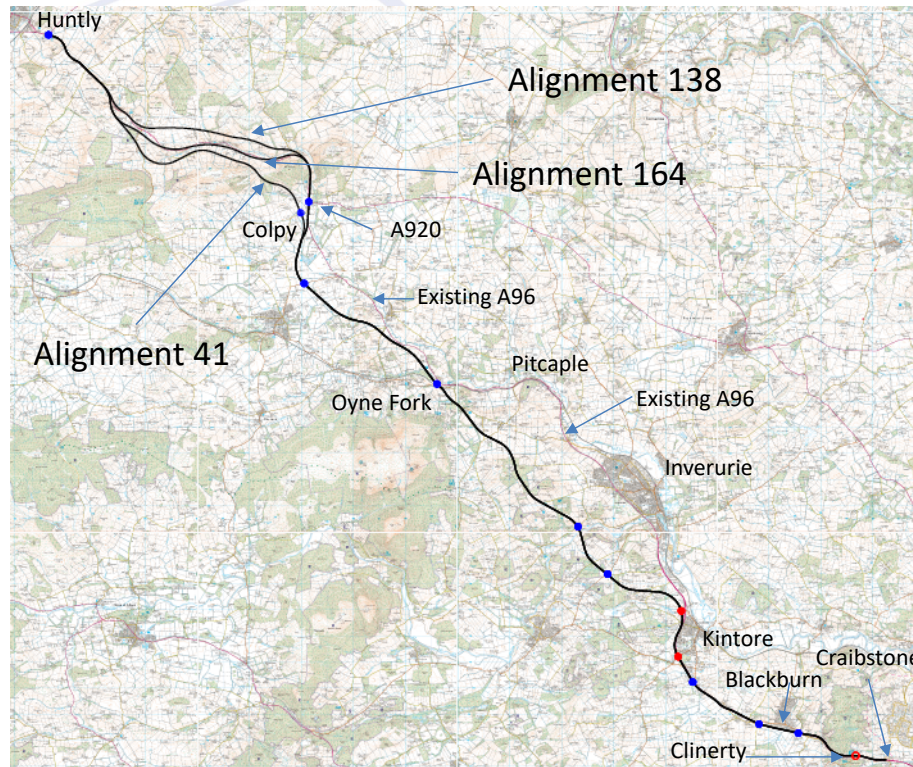


# Traffic Appraisal Criteria



- Following Scheme Objectives and STAG Criteria assessed both qualitatively and quantitatively against the existing A96 performance
- SO1 - To improve the operation of the A96 and inter-urban connectivity between the cities of Inverness and Aberdeen and their city regions
- SO2 - To improve safety for motorised and non-motorised users
- SO3 - To provide opportunities to grow the regional economies on the corridor
- SO4 - To facilitate active travel in the corridor
- SO5 - To facilitate integration with Public Transport Facilities
- STAG2 - Safety; STAG3 - Economy; STAG4 - Integration; STAG5 - Accessibility & Social Inclusion and STAG8 - Public Acceptability
- The scale of the impacts measured against the performance of all 52 alignments

# Alignment Groupings for Traffic Modelling



- 52 end-to-end alignments aggregated into 20 groups with similar alignments for modelling in CRAM v1.3
- All grouped alignments have similar routes and junction locations, with only minor variations in alignment on one section
- Difference in length between grouped alignments is less than 1km
- Difference in journey times between grouped alignments is less than 30 seconds
- Full list of grouped alignments are included in Appendix A of the workshop pack

# Outputs from CRAM v1.3 used in Appraisal



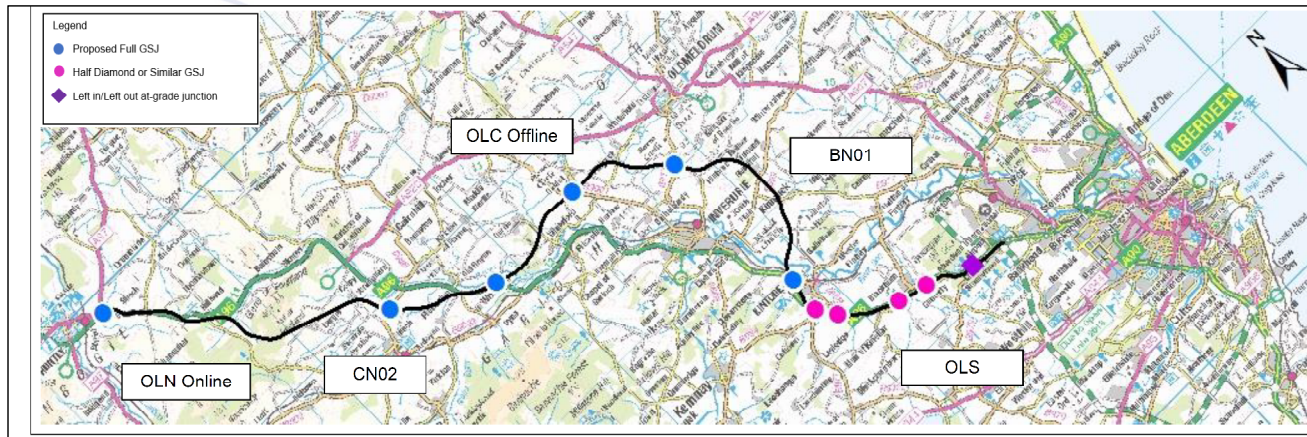
Journey Times on Routes	Freight Movement Efficiency	Access to Strategic Transport Network	Access to Jobs and Services	Public Transport Integration	Land Use Policy Integration
Aberdeen (King Street) to Huntly (Stephen Road)	✓	✓	✓		✓
Dyce (Craibstone Park and Ride) to Huntly (Stephen Road)	✓	✓		✓	
Inverurie (Station) to Huntly (Stephen Road)		✓	✓	✓	
Oldmeldrum (Colpy Way) to Huntly (Stephen Road)	✓	✓	✓		
Kintore (Station) to Oldmeldrum (Colpy Way)				✓	
Kintore (Development Area) to Oldmeldrum (Colpy Way)	✓				✓
Kintore (Development Area) to Inverurie (Ulryside Drive)				✓	✓
Dyce (Craibstone Park and Ride) to Inverurie (Ulryside Drive)		✓		✓	✓
Dyce (Craibstone Park and Ride) to Inverurie (Brankie Road)		✓		✓	
Huntly (Stephen Road) to Insch (High Street)			✓		
Oldmeldrum (Colpy Way) to Insch (High Street)	✓		✓		
Inverurie (Station) to Insch (High Street)		✓	✓	✓	
Kintore (Development Area) to Insch (High Street)	✓				✓
Huntly (Stephen Road) to Kemnay (High Street)			✓		
Dyce (Craibstone Park and Ride) to Kemnay (High Street)		✓		✓	
Inverurie (Harlaw Road) to Kintore (Development Area)	✓		✓		✓
Huntly (Stephen Road) to Crichie (Development Area)					✓
Dyce (Craibstone Park and Ride) to Crichie (Development Area)					✓
Inverurie (Harlaw Road) to Dyce (Craibstone Park and Ride)	✓	✓	✓		✓

- Quantitative appraisal uses outputs from traffic model (CRAM v1.3) to determine changes in travel time, veh-kms, and traffic volumes on sections between the 2030 Do-Min and Do-Something
- Journey times have been extracted both along the whole route, (A96 Huntly to Craibstone) and between major trip attractors and generators
- Transport user benefits calculated from changes in journey time indexed to relative BCR groupings
- Accident benefits calculated using changes in veh-kms and local accident rate on the existing

# Marking Process - Traffic



- Some alignments are less successful than others in attracting traffic e.g. alignment 181 which is circuitous.



- The scale of some benefits are 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.
- The 17 scores for each of the alignments have been added together to give an overall total for the traffic appraisal and marked from highest (best performing) to lowest (poorer performing).





## 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.



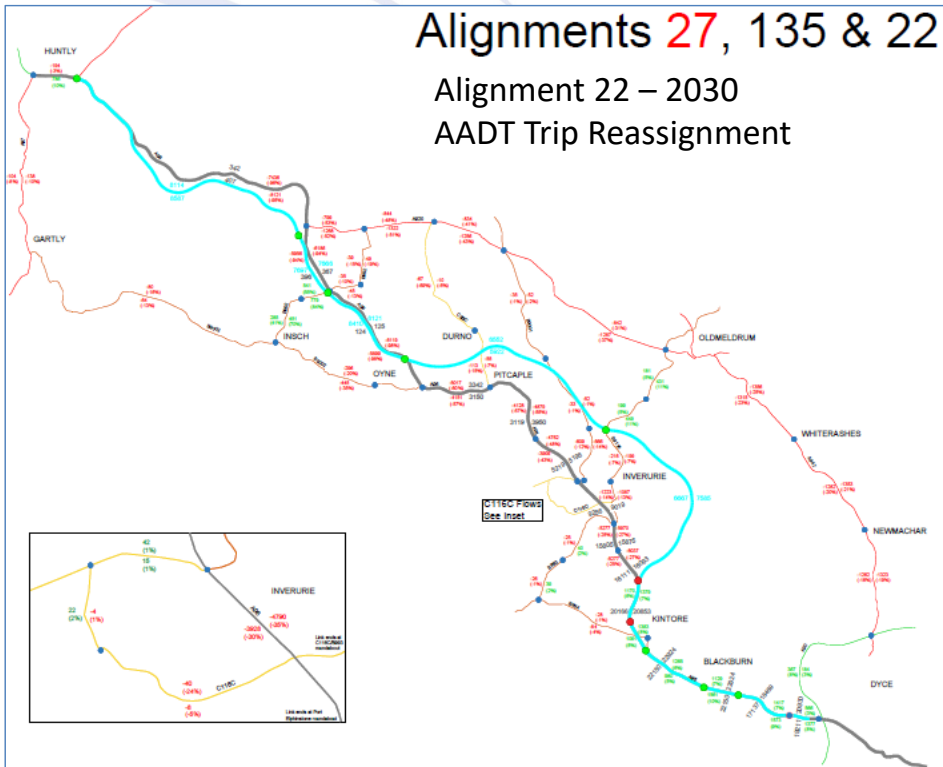
## Traffic Worked Example – Alignment 22



# Alignment 22



Alignments 27, 135 & 22  
Alignment 22 – 2030  
AADT Trip Reassignment



- Attracts 100% of traffic North of Oyne (12,000 vpd), and 30% of traffic from Inverurie (8,700)
- Routes an additional 700 vpd through Insch town centre via new junction on dual at Kellochbank
- Delivers JT savings on the A96 of 9 ½ minutes (8 minutes for freight)
- Reduces JT variability to 2 minutes
- Reduced traffic volumes on existing A96 and increase in veh-kms on dual (100%) reduces the risk of conflicts between local and strategic journeys, reduced number of accidents and improves OT opportunities

[Trip reassignment diagram](#)



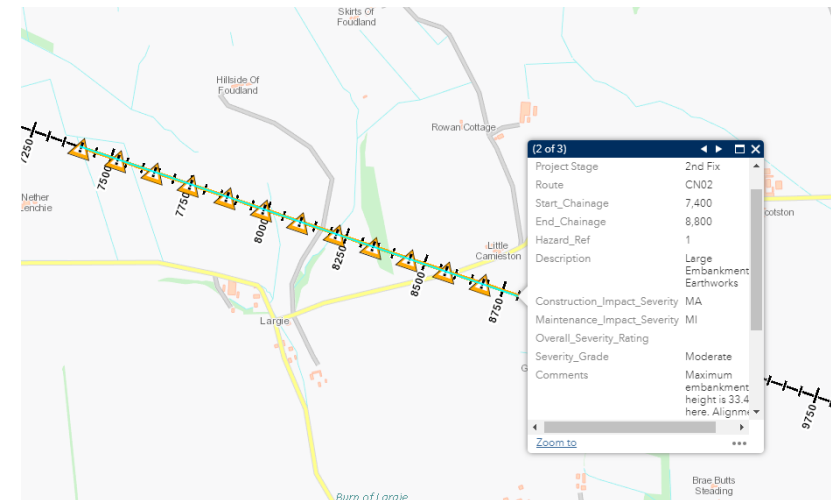
## Alignment 22 – Traffic Appraisal



- Reduction in traffic volumes on de-trunked sections of A96 may encourage active travel on these sections and reduce potential for conflicts between motorised and non-motorised users. (Moderate reduction in traffic in Inverurie. **Increases traffic through Insch**).
- Improved access to the strategic transport network through average reduction in peak journey times of 3.5 mins (14.5%) from population centres to strategic transport networks
- Improves access to jobs and services by reducing average peak hour journey times by 3 mins (13.5%) from population centres to employment centres and key service areas and by 4 mins (17.5%) to public transport facilities.
- **Alignment offers a lower level of economic benefits due to length of route (52.8km), relatively high construction costs and moderate level of JT savings.**
- Likely to gain public support as a result of reducing congestion in Inverurie making use of large sections of the existing A96. Aligns with majority of policies and land use allocations, offering average peak JT savings of 2mins (11%) to LDP allocations in A96 Growth Corridor. Meets LDP aspirations for an eastern bypass of Inverurie.

## CDM Hazards & Risk

- CDM Assessment Process has been used throughout Second Fix.
  - Over 700 Hazards Identified
  - **202 of these Hazards considered Major**
- Upload to GIS will visualise hazards for sifting discussions.
- PD review/challenge of hazards to follow upload.
- Significant hazards will contribute to rationale for sifting out alignments.
- Designers will be challenged to eliminate or reduce hazards during further design development.

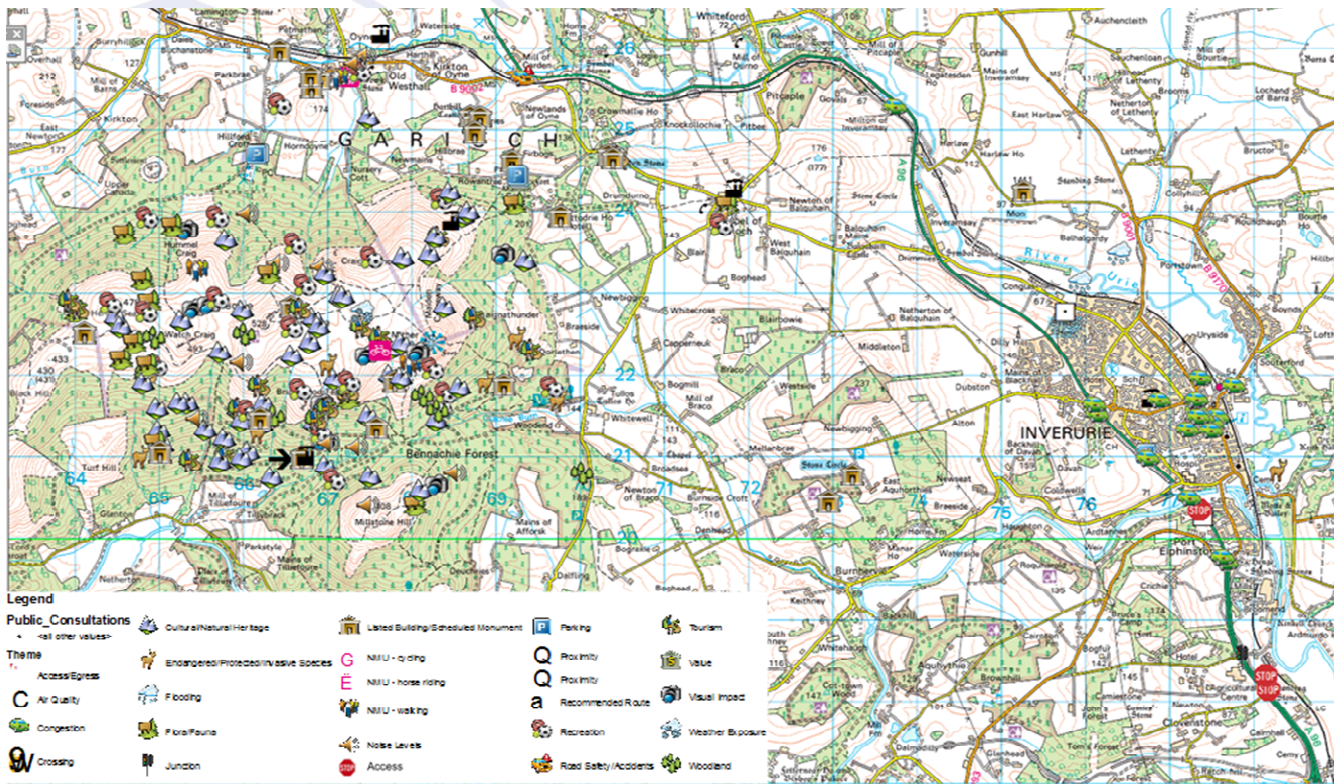


# Affordability



- Initial cost estimates compiled using rate/km (Spons) + Abnormals e.g. large earthworks , major structures etc
- Affordability is STAG Criteria but not used in overall appraisal at this stage i.e. Costs not used to mark route options
- Cost comparison using relative cost index to validate ranking
- Relative cost index in line with expectations

# Public Acceptability



- Feedback from DMRB Stage 1 Public Exhibitions Mapped
- Feedback from AmeyArup Meet the Team event mapped
- Main concerns are:
  - Impacts on Bennachie
  - Congestion in Inverurie
  - Impact on properties
  - Impact on agricultural land
  - Proximity to historic buildings





## Session 4 Combined Appraisal Results



# Overall Combined 2<sup>nd</sup> Fix Appraisal Results



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	<b>Better Performing</b>	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		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	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	





## Session 5

### Next Stages of Development



## Session 5: Next Stages of Development

- Junction Strategy
- Stakeholder Consultation
- Public Exhibition Details





# Junction Strategy – Junction Locations and Type

[Possible Junction Location Plan](#)



## Public Exhibition Details



- Public Exhibitions planned for early October over 4 days
- Preparations underway with venues:
  - Inverurie Town Hall (2 days)
  - Stewarts Hall, Huntly
  - Kinellar Community Hall, Blackburn
- Initial draft - story board of exhibition panels
- Working with BIG on preparation of all materials including panels, leaflet, publicity
- Preparing GIS viewer and landowner station
- Updating Q & A - staff briefing 2-3 weeks ahead of October events



## Session 6

### Summary, Actions and AOB





**TRANSPORT  
SCOTLAND**  
CÒMHDHAIL ALBA

**A96**

**DUALLING**

EAST OF HUNTLY TO ABERDEEN

**[transport.gov.scot/projects/  
a96-dualling-inverness-to-aberdeen/  
a96-east-of-huntly-to-aberdeen](https://transport.gov.scot/projects/a96-dualling-inverness-to-aberdeen/a96-east-of-huntly-to-aberdeen)**