

Annex C

Extracts from presentation to Environmental Steering Group (25 April 2019). Extracts in relation to Orange and Violet Routes



A96 Dualling East of Huntly to Aberdeen

Environmental Steering Group

25th April 2019

Pairing Assessments Process



- To present a series of pairing assessments in four specific locations
- Engineering, environmental and traffic & economic appraisals and key differences have been drawn together into a multi-disciplinary assessment
- To verify the better performing route section to be taken forward for each pairing assessment.

Assessment Basis



- Engineering, environmental and traffic & economic appraisals have been drawn together into a multi-disciplinary assessment
- The appraisals are based on developed second fix alignments, which incorporates the following development:
 - Indicative junction layouts in accordance with the Junction Strategy where applicable
 - Environmental / landscape feedback for optimising alignments and junction layouts
- The impacts described use the 7 point scale used throughout the options development process and are based on the metrics developed as part of the second fix alignments appraisal.
- The following colour coding has been used to indicate preferences for each paired element:

	Better Performing
	No preference

Environmental Assessment



Nine disciplines - each assessing alignments using 7 point scale & metrics:

- **Landscape and visual** - long length of alignment within SLA/GDL, >50% within high sensitivity landscape, substantial impact on setting of SLA/GDL, poor fit with topography
- **Cultural heritage** - a change to the fabric or setting of heritage assets that leads to a substantial environmental effect
- **Planning and policy** - alignments which pass through land subject to LDP allocations and/or land subject to local or major development planning permission
- **People & communities** - demolition of important community facility (e.g. hospital, school, doctor surgery, church, aged person home); demolition of large clusters of properties

Environmental Assessment

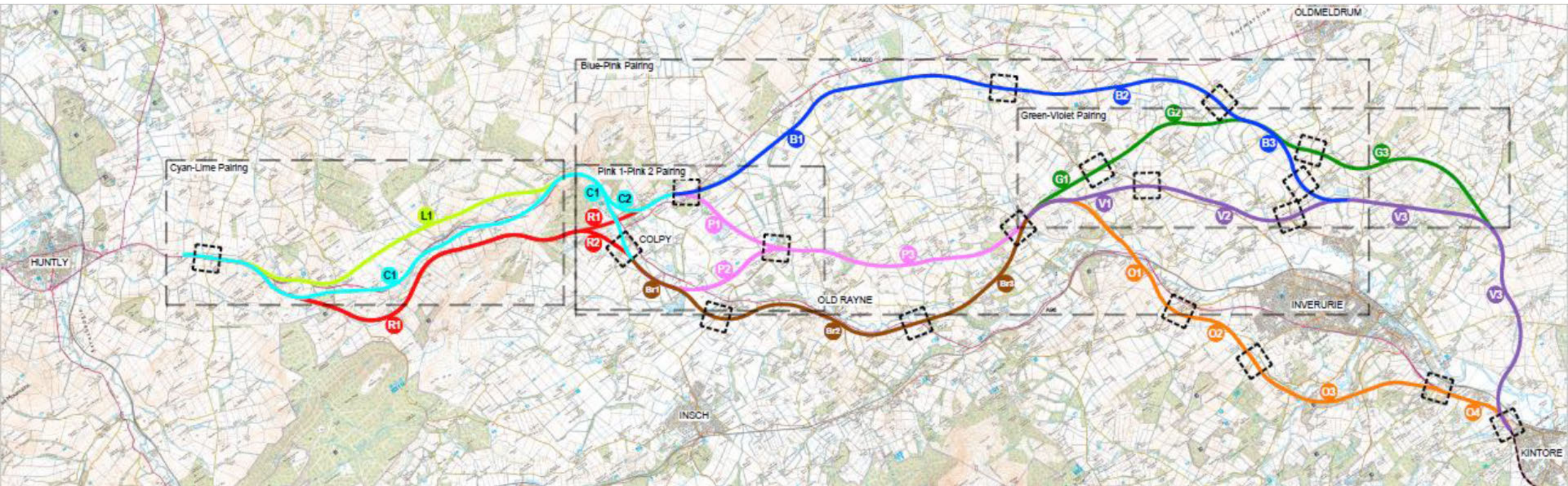


- **Water environment** - Alignment passes through an area of extensive functional floodplain and is not perpendicular to direction of flow.
- **Geology and soils** - Alignment has geological SSSI or three or more of the metrics (prime agricultural land, sand and gravel resource, contaminated land, high quality aquifers, peat)
- **Air quality** - introduction of roads > decrease of AQ to large population count/density
- **Noise and vibration** - introduction of roads > increase of noise to large population count/density
- **Ecology** - wildcat priority area, SSSI or other nationally or locally designated site
- **Materials** - scoped out at this stage as there is the same requirement for material resources for all pairings and is covered in the engineering assessment by length of alignment and number of structures

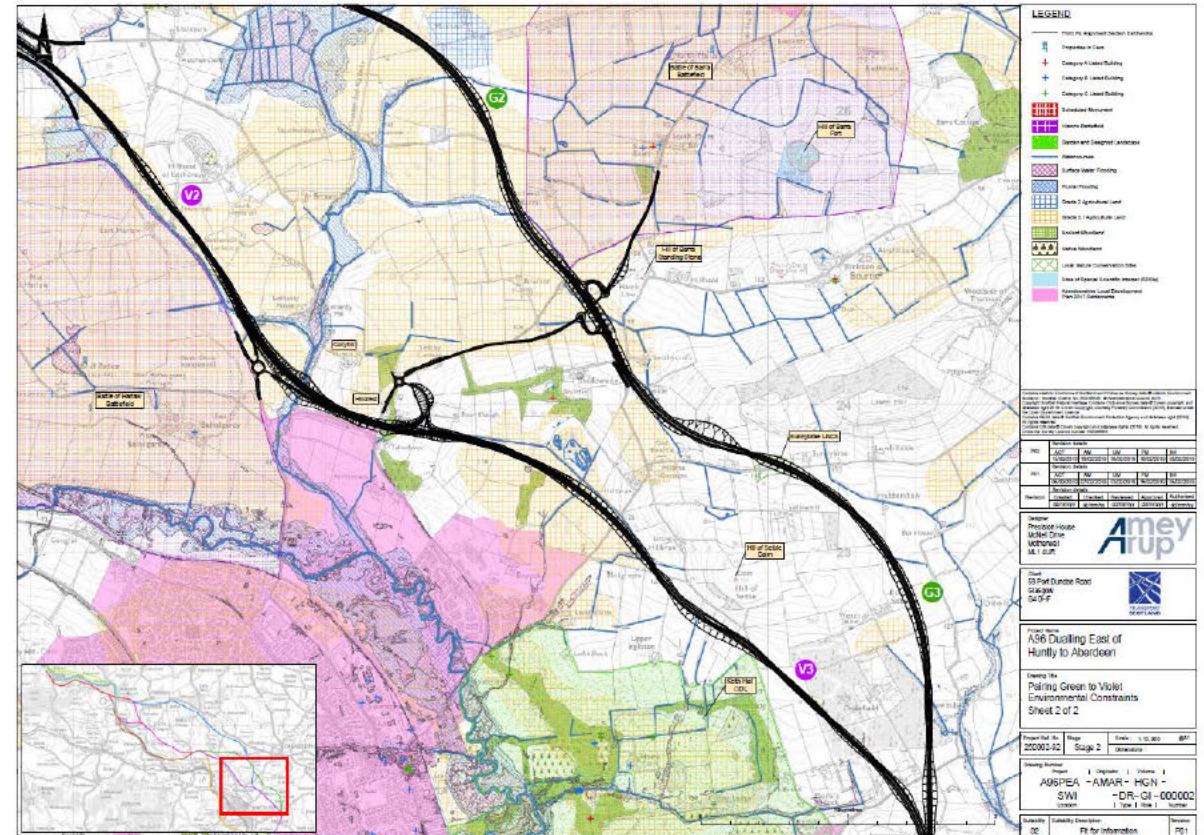
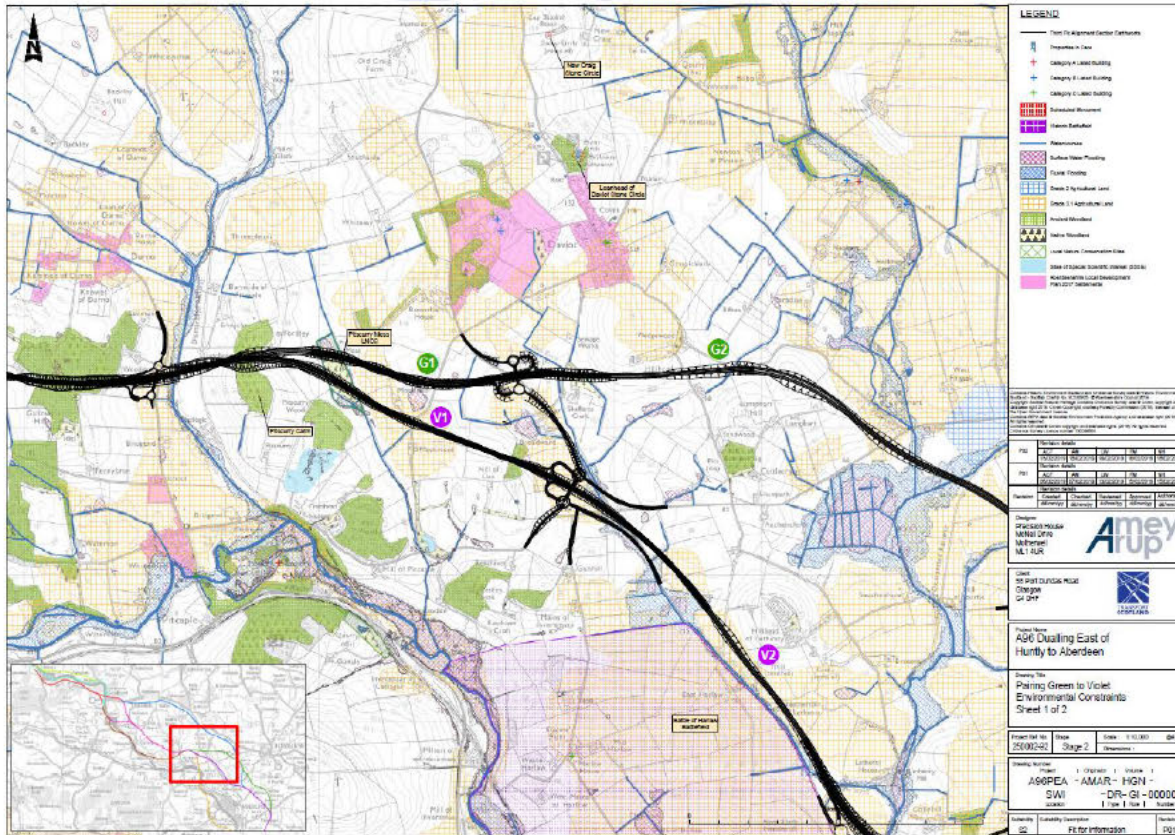
Pairing Assessments



Assessments undertaken in specific areas of the A96 Dualling East of Huntly to Aberdeen scheme where two route options have common start and end points and perform the same function



Green (G1/ G2/ G3) vs Violet (V1/ V2/ V3) Environmental Assessment



Green (G1/ G2/ G3) vs Violet (V1/ V2/ V3) Environmental Assessment



Discipline	Better Performing		Comment
	Violet	Green	
Landscape and Visual			Green has more areas in cutting, less visually intrusive, less impact on ancient woodland
Water			Green crosses more watercourses and widest floodplain to cross, and Kings Burn and Lochter Burn more difficult to mitigate
Ecology			Violet preferred as it only crosses one LNCS
Noise & Air Quality			Green preferred as it isn't in close proximity to LDP allocations
People & Communities			Green affects less prime agricultural land
Cultural Heritage			Violet preferred, lower number and less sensitive receptors. Green has major impacts on the Battle of Barra inventory battlefield.

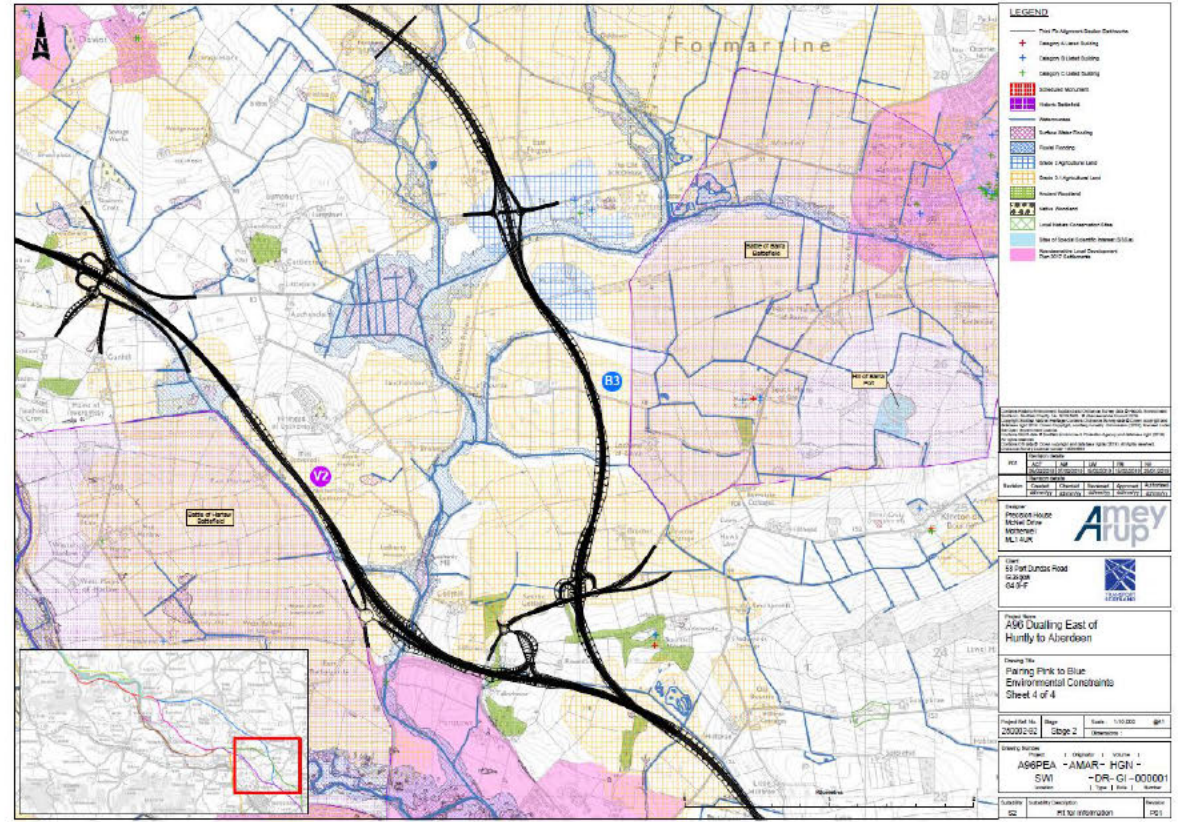
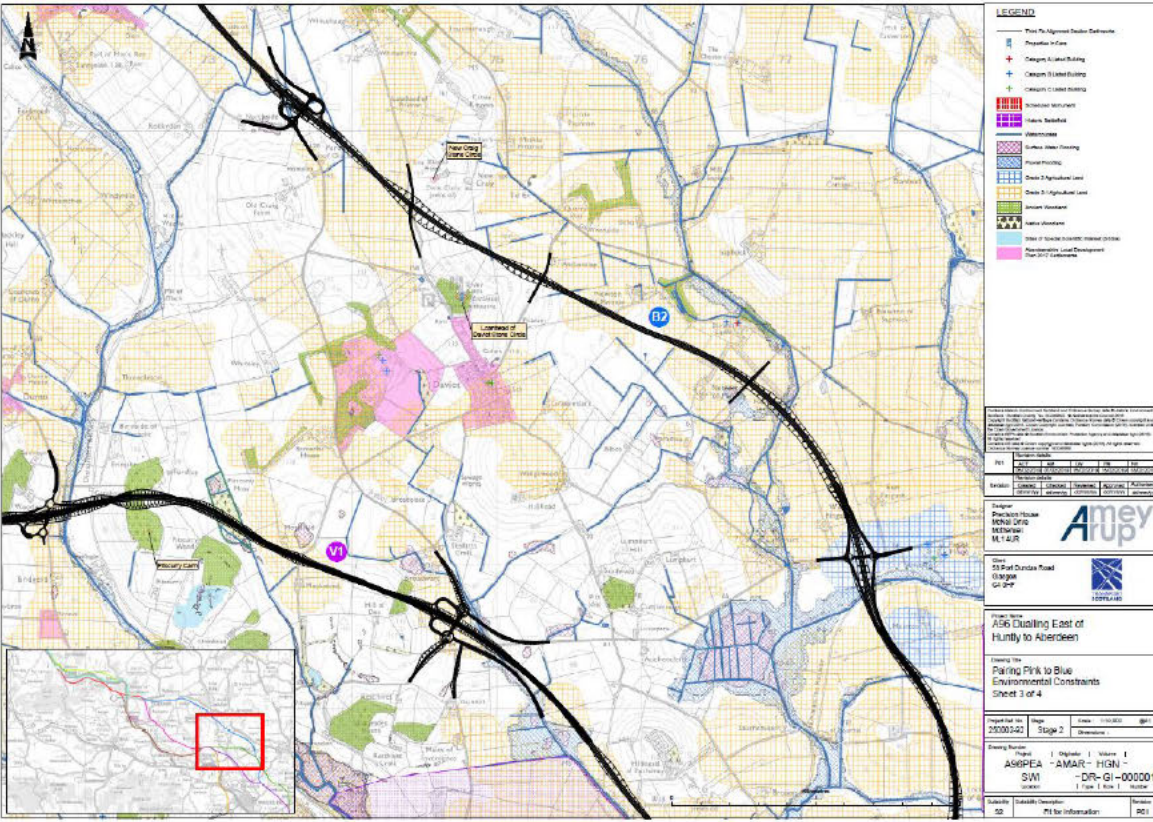
Green (G1/ G2/ G3) vs Violet (V1/ V2/ V3) Pairing Summary



Discipline	Better Performing		Comment
	Violet	Green	
Engineering Summary			Violet performs better for Earthworks/Geotechnics, Structures, Drainage/Hydrology and Cost – due to reduced interaction with the Lochter Burn and its floodplain
Environmental Summary			Green has less impact in terms of landscape, people and community, noise and air quality. Violet has less negative impacts on ecology, water, and cultural heritage. Overall, no preference.
Traffic Summary			Violet offers better journey times, reduced accident rates and better value for money. It also attracts significantly higher volumes of traffic to the new dual carriageway.
Overall Pairing Conclusion			Violet preferred by Engineering and Traffic, and Environmental has no preference

Blue (C2/ B1/ B2/ B3) vs Pink (C1/ Br1/ P2/ P3/ V1/ V2)

Environmental Assessment



Blue (C2/ B1/ B2/ B3) vs Pink (C1/ Br1/ P2/ P3/ V1/ V2) Environmental Assessment



Discipline	Better Performing		Comment
	Blue	Pink	
Landscape and Visual			Blue has less impact on GDLs, better fit in the topography, fewer structures and affects less ancient woodland
Water			Blue passes near the River Urie, with the potential for some channel realignment, and with current active morphology – with less potential to mitigate impacts
Ecology			Blue impacts on Wartle Moss LNCS, which is connected hydrologically to Wartle Moss SSSI
People & Communities			Blue severs the community around Culsalmond and Snipefield, including Snipefield Woods
Noise			Blue has fewer receptors and not adjacent to any LDP opportunity sites.

Blue (C2/ B1/ B2/ B3) vs Pink (C1/ Br1/ P2/ P3/ V1/ V2) Environmental Assessment



Discipline	Better Performing		Comment
	Blue	Pink	
Air Quality			Blue has fewer receptors and not adjacent to any LDP opportunity sites.
Cultural Heritage			Blue is in immediate proximity to Mummings Reive cairn, Loanhead stone circle and cremation cemetery, and Newcraig stone circle Scheduled Monuments. Loanhead is also a Promoted Visitor Site and Property in Care.
Plans and Policies			Blue does not infringe on any LDP reserved land
Soil and Geology			No preference between routes

Blue (C2/ B1/ B2/ B3) vs Pink (C1/ Br1/ P2/ P3/ V1/ V2) Pairing Summary



Discipline	Better Performing		Comment
	Blue	Pink	
Engineering Summary			Pink performs better for Standards Compliance, Earthworks/Geotechnics, Structures, Drainage/Hydrology and Cost.
Environmental Summary			Pink avoids impacts upon Wartle Moss SSSI and LNCS, has reduced impacts upon the Kirkton of Culsalmond community, and avoids significant impacts on cultural heritage receptors.
Traffic Summary			Pink attracts a high volume of new traffic to the new A96, reduces accidents more significantly than Blue and offers better value for money.
Overall Pairing Conclusion			Pink route is preferred for Engineering, Environmental and Traffic.

Deselected Options Plan



Deselection of Lime Route

- Major impacts at the Glen Water Valley requiring a major structure to cross from Glens of Foudland to Hill of Skares.
- Hilly topography requiring major earthworks along hillside of Hill of Bainshole.
- Visual impact on elevated landscape.
- More impact on Wildcat Priority Area than the Cyan route.

Deselection of Blue Route

- Major impacts at the River Urie and its floodplain at Kirkton of Culsalmond requiring a major viaduct structure (C2).
- Major engineering works including retaining structure at Kirkton Farm to avoid direct impacts on property.
- Impacts on locally designated ecological sites including Wartle Moss LNCS.
- Severance of the community of Kirkton of Culsalmond.
- Direct impact on Snipefield Wood.
- Immediate proximity to Cat A listed Culsalmond Church, Mummers Reive Scheduled Monument and major impact of Loanhead of Daviot Stone Circle.
- More remote from the existing A96, attracting less traffic than equivalent Pink and Violet routes.

Deselection of Green Route

- Major impact associated with a new structure over the Lochter Burn and associated floodplain combined with difficulty of provision of drainage attenuation in proximity of Lochter Burn and Kings Burn.
- Numerous side road interfaces requiring structures or realignment.
- Impacts on locally designated ecological sites including Pitscurry Moss.
- Potential direct impact on the Battle of Barra Inventory Historic Battlefield its setting and severance of the route of the advancing troops.
- Longer route, attracting less traffic than the Violet Route, further from Inverurie main population centre.

Deselection of Pink Route - Section P1

- Requirement for a major viaduct structure over River Urie and its floodplain at Kirkton of Culsalmond (C2) and an additional structure over A920 as part of Colpy Junction
- Direct impact on Snipefield Wood.
- Immediate proximity to Mummers Reive Cairn and Cat A listed building Culsalmond Church.
- Severance of the community of Kirkton of Culsalmond.

Removal of grade separated junction at the western tie-in. Standard taper will enable flexibility for future Huntly.

Predicted traffic flows do not justify a new junction at Durno. Access between Durno and Whiteford will be maintained via an underbridge to accommodate existing local roads.

