnical Key Issues
400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

350m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 4

New bridge to span variable topography, existing A96, River Urie and flood plain, length 350 m. Large Spans (>85m) or high piers (approx 20m) required

New bridge to span local road, Burn of Durno and floodplain, length 600m, Pier Height 17m

New bridge to span Railway line, River Urie and flood plain, length 800m at Inveramsay

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 33:33 minutes, saving 11:03 minutes.

SO1.2 – Change in JT variability from 8:37 to 3:36.

SO1.3 – 243M veh-kms (114%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Moderate Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 46.2kms (57%). 42% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:21mins (-13.8%).

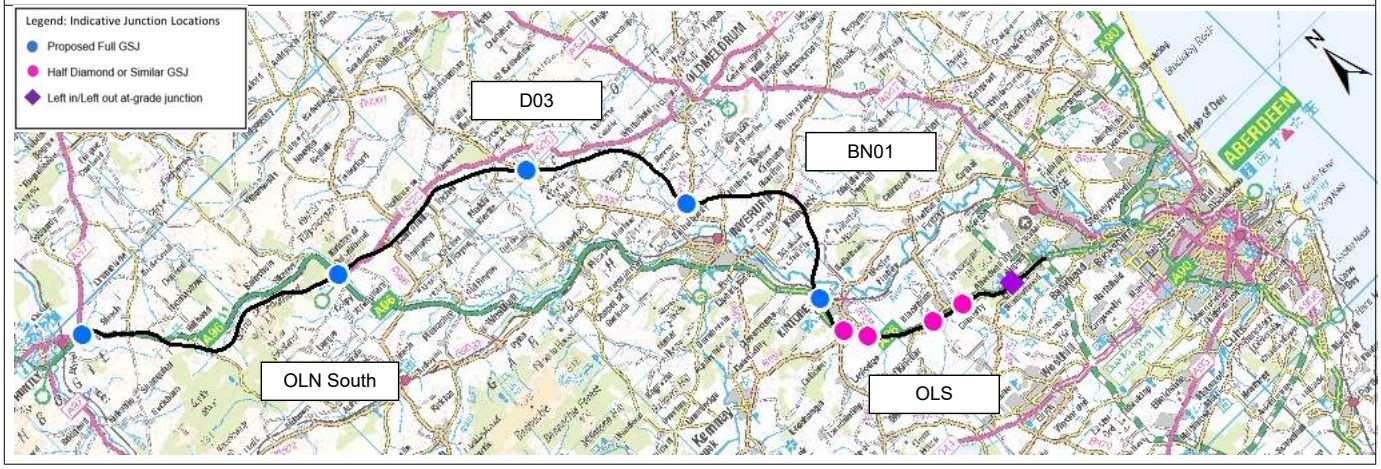
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -2:35mins (-11.4%).

Plans and Policies – heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone which are key areas of strategic settlement growth. **Overall end-to-end Environmental conclusion** **This alignment has fairly widespread issues. In the south the route passes through 4km of the Bennachie SLA with large earthworks, new structures and water crossings. There are numerous cultural heritage features, a geological SSSI and the alignment heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone. In the north the Wildcat Priority Area is affected along with numerous watercourse crossings and along with numerous cultural heritage features.**	New viaduct approximately 375m length over River Don and its floodplains. Very high piers (36m) required due to difference level difference. Number of Moderate Adverse Structures: 3 **Hydrology** Floodplain 1 Major Adverse Impact associated with the River Urie. 2 Moderate Adverse Impacts associated with the River Urie and The River Don. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation – no major or Moderate Adverse Impacts. **Utilities** Number of Major Adverse Impacts: 22 1 National Grid Pipeline crossings 3 SGN High Pressure Pipeline crossings 9 SSE 275Kv crossings 9 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 3 **Overall end-to-end Engineering conclusion** **This alignment recorded 38 clusters of Major Adverse Impacts and a large number of clusters of Moderate Adverse Impacts (76) resulting a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 700 vpd. Inverurie: Decrease of 4200 vpd. Overall change: -3500vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:08mins (-14.1%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a high level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce traffic congestion in Inverurie (-902 vpd in Inverurie town centre), fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public concerns over remoteness from existing A96, loss of agricultural land and proximity to historic buildings/monuments **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major to Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively high level of economic benefit. Generally moderate to major improvements in journey times. Minor accident savings.**
Health and Safety: 40 Major Hazards, 15 Moderate Hazards & 62 Minor Hazards		
Overall Combined Mark = 8.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 92 – OLN South, D03, BN01 Inner, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline Colpy to Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.5km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Minor Beneficial	Moderate Beneficial	Minor Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Neutral	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Neutral – refer to Engineering summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 3.75

Landscape – impacts on landscape character at River Don and floodplain crossing from large structure, setting of several scheduled monuments and residential receptors. Earthworks >15m, loss of ancient woodland, impacts on the settings of a Category A listed building and Williamston House GDL.

Water – extensive floodplain of the River Don. 33 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings, including Glen Water.

People and Com. – six properties and Snipefield woods recreation area within 100m alignment corridor.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure (SM11511) north-easternmost corner of Keith Hall Inventory GDL. Setting impact on Woodside, hut circles 300m W of (SM11513), Mummer's Reive, cairn (SM11629), Woodside, hut circles (SM11513), Category A listed Cusalmond Old Parish Church (LB2960), Loanhead, stone circle and enclosed cremation cemetery (SM90202) and PIC (PIC255), Newcraig, stone circle (SM37), New Craig, cupmarked boulder (SM12154) and Category A listed Mounie Castle, Original Block (LB2793).

Engineering Summary of Impacts

Overall Engineering Mark = 4.25

Engineering Impacts
Total no of Major Adverse impacts: 152
Total no of Major Adverse Impact Clusters: 27
Total no of Moderate Adverse impacts: 220
Total no of Moderate Adverse Impact Clusters: 69

Earthworks
Bulk Cut: 4,732,000 m^3
Bulk Fill: 2,953,000 m^3
Earthworks Balance: 1,779,000 m^3 (surplus)

Geotechnical Key Issues
400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

500m Stretch of Category 1 very compressible or challenging soils near Lochend of Barra

Structures
Number of Major Adverse Structures: 2
New bridge to span variable topography, existing A96, River Urie and flood plain, length 350 m. Large Spans (>85m) or high piers (approx 20m) required

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.

Number of Moderate Adverse Structures: 4

Transportation Summary of Impacts

Overall Transportation Mark = 1.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:50 minutes, saving 8:47 minutes

SO1.2 – Change in JT variability from 8:37 to 1:40

SO1.3 – 204M veh-kms (96%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 27.0kms (34%).

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 16 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Proportion of trips re-assigning to dual-carriageway around Inverurie is low, limiting the potential to reduce conflict between motorised and non-motorised users on the detrunked A96.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -2:55mins (-12%).

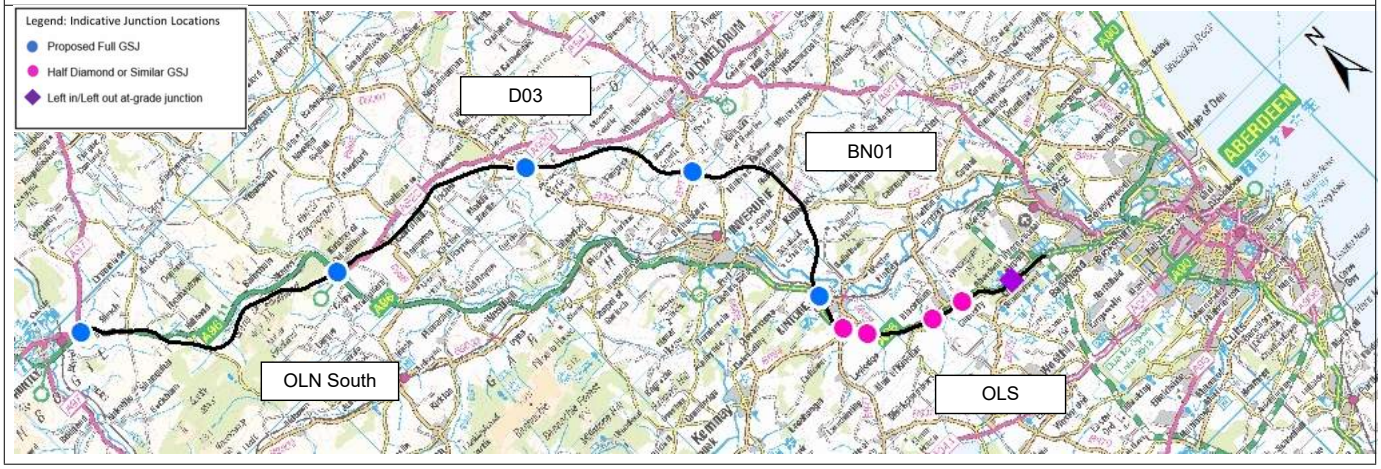
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -1:51mins (-8.2%).

Plans and Policies – committed small scale local developments, LDP land reserved for Northern Link Road and significant largescale consented development to the northern edge of Inverurie. A development for additional explosives storage has been consented at BN01 Inner. **Overall end-to-end Environmental conclusion** **This alignment has widespread issues along its length in relation to the landscape, community and cultural heritage features. In the south, there are additional issues with the River Don floodplain and LDP land reserved for Northern Link Road and significant largescale consented development to the northern edge of Inverurie. Development for additional explosives storage has been consented BN01 Inner.**	**Hydrology** Floodplain 1 Major Adverse Impact associated with the River Don. 2 Moderate Adverse Impacts associated with the Bonnyton Burn and Kings Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 17 3 National Grid Pipeline crossings 3 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossing 6 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 27 clusters of Major Adverse Impacts resulting in a better performing engineering discipline mark, similar to one other alignment (93).**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Road: No increase in vpd. Inverurie: Decrease of 5400 vpd. Overall change: -5400vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:23mins (-15.1%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-730 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by more than 850 pcus. **STAG 6** – Likely to be major public support over the route's potential to reduce congestion in Inverurie and avoiding impact on Bennachie. However, there may be some concern over loss of agricultural land and impact on cultural heritage sites. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate Beneficial Impacts across Scheme Objectives and STAG criteria, and offers a comparatively moderate level of economic benefit. Generally moderate improvements in journey times. Moderate accident savings.**
Health and Safety: 30 Major Hazards, 26 Moderate Hazards & 55 Minor Hazards		
Overall Combined Mark = 9.75 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 93 – OLN South, D03, BN01 Outer, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline Colpy to Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.4km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria		

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Neutral-refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 4.25

Landscape – impacts on landscape character associated with earthworks and new structures. Impacts on the settings of scheduled monuments, a Category A Listed building and Williamston House GDL.

Water – extensive floodplain of the Lochter Burn. 33 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings including Glen Water.

People and Com. – four properties and Snipefield woods recreation area within 100m alignment corridor.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure (SM11511) and south-western most corner of the Battle of Barra Inventory Historic Battlefield (BTL18). Setting impacts on Loanhead, stone circle and enclosed cremation cemetery (SM90202) and PIC (PIC255), Mummer's Reive, cairn (SM11629), Newcraig, stone circle (SM37), New Craig, cupmarked boulder (SM12154), Category A listed Mounie Castle, Original Block (LB2793), Woodside, hut circles (SM11513) and Category A listed Cusalmond Old Parish Church (LB2960).

Plans and Policies – committed small scale local developments within 100m alignment corridor.

Engineering Summary of Impacts

Overall Engineering Mark = 4.25

Engineering Impacts
Total no of Major Adverse impacts: 150
Total no of Major Adverse Impact Clusters: 27
Total no of Moderate Adverse impacts: 231
Total no of Moderate Adverse Impact Clusters: 69

Earthworks
Bulk Cut: 4,790,000 m^3
Bulk Fill: 3,592,000 m^3
Earthworks Balance: 1,198,000 m^3 (surplus)

Geotechnical Key Issues

400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

Structures
Number of Major Adverse Structures: 2
New bridge to span variable topography, existing A96, River Urie and flood plain, length 350 m. Large Spans (>85m) or high piers (approx 20m) required

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.

Number of Moderate Adverse Structures: 4

Transportation Summary of Impacts

Overall Transportation Mark = 2.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:29 minutes, saving 9:08 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:44.

SO1.3 – 229M veh-kms (108%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 4 km of more than 2% uphill (moderate hilliness). Together gives 'Minor' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 30.8kms (39%).28% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:12mins (-13.2%).

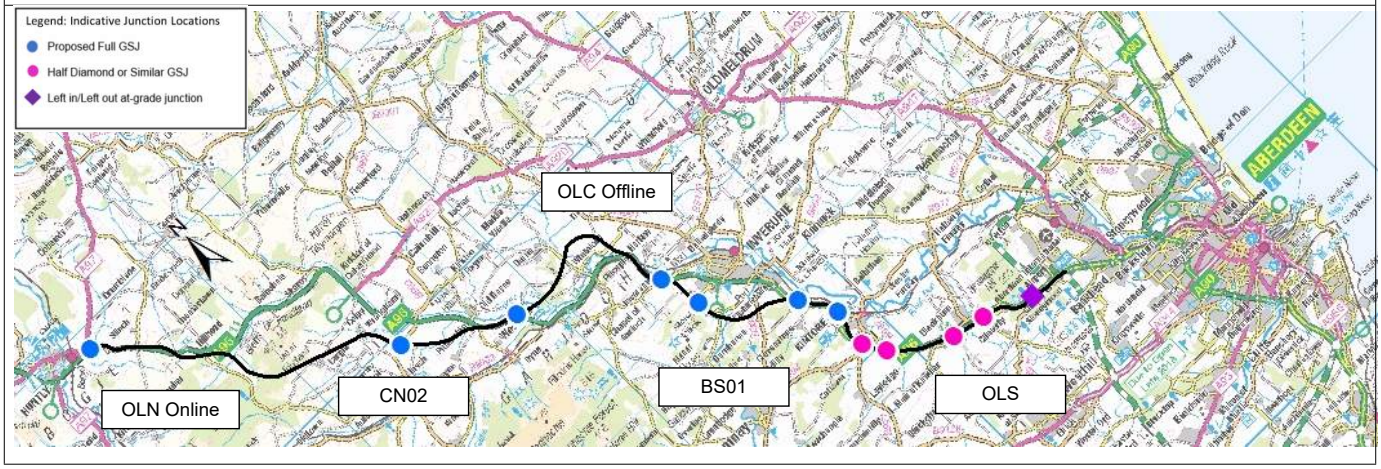
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:07mins (-9.3%).

Overall end-to-end Environmental conclusion **Along this alignment the issues are more limited in nature. Large earthworks and new structures impact on the landscape character and cause setting issues on cultural heritage features and some receptors. Ecological issues are concentrated in the north in relation to the Wildcat Priority Area. There are no large-scale developments.**	**Hydrology** Floodplain: 1 Major Adverse Impact associated with the River Don. 2 Moderate Adverse Impacts associated with the Bonnyton Burn and Kings Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 17 3 National Grid Pipeline crossings 3 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 6 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 27 clusters of Major Adverse Impacts resulting in a better performing engineering discipline mark, similar to one other alignment (92).**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: No increase in vpd. Inverurie: Decrease of 5300 vpd. Overall change: -5300vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:33mins (-15.9%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to the LDP aspiration to reduce congestion in Inverurie (-998 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to gain public support over the route's potential to reduce congestion in Inverurie and avoiding impact on Bennachie. However, there may be some concern over loss of agricultural land and impact on cultural heritage sites. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively moderate level of economic benefit. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 31 Major Hazards, 22 Moderate Hazards & 59 Minor Hazards		
Overall Combined Mark = 10.75 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 108 – OLN Online, CN02, OLC Offline, BS01 Inner, OLS

Description: Offline to the south of existing A96 and Glens of Foudland through Stony Hill to Chapel of Garioch; offline to the north of existing A96 to Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 48.6km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Moderate Beneficial**	**Minor Beneficial**	**Neutral**	**Moderate Adverse- refer to Engineering Drawing**	**N/A at this stage**	**Moderate Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 2.25

Landscape – 4km within Bennachie SLA, landscape character of the Don Valley. Major cuttings across Stony Hill will impact skyline and landscape character of Foudland Grampian Outliers. Embankments across the Insch Basin will degrade characteristic low lying topography. Setting of Colpy and scheduled monuments, earthworks >15m, new structure and loss of ancient woodland.

Water – realignment of Glen Water, crossing of Shevock Burn, extensive floodplain of the River Urie. 31 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Cuts through Wildcat Priority Area creating additional barrier and habitat fragmentation. Impacts on Pitscurry Moss LNCS, loss of ancient woodland and habitat fragmentation along corridor that extends to Bennachie.

People and Com. – nine properties within 100m alignment corridor.

Soil and geology – 150m of alignment in Pitcaple and Legatsden Quarry (SSSI). 9.4km of alignment in prime agricultural land.

Cultural heritage – direct impact on Battle of Harlaw Inventory Historic Battlefield (BT11) and Drimmies symbol stone (SM70). Setting impact on St Apolinaris' Chapel and burial ground (SM12118),

Engineering Summary of Impacts

Overall Engineering Mark = 1.75

Engineering Impacts
Total no of Major Adverse impacts: 251
Total no of Major Adverse Impact Clusters: 41
Total no of Moderate Adverse impacts: 386
Total no of Moderate Adverse Impact Clusters: 94

Earthworks
Bulk Cut: 9,551,000 m^3
Bulk Fill: 8,143,000 m^3
Earthworks Balance: 1,408,000 m^3 (surplus)

Geotechnical Key Issues
Up to 63.1m Cutting through shallow rock near Hill of Foudland

Up to 33.8m Embankment on glacial till near Hill of Foudland

Up to 33.8m Embankment on shallow rock near Hill of Foudland

450m Stretch of peat near Hillhead

250m Stretch of Category 1 very compressible or challenging soil near Brownhills

450m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 600m, Pier Height 17m

New bridge to span Railway line, River Urie and flood plain, length 800m at Inveramsay

Transportation Summary of Impacts

Overall Transportation Mark = 1.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 33:15 minutes, saving 11:22 minutes.

SO1.2 – Change in JT variability from 8:37 to 2:12.

SO1.3 – 244M veh-kms (115%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Moderate Beneficial'. 6 km of more than 2% uphill (major hilliness). Together gives 'Minor' rating.

SO1.5 - Average reduction in trip length over AM and PM peak= 47.3kms (58%). 42% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:21mins (-13.8%).

SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:02mins (-13.4%).

SO4 – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of

Dillyhill, enclosure 510m WNW of (SM12195), Bruce's Camp, hillfort (SM12523), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302) and Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826). **Plans and Policies** – heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone. **Overall end-to-end Environmental conclusion** **This alignment has extensive and widespread issues along its length. In the north the alignment deviates significantly from the A96 with added impacts on the Wildcat Priority Area and habitat fragmentation. Major cuttings impact the landscape. Along central sections, large earthworks and new structures impact further on landscape and cultural heritage features. To the south 4km of the alignment passes within the Bennachie SLA and heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone.**	New viaduct approximately 375m length over River Don and its floodplains. Very high piers (36m) required due to difference level difference. Number of Moderate Adverse Structures: 4 **Hydrology** Floodplain 4 Major Adverse Impacts associated with the Kellock, The Shevock and The River Urie (Twice), 2 Moderate Adverse Impacts associated with the Shevock and the River Don Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts Proposed low point would struggle for levels with outfall into Tributary **Utilities** Number of Major Adverse Impacts: 14 1 National Grid Pipeline crossing 3 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 5 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 41 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (94) resulting in a poorer performing engineering discipline mark.**	1900 vpd. Inverurie: Decrease of 4100 vpd. Overall change: -2200 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:28mins (-15.6%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-905 vpd) but fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows change by plus or minus 150 pcus. **STAG 6** – Likely to be significant public concerns over the route making limited use of the existing A96, proximity to Bennachie and on loss of agricultural land. May also be concerns over the route's proximity to woodland/recreational areas and historic buildings/monuments. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major to Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria, with a comparatively moderate level of economic benefit. Generally major improvements in journey times. Major accident savings.**
Health and Safety: 47 Major Hazards, 30 Moderate Hazards & 70 Minor Hazards		
Overall Combined Mark = 5.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 118 – OLN Online, CN02, OLC Offline, CS02, OLS

Description: Offline to the south of existing A96 and Glens of Foudland through Stony Hill to Chapel of Garioch; west and south of Inverurie Chapel of Garioch to south of Kintore and existing dual carriageway to Craibstone Roundabout

Length: 46.1km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).

Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Major Beneficial**	**Moderate Beneficial**	**Neutral**	**Major Adverse- refer to Engineering Summary**	**N/A at this stage**	**Major Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 1.75

Landscape – 10km within Bennachie SLA, earthworks > 15m, loss of ancient woodland, impact on setting of scheduled monuments and a new large structure across the River Don. Major cuttings across Stony Hill will impact skyline and landscape character of Foudland Grampian Outliers. Embankments across the Insch Basin will degrade characteristic low lying topography.

Water – realignment of Glen Water, crossing of Shevock Burn, extensive floodplain of the Gadie Burn and realignments required. 31 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings, including River Don. Three waterbodies removed and several watercourse diversions. Cuts through Wildcat Priority Area creating additional barrier and habitat fragmentation. Cumulative impact on ancient woodland and a reduction in habitat connectivity.

People and Com. – five properties within 100m alignment corridor.

Soil and geology – 6.4km of alignment in prime agricultural land.

Cultural heritage – direct impact on Deer's Den, roundhouses (SM12465). Setting impact on St Apolinaris' Chapel and burial ground (SM12118), East Aquhorthies, stone circle (SM90126) and PIC (PIC242), Maiden Stone (SM90210) and PIC (PIC256), Brownhills, cairns (SM12116), Wester

Engineering Summary of Impacts

Overall Engineering Mark = 1.25

Engineering Impacts
Total no of Major Adverse impacts: 290
Total no of Major Adverse Impact Clusters: 44
Total no of Moderate Adverse impacts: 321
Total no of Moderate Adverse Impact Clusters: 81

Earthworks
Bulk Cut: 10,071,000 m^3
Bulk Fill: 8,582,000 m^3
Earthworks Balance: 1,489,000 m^3 (surplus)

Geotechnical Key Issues
Up to 63m Cutting through shallow rock near Hill of Foudland
Up to 34m Embankment on glacial till near Hill of Foudland
Up to 34m Embankment on shallow rock near Hill of Foudland
450m Stretch of peat near Hillhead
250m Stretch of Category 1 very compressible or challenging soils near Brownhills
300m Stretch of peat near Westhall
350m Stretch of Landfill near Westhall
Up to 31m Cutting through shallow rock near Mellanbrae

Structures
Number of Major Adverse Structures: 3
Viaduct over the Gadie Burn, flood plain, B9002 at Ch. 3050 and railway at Ch. 3150. Approx. 850m total length.

Transportation Summary of Impacts

Overall Transportation Mark = 1.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 31:39 minutes, saving 12:58 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:51.

SO1.3 – 233M veh-kms (110%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Major Beneficial'. 7 km of more than 2% uphill (major hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 46.3kms (57%). 36% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:23mins (-13.9%).

SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:32mins (-15.6%).

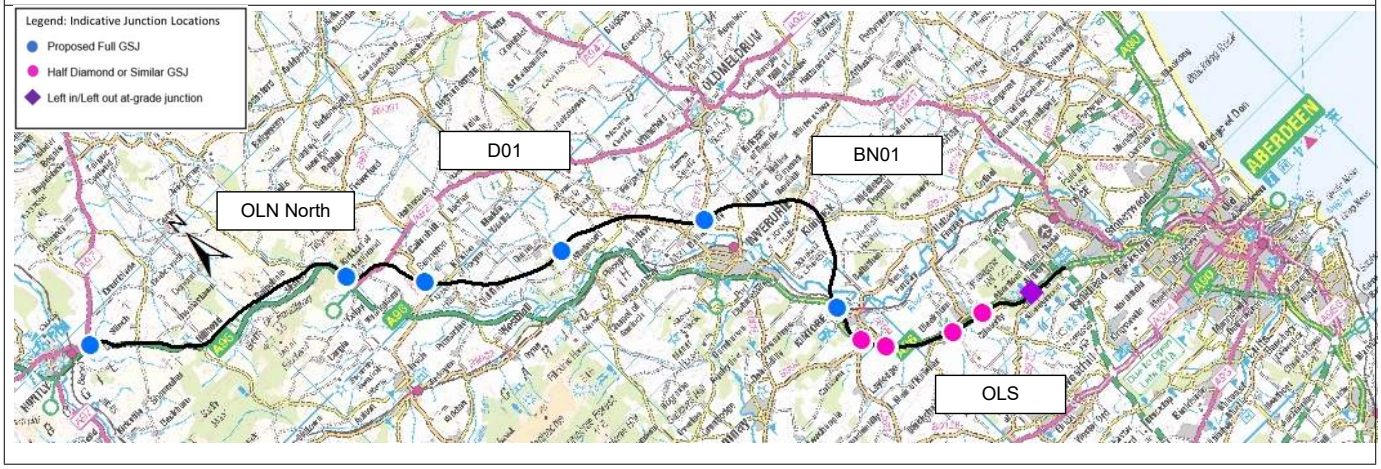
SO4 – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1400 vpd. Inverurie: Decrease of 2600 vpd. Overall change: -1200vpd

Shevock, cairn (SM12115) and Colpy Cottage, palisaded enclosure 300m S of (SM11511). **Plans and Policies** – committed medium scale and small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **Widespread and extensive issues along this route including 10km within Bennachie SLA, major cuttings across Stony Hill, fragmentation of habitat within the Wildcat Priority Area, extensive watercourse crossing throughout and impacts on community and cultural heritage features.**	Viaduct over B-class Road and River Don. Total length approx. 775 m. High piers (up to 30m). Viaduct over Bridgealehouse watercourse, flood plain and local road. Viaduct total length approx. 425 m. Number of Moderate Adverse Structures: 2 **Hydrology** Floodplain 5 Major Adverse Impacts associated with the Kellock, The Shevock, The Gadie Burn, The River don and the Bridgealehouse Burn. 2 Moderate Adverse Impacts associated with the Shevock and the Gadie Burn. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - No major or Moderate Adverse Impacts. **Utilities** Number of Major Adverse Impacts: 14 3 National Grid Pipeline crossings 4 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 44 clusters of Major Adverse Impacts and a large number of clusters of Moderate Adverse Impacts (81) resulting in a poorer performing engineering discipline mark.**	**SO5** – Average change in peak journey times to and from key public transport interchanges = -3:39mins (-16.4%). Does not provide easier access to Inverurie Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a high level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to the LDP aspiration to reduce congestion in Inverurie (-1118 vpd in Inverurie town centre) but fails to align with LDP aspiration for a northern bypass of Inverurie, **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows change by plus or minus 150 pcus. **STAG 6** – Likely to be major public concerns over the route's proximity to Bennachie and significant concerns over its proximity to historic buildings/monuments, proximity to ancient woodland, and over the route's limited use of the existing A96. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria. Generally major improvements in journey times. Major accident savings.**
Health and Safety: 44 Major Hazards, 26 Moderate Hazards & 71 Minor Hazards		
Overall Combined Mark = 4.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 125 – OLN North, D01 (Kirkton), BN01 Inner, OLS

Description: Offline to the north of existing A96 through Glens of Foudland to Colpy; offline to the north of existing A96 between Colpy and Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 51.0km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Moderate Beneficial**	**Moderate Beneficial**	**Moderate Beneficial**	**Minor Adverse- refer to Engineering Summary**	**N/A at this stage**	**Minor Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 3.25

Landscape – 2km section of ancient woodland loss, earthworks >15m, a new structure across Burn of Durno and impacts on residential receptors. Impacts on landscape character at River Don and floodplain crossing from large structure, setting of Category A LB in Kirkton of Culsalmond, Williamston House GDL and scheduled monuments.

Water – extensive floodplains of River Urie, Ides Burn, Burn of Durno and River Don. 29 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland.

People and Com. – five properties and Snipefield woods recreation area within 100m alignment corridor.

Soil and geology – 11.5km of alignment in prime agricultural land.

Cultural heritage – direct impact on the north-easternmost corner of Keith Hall Inventory GDL. Impact on setting of Hill of Selbie, cairn (SM12434), Battle of Harlaw (BTL11), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), The Law, cairn (SM12113), Whiteinches, cairn (SM12188) at, Pitscurry, cairn (SM12302), Category B listed Freefield House (LB16001), Mummer's Reive, cairn (SM11629) and Category A listed Cusalmond Old Parish Church (LB2960).

Engineering Summary of Impacts

Overall Engineering Mark = 2.75

Engineering Impacts
Total no of Major Adverse impacts: 195
Total no of Major Adverse Impact Clusters: 36
Total no of Moderate Adverse impacts: 243
Total no of Moderate Adverse Impact Clusters: 73

Earthworks
Bulk Cut: 4,562,000 m^3
Bulk Fill: 3,494,000 m^3
Earthworks Balance: 1,068,000 m^3 (surplus)

Geotechnical Key Issues
Up to 33m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
300m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, Pier Height approx 18m

New underbridge over B9001, Ides Burn and floodplain, length 400 m

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.

Transportation Summary of Impacts

Overall Transportation Mark = 3.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 34:24 minutes, saving 10:12 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:44.

SO1.3 – 231M veh-kms (109%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=34.1kms (41%). 32% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

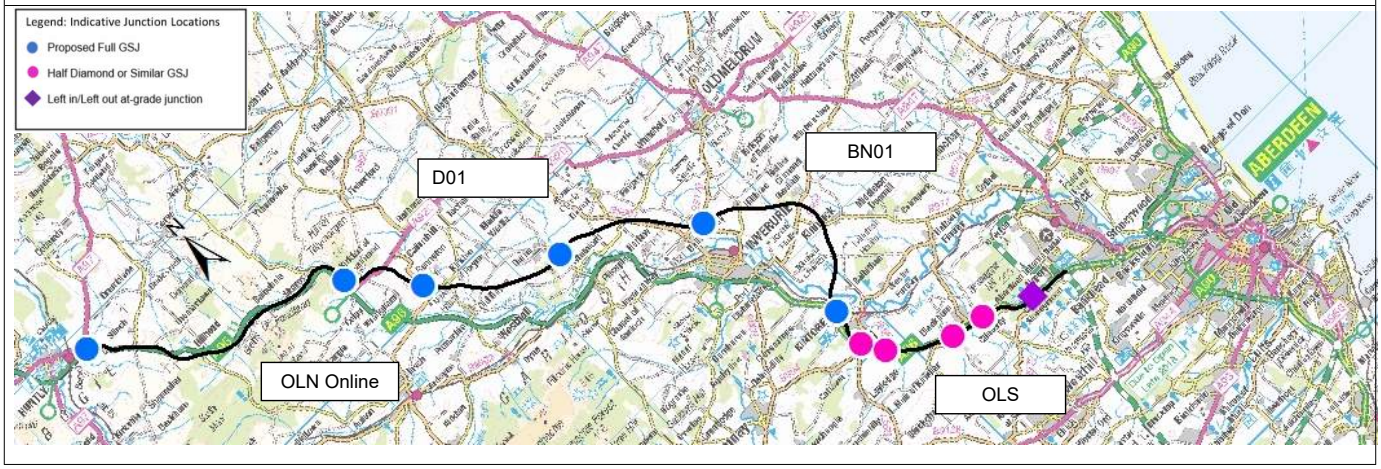
SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:43mins (-15.3%).

SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -3:17mins (-14.4%).

Plans and Policies – small scale local committed developments to north, LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie. A development for additional explosives storage has been consented BN01 Inner. **Overall end-to-end Environmental conclusion** **Extensive landscape issues throughout this route. Ecological impacts localised to the north with increased impacts on cultural heritage features and development land to the south.**	Number of Moderate Adverse Structures: 7 **Hydrology** Floodplain 6 Major Adverse Impacts associated with the River Urie (Twice), Ides Burn (Twice), Lochter Burn and River Don. 1 Moderate Adverse Impacts associated with the Ides Burn. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 11 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 36 clusters of Major Adverse Impacts marking it similar to three alternative alignments (10, 45, 173). However, the 73 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 400 vpd. Inverurie: Decrease of 5800 vpd. Overall change: -5400 vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -4:04mins (18.2%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-917 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be major public support over the route's potential to reduce congestion in Inverurie, but may have concern over loss of agricultural land and poor use of existing A96 alignment. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across Scheme Objectives and STAG criteria with a comparatively moderate level of economic benefit. Generally major improvements in journey times. Moderate accident savings.**
Health and Safety: 34 Major Hazards, 20 Moderate Hazards & 58 Minor Hazards		
Overall Combined Mark = 9.75 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 126 – OLN Online, D01 (Kirkton), BN01 Inner, OLS
Description: Online Huntly to Colpy, offline to the north of existing A96 to Pitcaple, northern inner Inverurie bypass to Kintore and existing dualling
Length: 51.5km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 –To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Neutral-refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 3.25

Landscape – 2km section of ancient woodland loss, earthworks >15m, a new structure across Burn of Durno, and impacts on residential receptors. Impacts on landscape character at River Don and floodplain crossing from large structure. Setting of Category A LB in Kirkton of Culsalmond, Williamston House GDL and scheduled monuments.

Water – realignment of Glen Water, extensive floodplains of River Urie, Ides Burn, Burn of Durno and River Don. 31 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation.

People and Com. – four properties and Snipefield woods recreation area within 100m alignment corridor.

Soil and geology – 11.5km of alignment in prime agricultural land.

Cultural heritage – direct impact on the north-easternmost corner of Keith Hall Inventory GDL. Impact on setting of Hill of Selbie, cairn (SM12434), Battle of Harlaw (BTL11), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), The Law, cairn (SM12113), Whiteinches, cairn (SM12188), Pitscurry, cairn (SM12302), Mummer's Reive, cairn (SM11629), Category A listed Cusalmond Old Parish Church (LB2960) and Category B listed Freefield House (LB16001).

Engineering Summary of Impacts

Overall Engineering Mark = 3.75

Engineering Impacts
Total no of Major Adverse impacts: 179
Total no of Major Adverse Impact Clusters: 31
Total no of Moderate Adverse impacts: 257
Total no of Moderate Adverse Impact Clusters: 77

Earthworks
Bulk Cut: 3,179,000 m^3
Bulk Fill: 3,368,000 m^3
Earthworks Balance: -189,000 m^3 (deficit)

Geotechnical Key Details
450m Stretch of peat near Hillhead
300m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, Pier Height approx 18m

New underbridge over B9001, Ides Burn and floodplain, length 400 m

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.

Number of Moderate Adverse Structures: 8

Hydrology
Floodplain:
5 Major Adverse Impacts associated with the River Urie, Ides Burn (Twice), Lochter Burn and River Don

Transportation Summary of Impacts

Overall Transportation Mark = 3.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 34:25 minutes, saving 10:12 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:44.

SO1.3 – 231M veh-kms (109%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=34.1kms (41%). 32% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:43mins (-15.3%).

SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -3:17mins (-14.4%).

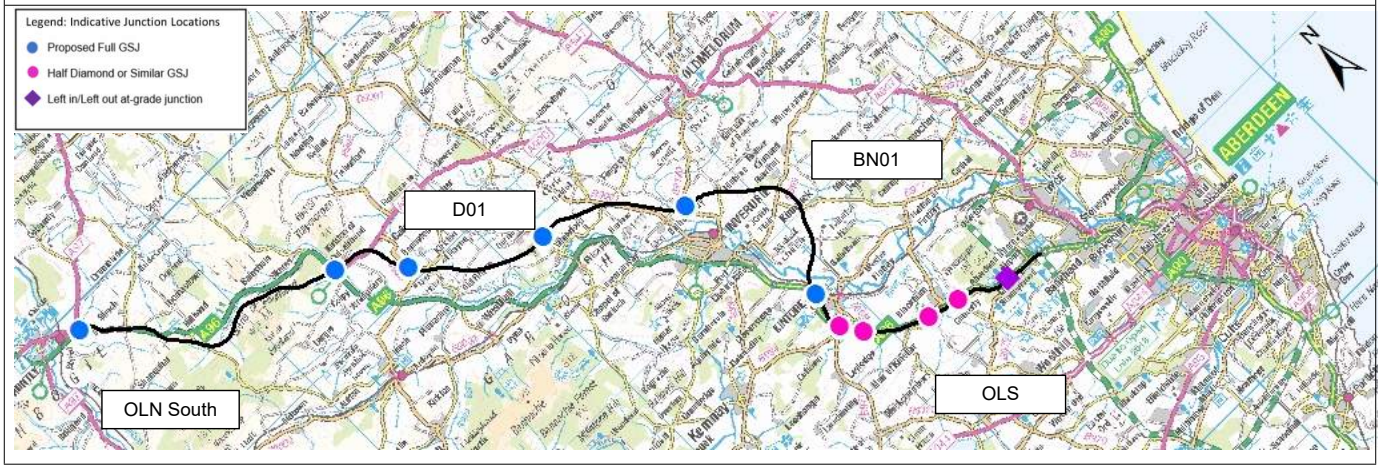
SO4 – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of

Plans and Policies – small scale local committed developments to the north with LDP land reserved for Northern Link Road and significant largescale consented development to the northern edge of Inverurie. A development for additional explosives storage has been consented BN01 Inner. **Overall end-to-end Environmental conclusion** **Extensive landscape issues throughout this route. Ecological impacts localised to the north with increased impacts on cultural heritage features and development land to the south.**	1 Moderate Adverse Impacts associated with the Ides Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts Proposed low point would struggle for space with outfall into River Urie Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 12 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded 31 clusters of Major Adverse Impacts marking it similar to two other alignments (58, 187). However, the 77 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	400 vpd. Inverurie: Decrease of 5800 vpd. Overall change: -5400 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -4:04mins (18.2%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce traffic congestion in Inverurie (-971 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be public support over the route's potential to reduce congestion in Inverurie. Also likely to be significant concern over loss of agricultural land and some concern over poor use of existing A96 alignment. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria. Generally major improvements in journey times. Moderate accident savings.**
Health and Safety: 25 Major Hazards, 32 Moderate Hazards & 73 Minor Hazards		
Overall Combined Mark = 10.75 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 127 – OLN South, D01 (Kirkton), BN01 Inner, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline to the north of existing A96 between Colpy and Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 51.3km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse - Refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 2.25

Landscape – 2km section of ancient woodland loss, earthworks >15m, a new structure across Burn of Durno and impacts on residential receptors. Impacts on landscape character at River Don and floodplain crossing from large structure, impacts on the settings of scheduled monuments, a Category A listed building and Williamston House GDL.

Water – extensive floodplain of Ides Burn, crosses several other watercourses including floodplain <100m wide of the Burn of Durno and River Don. 33 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings.

People and Com. – six properties and Snipefield woods recreation area within 100m alignment corridor.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure (SM11511) and north-easternmost corner of Keith Hall Inventory GDL. Setting impacts on Mummer's Reive, cairn (SM11629), Woodside, hut circles (SM11513), Category A listed Cusalmond Old Parish Church (LB2960), Category B listed Freefield House (LB16001), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), The Law, cairn (SM12113), Whiteinches, cairn (SM12188), Pitscurry, cairn

Engineering Summary of Impacts

Overall Engineering Mark = 1.75

Engineering Impacts
Total no of Major Adverse impacts: 209
Total no of Major Adverse Impact Clusters: 38
Total no of Moderate Adverse impacts: 237
Total no of Moderate Adverse Impact Clusters: 75

Earthworks
Bulk Cut: 4,520,000 m^3
Bulk Fill: 3,139,000 m^3
Earthworks Balance: 1,381,000 m^3 (surplus)

Geotechnical Key Issues
400m Stretch of peat near Hillhead
Up to 62m Cutting through shallow rock Near Hill of Foudland
300m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 4

New bridge to span existing A96, River Urie and flood plain, length 350 m. Large Spans (>85m) or high piers (approx 20m).

New bridge to span local road, Burn of Durno and floodplain, length 550m, Pier Height approx 18m

New underbridge over B9001, Ides Burn and floodplain, length 400 m

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.

Transportation Summary of Impacts

Overall Transportation Mark = 3.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 34:25 minutes, saving 10:12 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:44.

SO1.3 – 231M veh-kms (109%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=34.1kms (41%). 32% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:43mins (-15.3%).

SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -3:17mins (-14.4%).

(SM12302), Hill of Selbie, cairn (SM12434) and Battle of Harlaw (BTL11). **Plans and Policies** – small scale local committed developments to north and LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie. A development for additional explosives storage has been consented BN01 Inner. **Overall end-to-end Environmental conclusion** **Extensive landscape issues throughout this alignment. Ecological impacts localised to the north with increased impacts on cultural heritage features and development land to the south.**	Number of Moderate Adverse Structures: 5 **Hydrology** Floodplain: 4 Major Adverse Impacts associated with the Ides burn (Twice), Lochter Burn and River Don 1 Moderate Adverse Impacts associated with the Ides Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 22 3 National Grid Pipeline crossing 3 SGN High Pressure Pipeline crossings 7 SSE 275Kv crossings 9 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 6 **Overall end-to-end Engineering conclusion** **This alignment recorded 38 clusters of Major Adverse Impacts and a large number of clusters of Moderate Adverse Impacts (75) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 400 vpd. Inverurie: Decrease of 5800 vpd. Overall change: -5400 vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -4:04mins (18.2%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-971 vpd) and meets LDP aspiration for a northern bypass of Inverurie **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus **STAG 6** – Likely to be public support over the route's potential to reduce congestion in Inverurie and also the minimal/no impact on Bennachie. Likely to be public concerns over the route making limited use of the existing A96 and on loss of agricultural land. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across Scheme Objectives and STAG criteria with a comparatively moderate level of economic benefit. Generally major improvements in journey times. Moderate accident savings.**
Health and Safety: 38 Major Hazards, 22 Moderate Hazards & 61 Minor Hazards		
Overall Combined Mark = 7.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 129 – OLN North, OLC Online, CS02, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online from Colpy to Chapel of Garioch; offline west and south of Inverurie to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 47.3km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).

Scheme Objectives														
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Major Beneficial**	**Moderate Beneficial**	**Minor Beneficial**	**Moderate Adverse- refer to Engineering Summary**	**N/A at this stage**	**Moderate Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 2.75

Landscape – 10km within Bennachie SLA, earthworks > 15m, loss of ancient woodland, impact on setting of scheduled monuments and new large structure across the River Don. Earthworks, new structures at Glen Water/Peterden Burn and setting impacts at Colpy and Little Lediken.

Water – extensive floodplain of River Urie and Gadie Burn and realignments required, crossing of The Kellock. 27 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland, impacts from watercourse crossings including the River Don, cumulative impact on ancient woodland and a reduction in habitat connectivity.

People and Com. – nine properties within 100m alignment corridor.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Deer's Den, roundhouses (SM12465). Setting impact on Williamston House GDL (GDL00386) Newton House GDL (GDL00300), St Apolinaris' Chapel and burial ground (SM12118), East Aquhorthies, stone circle (SM90126) and PIC (PIC242) and Maiden Stone (SM90210) and PIC (PIC256).

Plans and Policies – committed medium scale and small scale local developments in 100m alignment corridor.

Engineering Summary of Impacts

Overall Engineering Mark = 1.75

Engineering Impacts
Total no of Major Adverse impacts: 226
Total no of Major Adverse Impact Clusters: 39
Total no of Moderate Adverse impacts: 212
Total no of Moderate Adverse Impact Clusters: 68

Earthworks
Bulk Cut: 5,591,000 m^3
Bulk Fill: 4,280,000 m^3
Earthworks Balance: 1,311,000 m^3 (surplus)

Geotechnical Key Issues
Up to 33m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
Up to 31.3m Cutting through shallow rock near Mellanbrae
300m Stretch of peat near Westhall
350m Stretch of Landfill near Westhall

Structures
Number of Major Adverse Structures: 2
Viaduct over the Gadie Burn, flood plain, B9002 at Ch. 3050 and railway at Ch. 3150. Approx. 850m length

Viaduct over B-class Road and River Don. Total length approx. 775 m

Number of Moderate Adverse Structures: 3

Transportation Summary of Impacts

Overall Transportation Mark = 3.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 32:22 minutes, saving 12:15 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:50.

SO1.3 – 238M veh-kms (112%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Major Beneficial'. 4 km of more than 2% uphill (moderate hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.2kms (59%). 36% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:29mins (-14.3%).

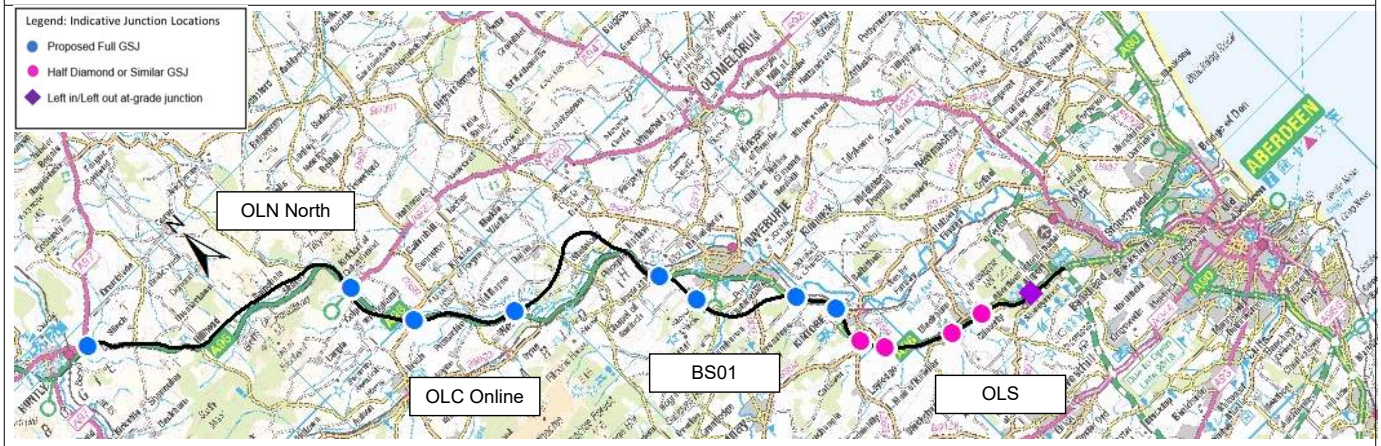
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:19mins (-14.6%).

Overall end-to-end Environmental conclusion **Landscape issues throughout alignment but concentrated in the south (CS02) due to 10km of alignment passing through the Bennachie SLA with major earthworks and large structure over the River Don and loss of ancient woodland. Ecological issues are also greater in the south due to the numerous water crossings and reduction in habitat connectivity. Impacts on cultural heritage features are also concentrated in the southern areas.**	**Hydrology** Floodplain: 5 Major Adverse Impacts associated with the River Urie, The Kellock, Gadie Burn, River Don and Bridgealehouse Burn. 1 Moderate Adverse Impacts associated with the Gadie Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts Proposed low point would struggle for levels with outfall into Jordan Burn **Utilities** Number of Major Adverse Impacts: 12 3 National Grid Pipeline crossing 3 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 4 **Overall end-to-end Engineering conclusion** **This alignment recorded 39 clusters of Major Adverse Impacts marking it similar to one other alignment (181) and overall a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 600 vpd. Inverurie: Decrease of 3200 vpd. Overall change: -2600 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:27mins (-15.4%). Does not provide easier access to Inverurie Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a high level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to the LDP aspiration to reduce congestion in Inverurie (-1131 vpd in Inverurie town centre) but fails to align with LDP aspiration for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be major public concerns over the route's proximity to Bennachie and significant concerns over its proximity to historic buildings/monuments and to ancient woodland. Also likely to be public support for the sections of the route making best use of the existing A96 (OLC). **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively high level of economic benefit. Generally major improvements in journey times. Major accident savings.**
Health and Safety: 38 Major Hazards, 24 Moderate Hazards & 60 Minor Hazards		
Overall Combined Mark = 8.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 131 – OLN North, OLC Online, BS01, OLS

Description: Offline to the north of existing A96 through Glens of Foudland to Colpy: online Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 49.8km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Moderate Beneficial**	**Minor Beneficial**	**Minor Beneficial**	**Moderate Adverse- refer to Engineering Summary**	**N/A at this stage**	**Minor Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 2.75

Landscape – 4km within Bennachie SLA with impacts on landscape character in the Don Valley. Large scale earthworks of >15m, loss of ancient woodland and new structures for watercourse crossings.

Water – extensive floodplain of River Urie, crossing of The Kellock. 27 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland. Impacts on Pitscurry Moss LNCS, loss of ancient woodland and habitat fragmentation along corridor that extends to Bennachie.

People and Com. – 13 properties within 100m alignment corridor.

Soil and geology – 150m of alignment in Pitcaple and Legatsden Quarry (SSSI), 11.7km in prime agricultural land.

Cultural heritage – direct impact on the Battle of Harlaw Inventory Historic Battlefield (BT11), Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Drimmies, symbol stone (SM70). Setting impacts on Williamston House GDL (GDL00386), Newton House GDL (GDL00300), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826), St Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure 510m

Engineering Summary of Impacts

Overall Engineering Mark = 2.25

Engineering Impacts
Total no of Major Adverse impacts: 189
Total no of Major Adverse Impact Clusters: 37
Total no of Moderate Adverse impacts: 276
Total no of Moderate Adverse Impact Clusters: 81

Earthworks
Bulk Cut: 5,071,000 m^3
Bulk Fill: 3,842,000 m^3
Earthworks Balance: 1,229,000 m^3 (surplus)

Geotechnical Key Issues
Up to 33m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
350m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3
New bridge to span local road, Burn of Durno and floodplain, length 600m, Pier Height 17m

New bridge to span Railway line, River Urie and flood plain, length 800m

New viaduct approximately 375m length over River Don and its floodplains

Number of Moderate Adverse Structures: 5

Transportation Summary of Impacts

Overall Transportation Mark = 2.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 34:15 minutes, saving 10:22 minutes.

SO1.2 – Change in JT variability from 8:37 to 2:12.

SO1.3 – 250M veh-kms (118%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.7kms (60%). 42% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:20mins (-13.7%).

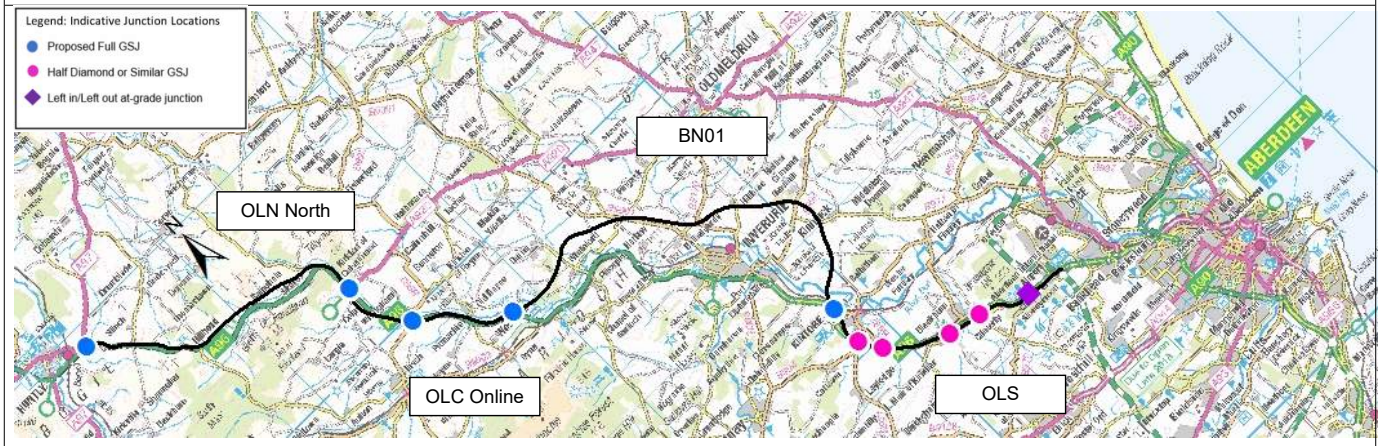
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -2:36mins (-11.5%).

WNW of (SM12195) and Bruce's Camp, hillfort (SM12523). **Plans and Policies** – heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone. **Overall end-to-end Environmental conclusion** **Widespread issues along this alignment. Landscape and cultural heritage issues concentrated through central and southern areas with 4km of the route within Bennachie SLA. This alignment also heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone.**	**Hydrology** Floodplain: 4 Major Adverse Impacts associated with the River Urie (x3) and The Kellock. 1 Moderate Adverse Impacts associated with the River Don Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts Proposed low point would struggle for levels with outfall into Jordan Burn **Utilities** Number of Major Adverse Impacts: 12 1 National Grid Pipeline crossing 2 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 4 **Overall end-to-end Engineering conclusion** **This alignment recorded 37 clusters of Major Adverse Impacts marking it similar to three alternative alignments (135, 189, 190). However, the 81 clusters of Moderate Adverse Impacts determined its engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1300 vpd. Inverurie: Decrease of 4200 vpd. Overall change: -2900 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:09mins (-14.1%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to the LDP aspiration to reduce congestion in Inverurie (-906 vpd in Inverurie town centre) but fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public support for the route making best use of the existing A96. Likely to be public concerns over the route's proximity to historic buildings/monuments, impact on agricultural land and some concern for route passing closer to the Bennachie and surrounding recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively moderate level of economic benefit. Generally moderate to major improvements in journey times. Major accident savings.**
Health and Safety: 41 Major Hazards, 28 Moderate Hazards & 59 Minor Hazards		
Overall Combined Mark = 7.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 135 – OLN North, OLC Online, BN01 Inner, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; online from Colpy to Chapel of Garioch; north of existing A96 at Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.7km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Major Beneficial**	**Moderate Beneficial**	**Moderate Adverse- refer to Engineering Summary**	**N/A at this stage**	**Major Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 0.75

Landscape – earthworks, new structures at Glen Water/Peterden Burn. Setting of receptors at Little Lediken, Colpy and scheduled monuments. Impacts on landscape character of Deveron and Upper Ythan Valleys with large earthworks and new structures and at the River Don.

Water – extensive floodplain of River Urie, Ides Burn and River Don, crossing of The Kellock. 27 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland. Impacts on Pitscurry Moss LNCS, loss of ancient woodland, habitat fragmentation and impacts from watercourse crossings.

People and Com. – eight properties within 100m alignment corridor.

Soil and geology – 15.2km of alignment in prime agricultural land.

Cultural heritage – direct impact on the north-easternmost corner of Keith Hall Inventory GDL and on Colpy Cottage, palisaded enclosure 300m S of (SM11511). Impact on setting of Hill of Selbie, cairn (SM12434), Battle of Harlaw (BTL11), Williamston House GDL (GDL00386), Newton House GDL (GDL00300), Durno, Roman temporary camp (SM4123) and Pitscurry, cairn (SM12302).

Plans and Policies - LDP land reserved for Northern Link Road and significant large-scale

Engineering Summary of Impacts

Overall Engineering Mark = 2.25

Engineering Impacts
Total no of Major Adverse impacts: 197
Total no of Major Adverse Impact Clusters: 37
Total no of Moderate Adverse impacts: 268
Total no of Moderate Adverse Impact Clusters: 78

Earthworks
Bulk Cut: 4,597,000 m^3
Bulk Fill: 4,010,000 m^3
Earthworks Balance: 587,000 m^3 (surplus)

Geotechnical Key Issues
Up to 33m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
350m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, Pier Height approx 18m

New underbridge over B9001, Ides Burn and floodplain, length 400 m

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew.
Number of Moderate Adverse Structures: 7

Transportation Summary of Impacts

Overall Transportation Mark = 4.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:18 minutes, saving 9:19 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:42.

SO1.3 – 227M veh-kms (107%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 33.3kms (39%). 27% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 16 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:29mins (-14.3%).

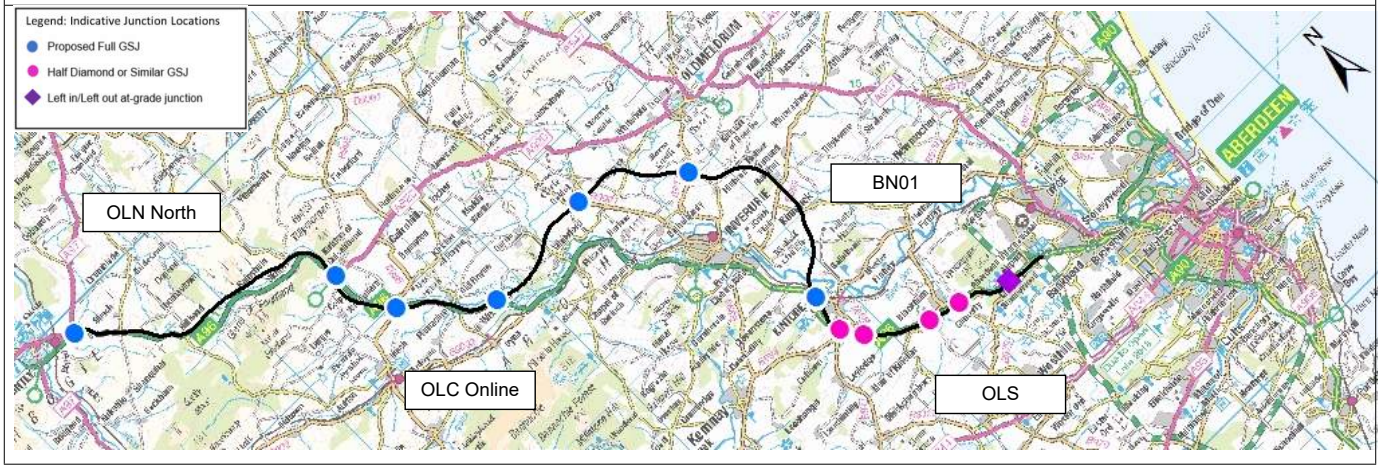
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -3:03mins (-13.5%).

consented development exist to the northern edge of Inverurie. A development for additional explosives storage has been consented BN01 Inner. **Overall end-to-end Environmental conclusion** **This alignment has widespread issues in relation to landscape and water with new crossings required in all sections. Ecological issues are localised to the north and central sections with cultural heritage features affected in central and southern areas. LDP land reserved for Northern Link Road and significant large-scale consented development exist to the northern edge of Inverurie. A development for additional explosives storage has been consented BN01 Inner.**	**Hydrology** Floodplain: 7 Major Adverse Impacts associated with the River Urie, The Kellock, River Urie, Ides Burn (Twice), Lochter Burn and River Don 1 Moderate Adverse Impacts associated with the Ides Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into Jordan Burn Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 11 3 National Grid Pipeline crossing 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 6 **Overall end-to-end Engineering conclusion** **This alignment recorded 37 clusters of Major Adverse Impacts marking it similar to three alternative alignments (131,189,190. However, the 78 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 700 vpd. Inverurie: Decrease of 6200 vpd. Overall change: -5500 vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:54mins (-17.5%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (-1057 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be significant public support over the route's potential to reduce congestion in Inverurie and for the route making best use of the existing A96. May also be some concerns over impact on woodland/recreational areas and loss of agricultural land. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across Scheme Objectives and STAG criteria. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 40 Major Hazards, 29 Moderate Hazards & 58 Minor Hazards		
Overall Combined Mark = 7.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 136 – OLN North, OLC Online, BN01 Outer, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; online from Colpy to Chapel of Garioch; north of existing A96 at Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 53.8km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Minor Beneficial	Moderate Beneficial	Neutral	Moderate Adverse	Minor Beneficial	Major Beneficial	Neutral	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Moderate Beneficial**	**Major Beneficial**	**Minor Adverse- refer to Engineering Summary**	**N/A at this stage**	**Moderate Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 2.75

Landscape – landscape character affected in areas of ancient woodland between Durno and Whiteford. Numerous receptors, two new structures, setting of receptors at Little Lediken, Colpy and scheduled monuments, earthworks along with new structures at Glen Water/Peterden Burn.

Water – extensive floodplains of River Urie and Lochter Burn, crossing of The Kellock. 31 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland. Impacts on Pitscurry Moss LNCS and the cumulative impact on blocks of ancient woodland. Significant impact on habitat connectivity along this corridor which extends to Bennachie.

People and Com. – six properties within 100m alignment corridor.

Soil and geology – 13.6km of alignment in prime agricultural land.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Battle of Barra Inventory Historic Battlefield (BTL18). Setting impact on Williamston House GDL (GDL00386), Newton House GDL (GDL00300), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302) and Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826).

Engineering Summary of Impacts

Overall Engineering Mark = 2.75

Engineering Impacts
Total no of Major Adverse impacts: 216
Total no of Major Adverse Impact Clusters: 35
Total no of Moderate Adverse impacts: 273
Total no of Moderate Adverse Impact Clusters: 80

Earthworks
Bulk Cut: 5,231,000 m^3
Bulk Fill: 4,689,000 m^3
Earthworks Balance: 542,000 m^3 (surplus)

Geotechnical Key Issues
Up to 32m Cutting through shallow rock near Thomastown

Up to 36m Embankment of glacial till near Glens of Foudland

Up to 33m Cutting through glacial till near Hill of Skares

Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, Pier Height approx 18m

New viaduct required over Lochter burn, flood plain and local Road, length 700m

Transportation Summary of Impacts

Overall Transportation Mark = 1.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 36:26 minutes, saving 8:11 minutes.

SO1.2 – Change in JT variability from 8:37 to 0:43

SO1.3 – 183M veh-kms (86%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 23.8kms (26%). 11% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 13 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Proportion of trips re-assigning to dual-carriageway around Inverurie is low, limiting potential to indirectly reduce conflict on the detrunked sections of the A96.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -2:49mins (-12.5%).

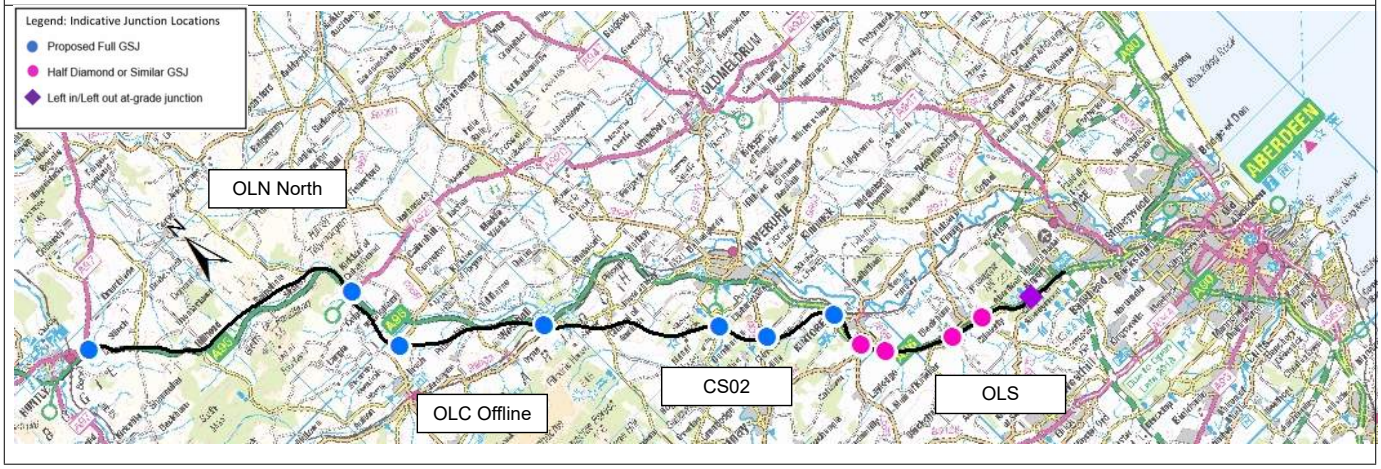
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:32mins (-11.9%).

Plans and Policies – committed small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **This alignment has a fairly even allocation of issues in relation to landscape and water. There are less ecological issues in the north than in the central sections (OLC) and cultural heritage features also dominate in central sections. There is no large-scale development.**	New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew. Number of Moderate Adverse Structures: 5 **Hydrology** Floodplain: 5 Major Adverse Impacts associated with the River Urie (twice), The Kellock, Lochter Burn and the River Don No Moderate Adverse Impacts Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into Jordan Burn Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 11 3 National Grid Pipeline crossing 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 6 **Overall end-to-end Engineering conclusion** **This alignment recorded 35 clusters of Major Adverse Impacts with a large number of Moderate Adverse Impacts (80) resulting in an overall poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 400 vpd. Inverurie: Decrease of 6200 vpd. Overall change: -5800 vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:23mins (-16.7%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-713vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by more than 850 pcus. **STAG 6** – Likely to be significant public support over the route's potential to reduce congestion in Inverurie and for the route making best use of the existing A96. May also be some concerns over impact on woodland/recreational areas and loss of agricultural land. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Minor to Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively low level of economic benefit. Generally moderate to major improvements in journey times. Minor accident savings.**
Health and Safety: 42 Major Hazards, 36 Moderate Hazards & 62 Minor Hazards		
Overall Combined Mark = 6.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 138 – OLN North, OLC Offline, CS02, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; offline to the south of the existing A96 from Colpy to Chapel of Garioch; offline west and south of Inverurie to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 48.0km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Moderate Beneficial**	**Moderate Beneficial**	**Neutral**	**Major Adverse- refer to Engineering Summary**	**N/A at this stage**	**Major Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 1.75

Landscape – 10km within Bennachie SLA, earthworks > 15m, loss of ancient woodland and new large structure across the River Don. Setting of Colpy, scheduled monuments, and new structure at Glen Water/Peterden Burn.

Water – extensive floodplains of River Urie and Gadie Burn and realignments required, crossing of Shevock Burn. 31 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings including the River Don, cumulative impact on ancient woodland and a reduction in habitat connectivity.

People and Com. – six properties within 100m alignment corridor.

Soil and geology – 7km of alignment in prime agricultural land.

Cultural heritage – direct impact on Deer's Den, roundhouses (SM12465). Setting impact on St Apolinaris' Chapel and burial ground (SM12118), East Aquhorthies, stone circle (SM90126) and PIC (PIC242), Maiden Stone (SM90210) and PIC (PIC256), Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115) and Colpy Cottage, palisaded enclosure 300m S of (SM11511).

Engineering Summary of Impacts

Overall Engineering Mark = 0.75

Engineering Impacts
Total no of Major Adverse impacts: 280
Total no of Major Adverse Impact Clusters: 50
Total no of Moderate Adverse impacts: 288
Total no of Moderate Adverse Impact Clusters: 87

Earthworks
Bulk Cut: 6,684,000 m^3
Bulk Fill: 6,087,000 m^3
Earthworks Balance: 597,000 m^3 (surplus)

Geotechnical Key Issues
Up to 32m Cutting through shallow rock near Thomastown

Up to 36m Embankment of glacial till near Glens of Foudland

Up to 33m Cutting through glacial till near Hill of Skares

250m Stretch of Category 1 very compressible or challenging soils near Brownhills

300m Stretch of peat near Westhall

350m Stretch of Landfill near Westhall

Up to 31m Cutting through shallow rock near Mellanbrae

Transportation Summary of Impacts

Overall Transportation Mark = 2.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 33:08 minutes, saving 11:29 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:51

SO1.3 – 239M veh-kms (113%) increase in distance travelled on dual carriageways

SO1.4 – Estimated OGV economic benefit is a 'Major Beneficial'. 4 km of more than 2% uphill (moderate hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.3kms (59%). 36% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3.25mins (-14%).

Plans and Policies – committed medium scale and small scale local developments within 100m alignment corridor.

Overall end-to-end Environmental conclusion

The main issues in the north of this route is the Wildcat Priority Area and the River Urie crossing. In the south, there are more extensive issues as the route passes for 10km through the Bennachie SLA. Large earthworks and the River Don crossing provide added impacts on the landscape. There is a reduction in habitat connectivity in relation to the River Don crossing and a concentration of cultural heritage features in this area.

Structures
Number of Major Adverse Structures: 3

Viaduct over the Gadie Burn, flood plain, B9002 at Ch. 3050 and railway at Ch. 3150. Approx. 850m total length

Viaduct over B-class Road and River Don. Total length approx. 775 m. High piers (up to 30m)

Viaduct over Bridgealehouse watercourse, flood plain and local road. Viaduct total length approx. 425 m

Number of Moderate Adverse Structures: 4

Hydrology
Floodplain:
5 Major Adverse Impacts associated with the River Urie, the Shevock, Gadie Burn, River Don and Bridgealehouse Burn.
2 Moderate Adverse Impacts associated with the Shevock and the Gadie Burn.
Watercourse Crossings – No Major/Moderate Adverse Impacts
Attenuation - 1 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into Tributary

Utilities
Number of Major Adverse Impacts: 16
3 National Grid Pipeline crossing
7 SGN High Pressure Pipeline crossings
3 SSE 275Kv crossings
3 SSE pylons within 100m of alignment

Number of Moderate Adverse Impacts: 5

Overall end-to-end Engineering conclusion

This alignment recorded one of the largest number of Major Adverse Impacts (50) and one of the largest number of clusters of Moderate Adverse Impacts (87) resulting in a poorer performing engineering discipline mark.

SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:18mins (-13.6%).

SO4 – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1100 vpd. Inverurie: Decrease of 3200 vpd. Overall change: -2100 vpd.

SO5 – Average change in peak journey times to and from key public transport interchanges = -3:18mins (-14.7%). Does not provide easier access to Inverurie Rail Station.

STAG 2 – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments.

STAG 3 – Alignment offers a moderate level of economic benefits

STAG 4 – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-1120 vpd in Inverurie town centre) but fails to align with LDP aspirations for a northern bypass of Inverurie.

STAG 5 – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows change by plus or minus 150 pcus.

STAG 6 – Likely to be major public concerns over the route's proximity to Bennachie and significant concerns over its proximity to historic buildings/monuments and to ancient woodland/recreational areas. May also be concerns on loss of agricultural land.

Overall end-to-end Transportation conclusion

Overall the alignment offers Major to Moderate Beneficial Impacts across the Scheme objectives and STAG criteria with a comparatively moderate level of economic benefit, Generally major improvements in journey times. Major accident savings.

Health and Safety: 43 Major Hazards, 24 Moderate Hazards & 65 Minor Hazards

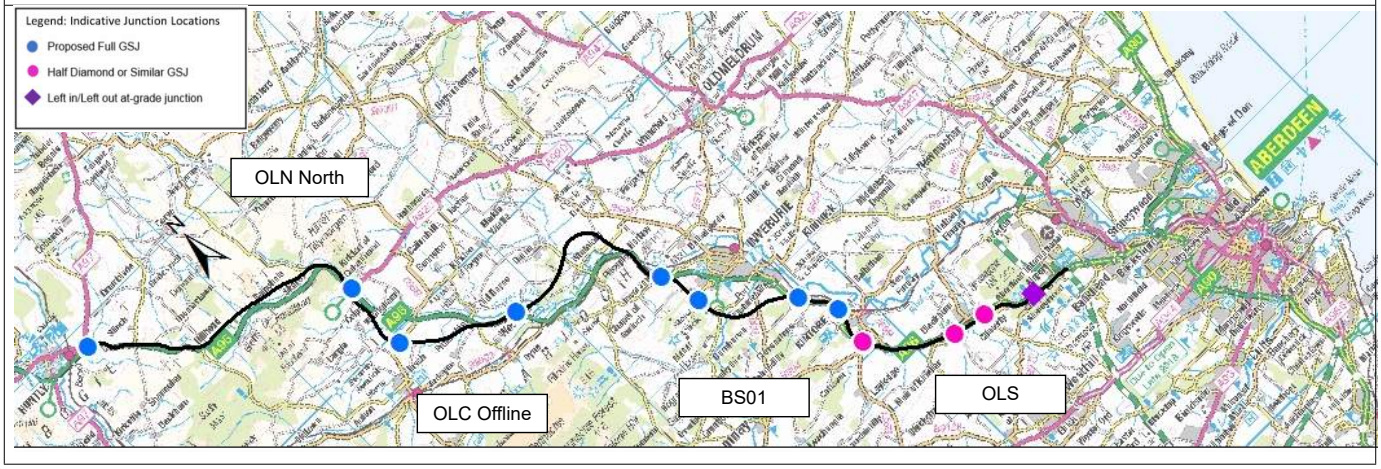
Overall Combined Mark = 4.75 (Poorer Performing)

Recommendation
Alignment should not be carried forward to Public Consultation

Alignment No. 140 – OLN North, OLC Offline, BS01, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; offline to the south of the existing A96 from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 50.6km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Minor Beneficial**	**Neutral**	**Major Adverse- refer to Engineering Summary**	**N/A at this stage**	**Moderate Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 2.25

Landscape – 4km within Bennachie SLA, landscape character and the Don Valley. Large scale earthworks of >15m, loss of ancient woodland, two new structures across Burn of Durno and River Urie and impact on receptors. New structures at Glen Water/Peterden Burn and setting issues at Colpy.

Water – extensive floodplain of River Urie, crossing of Shevock Burn. 31 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland. Impacts on Pitscurry Moss LNCS, loss of ancient woodland, habitat fragmentation along corridor that extends to Bennachie. Impacts from watercourse crossings including the River Urie

People and Com. – ten properties within 100m alignment corridor.

Soil and geology – 150m of alignment in Pitcaple and Legatsden Quarry (SSSI). 10.5km of alignment in prime agricultural land.

Cultural heritage – direct impact on Battle of Harlaw Inventory Historic Battlefield (BT11) and Drimmies, symbol stone (SM70). Setting impacts on Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826), St Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure 510m WNW of (SM12195), Bruce's Camp, hillfort

Engineering Summary of Impacts

Overall Engineering Mark = 0.75

Engineering Impacts
Total no of Major Adverse impacts: 243
Total no of Major Adverse Impact Clusters: 48
Total no of Moderate Adverse impacts: 352
Total no of Moderate Adverse Impact Clusters: 100

Earthworks
Bulk Cut: 6,164,000 m^3
Bulk Fill: 5,648,000 m^3
Earthworks Balance: 516,000 m^3 (surplus)

Geotechnical Key Issues
Up to 32m Cutting through shallow rock near Thomastown

Up to 36m Embankment of glacial till near Glens of Foudland

Up to 33m Cutting through glacial till near Hill of Skares

250m Stretch of Category 1 very compressible or challenging soils near Brownhills

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 600m, Pier Height 17m

New bridge to span Railway line, River Urie and flood plain, length 800m

Transportation Summary of Impacts

Overall Transportation Mark = 1.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 34:41 minutes, saving 9:59 minutes.

SO1.2 – Change in JT variability from 8:37 to 2:07

SO1.3 – 249M veh-kms (117%) increase in distance travelled on dual carriageways

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.6kms (60%). 42% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:17mins (-13.5%).

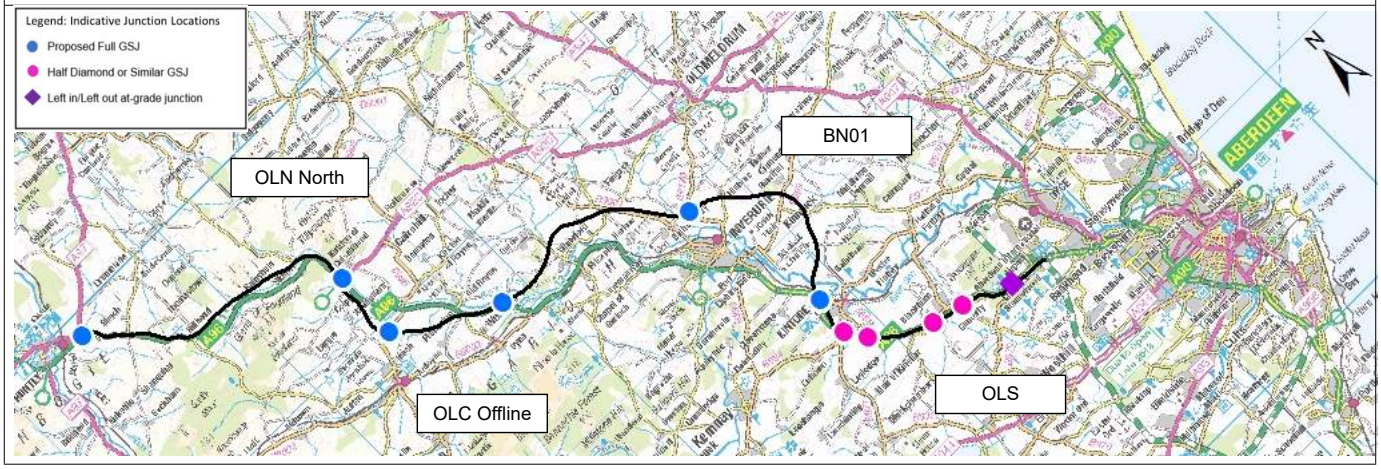
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:46mins (-12.2%).

(SM12523), Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115) and Colpy Cottage, palisaded enclosure 300m S of (SM11511). **Plans and Policies** – heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone. **Overall end-to-end Environmental conclusion** **This alignment has widespread issues but most are concentrated in the southern sections (BS01). This includes 4km of the route within Bennachie SLA, issues in the Don Valley, new structures, impacts on cultural heritage features and large-scale LDP housing and employment allocations to the south east of Port Elphinstone.**	New viaduct approximately 375m length over River Don and its floodplains. The river crossing itself spans approximately 50m. Very high piers required due to level difference Number of Moderate Adverse Structures: 6 **Hydrology** Floodplain: 4 Major Adverse Impacts associated with the River Urie (x3) and The Shevock 2 Moderate Adverse Impacts associated with the Shevock and The River Don. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into Tributary **Utilities** Number of Major Adverse Impacts: 16 1 National Grid Pipeline crossing 6 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 48 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (100) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1700 vpd. Inverurie: Decrease of 4000 vpd. Overall change: -2300vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:07mins (-14%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-899 vpd in Inverurie town centre) but fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows change by plus or minus 150 pcus **STAG 6** – Likely to be public concerns over the route's proximity to historic buildings/monuments, loss of agricultural land and impact on woodland/recreational areas. May also be concern that route does not make use of the existing A96 alignment or address congestion in Inverurie through a northern bypass. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Minor to Moderate Beneficial Impacts across the Scheme objectives and STAG criteria with a comparatively low level of economic benefit. Generally moderate improvements in journey times. Major accident savings.**
Health and Safety: 46 Major Hazards, 28 Moderate Hazards & 64 Minor Hazards		
Overall Combined Mark = 4.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 143 – OLN North, OLC Offline, BN01 Inner, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; offline to the south of the existing A96 from Colpy to Chapel of Garioch; north of existing A96 at Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 53.5km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Major Beneficial**	**Minor Beneficial**	**Major Adverse- refer to Engineering Summary**	**N/A at this stage**	**Minor Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 0.75

Landscape – new structures at Glen Water/Peterden Burn, setting of Colpy and scheduled monuments, earthworks >15mand loss of ancient woodland. Impacts on the character of Deveron and Upper Ythan Valleys and River Don valley and floodplain crossing from large structure.

Water – extensive floodplains of River Urie and Ides Burn, crossing of Shevock Burn. 31 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland. Impacts on Pitscurry Moss LNCS, loss of ancient woodland and habitat fragmentation.

People and Com. – five properties within 100m alignment corridor.

Soil and geology – 13.5km of alignment in prime agricultural land.

Cultural heritage – direct impact on the north-easternmost corner of Keith Hall Inventory GDL. Impact on setting of Hill of Selbie, cairn (SM12434), Battle of Harlaw (BTL11), Colpy Cottage, palisaded enclosure 300m S of (SM11511), Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115), Durno, Roman temporary camp (SM4123) and Pitscurry, cairn (SM12302).

Plans and Policies – LDP land reserved for Northern Link Road and significant large-scale consented development exist to the northern edge

Engineering Summary of Impacts

Overall Engineering Mark = 0.75

Engineering Impacts
Total no of Major Adverse impacts: 251
Total no of Major Adverse Impact Clusters: 48
Total no of Moderate Adverse impacts: 344
Total no of Moderate Adverse Impact Clusters: 97

Earthworks
Bulk Cut: 5,690,000 m^3
Bulk Fill: 5,817,000 m^3
Earthworks Balance: -127,000 m^3 (deficit)

Geotechnical Key Issues
Up to 32m Cutting through shallow rock near Thomastown

Up to 36m Embankment of glacial till near Glens of Foudland

Up to 33m Cutting through glacial till near Hill of Skares

250m Stretch of Category 1 very compressible or challenging soils near Brownhills

350m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span Burn of Durno and local road, length 600m, High Piers (approx 17m)

New underbridge over Ides Burn and B9001, high skew, length 400 m

Transportation Summary of Impacts

Overall Transportation Mark = 2.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 36:13 minutes, saving 8:24 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:40.

SO1.3 – 219M veh-kms (103%) increase in distance travelled on dual carriageways

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=24.7kms (31%). 28% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 16 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:23mins (-13.9%).

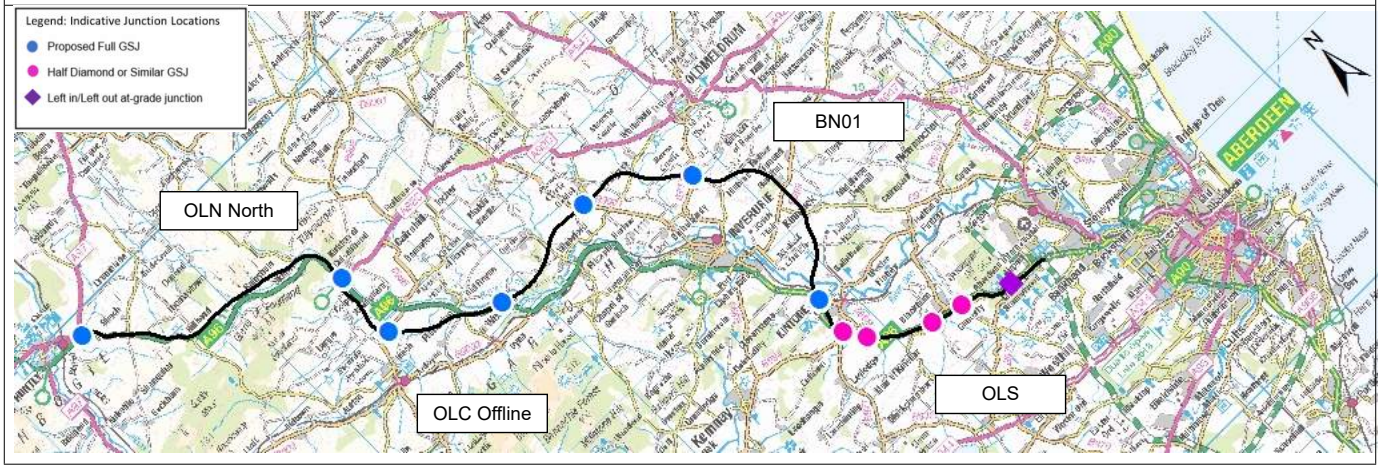
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:04mins (-13.5%).

of Inverurie. A development for additional explosives storage has been consented BN01 Inner **Overall end-to-end Environmental conclusion** **This alignment has widespread issues relating to landscape, water and community. Ecological impacts are localised to the north and central sections with the majority of cultural heritage features located around the central and southern areas. LDP land reserved for Northern Link Road and significant largescale consented development exist to the northern edge of Inverurie. Development for additional explosives storage has been consented BN01 Inner.**	New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures: 8 **Hydrology** Floodplain: 7 Major Adverse Impacts associated with the River Urie (twice), The Shevock, Ides Burn (twice), Lochter Burn and River Don 2 Moderate Adverse Impacts associated with the Shevock and the Ides Burn. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into Tributary Proposed low point would struggle for levels with outfall into River Urie **Utilities** Number of Major Adverse Impacts: 16 3 National Grid Pipeline crossings 6 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded 48 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (97) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1400 vpd. Inverurie: Decrease of 6200 vpd. Overall change: -4800 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:45mins (-16.8%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-1083 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public support over the route's potential to reduce congestion in Inverurie and minimise impact on Bennachie. May be concerns over loss of agricultural land and proximity to woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria and offers a comparatively low level of economic benefit. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 45 Major Hazards, 29 Moderate Hazards & 63 Minor Hazards		
Overall Combined Mark = 4.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 144 – OLN North, OLC Offline, BN01 Outer, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; offline to the south of the existing A96 from Colpy to Chapel of Garioch; north of existing A96 at Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 54.6km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Minor Beneficial	Moderate Beneficial	Minor Beneficial	Moderate Adverse	Minor Beneficial	Major Beneficial	Neutral	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Moderate Beneficial**	**Moderate Beneficial**	**Major Adverse- refer to Engineering Summary**	**N/A at this stage**	**Minor Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 1.25

Landscape – new structures at Glen Water/Peterden Burn, setting of Colpy and scheduled monuments, earthworks >15m, new structure and loss of ancient woodland. Landscape character affected in areas of ancient woodland between Durno and Whiteford and numerous receptors.

Water – extensive floodplains of River Urie and Lochter Burn, crossing of Shevock Burn. 35 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland. Impacts on Pitscurry Moss LNCS and the cumulative impact on blocks of ancient woodland. Significant impact on habitat connectivity along this corridor which extends to Bennachie.

People and Com. – three properties within 100m alignment corridor.

Soil and geology – 11.8km of alignment in prime agricultural land.

Cultural heritage – Direct impact with the south-western most corner of Battle of Barra Inventory Historic Battlefield (BTL18). Setting impact Colpy Cottage, palisaded enclosure 300m S of (SM11511), Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302) and Category B listed Logie Durno

Engineering Summary of Impacts

Overall Engineering Mark = 0.75

Engineering Impacts
Total no of Major Adverse impacts: 270
Total no of Major Adverse Impact Clusters: 46
Total no of Moderate Adverse impacts: 349
Total no of Moderate Adverse Impact Clusters: 99

Earthworks
Bulk Cut: 6,325,000 m^3
Bulk Fill: 6,495,000 m^3
Earthworks Balance: -170,000 m^3 (deficit)

Geotechnical Key Issues
Up to 32m Cutting through shallow rock near Thomastown

Up to 36m Embankment of glacial till near Glens of Foudland

Up to 33m Cutting through glacial till near Hill of Skares

250m Stretch of Category 1 very compressible or challenging soils near Brownhills

Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse Structures: 3

New bridge to span Burn of Durno and local road, length 600m, High Piers (approx 17m)

Transportation Summary of Impacts

Overall Transportation Mark = 0.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 36:24 minutes, saving 8:12 minutes.

SO1.2 – Change in JT variability from 8:37 to 0:43.

SO1.3 – 194M veh-kms (91%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=26.9kms (31%). 19% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 14 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Proportion of trips re-assigning to dual-carriageway around Inverurie is low, limiting the potential to indirectly reduce conflict between motorised and non-motorised users on the de-trunked A96.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -2:58mins (-12.2%).

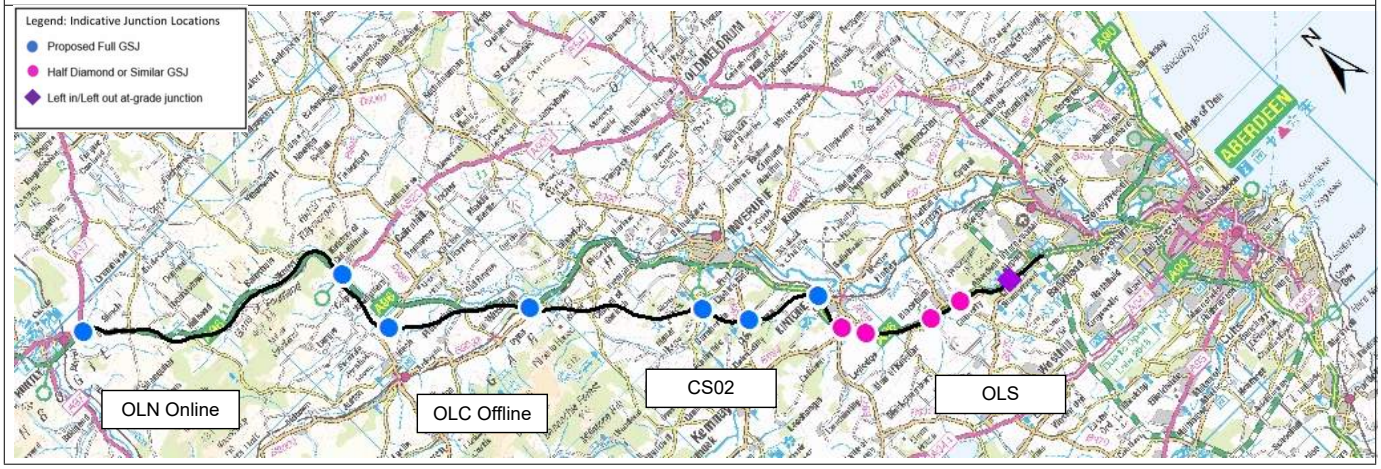
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:54mins (-12.8%).

Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826) **Plans and Policies** – committed small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **The main issues along this route are located in the northern and central areas. The impacts in the south are more limited and localised. In the central section there are issues related to ecology with reduced habitat connectivity in a corridor that extends to Bennachie. The main landscape issues also affect the central and northern areas with large earthworks, new structures and setting issues. Most of the cultural heritage features are in the central sections (related to OLC).**	New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m) New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures: 6 **Hydrology** Floodplain - 5 Major Adverse Impacts associated with the River Urie (twice), The Shevock, Lochter Burn and the River Don. 1 Moderate Adverse Impacts associated with The Shevock. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into Tributary Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 15 3 National Grid Pipeline crossings 6 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded 46 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (99) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1300 vpd. Inverurie: Decrease of 6400 vpd. Overall change: -5100 vpd **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:33mins (-15.9%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-831 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be public support over the route's potential to reduce congestion in Inverurie but may raise some concern over the route making limited use of the existing A96, impact on woodland/recreational areas and on loss of agricultural land. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Minor to Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively low level of economic benefit. Generally moderate to major improvements in journey times. Minor accident savings.**
Health and Safety: 47 Major Hazards, 36 Moderate Hazards & 67 Minor Hazards		
Overall Combined Mark = 2.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 164 – OLN Online, OLC Offline, CS02, OLS

Description: Online via Hill of Skares to Colpy; offline to the south of the existing A96 from Colpy to Chapel of Garioch; offline west and south of Inverurie to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 48.5km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Moderate Beneficial**	**Moderate Beneficial**	**Neutral**	**Major Adverse- refer to Engineering Summary**	**N/A at this stage**	**Major Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 1.25

Landscape – 10km within Bennachie SLA, earthworks > 15m, loss of ancient woodland, impact on setting of scheduled monuments and new large structure across the River Don. Introduction of large structures and setting of Colpy.

Water – realignment of Glen Water, crossing of Shevock Burn, extensive floodplain of the Gadie Burn and realignments required. 33 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings, including The River Don. Three waterbodies removed and several watercourse diversions. Habitat fragmentation, cumulative impact on ancient woodland and a reduction in habitat connectivity.

People and Com. – five properties within 100m alignment corridor.

Soil and geology – 7.1km of alignment in prime agricultural land.

Cultural heritage – direct impact on Deer's Den, roundhouses (SM12465). Setting impact on St Apolinaris' Chapel and burial ground (SM12118), East Aquhorthies, stone circle (SM90126) and PIC (PIC242), Maiden Stone (SM90210) and PIC (PIC256), Colpy Cottage, palisaded enclosure 300m S of (SM11511), Brownhills, cairns (SM12116) and Wester Shevock, cairn (SM12115).

Engineering Summary of Impacts

Overall Engineering Mark = 1.25

Engineering Impacts
Total no of Major Adverse impacts: 264
Total no of Major Adverse Impact Clusters: 45
Total no of Moderate Adverse impacts: 303
Total no of Moderate Adverse Impact Clusters: 91

Earthworks
Bulk Cut: 5,269,000 m^3
Bulk Fill: 6,011,000 m^3
Earthworks Balance: -742,000 m^3 (deficit)

Geotechnical Key Issues
450m Stretch of peat near Hillhead

250m Stretch of Category 1 very compressible or challenging soils near Brownhills

300m Stretch of peat near Westhall

350m Stretch of Landfill near Westhall

Up to 31m Cutting through shallow rock near Mellanbrae

Structures
Number of Major Adverse Structures: 3

Viaduct over the Gadie Burn, flood plain, B9002 at Ch. 3050 and railway at Ch. 3150. Approx. 850m total length

Viaduct over B-class Road and River Don. Total length approx. 775 m. High piers (up to 30m)

Transportation Summary of Impacts

Overall Transportation Mark = 2.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 33:08 minutes, saving 11:29 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:51.

SO1.3 – 239M veh-kms (113%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Major Beneficial'. 4 km of more than 2% uphill (moderate hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.3kms (59%). 36% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:18mins (-13.6%).

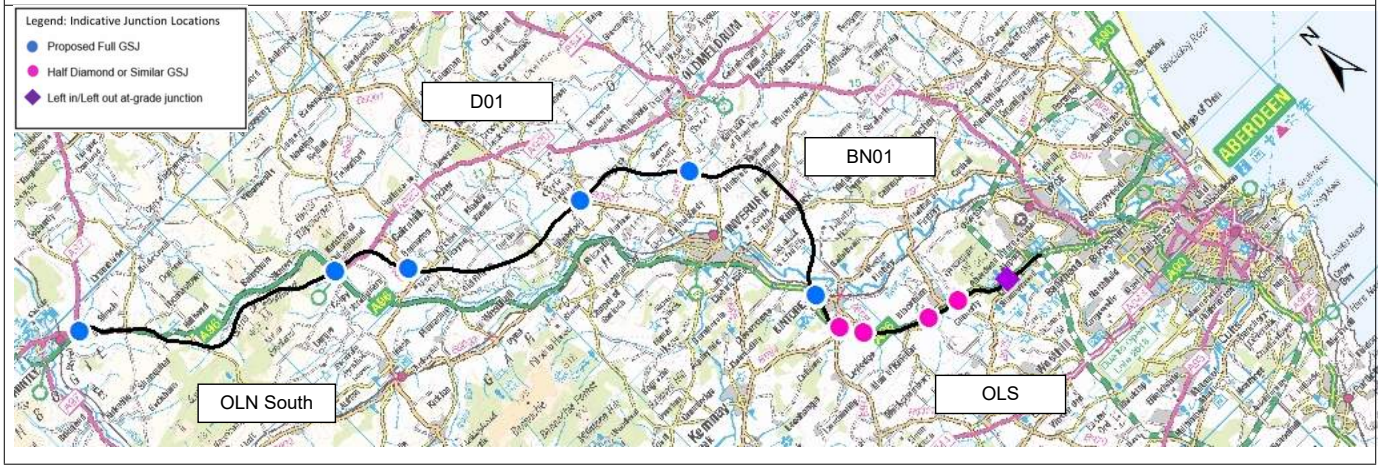
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:16mins (-14.4%).

Plans and Policies – committed medium scale and small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **The main issues along this alignment are found in the south and relate to section CS02. This is due to 10km of the route passing through the Bennachie SLA, with large earthworks, new structures and loss of ancient woodland. Impacts on cultural heritage features are also concentrated in this area and the crossing of the Don reduces connectivity of habitats. There are committed medium and small scale local developments within the 100m alignment corridor.**	Viaduct over Bridgealehouse watercourse, flood plain and local road. Viaduct total length approx. 425 m Number of Moderate Adverse Structures: 5 **Hydrology** Floodplain: 4 Major Adverse Impacts associated with The Shevock, Gadie Burn, River Don and Bridgealehouse Burn. 2 Moderate Adverse Impacts associated with The Shevock and the Gadie Burn. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into Tributary Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 17 3 National Grid Pipeline crossings 7 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 6 **Overall end-to-end Engineering conclusion** **This alignment recorded 45 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (91) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1100 vpd. Inverurie: Decrease of 3200 vpd. Overall change: -2100 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:18mins (-14.7%). Does not provide easier access to Inverurie Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to the LDP aspiration to reduce congestion in Inverurie (-119 vpd in Inverurie town centre) but fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows change by plus or minus 150 pcus. **STAG 6** – Likely to be major public concerns over the route's proximity to Bennachie and significant concerns over its proximity to historic buildings/monuments and to ancient woodland/recreational areas. Route does not offer a northern bypass of Inverurie and does not make use of the existing A96. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major Beneficial Impacts across 10 of the Scheme Objectives and Neutral to Moderate Beneficial Impacts against STAG criteria. It also offers a comparatively moderate level of economic benefit. Generally major improvements in journey times. Major accident savings.**
Health and Safety: 34 Major Hazards, 35 Moderate Hazards & 79 Minor Hazards		
Overall Combined Mark = 4.75 (poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 173 – OLN South, D01 (Kirkton), BN01 Outer, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline Colpy to Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.4km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives																
SO1 – To improve the operation of the A96 and inter-urban connectivity through:							**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience		SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Moderate Adverse		Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Moderate Beneficial**	**Moderate Beneficial**	**Major Beneficial**	**Moderate Adverse- refer to Engineering Summary**	**N/A at this stage**	**Minor Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 3.25

Landscape – new structures, impacts on the settings of scheduled monuments, a Category A Listed building and Williamston House GDL. Loss of ancient woodland, earthworks >15m, impacts on receptors and new structure across Burn of Durno.

Water – extensive floodplain of the Lochter Burn. 37 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings including Glen Water.
People and Com. – four properties and Snipefield woods recreation area within 100m alignment corridor.

Soil and geology – 9.8km of alignment in prime agricultural land.

Cultural heritage – direct impact with the south-western most corner of Battle of Barra Inventory Historic Battlefield (BTL18) and Colpy Cottage, palisaded enclosure (SM11511). Setting impact on Woodside, hut circles 300m W of (SM11513), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), the Law, cairn (SM12113), Pitscurry, cairn (SM12302), Mummer's Reive, cairn (SM11629) and Category A listed Cusalmond Old Parish Church (LB2960).

Plans and Policies – consented small scale local developments within 100m alignment corridor.

Engineering Summary of Impacts

Overall Engineering Mark = 2.25

Engineering Impacts
Total no of Major Adverse impacts: 226
Total no of Major Adverse Impact Clusters: 36
Total no of Moderate Adverse impacts: 239
Total no of Moderate Adverse Impact Clusters: 76

Earthworks
Bulk Cut: 5,031,000 m^3
Bulk Fill: 3,781,000 m^3
Earthworks Balance: 1,250,000 m^3 (surplus)

Geotechnical Key Issues

400m Stretch of peat near Hillhead

Up to 62m Cutting through shallow rock near Hill of Foudland

Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse Structures: 4

New bridge to span variable topography, existing A96, River Urie and floodplain, length 350 m

New bridge to span local road, Burn of Durno and floodplain, length 550m, High Piers approx 18m

New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m)

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:07 minutes, saving 9:30 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:47

SO1.3 – 230M veh-kms (108%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 37.2kms (46%). 31% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:21mins (-13.8%).

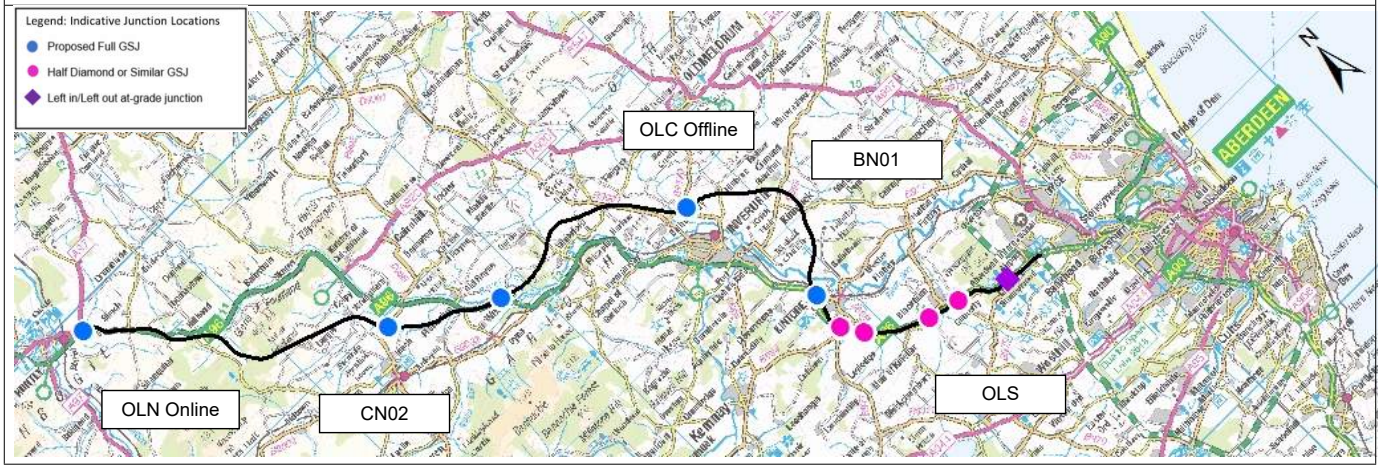
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:47mins (-12.3%).

Overall end-to-end Environmental conclusion **The main issues along this alignment are the Wildcat Priority Area in the north, the cultural heritage features in the central and north sections and the Lochter Burn flood plain in the south.**	New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures: 3 **Hydrology** Floodplain: 2 Major Adverse Impacts associated with The Lochter Burn and the River Don No Moderate Adverse Impacts. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts: Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 21 3 National Grid Pipeline crossings 3 SGN High Pressure Pipeline crossings 7 SSE 275Kv crossings 8 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 36 clusters of Major Adverse Impacts marking it similar to three other alignments (10, 45, 125). However, the 76 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 100 vpd. Inverurie: Decrease of 6400 vpd. Overall change: -6300 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:43mins (-16.7%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-895 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by more than 850 pcus. **STAG 6** – Likely to be significant public support over the route's potential to reduce congestion in Inverurie and minimise impact on Bennachie, however there is likely to be some concern over loss of agricultural land and proximity to woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria and offers a comparatively moderate level of economic benefit. Generally moderate improvements in journey times. Moderate accident savings.**
Health and Safety: 40 Major Hazards, 23 Moderate Hazards & 63 Minor Hazards		
Overall Combined Mark = 8.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 180 – OLN Online, CN02, OLC Offline, BN01 Inner, OLS

Description: Offline to the south of existing A96 and Glens of Foudland through Stony Hill to Chapel of Garioch; offline to the north of existing A96 to Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 51.5km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives														
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Minor Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Neutral	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Minor Beneficial	Major Beneficial	Minor Beneficial	Moderate Adverse- refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 0.75

Landscape – major cuttings across Stony Hill will impact skyline and landscape character of Foudland Grampian Outliers. Embankments across the Insch Basin will degrade characteristic low lying topography. Setting of Colpy, impacts on character of Deveron and Upper Ythan Valleys and character at River Don and floodplain crossing from large structure.

Water – realignment of Glen Water, crossing of Shevock Burn, extensive floodplains of the River Urie, Ides Burn and River Don. 31 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation cutting through Wildcat Priority Area creating additional barrier. Impacts on Pitscurry Moss LNCS, loss of ancient woodland and habitat fragmentation.

People and Com. – four properties within 100m alignment corridor.

Soil and geology – 12.5km of alignment in prime agricultural land.

Cultural heritage – direct impact on the north-easternmost corner of Keith Hall Inventory GDL. Impact on setting of Hill of Selbie, cairn (SM12434), Battle of Harlaw (BTL11), Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302),

Engineering Summary of Impacts

Overall Engineering Mark = 1.75

Engineering Impacts
Total no of Major Adverse impacts: 260
Total no of Major Adverse Impact Clusters: 41
Total no of Moderate Adverse impacts: 375
Total no of Moderate Adverse Impact Clusters: 91

Earthworks
Bulk Cut: 9,077,000 m^3
Bulk Fill: 8,311,000 m^3
Earthworks Balance: 766,000 m^3 (surplus)

Geotechnical Key Issues
Up to 63.1m Cutting through shallow rock near Hill of Foudland
Up to 33.8m Embankment on glacial till near Hill of Foudland U
Up to 33.8m Embankment on shallow rock near Hill of Foudland
250m Stretch of Category 1 very compressible or challenging soils near Brownhills
450m Stretch of peat near Hillhead
300m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span Burn of Durno and local road, length 600m, High Piers (approx 17m)

New underbridge over Ides Burn and B9001, high skew, length 400 m

Transportation Summary of Impacts

Overall Transportation Mark = 1.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 34:34 minutes, saving 10:03 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:47.

SO1.3 – 223M veh-kms (105%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Moderate Beneficial'. 6 km of more than 2% uphill (major hilliness). Together gives 'Minor' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=29.5kms (34%). 22% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 16 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:53mins (-16%).

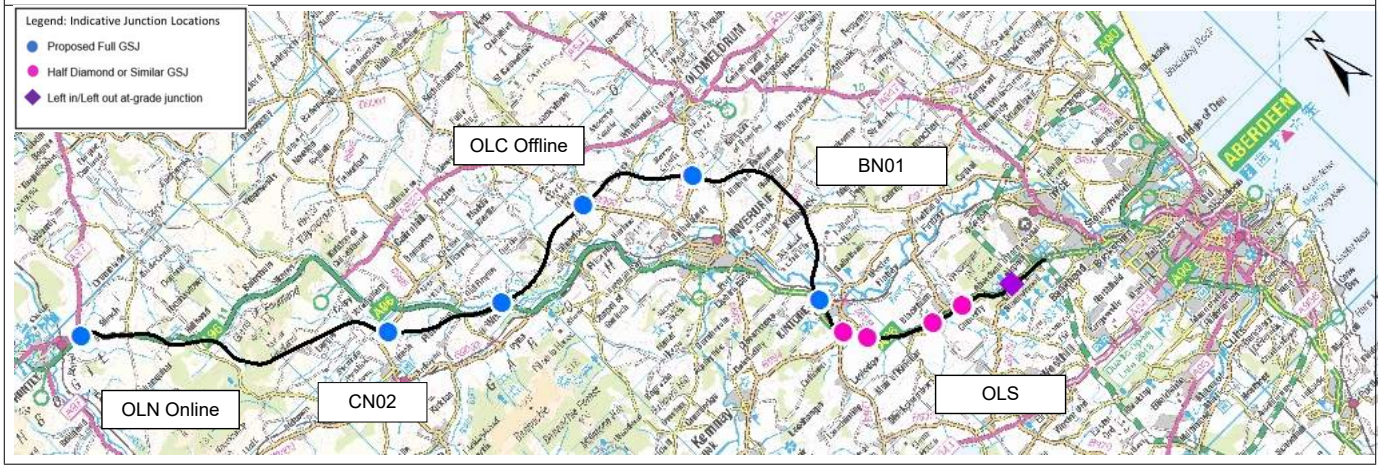
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:48mins (-16.8%).

Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115) and Colpy Cottage, palisaded enclosure 300m S of (SM11511). **Plans and Policies** – LDP land reserved for Northern Link Road and significant large-scale consented development exist to the northern edge of Inverurie. A development for additional explosives storage has been consented BN01 Inner. **Overall end-to-end Environmental conclusion** **This alignment has extensive and widespread issues. Major earthworks along the alignment impact on landscape character, setting of cultural heritage features and ecological features. The latter is also impacted by numerous water crossings reducing habitat connectivity. Part of this alignment also deviates significantly from the A96 impacting further on the Wildcat Priority Area. LDP land reserved for Northern Link Road and significant large-scale consented development exist to the northern edge of Inverurie. Development for additional explosives storage has been consented BN01 Inner.**	New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures: 6 **Hydrology** Floodplain: 7 Major Adverse Impacts associated with The Kellock, The Shevock, River Urie, Ides Burn (twice), Lochter Burn and River Don 2 Moderate Adverse Impacts associated with the Shevock and the Ides Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into Tributary Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 13 3 National Grid Pipeline crossing 3 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded 41 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (91) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1500 vpd. Inverurie: Decrease of 5900 vpd. Overall change: -4400 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -4:09mins (-18.6%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-1055vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public support over the route's potential to reduce congestion in Inverurie and minimise impact on Bennachie. May be concerns over loss of agricultural land and proximity to woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria and offers a comparatively low level of economic benefit. Generally major improvements in journey times. Minor accident savings.**
Health and Safety: 46 Major Hazards, 30 Moderate Hazards & 69 Minor Hazards		
Overall Combined Mark = 4.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 181 – OLN Online, CN02, OLC Offline, BN01 Outer, OLS

Description: Offline to the south of existing A96 and Glens of Foudland through Stony Hill to Chapel of Garioch; offline to the north of existing A96 to Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.7km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Minor Beneficial	Minor Beneficial	Neutral	Moderate Adverse	Minor Beneficial	Major Beneficial	Neutral	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Major Beneficial**	**Minor Beneficial**	**Moderate Adverse- refer to Engineering Summary**	**N/A at this stage**	**Minor Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 1.75

Landscape – major cuttings across Stony Hill will impact skyline and landscape character of Foudland Grampian Outliers. Embankments across the Insch Basin will degrade characteristic low lying topography. Setting of Colpy, landscape character affected in areas of ancient woodland between Durno and Whiteford and numerous receptors.

Water – realignment of Glen Water, crossing of Shevock Burn, extensive floodplains of the River Urie and Lochter Burn. 17 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation cutting through Wildcat Priority Area creating additional barrier. Impacts on Pitscurry Moss LNCS and the cumulative impact on blocks of ancient woodland. Significant impact on habitat connectivity along this corridor which extends to Bennachie.

People and Com. – two properties within 100m alignment corridor.

Soil and geology – 11.2km of alignment in prime agricultural land.

Cultural heritage – direct impact with the south-western most corner of Battle of Barra Inventory Historic Battlefield (BTL18). Setting impact on Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone

Engineering Summary of Impacts

Overall Engineering Mark = 1.75

Engineering Impacts
Total no of Major Adverse impacts: 279
Total no of Major Adverse Impact Clusters: 39
Total no of Moderate Adverse impacts: 380
Total no of Moderate Adverse Impact Clusters: 93

Earthworks
Bulk Cut: 9,712,000 m^3
Bulk Fill: 8,990,000 m^3
Earthworks Balance: 722,000 m^3 (surplus)

Geotechnical Key Issues
Up to 63m Cutting through shallow rock near Hill of Foudland
Up to 34m Embankment on glacial till near Hill of Foudland
Up to 34m Embankment on shallow rock near Hill of Foudland
450m Stretch of peat near Hillhead
250m Stretch of Category 1 very compressible or challenging soils near Brownhills
Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse Structures: 3

New bridge to span Burn of Durno and local road, length 600m, High Piers (approx 17m)

New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m)

Transportation Summary of Impacts

Overall Transportation Mark = 0.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:01 minutes, saving 9:36 minutes.

SO1.2 – Change in JT variability from 8:37 to 0:59

SO1.3 – 201M veh-kms (95%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Moderate Beneficial'. 6 km of more than 2% uphill (major hilliness). Together gives 'Minor' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=23.7kms (26%). 17% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 15 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Proportion of trips re-assigning to dual-carriageway around Inverurie is low, limiting the potential to indirectly reduce conflict between motorised and non-motorised users on the de-trunked section of the A96.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:31mins (-14.5%).

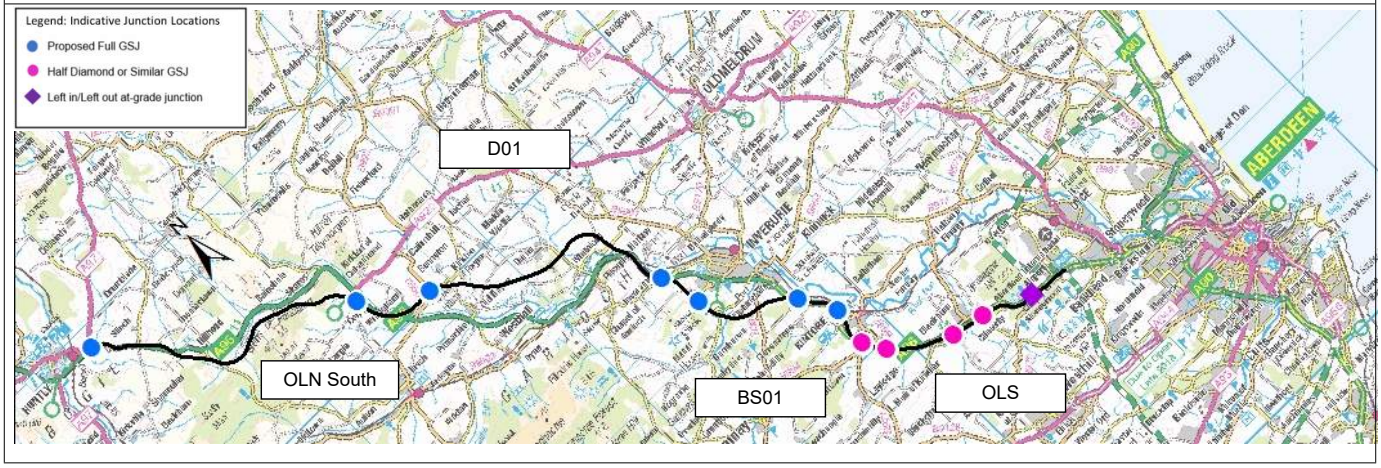
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -3:40mins (-16.1%).

Burial Enclosure (LB2826), Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115) and Colpy Cottage, palisaded enclosure 300m S of (SM11511). **Plans and Policies** – committed small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **The main issues along this alignment are located in the central sections. Issues to the north and south are relatively localised and limited, with the concentration of impacts in the centre. These relate to major earthworks affecting landscape character and setting, the alignment deviating away from the A96 impacting further on the Wildcat Priority Area, numerous watercourse crossings reducing habitat connectivity in a corridor that extends to Bennachie, and cultural heritage features. There are no large-scale developments.**	New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures: 4 **Hydrology** Floodplain: 5 Major Adverse Impacts associated with The Kellock, The Shevock, The River Urie, Lochter Burn and the River Don. 1 Moderate Adverse Impacts associated with the Shevock. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into Tributary Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 13 3 National Grid Pipeline crossings 3 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded 29 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (93) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1500 vpd. Inverurie: Decrease of 6400 vpd. Overall change: -4900 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:52mins (-17.3%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-1055 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public support over the route's potential to reduce congestion in Inverurie but may raise some concern over the route making limited use of the existing A96, impact on woodland/recreational areas and on loss of agricultural land. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Minor to Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively low level of economic benefit. Generally moderate to major improvements in journey times. Minor accident savings.**
Health and Safety: 48 Major Hazards, 37 Moderate Hazards & 73 Minor Hazards		
Overall Combined Mark = 4.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 185 – OLN South, D01 (Newton House), BS01, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline to the south of the A96 between Colpy and Newton House; offline to the north of existing A96 between Newton House and Pitcaple; offline to the north of existing A96 at Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 48.8km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Major Beneficial	Minor Beneficial	Minor Beneficial	Minor Adverse- refer to Engineering Summary	N/A at this stage	Minor Adverse

Environment Summary of Impacts

Overall Environmental Mark = 3.75

Landscape – 4km within Bennachie SLA, landscape character, the Don Valley, earthworks of >15m, loss of ancient woodland, large watercourse crossing structures and impacts on scheduled monuments.

Water – crossing River Urie. 31 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings including Glen Water.

People and Com. – eight properties within 100m alignment corridor.

Soil and geology – 100m of route in SSSI Pitcaple and Legatsden Quarry. 9.6km of alignment in prime agricultural land.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Drimmies, symbol stone (SM70). Setting impact on St Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure 510m WNW of (SM12195), Bruce's Camp, hillfort (SM12523), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), The Law, cairn (SM12113), Pitscurry, cairn (SM12302), Category B listed Freefield House (LB16001), Woodside, hut circles 300m W of (SM11513) and Williamston House GDL (GDL00386).

Engineering Summary of Impacts

Overall Engineering Mark = 3.25

Engineering Impacts
Total no of Major Adverse impacts: 176
Total no of Major Adverse Impact Clusters: 33
Total no of Moderate Adverse impacts: 255
Total no of Moderate Adverse Impact Clusters: 75

Earthworks
Bulk Cut: 4,827,000 m^3
Bulk Fill: 3,567,000 m^3
Earthworks Balance: 1,260,000 m^3 (surplus)

Geotechnical Key Issues
400m Stretch of peat near Hillhead
Up to 62m Cutting through shallow rock near Hill of Foudland
350m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, High Piers approx 18m

New bridge to span Railway line, River Urie and floodplain, length 850m. Potential for large spans to reduce Piers in the watercourse

New viaduct approximately 375m length over River Don and its floodplains. The river crossing itself spans approximately 50m. Very high piers required due to level difference

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 33:36 minutes, saving 11:01 minutes.

SO1.2 – Change in JT variability from 8:37 to 2:12.

SO1.3 – 245M veh-kms (115%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Moderate Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=46.6kms (57%).

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:19mins (-13.7%).

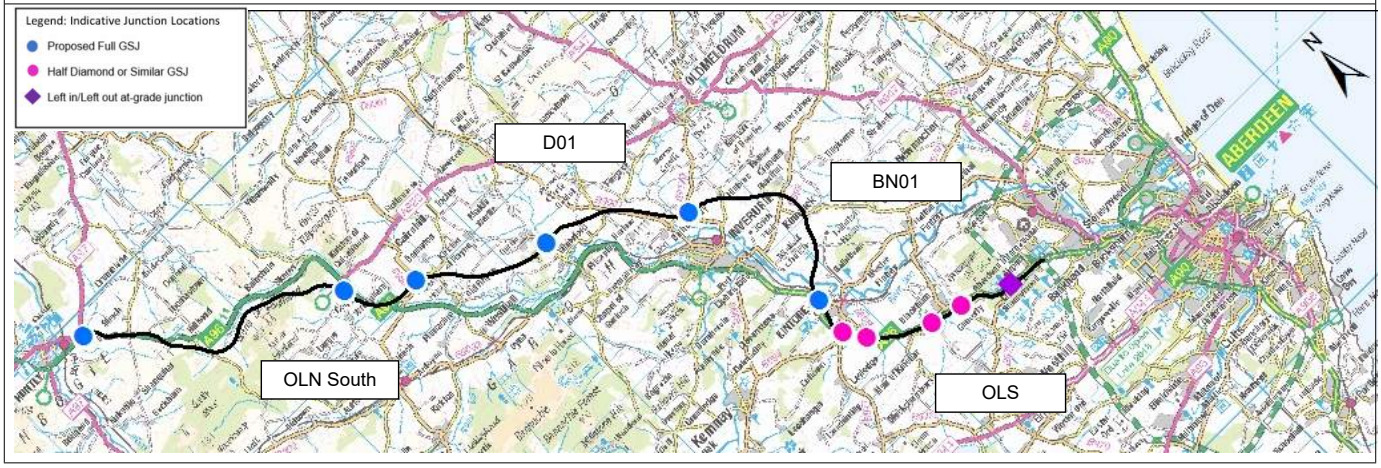
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -2:32mins (-11.1%).

Plans and Policies – committed small scale local developments affected throughout north/centre and heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone. **Overall end-to-end Environmental conclusion** **The main issues along this alignment are located to the northern and southern extents. In the south, 4km of the route passes through the Bennachie SLA with large earthworks and loss of ancient woodland. There are numerous impacts on cultural heritage features and the River Urie crossing with new structure. The alignment also infringes on a large-scale LDP housing and employment allocation in the south. In the north, landscape issues continue with earthworks and structures and there are impacts on the Wildcat Priority Area.**	Number of Moderate Adverse Structures: 4 **Hydrology** Floodplain: 1 Major Adverse Impact associated with The River Urie. 2 Moderate Adverse Impacts associated with the River Urie and the River Don Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - No major or Moderate Adverse Impacts. **Utilities** Number of Major Adverse Impacts: 18 1 National Grid Pipeline crossing 3 SGN High Pressure Pipeline crossings 7 SSE 275Kv crossings 7 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 3 **Overall end-to-end Engineering conclusion** **This alignment recorded 33 clusters of Major Adverse Impacts, similar to two other alignments (26,186). However, the 75 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 900 vpd. Inverurie: Decrease of 4200 vpd. Overall change: -330 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:08mins (-14%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a high level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-905vpd in Inverurie town centre) but fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public concerns over the loss of agricultural land and impact on Bennachie. May also be some concern over impact on cultural heritage sites. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Minor to Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively low level of economic benefit. Generally moderate to major improvements in journey times. Minor accident savings.**
Health and Safety: 41 Major Hazards, 16 Moderate Hazards & 65 Minor Hazards		
Overall Combined Mark = 10.25 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 186 – OLN South, D01 (Newton House), BN01 Inner, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline to the south of the A96 between Colpy and Newton House; offline to the north of existing A96 between Newton House and Pitcaple; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 51.3km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Major Beneficial	Moderate Beneficial	Minor Adverse- refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 2.25

Landscape – 2km section of ancient woodland loss, earthworks >15m, new structure across Burn of Durno, impacts on residential receptors, scheduled monuments and landscape character at River Don and floodplain crossing from large structure.

Water – extensive floodplain of Ides Burn, crosses several other watercourses including floodplain <100m wide of the Burn of Durno and River Don crossing. 30 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings.

People and Com. – six properties within 100m alignment corridor.

Soil and geology – 13km of alignment in prime agricultural land.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Keith Hall Inventory GDL. Setting impact on Williamston House GDL (GDL00386), Category B listed Freefield House (LB16001), Hill of Selbie, cairn (SM12434), Battle of Harlaw (BTL11), Woodside, hut circles 300m W of (SM11513), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), The Law, cairn

Engineering Summary of Impacts

Overall Engineering Mark = 3.25

Engineering Impacts
Total no of Major Adverse impacts: 182
Total no of Major Adverse Impact Clusters: 33
Total no of Moderate Adverse impacts: 247
Total no of Moderate Adverse Impact Clusters: 73

Earthworks
Bulk Cut: 4,376,000 m^3
Bulk Fill: 3,715,000 m^3
Earthworks Balance: 661,000 m^3 (surplus)

Geotechnical Key Issues
400m Stretch of peat near Hillhead
Up to 62m Cutting through shallow rock near Hill of Foudland
300m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, High Piers approx 18m

New underbridge over B9001, Ides Burn and floodplain, length 400 m

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew

Number of Moderate Adverse Structures: 6

Transportation Summary of Impacts

Overall Transportation Mark = 3.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:05 minutes, saving 9:32 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:43

SO1.3 – 232M veh-kms (109%) increase in distance travelled on dual carriageways

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=33.2kms (40%). 32% traffic reduction on existing A96 through Inverurie

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:31mins (-14.5%).

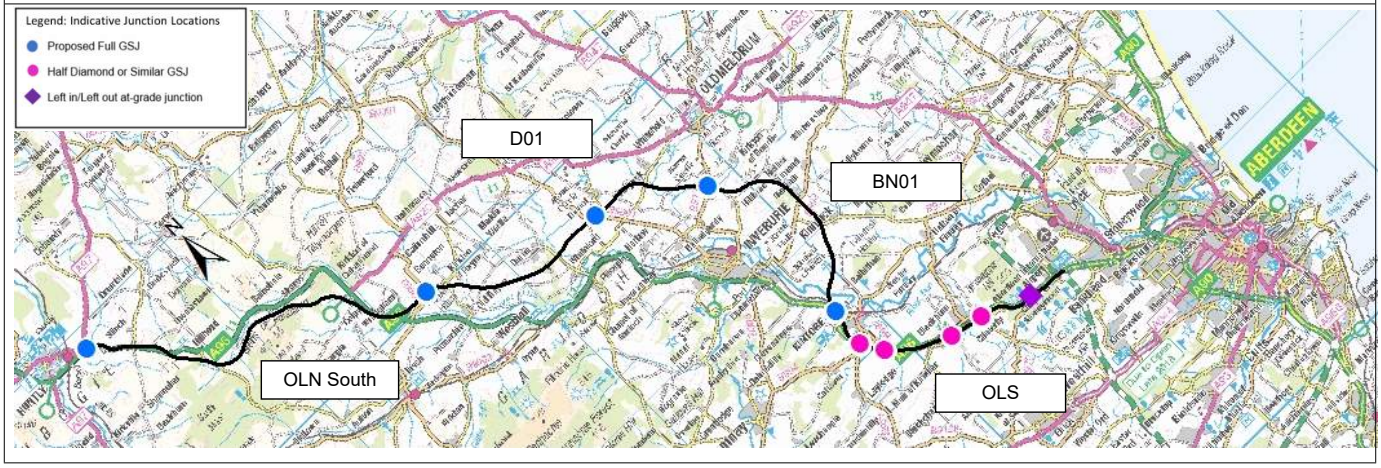
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -2:57mins (-13%).

(SM12113), Whiteinches, cairn (SM12188) and Pitscurry, cairn (SM12302). **Plans and Policies** – committed small scale local developments in north and LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie. A development for additional explosives storage has been consented at BN01 Inner. **Overall end-to-end Environmental conclusion** **This alignment has widespread issues along its length with the additional issue of LDP land reserved for Northern Link Road and significant largescale consented development to the northern edge of Inverurie. Development for additional explosives storage has been consented at BN01 Inner.**	**Hydrology** Floodplain: 4 Major Adverse Impacts associated with The Ides burn (twice), Lochter Burn and River Don. 1 Moderate Adverse Impacts associated with the Ides Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts: Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 17 3 National Grid Pipeline crossings 3 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 6 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 33 clusters of Major Adverse Impacts marking it similar to two other alignments (16,185). However, the 73 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 400 vpd. Inverurie: Decrease of 6000 vpd. Overall change: -5600 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:53mins (-17.4%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspirations to reduce congestion in Inverurie (-1029 vpd in Inverurie town centre and meets LDP aspirations for a northern bypass of Inverurie) **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be major public support over the route's potential to reduce congestion in Inverurie, but may have concern over loss of agricultural land and poor use of existing A96 alignment. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively moderate level of economic benefit. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 39 Major Hazards, 23 Moderate Hazards & 63 Minor Hazards		
Overall Combined Mark = 9.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 187 – OLN South, D01 (Newton House), BN01 Outer, OLS

Description: Offline to the south of existing A96 through Glens of Foudland to Colpy; offline to the south of the A96 between Colpy and Newton House; offline to the north of existing A96 between Newton House and Pitcaple; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.5km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Minor Beneficial	Moderate Beneficial	Major Beneficial	Minor Adverse- refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 3.25

Landscape – loss of ancient woodland, earthworks >15m, impacts on receptors and new structure across Burn of Durno. Impacts on scheduled monuments, severance of the landscape and visual connection of the GDLs at Williamston House and Newton House.

Water – extensive floodplain of the Lochter Burn. 34 watercourse crossings.

Ecology – Wildcat Priority Area, loss of ancient woodland and habitat fragmentation around Wishach Hill and Hills of Foudland. Impacts from watercourse crossings.

People and Com. – four properties within 100m alignment corridor.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Battle of Barra Inventory Historic Battlefield (BTL18). Setting impact on Williamston House GDL (GDL00386), Category B listed Freefield House (LB16001), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), the Law, cairn (SM12113), Pitscurry, cairn (SM12302) and Woodside, hut circles 300m W of (SM11513).

Plans and Policies – committed small scale local developments throughout central areas.

Engineering Summary of Impacts

Overall Engineering Mark = 3.75

Engineering Impacts
Total no of Major Adverse impacts: 199
Total no of Major Adverse Impact Clusters: 31
Total no of Moderate Adverse impacts: 247
Total no of Moderate Adverse Impact Clusters: 75

Earthworks
Bulk Cut: 4,887,000 m^3
Bulk Fill: 4,357,000 m^3
Earthworks Balance: 530,000 m^3 (surplus)

Key Geotechnical Issues
400m Stretch of peat near Hillhead
Up to 62m Cutting through shallow rock near Hill of Foudland
Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, High Piers approx 18m

New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m)

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew
Number of Moderate Adverse Structures: 4

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:29 minutes, saving 9:08 minutes

SO1.2 – Change in JT variability from 8:37 to 1:44.

SO1.3 – 233M veh-kms (110%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=26.2kms (34%). 30% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:13mins (-13.2%).

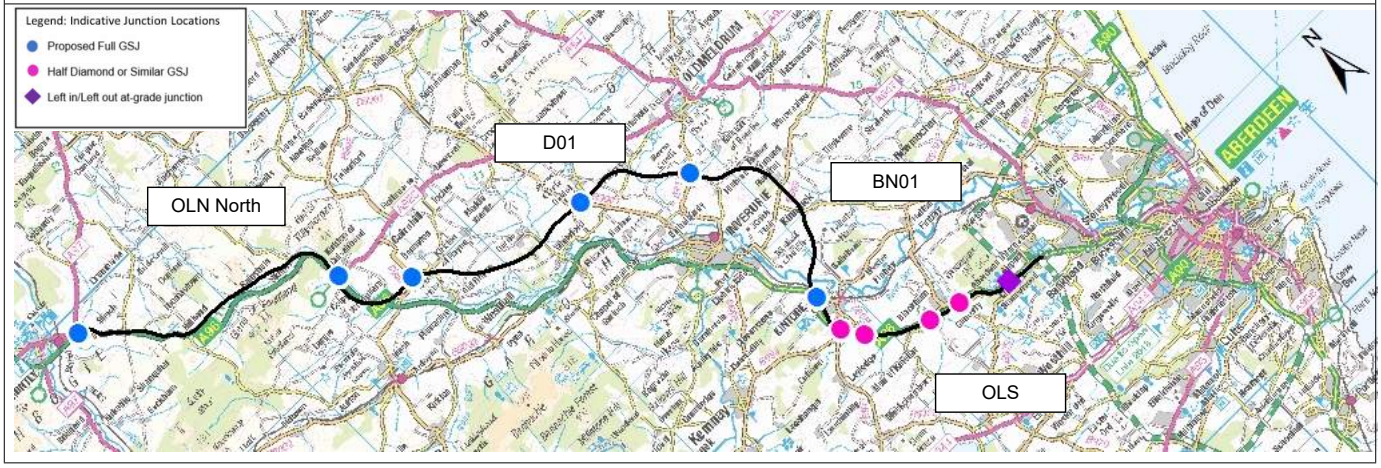
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:33mins (-11.2%).

Overall end-to-end Environmental conclusion **This alignment has limited and localised issues in the south section. There are fewer watercourse crossings and associated with this there are fewer impacts on landscape and ecology. There are no large-scale developments.**	**Hydrology** Floodplain: 2 Major Adverse Impacts associated with Lochter Burn and The River Don. No Moderate Adverse Impacts. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts: Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 17 3 National Grid Pipeline crossings 3 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 6 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 31 clusters of Major Adverse Impacts similar to two alternative alignments (58,126). However, the 75 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 200 vpd. Inverurie: Decrease of 6400 vpd. Overall change: -6200 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:35mins (-16.1%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-865 vpd) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by more than 850 pcus. **STAG 6** – Likely to be significant public support over the route's potential to reduce congestion in Inverurie and minimise impact on Bennachie, however, there is likely to be some concern over loss of agricultural land and proximity to woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively low level of economic benefit. Generally major improvements in journey times. Major accident savings.**
Health and Safety: 41 Major Hazards, 24 Moderate Hazards & 66 Minor Hazards		
Overall Combined Mark = 10.25 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 188 – OLN North, D01 (Newton House), BN01 Outer, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; offline to the south of the A96 between Colpy and Newton House; offline to the north of existing A96 between Newton House and Pitcaple; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.9km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives														
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Moderate Beneficial**	**Major Beneficial**	**Minor Adverse- refer to Engineering Summary**	**N/A at this stage**	**Minor Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 3.25

Landscape – loss of ancient woodland, earthworks >15m, impacts on receptors and new structure across Burn of Durno, impacts on scheduled monuments, severance of the landscape and visual connection of the GDLs at Williamston House and Newton House. New structures at Glen Water/Peterden Burn.

Water – extensive floodplains of River Urie and Lochter Burn. 29 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland.

People and Com. – Three properties within 100m alignment corridor.

Soil and geology – 11.8km of alignment in prime agricultural land.

Cultural heritage – direct impact with the south-western most corner of Battle of Barra Inventory Historic Battlefield (BTL18) and Colpy Cottage, palisaded enclosure 300m S of (SM11511). Setting impacts on Williamston House GDL (GDL00386), Category B listed Freefield House (LB16001), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), the Law, cairn (SM12113) and Pitscurry, cairn (SM12302).

Plans and Policies – consented small scale local developments within 100m alignment corridor.

Engineering Summary of Impacts

Overall Engineering Mark = 2.75

Engineering Impacts
Total no of Major Adverse impacts: 204
Total no of Major Adverse Impact Clusters: 35
Total no of Moderate Adverse impacts: 244
Total no of Moderate Adverse Impact Clusters: 77

Earthworks
Bulk Cut: 5,030,000 m^3
Bulk Fill: 4,600,000 m^3
Earthworks Balance: 430,000 m^3 (surplus)

Geotechnical Key Issues
Up to 32m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, High Piers approx 18m

New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m)

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:29 minutes, saving 9:08 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:44

SO1.3 – 233M veh-kms (110%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=26.2kms (34%). 30% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

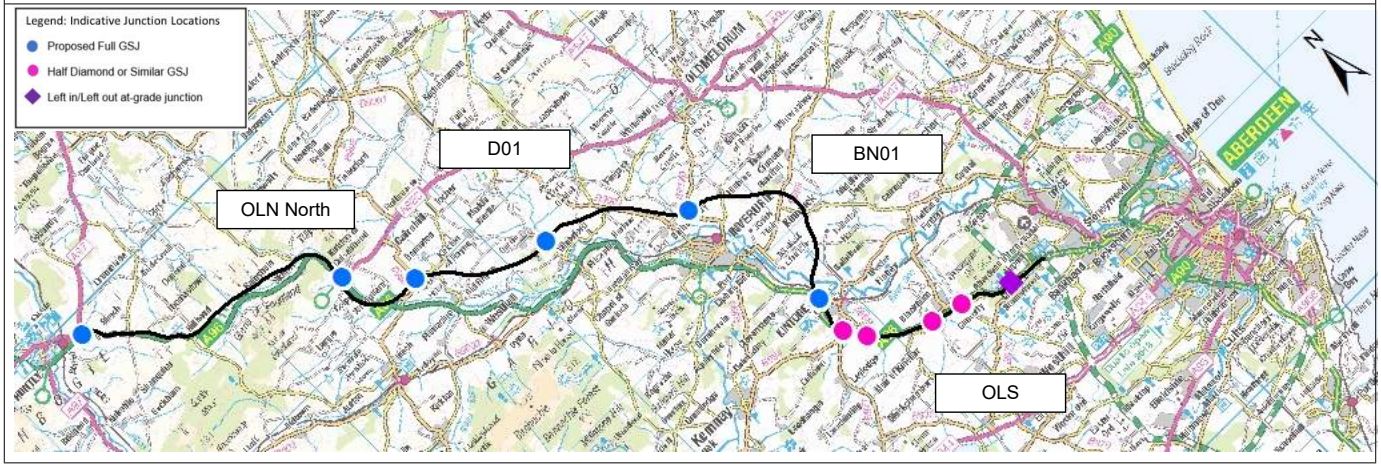
SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:13mins (-13.2%).

Overall end-to-end Environmental conclusion **This alignment has limited and localised issues in the south section. There are fewer watercourse crossings and associated with this there are fewer impacts on landscape and ecology. There are no large-scale developments.**	New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures: 5 **Hydrology** Floodplain: 3 Major Adverse Impacts associated with the River Urie, Lochter Burn and The River Don. No Moderate Adverse Impacts. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts: Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 10 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 2 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 6 **Overall end-to-end Engineering conclusion** **This alignment recorded 35 clusters of Major Adverse Impacts similar to three other alignments (27, 31, 136). However, the 77 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO3.2** – Average change in peak journey time from population centres to regional trip attractors = -2:33mins (-11.2%). **SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 200 vpd. Inverurie: Decrease of 6400 vpd. Overall change: -6200 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:35mins (-16.1%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits. **STAG 4** – Offers moderate reductions in flows within Inverurie town centre (865 veh/day) and offers a northern bypass. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by more than 850 pcus. **STAG 6** – Likely to be significant public support over the route's potential to reduce congestion in Inverurie and minimal impact on Bennachie, however there is likely to be some concern over loss of agricultural land and proximity to woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively low level of economic benefit. Generally major improvements in journey times. Major accident savings.**
Health and Safety: 36 Major Hazards, 24 Moderate Hazards & 63 Minor Hazards		
Overall Combined Mark = 9.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 189 – OLN North, D01 (Newton House), BN01 Inner, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; offline to the south of the A96 between Colpy and Newton House; offline to the north of existing A96 between Newton House and Pitcaple; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 51.8km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Major Beneficial	Moderate Beneficial	Minor Adverse- refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 2.25

Landscape – 2km section of ancient woodland loss, earthworks >15m, new structures across Burn of Durno and at Glen Water/Peterden Burn and impacts on residential receptors and scheduled monuments. Impacts on landscape character at River Don and floodplain crossing from large structure.

Water – extensive floodplains of River Urie and Ides Burn, crosses several other watercourses including floodplain <100m wide of the Burn of Durno, River Don floodplain. 25 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland.

People and Com. – five properties within 100m alignment corridor.

Soil and geology – 13.5km of alignment in prime agricultural land.

Cultural heritage – direct impact on the north-easternmost corner of Keith Hall Inventory GDL and Colpy Cottage, palisaded enclosure 300m S of (SM11511). Impact on setting of Hill of Selbie, cairn (SM12434), Battle of Harlaw (BTL11), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), The Law, cairn (SM12113), Whiteinches, cairn (SM12188), Pitscurry, cairn (SM12302), Williamston House GDL

Engineering Summary of Impacts

Overall Engineering Mark = 2.25

Engineering Impacts
Total no of Major Adverse impacts: 187
Total no of Major Adverse Impact Clusters: 37
Total no of Moderate Adverse impacts: 244
Total no of Moderate Adverse Impact Clusters: 75

Earthworks
Bulk Cut: 4,519,000 m^3
Bulk Fill: 3,958,000 m^3
Earthworks Balance: 561,000 m^3 (surplus)

Geotechnical Key Issues
Up to 32m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
300m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, High Piers approx 18m

New underbridge over B9001, Ides Burn and floodplain, length 400 m

Transportation Summary of Impacts

Overall Transportation Mark = 3.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:05 minutes, saving 9:32 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:44

SO1.3 – 232M veh-kms (109%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=33.2kms (40%). 31% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:31mins (-14.5%).

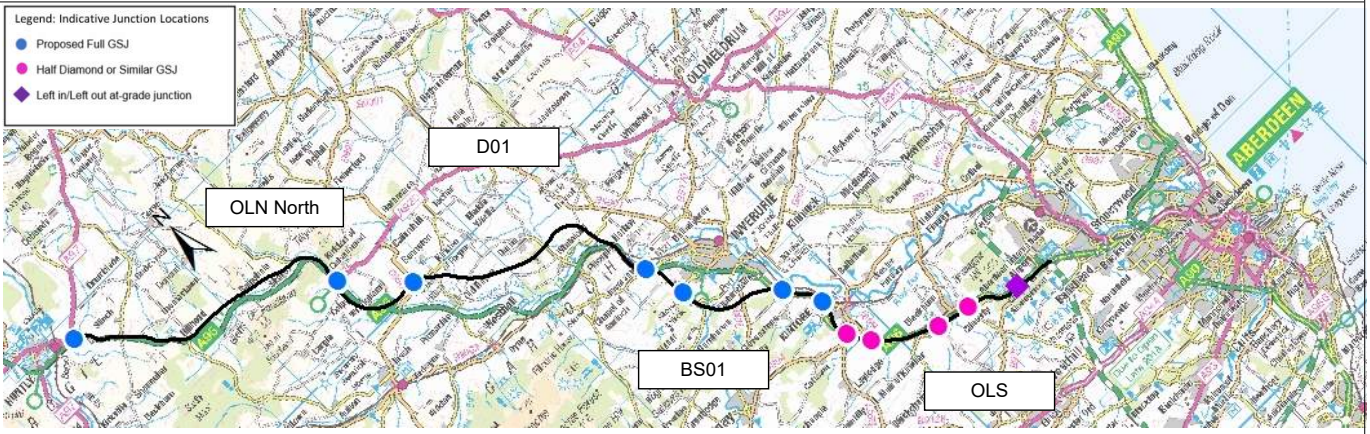
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -2:57mins (-13%).

(GDL00386) and Category B listed Freefield House (LB16001). **Plans and Policies** – committed small scale local developments in north and LDP land reserved for Northern Link Road and significant largescale consented development to the northern edge of Inverurie. A development for additional explosives storage has been consented BN01 Inner. **Overall end-to-end Environmental conclusion** **This alignment has widespread issues along its length but with a concentration of issues to the south. These are in relation to loss of ancient woodland and earthworks affecting the landscape, the River Don floodplain crossing, impacts on cultural heritage features and LDP land reserved for Northern Link Road and significant large-scale consented development to the northern edge of Inverurie.**	New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures: 7 **Hydrology** Floodplain: 5 Major Adverse Impacts associated with the River Urie, Ides Burn (twice), Lochter Burn and The River Don. 1 Moderate Adverse Impacts associated with the Ides Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts: Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 11 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 6 **Overall end-to-end Engineering conclusion** **This alignment recorded 37 clusters of Major Adverse Impacts, similar to three alternative alignments (131,135,190). However, the 75 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 400 vpd. Inverurie: Decrease of 6000 vpd. Overall change: -5600 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:53mins (-17.4%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Offers moderate reductions in flows within Inverurie town centre (1,029 veh/day) and offers a northern bypass. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be major public support over the route's potential to reduce congestion in Inverurie, but may have concern over loss of agricultural land and poor use of existing A96 alignment. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively moderate level of economic benefit. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 34 Major Hazards, 23 Moderate Hazards & 60 Minor Hazards		
Overall Combined Mark = 8.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 190 – OLN North, D01 (Newton House), BS01, OLS

Description: Offline to the north of existing A96 through Glens of Foudland; online Hill of Skares; offline to the south of the A96 between Colpy and Newton House; offline to the north of existing A96 between Newton House and Pitcaple; offline to the north of existing A96 at Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 49.2km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Major Beneficial	Minor Beneficial	Minor Beneficial	Moderate Adverse- refer to Engineering Summary	N/A at this stage	Minor Adverse

Environment Summary of Impacts

Overall Environmental Mark = 3.75

Landscape – 4km within Bennachie SLA, landscape character, the Don Valley, earthworks of >15m, loss of ancient woodland and large watercourse crossing structures at the River Don and Glen Water/Peterden Burn. Impacts on scheduled monuments.

Water – extensive floodplain of River Urie. 26 watercourse crossings.

Ecology – Wildcat Priority area, fragmentation of habitat around Wishach Hill and Hills of Foudland.

People and Com. – seven properties within 100m alignment corridor.

Soil and geology – 100m of alignment in SSSI Pitcaple and Legatsden Quarry. 9.9km in prime agricultural land.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) Drimmies, symbol stone (SM70) and Battle of Harlaw Inventory Historic Battlefield (BTL11). Setting impacts on Williamston House GDL (GDL00386), Category B listed Freefield House (LB16001), Durno, Roman temporary camp (SM4123, Newton of Lewesk, enclosure (SM12137), The Law, cairn (SM12113), Pitscurry, cairn (SM12302), St Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure 510m WNW of (SM12195) and Bruce's Camp, hillfort (SM12523).

Engineering Summary of Impacts

Overall Engineering Mark = 2.25

Engineering Impacts
Total no of Major Adverse impacts: 181
Total no of Major Adverse Impact Clusters: 37
Total no of Moderate Adverse impacts: 252
Total no of Moderate Adverse Impact Clusters: 77

Earthworks
Bulk Cut: 4,971,000 m^3
Bulk Fill: 3,810,000 m^3
Earthworks Balance: 1,161,000 m^3 (surplus)

Geotechnical Key Issues
Up to 32m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
350m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, High Piers approx 18m

New bridge to span Railway line, River Urie and floodplain, length 800m

New viaduct approximately 375m length over River Don and its floodplains. The river crossing itself

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 33:36 minutes, saving 11:01 minutes

SO1.2 – Change in JT variability from 8:37 to 2:12

SO1.3 – 245M veh-kms (115%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Moderate Beneficial'. 1 km of more than 2% uphill (minor hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=46.6kms (57%). 42% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:19mins (-13.7%).

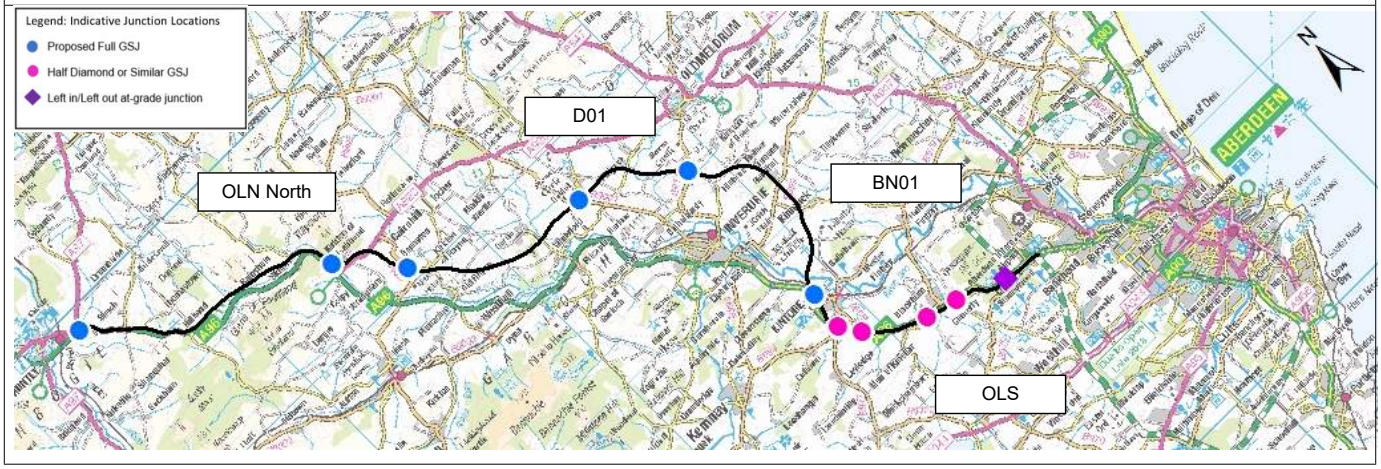
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -2:32mins (-11.5%).

Plans and Policies – small scale local committed developments, heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone. **Overall end-to-end Environmental conclusion** **Issues are widespread along this alignment. The main landscape issues are located in the south where the route passes through 4km of the Bennachie SLA, with earthworks and loss of ancient woodland. Ecological issues are located in the north and are limited due to fewer watercourse crossings. Impacts on cultural heritage features are widespread with slight concentration in south. There are small scale developments in the north, however the alignment heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone.**	spans approximately 50m. Very high piers required due to level difference Number of Moderate Adverse Structures: 5 **Hydrology** Floodplain: 2 Major Adverse Impacts associated with the River Urie (twice) 2 Moderate Adverse Impacts associated with the River Urie and the River Don Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - No major or Moderate Adverse Impacts **Utilities** Number of Major Adverse Impacts: 12 1 National Grid Pipeline crossing 2 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 4 **Overall end-to-end Engineering conclusion** **This alignment recorded 37 clusters of Major Adverse Impacts marking it similar to three alternative alignments (131,135,189). However, the 77 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Road: Increase of 900 vpd. Inverurie: Decrease of 4200 vpd. Overall change: -3300 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:08mins (-14%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a high level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to the LDP aspiration to reduce congestion in Inverurie (-905 vpd in Inverurie town centre) but fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5 –** Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6 –** Likely to be public concerns over the loss of agricultural land and impact on Bennachie. May also be some concern over impact on cultural heritage sites. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major to Moderate Beneficial Impacts across the Scheme objectives and STAG criteria with a comparatively high level of economic benefit. Generally moderate to major improvements in journey times. Major accident savings.**
Health and Safety: 36 Major Hazards, 16 Moderate Hazards & 62 Minor Hazards		
Overall Combined Mark = 9.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 191 – OLN North, D01 (Kirkton), BN01 Outer, OLS

Description: Offline to the north of existing A96 through Glens of Foudland to Colpy; offline to the north of existing A96 between Colpy and Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.2km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives																
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**		
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor.	Natural and cultural heritage assets.		
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria			

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Minor Adverse- refer to Engineering Summary	N/A at this stage	Minor Beneficial

Environment Summary of Impacts

Overall Environmental Mark = 3.75

Landscape – earthworks, new structures at Glen Water/Peterden Burn, setting of Category A LB in Kirkton of Culsalmond, Williamston House GDL and scheduled monuments, loss of ancient woodland, earthworks >15m, impacts on receptors and new structure across Burn of Durno.

Water – extensive floodplains of River Urie and Lochter Burn. 33 watercourse crossings.

Ecology – Wildcat Priority Area, fragmentation of habitat around Wishach Hill and Hills of Foudland.

People and Com. – three properties and Snipefield woods recreation area within 100m alignment corridor.

Soil and geology – 9.8km of alignment in prime agricultural land.

Cultural heritage – direct impact with the south-western most corner of Battle of Barra Inventory Historic Battlefield (BTL18). Setting impacts on Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), the Law, cairn (SM12113), Pitscurry, cairn (SM12302), Category B listed Freefield House (LB16001), Mummer's Reive, cairn (SM11629) and Category A listed Cusalmond Old Parish Church (LB2960).

Engineering Summary of Impacts

Overall Engineering Mark = 3.25

Engineering Impacts
Total no of Major Adverse impacts: 212
Total no of Major Adverse Impact Clusters: 34
Total no of Moderate Adverse impacts: 243
Total no of Moderate Adverse Impact Clusters: 75

Earthworks
Bulk Cut: 5,072,000 m^3
Bulk Fill: 4,136,000 m^3
Earthworks Balance: 936,000 m^3 (surplus)

Geotechnical Key Issues
Up to 32m Cutting through shallow rock near Thomastown
Up to 36m Embankment on glacial till near Glens of Foudland
Up to 33m Cutting through glacial till near Hill of Skares
Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, High Piers approx 18m

New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m)

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:07 minutes, saving 9:30 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:47

SO1.3 – 230M veh-kms (108%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak= 37.2kms (46%). 31% traffic reduction on existing A96 though Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

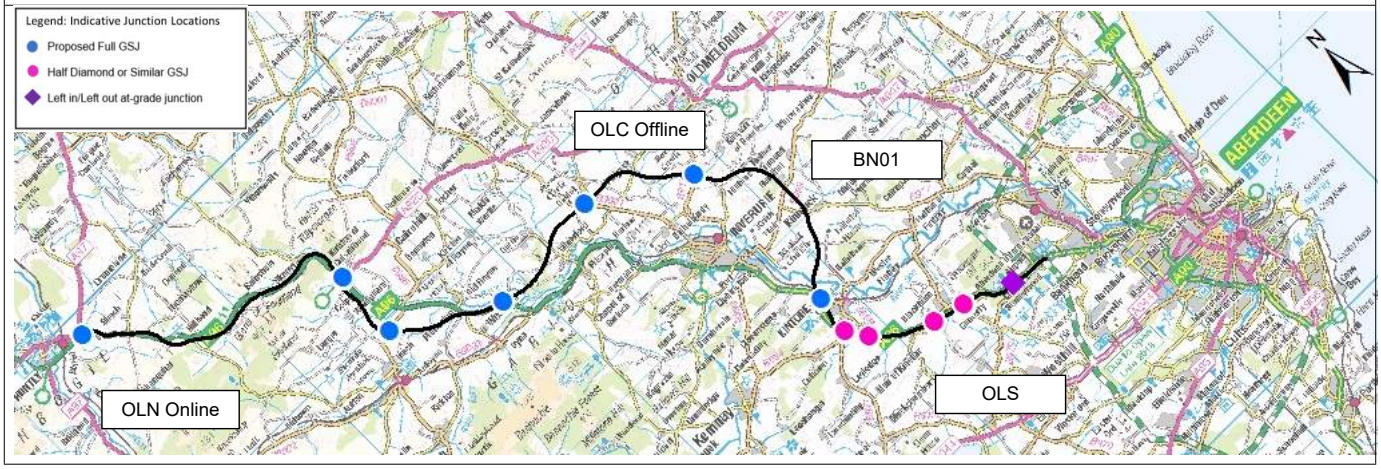
SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:21mins (-13.8%).

Plans and Policies – consented small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **This alignment has fewer issues in relation to landscape, ecology, water, cultural heritage and community than others. There are no large-scale developments.**	New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew Number of Moderate Adverse Structures: 5 **Hydrology** Floodplain: 4 Major Adverse Impacts associated with the River Urie (twice), The Lochter Burn and The River Don No Moderate Adverse Impacts. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts: Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 11 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 6 **Overall end-to-end Engineering conclusion** **This alignment recorded 34 clusters of Major Adverse Impacts and 75 clusters of Moderate Adverse Impacts in determining its engineering discipline mark.**	**SO3.2** – Average change in peak journey time from population centres to regional trip attractors = -2:47mins (-12.3%). **SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 100 vpd. Inverurie: Decrease of 6400 vpd. Overall change: -6300 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:43mins (-16.7%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-895 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by more than 850 pcus. **STAG 6** – Likely to be significant public support over the route's potential to reduce congestion in Inverurie and minimal impact on Bennachie, however there is likely to be some concern over loss of agricultural land and proximity to woodland/recreational areas. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria and offers a comparatively moderate level of economic benefit. Generally moderate improvements in journey times. Moderate accident savings.**
Health and Safety: 36 Major Hazards, 21 Moderate Hazards & 61 Minor Hazards		
Overall Combined Mark = 10.25 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No. 192 – OLN Online, OLC Offline, BN01 Outer, OLS

Description: Online via Hill of Skares to Colpy; offline to the south of the existing A96 from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 55.0km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Minor Beneficial	Moderate Beneficial	Minor Beneficial	Moderate Adverse	Minor Beneficial	Major Beneficial	Neutral	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Moderate Beneficial**	**Moderate Beneficial**	**Major Adverse- refer to Engineering Summary**	**N/A at this stage**	**Minor Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 1.25

Landscape – landscape character affected in areas of ancient woodland between Durno and Whiteford, numerous receptors and new structures. Earthworks of >15m and the introduction of large structures and setting of Colpy and scheduled monuments.

Water – realignment of Glen Water, crossing of Shevock Burn, extensive floodplains of the River Urie and Lochter Burn. 37 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation, impacts on Pitscurry Moss LNCS and the cumulative impact on blocks of ancient woodland. Significant impact on habitat connectivity along this corridor which extends to Bennachie.

People and Com. – two properties within 100m alignment corridor.

Soil and geology – 11.8km of alignment in prime agricultural land.

Cultural heritage – direct impact with the south-western most corner of Battle of Barra Inventory Historic Battlefield (BTL18). Setting impact on Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826), Brownhills, cairns (SM12116), Wester Shevock, cairn (SM12115) and Colpy Cottage, palisaded enclosure 300m S of (SM11511).

Engineering Summary of Impacts

Overall Engineering Mark = 1.25

Engineering Impacts
Total no of Major Adverse impacts: 254
Total no of Major Adverse Impact Clusters: 41
Total no of Moderate Adverse impacts: 364
Total no of Moderate Adverse Impact Clusters: 103

Earthworks
Bulk Cut: 4,909,000 m^3
Bulk Fill: 6,419,000 m^3
Earthworks Balance: -1,510,000 m^3 (deficit)

Geotechnical Key Issues
450m Stretch of peat near Hillhead
250m Stretch of Category 1 very compressible or challenging soils near Brownhills
Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse Structures: 3

New bridge to span Burn of Durno and local road, length 600m, High Piers (approx 17m)

New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m)

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew

Number of Moderate Adverse Structures: 7

Transportation Summary of Impacts

Overall Transportation Mark = 0.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 36:24 minutes, saving 8:12 minutes.

SO1.2 – Change in JT variability from 8:37 to 0:43.

SO1.3 – 194M veh-kms (91%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 3 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=26.9kms (31%). 19% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 14 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Proportion of trips re-assigning to dual-carriageway around Inverurie is low, limiting the potential to reduce conflict between motorised and non-motorised users on the de-trunked sections of the existing A96.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -2:58mins (-12.2%).

SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:54mins (-12.8%).

Plans and Policies – committed small scale local developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **This alignment has extensive and widespread issues relating to landscape, water crossings, ecology, community and cultural heritage features.**	**Hydrology** Floodplain: 4 Major Adverse Impacts associated with The Shevock. River Urie, Lochter Burn and the River Don 1 Moderate Adverse Impacts associated with the Shevock. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 3 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into the River Urie Proposed low point would struggle for levels with outfall into the tributary. Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 16 3 National Grid Pipeline crossings 6 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 8 **Overall end-to-end Engineering conclusion** **This alignment recorded 41 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (103) resulting in a poorer performing engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1300 vpd. Inverurie: Decrease of 6400 vpd. Overall change: -5100 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:33mins (-15.9%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-830 vpd) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6** – Likely to be public support over the route's potential to reduce congestion in Inverurie but may raise some concern over the route making limited use of the existing A96, impact on woodland/recreational areas and on loss of agricultural land. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Minor to Moderate Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively low level of economic benefit. Generally moderate to major improvements in journey times. Minor accident savings.**
Health and Safety: 38 Major Hazards, 47 Moderate Hazards & 81 Minor Hazards		
Overall Combined Mark = 3.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 193 – OLN Online, OLC Offline, BS01, OLS

Description: Online via Hill of Skares to Colpy; offline to the south of the existing A96 from Colpy to Chapel of Garioch; offline to the north of existing A96 at Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 51.0km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).

Scheme Objectives														
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Minor Beneficial**	**Neutral**	**Major Adverse- refer to Engineering Summary**	**N/A at this stage**	**Moderate Adverse**

Environment Summary of Impacts

Overall Environmental Mark = 1.25

Landscape – 4km within Bennachie SLA, landscape character, the Don Valley, large scale earthworks of >15m, loss of ancient woodland, two new structures across Burn of Durno and River Urie and impact on receptors, setting of Colpy.

Water – realignment of Glen Water, crossing of Shevock Burn and extensive floodplain of the River Urie. 33 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Impacts on Pitscurry Moss LNCS, loss of ancient woodland, habitat fragmentation along corridor that extends to Bennachie. 10 water crossings, 8 minor and 2 of the River Urie.

People and Com. – nine properties within 100m alignment corridor.

Soil and geology – 150m of alignment in Pitcaple and Legatsden Quarry. 10.1km of alignment in prime agricultural land.

Cultural heritage – direct impact on Drimmies, symbol stone (SM70) and Battle of Harlaw Inventory Historic Battlefield (BT11). Setting impact Colpy Cottage, palisaded enclosure 300m S of (SM11511), St Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure 510m WNW of (SM12195), Bruce's Camp, hillfort (SM12523),

Engineering Summary of Impacts

Overall Engineering Mark = 1.25

Engineering Impacts
Total no of Major Adverse impacts: 227
Total no of Major Adverse Impact Clusters: 43
Total no of Moderate Adverse impacts: 367
Total no of Moderate Adverse Impact Clusters: 104

Earthworks
Bulk Cut: 4,749,000 m^3
Bulk Fill: 5,572,000 m^3
Earthworks Balance: -823,000 m^3 (deficit)

Geotechnical Key Issues
450m Stretch of peat near Hillhead
250m Stretch of Category 1 very compressible or challenging soils near Brownhills
350m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 600m, Pier Height 17m

New bridge to span Railway line, River Urie and flood plain, length 800m

New viaduct approximately 375m length over River Don and its floodplains. The river crossing itself spans approximately 50m. Very high piers required due to level difference

Transportation Summary of Impacts

Overall Transportation Mark = 1.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 34:41 minutes, saving 9:56 minutes.

SO1.2 – Change in JT variability from 8:37 to 2:07.

SO1.3 – 249M veh-kms (117%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=48.6kms (60%). 42% traffic reduction on existing QA96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

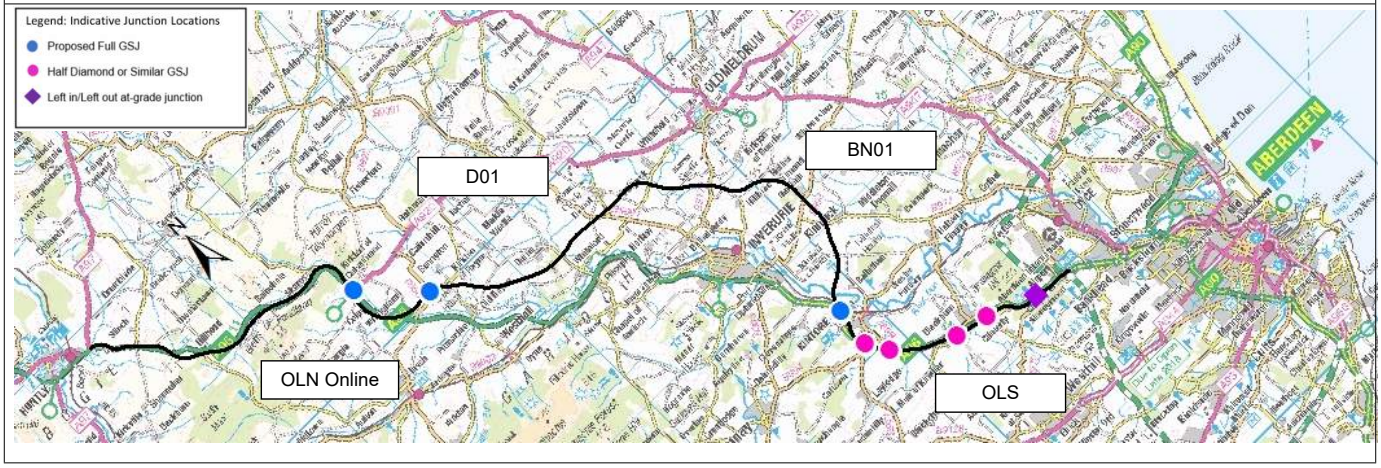
SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:17mins (-13.5%).

Durno, Roman temporary camp (SM4123), Pitscurry, cairn (SM12302), Category B listed Logie Durno Churchyard, Dalrymple Horn Elphinstone Burial Enclosure (LB2826), Brownhills, cairns (SM12116) and Wester Shevock, cairn (SM12115). **Plans and Policies** – heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone. **Overall end-to-end Environmental conclusion** **This alignment has extensive and widespread issues relating to landscape, water crossings, ecology, community and cultural heritage features. The alignment also heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone.**	Number of Moderate Adverse Structures: 7 **Hydrology** Floodplain: 3 Major Adverse Impacts associated with The Shevock and the River Urie (twice). 2 Moderate Adverse Impacts associated with the Shevock and the River Don. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into the River Urie Proposed low point would struggle for levels with outfall into the tributary. **Utilities** Number of Major Adverse Impacts: 16 1 National Grid Pipeline crossing 6 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 43 clusters of Major Adverse Impacts and one of the largest number of clusters of Moderate Adverse Impacts (104) resulting in a poorer performing engineering discipline mark.**	**SO3.2** – Average change in peak journey time from population centres to regional trip attractors = -2:46mins (-12.2%). **SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 1700 vpd. Inverurie: Decrease of 4000 vpd. Overall change: -2300 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:07mins (-14%). **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-899 vpd) but fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows change by plus or minus 150 pcus. **STAG 6** – Likely to be public concerns over the route's impact on Bennachie and low use of the existing A96. May be concern that a northern bypass of Inverurie has not been provided, and concern over proximity to woodland/recreational areas and impact on agricultural land. Potential for some concern over proximity to cultural heritage features. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts against Scheme Objectives and STAG criteria. Generally moderate improvements in journey times. Major accident savings.**
Health and Safety: 37 Major Hazards, 39 Moderate Hazards & 78 Minor Hazards		
Overall Combined Mark = 3.75 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 194 – OLN Online, D01 (Newton House), BN01 Outer, OLS

Description: Online via Hill of Skares to Colpy; offline to the south of the A96 between Colpy and Newton House; offline to the north of existing A96 between Newton House and Pitcaple; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Outer) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 53.3km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives														
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 – To improve safety for motorised and Non-Motorised Users through:**			**SO3 – To provide opportunities to grow the regional economies on the corridor through:**		**SO4 – To facilitate active travel in the corridor.**	**SO5 – To facilitate integration with Public Transport Facilities**	**SO6 – To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2 - Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Minor Beneficial**	**Moderate Beneficial**	**Major Beneficial**	**Neutral-refer to Engineering Summary**	**N/A at this stage**	**Minor Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 3.25

Landscape – impacts on scheduled monuments, severs the landscape and visual connection of the GDLs Williamston House and Newton House. Loss of ancient woodland, earthworks >15m, impacts on receptors and new structure across Burn of Durno.

Water – realignment of Glen Water, extensive floodplain of the Lochter Burn. 31 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation.

People and Com. – two properties within 100m alignment corridor.

Soil and geology – 11.8km of alignment in prime agricultural land.

Cultural heritage – direct impact with the south-western most corner of the Battle of Barra Inventory Historic Battlefield (BTL18) and Colpy Cottage, palisaded enclosure 300m S of (SM11511). Setting impacts on Durno, Roman temporary camp (SM4123) 100m from alignment, Newton of Lewesk, enclosure (SM12137) immediately south of alignment, the Law, cairn (SM12113) situated c. 0.3km to the northeast of the alignment, Pitscurry, cairn (SM12302), Category B listed Freefield House

Engineering Summary of Impacts

Overall Engineering Mark = 3.75

Engineering Impacts
Total no of Major Adverse impacts: 188
Total no of Major Adverse Impact Clusters: 30
Total no of Moderate Adverse impacts: 259
Total no of Moderate Adverse Impact Clusters: 81

Earthworks
Bulk Cut: 3,615,000 m^3
Bulk Fill: 4,523,000 m^3
Earthworks Balance: -908,000 m^3 (deficit)

Geotechnical Key Issues
450m Stretch of peat near Hillhead
Up to 33m Cutting through shallow rock near Kirkton of Bourtie

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and flood plain, length 550m, pier height approx. 18m

New viaduct required over Lochter burn, flood plain and local Road at Ch.1200 (approx total length 700m)

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew

Number of Moderate Adverse Structures: 6

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:29 minutes, saving 9:08 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:44.

SO1.3 – 233M veh-kms (110%) increase in distance travelled on dual carriageways.

SO1.4 – Estimated OGV economic benefit is a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=26.2kms (34%). 30% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:13mins (-13.2%).

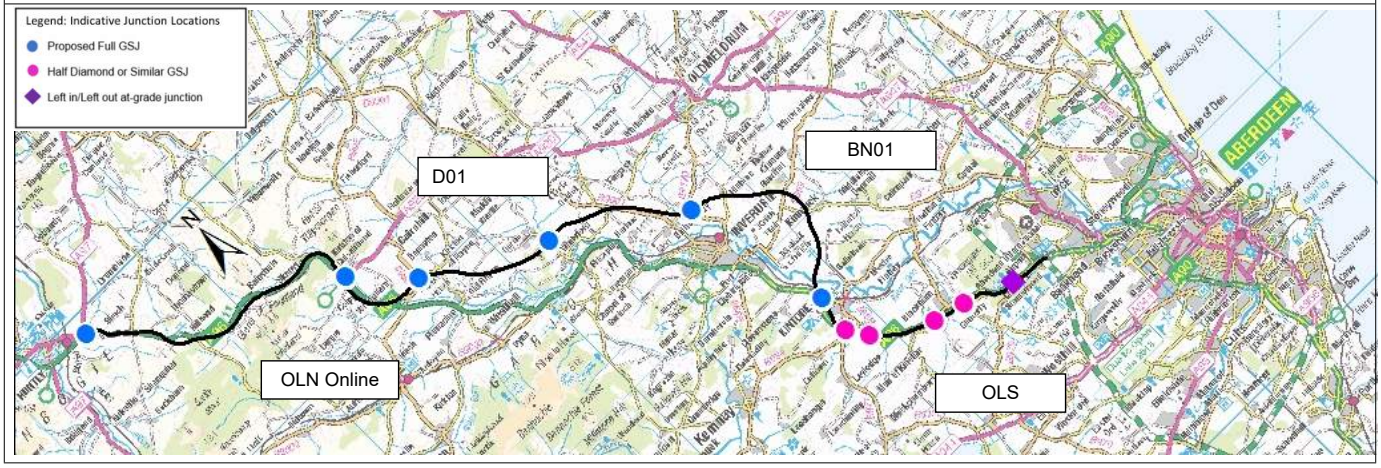
SO3.2 – Average change in peak journey time from population centres to regional trip attractors = -2:33mins (-11.2%).

(LB16001) and Williamston House GDL (GDL00386). **Plans and Policies** – small scale local committed developments within 100m alignment corridor. **Overall end-to-end Environmental conclusion** **This issues along this alignment are more limited and localised in nature. There are fewer river crossings so less impacts on landscape and ecology. There are no large scale developments.**	**Hydrology** Floodplain: 2 Major Adverse Impacts associated with the Lochter Burn and the River Don. No Moderate Adverse Impacts Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into the River Urie Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 11 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded 30 clusters of Major Adverse Impacts, similar to alignment 55. However, the 81 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4 –** Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 200 vpd. Inverurie: Decrease of 6400 vpd. Overall change: -6200 vpd. **SO5 –** Average change in peak journey times to and from key public transport interchanges = -3:35mins (-16.1%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a low level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-865 vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by more than 850 pcus. **STAG 6** – Likely to be significant public support over the route's potential to reduce congestion in Inverurie and minimise impact on Bennachie, however there is likely to be some concern over loss of agricultural land and proximity to woodland/recreational areas **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively low level of economic benefit. Generally major improvements in journey times. Major accident savings.**
Health and Safety: 27 Major Hazards, 35 Moderate Hazards & 77 Minor Hazards		
Overall Combined Mark = 10.25 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

Alignment No.195 – OLN Online, D01 (Newton House), BN01 Inner, OLS

Description: Online via Hill of Skares to Colpy; offline to the south of the A96 between Colpy and Newton House; offline to the north of existing A96 between Newton House and Pitcaple; offline to the north of existing A96 at Pitcaple; Inverurie Northern Bypass (Inner) to Kintore and existing dual carriageway to Craibstone Roundabout

Length: 52.2km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 - To improve safety for motorised and Non-Motorised Users through:**			**SO3 -To provide opportunities to grow the regional economies on the corridor through:**		**SO4 -To facilitate active travel in the corridor.**	**SO5 -To facilitate integration with Public Transport Facilities**	**SO6 -To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Adverse	Moderate Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2- Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7 - Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	**Minor Beneficial**	**Moderate Beneficial**	**Major Beneficial**	**Moderate Beneficial**	**Neutral – Refer to Engineering Summary**	**N/A at this stage**	**Minor Beneficial**

Environment Summary of Impacts

Overall Environmental Mark = 1.75

Landscape – Impacts on scheduled monuments, severs the landscape and visual connection of the GDLs Williamston House and Newton House. 2km section of ancient woodland loss, earthworks >15m, new structure across Burn of Durno and impacts on residential receptors. Landscape character affected at River Don and floodplain crossing from large structure.

Water – realignment of Glen Water, extensive floodplain of Ides Burn, crosses several other watercourses including floodplain <100m wide of the Burn of Durno. Extensive floodplain of the River Don. 27 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation.

People and Com. – four properties within 100m alignment corridor.

Soil and geology – 13.4km of alignment in prime agricultural land.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511) and Keith Hall Inventory GDL. Setting impacts on Williamston House GDL (GDL00386), Category B listed Freefield House (LB16001), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), The Law, cairn (SM12113),

Engineering Summary of Impacts

Overall Engineering Mark = 3.75

Engineering Impacts
Total no of Major Adverse impacts: 171
Total no of Major Adverse Impact Clusters: 32
Total no of Moderate Adverse impacts: 259
Total no of Moderate Adverse Impact Clusters: 79

Earthworks
Bulk Cut: 3,104,000 m^3
Bulk Fill: 3,882,000 m^3
Earthworks Balance: -778,000 m^3 (deficit)

Geotechnical Key Issues
450m Stretch of peat near Hillhead
300m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and flood plain, length 550 m, pier height approx. 18 m

New underbridge over B9001, Ides Burn and flood plain, length 400 m

New Viaduct required, approx. length 800m crossing River Don and floodplains, as well as railway at a notable skew

Number of Moderate Adverse Structures: 8

Transportation Summary of Impacts

Overall Transportation Mark = 3.75

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 35:05 minutes, saving 9:32 minutes.

SO1.2 – Change in JT variability from 8:37 to 1:43

SO1.3 – 232M veh-kms (109%) increase in distance travelled on dual carriageways.

SO1.4 – OGV economic benefit from TUBA gives a 'Minor Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Moderate' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=33.2kms (40%). 31% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 17 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:31mins (-14.5%).

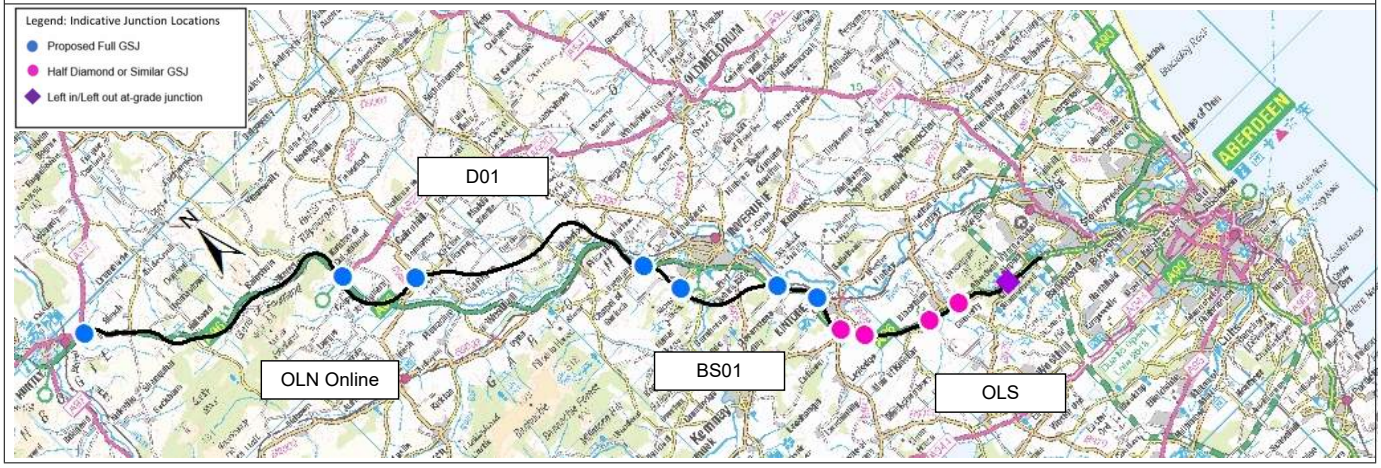
SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -2:57mins (-13%).

Whiteinches, cairn (SM12188), Pitscurry, cairn (SM12302) Hill of Selbie, cairn (SM12434) and Battle of Harlaw (BTL11). **Plans and Policies –** small scale local committed developments and LDP land reserved for Northern Link Road and significant largescale consented development to the northern edge of Inverurie. Development for additional explosives storage has been consented BN01 Inner. **Overall end-to-end Environmental conclusion** **This alignment has widespread issues along its length. Numerous watercourse crossings require earthworks and structures affecting landscape character and setting of cultural heritage features. Ecological issues are limited to the north however further south there is LDP land reserved for Northern Link Road and significant largescale consented development to the northern edge of Inverurie.**	**Hydrology** Floodplain: 4 Major Adverse Impacts associated with the Ides Burn (twice), Lochter Burn and the River Don. 1 Moderate Adverse Impacts associated with the Ides Burn Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 2 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into the River Urie Coinciding with River Don floodplain **Utilities** Number of Major Adverse Impacts: 11 3 National Grid Pipeline crossings 2 SGN High Pressure Pipeline crossings 3 SSE 275Kv crossings 3 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 7 **Overall end-to-end Engineering conclusion** **This alignment recorded 32 clusters of Major Adverse Impacts marking it similar to three other alignments 922,53,196). However, the 79 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4 –** Changes in traffic in urban areas will impact on active travel use. Drumrossie Street: Increase of 400 vpd. Inverurie: Decrease of 6000 vpd. Overall change: -5600 vpd. **SO5 –** Average change in peak journey times to and from key public transport interchanges = -3:53mins (-17.4%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a moderate level of economic benefits. **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to LDP aspiration to reduce congestion in Inverurie (-1029vpd in Inverurie town centre) and meets LDP aspirations for a northern bypass of Inverurie. **STAG 5 –** Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 500 and 850 pcus. **STAG 6 –** Likely to be major public support over the route's potential to reduce congestion in Inverurie, but may have concern over loss of agricultural land and poor use of existing A96 alignment. **Overall end-to-end Transportation conclusion** **Overall the alignment offers Moderate to Major Beneficial Impacts across the Scheme Objectives and STAG criteria with a comparatively moderate level of economic benefit. Generally moderate to major improvements in journey times. Moderate accident savings.**
Health and Safety: 25 Major Hazards, 34 Moderate Hazards & 74 Minor Hazards		
Overall Combined Mark = 9.25 (Poorer Performing) **Recommendation** Alignment should not be carried forward to Public Consultation		

Alignment No. 196 – OLN Online, D01 (Newton House), BS01, OLS

Description: Online via Hill of Skares to Colpy; offline to the south of the A96 between Colpy and Newton House; offline to the north of existing A96 between Newton House and Pitcaple; offline to the north of existing A96 at Pitcaple; Inverurie Southern Bypass to Port Elphinstone and existing dual carriageway to Craibstone Roundabout

Length: 49.6km (shortest alignment = 46.8km, longest = 55.0km, existing A96 is 50.1km between the A97 and Craibstone Roundabout).



Scheme Objectives															
SO1 – To improve the operation of the A96 and inter-urban connectivity through:						**SO2 - To improve safety for motorised and Non-Motorised Users through:**			**SO3 -To provide opportunities to grow the regional economies on the corridor through:**		**SO4 -To facilitate active travel in the corridor.**	**SO5 -To facilitate integration with Public Transport Facilities**	**SO6 -To avoid significant environmental impacts and, where this is not possible, to minimise the environmental effect on:**	
SO1.1 Reduced journey times	SO1.2 Improved journey time reliability	SO1.3 Increased overtaking opportunities	SO1.4 Improved efficiency of freight movements along the transport corridor	SO1.5 Reduced conflicts between local traffic and Strategic Journeys	SO1.6 Improved network resilience	SO2.1 Reduced accident rates and severity	SO2.2 Reduced driver stress	SO2.3 Reduced potential conflicts between Motorised and Non-Motorised Users	SO3.1 Improved access to the wider strategic transport network	SO3.2 Enhanced access to jobs and services			The communities and people in the corridor;	Natural and cultural heritage assets.
Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Major Beneficial	Moderate Adverse	Major Beneficial	Major Beneficial	Minor Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Major Beneficial	Assessed under STAG Criteria	

STAG Criteria							
STAG 1 - Environment	**STAG 2- Safety**	**STAG 3 - Economy**	**STAG 4 - Integration**	**STAG 5 - Accessibility & Social Inclusion**	**STAG 6 - Feasibility**	**STAG 7- Affordability (Relative Cost Index)**	**STAG 8 - Public Acceptability**
Major Adverse – Refer to Environmental summary	Minor Beneficial	Major Beneficial	Minor Beneficial	Minor Beneficial	Neutral – Refer to Engineering Summary	N/A at this stage	Minor Adverse

Environment Summary of Impacts

Overall Environmental Mark = 3.25

Landscape – 4km within Bennachie SLA, landscape character, the Don Valley, impacts on scheduled monuments, severs the landscape and visual connection of the GDLs Williamston House and Newton House. Earthworks of >15m, loss of ancient woodland and large watercourse crossing structures.

Water – realignment of Glen Water and crossing River Urie. 28 watercourse crossings.

Ecology – Wildcat Priority Area. Impacts from watercourse crossings. Three waterbodies removed and several watercourse diversions. Habitat fragmentation.

People and Com. – six properties within 100m alignment corridor.

Soil and geology – 100m of alignment in SSSI Pitcaple and Legatsden Quarry, 9.9km in prime agricultural land.

Cultural heritage – direct impact on Colpy Cottage, palisaded enclosure 300m S of (SM11511), Battle of Harlaw Inventory Historic Battlefield (BTL11) and Drimmies, symbol stone (SM70). Setting impacts on Williamston House GDL (GDL00386), Category B listed Freefield House (LB16001), Durno, Roman temporary camp (SM4123), Newton of Lewesk, enclosure (SM12137), The Law, cairn (SM12113), Pitscurry, cairn (SM12302), St Apolinaris' Chapel and burial ground (SM12118), Dillyhill, enclosure

Engineering Summary of Impacts

Overall Engineering Mark = 3.25

Engineering Impacts
Total no of Major Adverse impacts: 165
Total no of Major Adverse Impact Clusters: 32
Total no of Moderate Adverse impacts: 267
Total no of Moderate Adverse Impact Clusters: 81

Earthworks
Bulk Cut: 3,555,000 m^3
Bulk Fill: 3,734,000 m^3
Earthworks Balance: -179,000 m^3 (deficit)

Geotechnical Key Issues
450m Stretch of peat near Hillhead
350m Stretch of peat near Pitcaple

Structures
Number of Major Adverse Structures: 3

New bridge to span local road, Burn of Durno and floodplain, length 550m, High Piers approx 18m

New bridge to span Railway line, River Urie and floodplain, length 850m. Potential for large spans to reduce Piers in the watercourse

New viaduct approximately 375m length over River Don and its floodplains. Very high piers (36m) required due to level difference.

Number of Moderate Adverse Structures: 6

Transportation Summary of Impacts

Overall Transportation Mark = 3.25

SO1.1 – Peak journey times between Huntly and Craibstone reduced from 44:37 to 33:36 minutes, saving 11:01 minutes.

SO1.2 – Change in JT variability from 8:37 to 2:12.

SO1.3 – 245M veh-kms (115%) increase in distance travelled on dual carriageways

SO1.4 – Estimated OGV economic benefit is a 'Moderate Beneficial'. 2 km of more than 2% uphill (minor hilliness). Together gives 'Major' rating.

SO1.5 – Average reduction in trip length over AM and PM peak=46.6kms (57%). 42% traffic reduction on existing A96 through Inverurie.

SO2.1 – Net change in Personal Injury Accidents (PIA) per year = - 18 PIAs.

SO2.2 – All alignments reduced driver stress equally through provision of a new higher standard dual carriageway and avoidance of congestion on the existing A96 around Inverurie.

SO2.3 – Suitable NMU facilities will be provided to manage the interaction of motorised and non-motorised users. Reduction in traffic volumes on de-trunked sections of A96 may reduce potential for conflicts between motorised and non-motorised users.

SO3.1 – Average change in peak journey times from population centres to reach other strategic transport networks = -3:19mins (-13.7%).

SO3.2 – Average change in peak journey time from population centres to regional trip attractors= -2:32mins (-11.1%).

510m WNW of (SM12195) and Bruce's Camp, hillfort (SM12523). **Plans and Policies** – small scale local committed developments in north and alignment heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone. **Overall end-to-end Environmental conclusion** **This alignment has widespread issues but with a concentration in the south. 4km of the alignment passes through the Bennachie SLA with earthworks and loss of ancient woodland. There is a concentration of cultural heritage features to the south also and the alignment heavily infringes upon key large-scale LDP housing and employment allocations to the south east of Port Elphinstone. Elsewhere there is small scale development, and ecological impacts are limited to the north.**	**Hydrology** Floodplain 1 Major Adverse Impacts associated with the River Urie. 2 Moderate Adverse Impacts associated with the River Urie and the River Don. Watercourse Crossings – No Major/Moderate Adverse Impacts Attenuation - 1 Moderate Adverse Impacts: Proposed low point would struggle for levels with outfall into the River Urie **Utilities** Number of Major Adverse Impacts: 12 1 National Grid Pipeline crossing 2 SGN High Pressure Pipeline crossings 5 SSE 275Kv crossings 4 SSE pylons within 100m of alignment Number of Moderate Adverse Impacts: 5 **Overall end-to-end Engineering conclusion** **This alignment recorded 32 clusters of Major Adverse Impacts marking it similar to three other alignments (22, 53, 195). However, the 81 clusters of Moderate Adverse Impacts determined its final engineering discipline mark.**	**SO4** – Changes in traffic in urban areas will impact on active travel use. Drumrossie Road: Increase of 900 vpd. Inverurie: Decrease of 4200 vpd. Overall change: -3300 vpd. **SO5** – Average change in peak journey times to and from key public transport interchanges = -3:08mins (-14%). Does not provide easier access to Insch Rail Station. **STAG 2** – Improved laybys and NMU facilities will improve personal safety for all road users equally on all alignments. **STAG 3** – Alignment offers a high level of economic benefits **STAG 4** – Aligns with majority of policies and land use allocations. Positively contributes to the LDP aspiration to reduce congestion in Inverurie (-905 vpd in Inverurie town centre) but fails to align with LDP aspirations for a northern bypass of Inverurie. **STAG 5** – Bus service reliability and propensity to walk and cycle could be affected by changes in traffic volumes especially in urban areas. Over three links in Inverurie and one in Insch aggregate modelled traffic flows reduce by between 150 and 500 pcus. **STAG 6** – Likely to be public concerns over the loss of agricultural land and impact on Bennachie. May also be some concern over impact on cultural heritage sites **Overall end-to-end Transportation conclusion** **Overall the alignment offers Major to Moderate Beneficial Impacts across the Scheme objectives and STAG criteria with a comparatively high level of economic benefit. Generally moderate to major improvements in journey times. Major accident savings.**
Health and Safety: 27 Major Hazards, 27 Moderate Hazards & 76 Minor Hazards		
Overall Combined Mark = 9.75 (Better Performing) **Recommendation** Alignment should be carried forward to Public Consultation		

C6 Second Fix Combined Discipline Appraisal

Discipline Marking
Each of the three disciplines (Environmental, Engineering and Transportation) appraised the 52 end-to-end alignments using the 7-point scale scoring given for each of their sub criteria/topics over each 50m segment. Professional judgement was used to ensure this was not just a numerical exercise and that the major impacts were not lost or averaged. Each discipline then marked the end to end alignments in accordance with the table below by grouping them in order of better performing to poorer performing alignments.

The alignments were grouped into quartiles with the top 13 alignments in each discipline being awarded 4 marks, the next 13 being awarded 3 marks, the following 13 being awarded 2 marks and the poorest performing 13 alignments being awarded 1 mark. Each quartile was then sub-divided into top 7 and bottom 6 in each group - the top 7 alignments being assigned a quarter mark increase and the bottom 6 assigned a quarter mark decrease:

Discipline Grouping	Mark	Sub-divided grouping	Mark
Alignments in group 1-13	4	1 - 7	4.25
		8 - 13	3.75
Alignments in group 14-26	3	14 - 20	3.25
		21 - 26	2.75
Alignments in group 27-39	2	27 - 33	2.25
		34 - 39	1.75
Alignments in group 40-52	1	40 - 46	1.25
		47 - 52	0.75

Combined Marking
The marks from each of the three disciplines were then combined to provide an overall assessment mark for each end to end alignment.

Sum of group marks	Comment
12.75 – 11.25	Better Performing
10.75 - 9.75	Better Performing
9.25 - 8.25	*Poorer Performing*
7.75 – 5.25	*Poorer Performing*
4.75 – 2.25	*Poorer Performing*

Alignments with a combined score of 9.75 or better were deemed better performing and taken through to the next appraisal stage. See combined appraisal marking table below for all end to end alignments.

Alignment	Engineering Mark	Environment Mark	Transport Mark	Sum (Marks)		Section 1	Section 2	Section 3	Section 4	Section 5
Alignment_67	4.25	4.25	2.75	11.25		OLN Online	-	D03	BN01 outer	OLS
Alignment_21	4.25	4.25	2.75	11.25		OLN North	-	D03	BN01 outer	OLS
Alignment_58	3.75	4.25	3.25	11.25		OLN Online	-	D01 (Kirkton)	BS01	OLS
Alignment_60	4.25	3.75	3.25	11.25		OLN Online	-	D01 (Kirkton)	BN01 outer	OLS
Alignment_126	3.75	3.25	3.75	10.75		OLN Online	-	D01 (Kirkton)	BN01 inner	OLS
Alignment_93	4.25	4.25	2.25	10.75		OLN South	-	D03	BN01 outer	OLS
Alignment_187	3.75	3.25	3.25	10.25		OLN South	-	D01 (Newton House)	BN01 outer	OLS
Alignment_194	3.75	3.25	3.25	10.25		OLN Online	-	D01 (Newton House)	BN01 outer	OLS
Alignment_185	3.25	3.75	3.25	10.25	**Better Performing**	OLN South	-	D01 (Newton House)	BS01	OLS
Alignment_191	3.25	3.75	3.25	10.25		OLN North	-	D01 (Kirkton)	BN01 outer	OLS
Alignment_20	4.25	4.25	1.75	10.25		OLN North	-	D03	BN01 inner	OLS
Alignment_196	3.25	3.25	3.25	9.75		OLN Online	-	D01 (Newton House)	BS01	OLS
Alignment_10	2.25	4.25	3.25	9.75		OLN North	-	D01 (Kirkton)	BS01	OLS
Alignment_66	4.25	4.25	1.25	9.75		OLN Online	-	D03	BN01 inner	OLS
Alignment_125	2.75	3.25	3.75	9.75		OLN North	-	D01 (Kirkton)	BN01 inner	OLS
Alignment_92	4.25	3.75	1.75	9.75		OLN South	-	D03	BN01 inner	OLS
Alignment_186	3.25	2.25	3.75	9.25		OLN South	-	D01 (Newton House)	BN01 inner	OLS
Alignment_188	2.75	3.25	3.25	9.25		OLN North	-	D01 (Newton House)	BN01 outer	OLS
Alignment_190	2.25	3.75	3.25	9.25		OLN North	-	D01 (Newton House)	BS01	OLS
Alignment_195	3.75	1.75	3.75	9.25		OLN Online	-	D01 (Newton House)	BN01 inner	OLS
Alignment_173	2.25	3.25	3.25	8.75		OLN South	-	D01 (Kirkton)	BN01 outer	OLS
Alignment_83	2.25	2.75	3.75	8.75		OLN South	-	OLC online	CS02	OLS
Alignment_45	2.75	2.25	3.75	8.75		OLN Online	-	OLC online	CS02	OLS
Alignment_89	1.75	3.75	3.25	8.75		OLN South	-	D01 (Kirkton)	BS01	OLS
Alignment_189	2.25	2.25	3.75	8.25		OLN North	-	D01 (Newton House)	BN01 inner	OLS
Alignment_129	1.75	2.75	3.75	8.25		OLN North	-	OLC online	CS02	OLS
Alignment_22	3.25	0.75	4.25	8.25		OLN Online	-	OLC online	BN01 inner	OLS
Alignment_27	2.75	1.25	4.25	8.25		OLN South	-	OLC online	BN01 inner	OLS
Alignment_127	1.75	2.25	3.75	7.75		OLN South	-	D01 (Kirkton)	BN01 inner	OLS
Alignment_31	2.75	2.75	2.25	7.75		OLN South	-	OLC online	BS01	OLS
Alignment_135	2.25	0.75	4.25	7.25		OLN North	-	OLC online	BN01 inner	OLS
Alignment_131	2.25	2.75	2.25	7.25		OLN North	-	OLC online	BS01	OLS
Alignment_53	3.25	1.75	2.25	7.25		OLN Online	-	OLC online	BS01	OLS
Alignment_55	3.75	2.25	1.25	7.25	**Poorer Performing**	OLN Online	-	OLC online	BN01 outer	OLS
Alignment_136	2.75	2.75	1.25	6.75		OLN North	-	OLC online	BN01 outer	OLS
Alignment_26	3.25	2.75	0.75	6.75		OLN South	-	OLC online	BN01 outer	OLS
Alignment_108	1.75	2.25	1.75	5.75		OLN Online	CN02	OLC Offline	BS01	OLS
Alignment_118	1.25	1.75	1.75	4.75		OLN Online	CN02	OLC Offline	CS02	OLS
Alignment_23	1.25	0.75	2.75	4.75		OLN Online	-	OLC offline	BN01 Inner	OLS
Alignment_138	0.75	1.75	2.25	4.75		OLN North	-	OLC offline	CS02	OLS
Alignment_164	1.25	1.25	2.25	4.75		OLN Online	-	OLC offline	CS02	OLS
Alignment_72	1.25	0.75	2.75	4.75		OLN south	-	OLC offline	BN01 inner	OLS
Alignment_181	1.75	1.75	0.75	4.25		OLN Online	CN02	OLC Offline	BN01 outer	OLS
Alignment_41	0.75	1.25	2.25	4.25		OLN South	-	OLC offline	CS02	OLS
Alignment_143	0.75	0.75	2.75	4.25		OLN North	-	OLC offline	BN01 inner	OLS
Alignment_180	1.75	0.75	1.75	4.25		OLN Online	CN02	OLC Offline	BN01 inner	OLS
Alignment_140	0.75	2.25	1.25	4.25		OLN North	-	OLC offline	BS01	OLS
Alignment_28	0.75	1.75	1.25	3.75		OLN South	-	OLC offline	BS01	OLS
Alignment_193	1.25	1.25	1.25	3.75		OLN Online	-	OLC offline	BS01	OLS
Alignment_192	1.25	1.25	0.75	3.25		OLN Online	-	OLC offline	BN01 outer	OLS
Alignment_73	1.25	1.25	0.75	3.25		OLN south	-	OLC offline	BN01 outer	OLS
Alignment_144	0.75	1.25	0.75	2.75		OLN North	-	OLC offline	BN01 outer	OLS