

## **35 Environmental Impact Tables**

### **35.1 Introduction**

- 35.1.1 This chapter summarises the potential environmental impacts of the proposed scheme in tabular form.
- 35.1.2 Potential environmental impacts are provided for each environmental parameter, with a Mitigation Item Number corresponding to the Schedule of Environmental Commitments for the Southern Leg of the proposed scheme (Chapter 36).
- 35.1.3 The residual impact (i.e. following implementation of mitigation) is provided in terms of magnitude and significance, where appropriate, and is considered an adverse impact unless otherwise stated.

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**Table 35.1: Environmental Impact Table**

Description of Impact	Mitigation Item Number (refer to Chapter 36)	Sensitivity /value of Receptor	Residual Impact (i.e. <i>with</i> mitigation)	
			Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)				
<b>Land Use (Chapter 22)</b>				
Bishopton Land Ref 1736 and 229; loss of 14.21ha. (15% of the total farmed area) with severance.	LU1s-LU18s, LU23s	High	High	Substantial
Milltimber Farm Land Ref 438; loss of 14.86ha. (15% of the total farmed area) with severance.	LU1s-LU18s, LU23s	High	High	Substantial
Nether Beanshill Land Ref 510; loss of 14.971ha. (21% of the total farmed area) with severance.	LU1s-LU18s, LU23s	High	High	Substantial
Craiglug Land Ref 483, 484 and 481; loss of 4.50ha. (39% of the total farmed area) with severance and disruption to organic field rotation.	LU1s-LU18s, LU23s	High	High	Substantial
East Kingford Livery Land Ref 460; loss of 6.09ha. (30% of the total farmed area) with severance.	LU1s-LU18s, LU23s	High	High	Substantial
Denburn Livery & Stud Farm Land Ref 105 and 349; loss of 3.61ha. (15% of the total farmed area) with severance and loss of equestrian facilities.	LU1s-LU23s	High	High	Substantial
Mains of Charleston Land Ref 230 and 217; loss of 6.93ha. (23% of the total farmed area) with severance.	LU1s-LU23s	Medium	High	Moderate/Substantial
Merchant's Croft Land Ref 637 and part 228; loss of 9.31ha. (10% of the total farmed area) with severance.	LU1s-LU18s, LU23s	Medium	High	Moderate/Substantial
Swellhead Farm Land Ref 634 and 5177; loss of 13.89ha. (7% of the total farmed area) with severance.	LU1s- LU23s	Medium	High	Moderate/Substantial
Gairn Farm Land Ref 486; loss of 5.02ha. (15% of the total farmed area) with severance.	LU1s-LU18s, LU23s	Medium	High	Moderate/Substantial
Backhill (Aldersyde) Land Ref 473; loss of 4.14ha. (5% of the total farmed area) with severance.	LU1s-LU18s, LU23s	High	Medium	Moderate/Substantial
Derbeth Farm Land Ref 103; loss of 23.04ha. (14% of the total farmed area) with severance.	LU1s-LU23s	Medium	High	Moderate/Substantial
Land East of Bankhead Land Ref 334; loss of 0.83ha (14% of the total land interest area).	LU1s-LU18s, LU23s	Low	High	Moderate
Land at Bothiebrig Land Ref223; loss of 0.97ha. (11% of the total farm area) with no severance.	LU1s-LU23s	Low	High	Moderate
Land East of Bothiebrig Land Ref 632; loss of 1.02ha (50% of the total land interest area) with no severance.	LU1s-LU18s, LU23s	Low	High	Moderate
Land near Charleston Land Ref 329; loss of 2.02ha. (37% of the total farmed area).	LU1s-LU18s, LU23s	Low	High	Moderate
Lochview Croft Land Ref 290; loss of 2.18ha. (31% of the total farmed area) with no severance.	LU1s-LU18s, LU23s	Low	High	Moderate
Duffshill Farm Land Ref 209; loss of 8.12ha. (37% of the total farmed area) with severance.	LU1s-LU18s, LU23s	Low	High	Moderate
Jameston Farm Land Ref 206; loss of 3.13ha. (6% of the total farmed area) with no severance.	LU1s- LU18s, LU23s	Medium	Medium	Moderate
Land at Hare moss Land Ref 282; loss of 0.51ha. (26% of the total land interest area) with no severance.	LU1s-LU18s, LU23s	Low	Medium	Slight/Moderate
Land at Hare moss Land Ref 312; loss of 0.92ha. (5.5% of the total land interest area) with no severance.	LU1s-LU18s, LU23s	Low	High	Moderate
Newlands Farm Land Ref 211; loss of 3.78ha. (20% of the total farmed area) with severance.	LU1s- LU23s	Low	High	Moderate
Kingcausie Estate Land Ref 556; loss of 16.98ha. (3% of the total farmed area) with severance and moderate-high windthrow risk.	LU1s-LU23s	Medium	Medium	Moderate

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Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)				
Victoria Sawmills Land Ref 584; loss of 1.45ha. (12% of the total forestry area) with severance.	LU1s-LU8s, LU10s-LU12s, LU14s-LU15s, LU17s, LU19s-LU23s	Low	High	Moderate
Binghill House Land Ref 580; loss of 0.61ha. (14% of the total farmed area) with no severance.	LU1s-LU18s, LU23s	Low	High	Moderate
Beanshill Cottage Land Ref 578; loss of 2.71ha. (13% of the total farmed area) with severance.	LU1s-LU18s, LU23s	Low	High	Moderate
Land near Gairnlea Land Ref 5171; loss of 0.61ha (39% of the total farmed area) with no severance.	LU1s-LU23s	Low	High	Moderate
Gairnlea Land Ref 566; loss of 2.82ha. (63% of the total land interest).	LU1s-LU18s, LU23s	Low	High	Moderate
Silverburn Farm Land Ref 610; loss of 6.00ha. (14% of the total farmed area) with severance.	LU1s-LU18s, LU23s	Low	High	Moderate
Backhill of Brodiach Land Ref 466; loss of 7.39ha. (24% of the total farmed area) with severance.	LU1s-LU18s, LU23s	Low	High	Moderate
West Hatton Land Ref 333; loss of 6.87ha. (17% of the total farmed area) with severance.	LU1s-LU23s	Low	High	Moderate
Land near Portlethen Land Ref 320; loss of 1.17ha. (9% of the total land interest area).	LU1s-LU23s	Low	Medium	Slight/Moderate
Newton of Charleston, Land Ref 288; loss of 0.20ha. (10% of the total farmed area) with no severance. The poultry specialist assessed the unit as low sensitivity and biosecurity impacts negligible.	LU1s-LU18s, LU23s, LU26s (refer to landscape/ecology planting)	Low	Medium	Slight/Moderate
Charleston Estate Land Ref 233; loss of 3.08ha. (7% of the total farmed area) with no severance.	LU1s-LU18s, LU23s	Low	Medium	Slight/Moderate
Woodend Farm Land Ref 5175; loss of 5.89ha. (9% of the total farmed area) with no severance.	LU1s-LU18s, LU23s	Low	Moderate	Slight/Moderate
Westfield Land Ref 723; loss of 2.34ha. (3% of the total farmed area) with severance.	LU1s-LU23s	Low	Medium	Slight/Moderate
Auchlea Land Ref 477; loss of 1.38ha. (1% of the total farmed area) with no severance.	LU1s-LU18s, LU23s	High	Low	Slight/Moderate
Banchory-Devenick Estates Land Ref 214; loss of 7.56ha., including woodland (1% of the total farmed area) with severance.	LU1s-LU23s	Medium	Low	Slight
Bankhead Land Ref 210; loss of 0.33ha. (1% of the total farmed area) with severance.	LU1s-LU18s, LU23s	Medium	Low	Slight
Cowford Farm Land Ref 211; loss of 3.25ha. (2% of the total farmed area) with severance.	LU1s-LU18s, LU23s	Medium	Low	Slight
South Last Land Ref 557; loss of 3.77ha. (2% of the total farmed area) with severance.	LU1s-LU18s, LU23s	Medium	Low	Slight
East Brotherfield Land Ref 561, loss of 1.09ha. (4% of the total farm area) no severance.	LU1s-LU18s, LU23s	Medium	Low	Slight
Craighill Farm Land Ref 430; loss of 0.27ha. (2% of the total land interest area) with severance.	LU1s-LU18s, LU23s	Low	Low	Negligible/Slight
Rigifa Land Ref 214; loss of 1.62ha. (less than 1% of the total farmed area) with no severance and disruption to access.	LU1s-LU18s, LU23s	Medium	Negligible	Negligible/Slight
Duff's Hill Wood Land Ref 256; loss of 1.11ha. (3% of the total forestry area) with severance although area is felled.	LU1s-LU8s, LU10s-LU12s, LU14s-LU15s, LU17s, LU19s-LU23s	Low	Low	Negligible/Slight
Kingshill and Gairnhill Wood Land Ref 253; loss of 1.44ha. (1% of the total forestry area) and moderate to high windthrow risk.	LU1s-LU8s, LU10s-12s, LU14s-LU15s, LU17s, LU19s-LU23s	Low	Low	Negligible/Slight

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Land at Recraigs Land Ref 422; loss of 0.06ha. (less than 1% of the total farmed area) with no severance.	LU1s-LU18s, LU23s	Low	Negligible	Negligible
Clochandighter Wood Land Ref 590; loss of 0.07ha. (less than 1% of the total forestry area) although area is felled.	LU1s-LU8s, LU10s-LU12s, LU14s-LU15s, LU17s, LU19s- LU23s	Low	Negligible	Negligible
Demolition of 10 residential properties.	LU24s	n/a	n/a	Substantial
Demolition of International School.	LU24s	n/a	n/a	Adverse
Loss of 5% of total area of Marywell Homes Ltd.	LU24s	n/a	n/a	Adverse
Loss of 10% of total area of Newton of Charleston	LU24s	n/a	n/a	Adverse
Loss of 15% of total area and severance at Milltimber Farm.	LU24s	n/a	n/a	Adverse
Loss of 14% of total area at Kippie Lodge.	LU24s	n/a	n/a	Adverse
Loss of 22% of total area (3% of Livery) and severance at Nether Beanshill.	LU24s	n/a	n/a	Adverse
Loss of 6% of total area at East Brotherfield.	LU24s	n/a	n/a	Adverse
Loss of 32% of total area at East Kingsford Livery.	LU24s	n/a	n/a	Adverse
Loss of 13% of total area, demolition of outbuildings and severance at Denburn Livery & Stud (Denhead of Cloghill).	LU24s	n/a	n/a	Adverse
Noise impacts at Kingswood Learning and Enhancement Centre.	Noise barrier (refer to noise barriers)	n/a	n/a	Adverse
Potential relocation or reconfiguration of Aberdeen Aeromodellers Club depending on risk assessment.	None proposed awaiting outcome of risk assessment.	n/a	n/a	Neutral
Improved access to north & south for: Jeeves Couries; Jeeves Group Storage; ANC Express; R&B services; Smiddy Brae Industrial Units (Clark & Sutherland; King Street Autobody and LD Motors); W. Enterprises Aberdeen Ltd and Ardene House Veterinary Hospital.	LU25s	n/a	n/a	Beneficial
Minor changes to business access (i.e. no major diversions required) at: W. Leiper, Newton of Charleston Farm, Optima Solutions, Alexander Duncan (Aberdeen) Ltd., EIS Waste Services, Dennis Irvine Superbike Centre; Ewing Motors, Marywell Park Homes Ltd., Artward Bound, Northeast Reprographics, SBS Logistics, Maryculter Play Group, Storybook Glen Theme Park, Lower Deeside Holiday Park, Old Mill Inn, Albyn School Playing Fields and Five Mile Petrol Station Garage & Caravan Site.	LU25s	n/a	n/a	Neutral
Major Changes to Access (i.e. lengthy diversions required) at Bothiebrig Garage.	LU25s	n/a	n/a	Adverse
Loss of development land (P22s and P24s).	LU24s	n/a	n/a	Adverse
Potential loss of amenity (P2s, P3s, P10s).	n/a	n/a	n/a	Adverse
Potential loss of amenity (P21s).	LU26s (refer to landscape/ecology planting)	n/a	n/a	Adverse

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Potential loss of amenity (P13s).	LU26s (refer to landscape/ecology planting)	n/a	n/a	Mixed
Improved access arrangements and transport links (P23s, P26s, P27s, OP2s, and OP3s).	n/a	n/a	n/a	Beneficial
Neutral impacts to planning applications and development land (P1S, P5S –P8S, P15S–P20S and OP4s and OP5s).	n/a	n/a	n/a	Neutral
Loss of 11.93% of total woodland area and severance at Greenhowe Plantation.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Low	Negligible/Slight
Loss of 3.16% of total woodland area at Duff's Hill.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Low	Negligible/Slight
Loss of 0.16% of total woodland area at Clochandighter.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Negligible	Negligible
Loss of 10.81% of total woodland area and severance at Cleanhill Wood.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Low	Negligible
Loss of 6.87% of total woodland area at Milltimber wood.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Negligible	Negligible
Loss of 11.44% of total woodland area at Guthrie Hill Plantation.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Low	Negligible/Slight
Loss of 4.54% of total woodland area at Rotten O'Gairn.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Low	Negligible/Slight
Loss of 0.37% of total woodland area at Gairnhill.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Negligible	Negligible
Loss of 21.43% of total woodland area at Upper Beanshill.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Moderate	Slight/Moderate
Loss of 5.22% of total woodland area and severance at West Hatton.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Low	Negligible/Slight

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Loss of 39.27% of total woodland area Shelter belts at Cloghill/Derbeth.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Negligible	Negligible
Loss of 27.44% of total woodland area at Denhead Cloghill Shelter Belt.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Medium	Slight/Moderate
Loss of 67.45% of total woodland area at Roundalls near Newlands (north and south).	LU24s, LU26s (refer to landscape/ecology planting)	Low	Medium	Slight/Moderate
Loss of 2.19% of total woodland area at Old Deeside Railway line.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Low	Negligible/Slight
Loss of 0.03ha of non-community woodland at Shelter Belt between Duff's Hill and A90.	LU24s, LU26s (refer to landscape/ecology planting)	Low	Negligible	Negligible
Loss of 0.11ha of non-community woodland patches near Bothiebrig (4 areas).	LU24s, LU26s (refer to landscape/ecology planting)	Low	Negligible	Negligible
<b>Geology, Contaminated Land and Groundwater (Chapter 23)</b>				
Disturbance of solid geology during ground excavations.	n/a	Low	Negligible	Negligible
Disturbance of drift deposits during ground excavations.	n/a	Low - Medium	Negligible to Low	Negligible to Slight
Impact of blasting on the rock mass and risks to increase potentially contaminated groundwater towards private water supplies.	G1s	High-Low	Medium	Moderate-Negligible
Disturbance of contaminated land encountered during road construction. Including known and suspected contamination identified through site investigations, and any unknown contamination discovered during construction works.	G2s-G4s	n/a	n/a	Slight Beneficial
Impact on groundwater quality caused by accidental spillages and road drainage system.	G5s	Low to High	None - Negligible	Slight
Impact of cuttings on groundwater flow.	G6s-G7s	Low to High	None - Negligible	Negligible
Impact on groundwater quality and human health caused by cone of influence of road cutting reaching areas of potential contaminated land and contamination flowing towards humans and groundwater.	G8s	Low to High	None - Negligible	Negligible
Impact on Hare moss water balance and quality.	G9s-G11s	High	Negligible - Low	Moderate/Slight

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<b>Water Environment (Chapter 39)</b>				
<b>Generic Construction Impacts</b>				
<u>Surface Water Hydrology</u> – regime/ flow impacts from diversions, crossings and realignments, vegetation clearance.	W1s, W14s, W15s, W17s, W23s, W24s, W25s, W26s-W31s	n/a	n/a	n/a
<u>Fluvial Geomorphology</u> - suspended solids release during construction works, vegetation clearance.	W1s-W6s, W10s-W15s, W17s, W21s, W23s, W25s, W26s-W34s, W36s, W38s, W39s, W41s, W44s	n/a	n/a	n/a
<u>Water Quality</u> – pollutant spillages, ,suspended solids release, leaks, contaminated land etc	W1s-W17s, W21s, W23s, W25s, W26s-W34s, W36s, W38s, W39s, W41s,W43s, W44s	n/a	n/a	n/a
<b>Generic Operational Impacts – Road Drainage</b>				
<u>Surface Water Hydrology</u> – volume increases/flow changes etc arising from new impermeable areas	W18s, W19s, W26s-W31s	n/a	n/a	n/a
<u>Fluvial Geomorphology</u> - Increased turbidity, sediment transport, erosion	W18s, W19s, W20s, W22s, W26s-W31s	n/a	n/a	n/a
<u>Water Quality</u> - Road runoff contaminants, accidental spillage.	W19s, W20s, W22s, W26s-W31s, W35s	n/a	n/a	n/a
<b>Generic Operational Impacts – Watercourse Crossing Impacts</b>				
<u>Surface Water Hydrology</u> - Channel/culvert/bridges have potential to affect flood risk	W18s, W23s,	n/a	n/a	n/a
<u>Fluvial Geomorphology</u> – Culverting/bridging may cause increase in sedimentation and erosion.	W18s, W23s	n/a	n/a	n/a
<u>Water Quality</u> – Sediment increase may release contaminants. O <sub>2</sub> sags from low light in culverts	W18s, W23s	n/a	n/a	n/a
<b>Generic Operational Impacts – Watercourse Realignment Impacts</b>				
<u>Surface Water Hydrology</u> – Possible impacts d’sstream of some realignments or if catchment affected	W24s	n/a	n/a	n/a
<u>Fluvial Geomorphology</u> – Possible impacts on sediment supply, rate of transfer, erosion and deposition.	W24s	n/a	n/a	n/a
<u>Water Quality</u> – Sediment released as a result of the realignment, may include contamination.	W24s	n/a	n/a	n/a

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<b>Specific Environmental Impacts</b>						
Loirston Burn	<b>Construction</b>		Medium	Low	Slight	
	Hydrology - Impact through changes to hydrological pathways. - Changes to the discharge regime as a result of extent and duration of works.					W1s, W11s, W17s, W25s, W29s
	Geomorphology - Culverting of existing straightened channel will involve earthworks, possibly resulting in sediment release and short-term change to morphological diversity and turbidity of the water column. - Construction of treatment ponds will involve some earthworks, possibly resulting in sediment release and short-term change to turbidity of the water column.					W1s-W6s, W10s- W17s, W21s, W24s- W25s, W29s, W32s, W36s, W38s, W39s, W41s, W44s
	Water Quality - Construction of culverts, realignments and outfall may increase risk of accidental spillage of pollutants.			W1s-W17s, W21s, W25s, W29s, W32s, W36s, W38s, W39s, W41s, W43s, W44s		
	<b>Operation</b>				Negligible	Negligible
	Hydrology - Culverting and realignment will impact flow paths and potential flood risk. - Road runoff outfall and realignment have potential to change discharge regime leading to siltation and the requirement for dredging.			W18s, W24s, W29s, W40s, W42s		
	Geomorphology - Long-term decrease to morphological diversity due to extensive culverting and realignment of channel.			W18s-W20s, W22s, W24s, W29s		
Water Quality - Sediment loaded untreated road run-off, soluble and insoluble pollution may occur increasing levels of copper and zinc over EQS values. - Increased accidental spillage risk due to traffic loadings. - Potential pollution to surface water as a result of impact on groundwater quality. - Number and length of culverts may impact upon water quality due to lack of light.		W18s-W20s, W22s, W24s, W29s				
Greengate Ditch	<b>Construction</b>		Low	Negligible	Negligible	
	Overall – A section of the watercourse downstream of the proposed road may be lost through re-direction. Release of fine sediment or construction pollutants may occur.					W1s-W16s



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	<b>Operation</b>				
	Overall - A section of the watercourse downstream of road may be lost.	n/a		Negligible	Negligible
Jameston Ditch	<b>Construction</b>				
	Hydrology - Changes to the discharge regime as a result of extent and duration of works.	W1s, W11s, W17s, W28s, W38s, W39s			
	Geomorphology – Construction of treatment ponds will involve some earthworks, possibly resulting in sediment release and short-term change to turbidity of the water column.	W1s-W6s, W10s- W15s, W21s, W28s, W36s, W38s, W39s, W44s		Negligible	Slight/ Negligible
	Water Quality- Slight potential for accidental spillage of fuel and concrete due to the distance of works to watercourse.	W1s-W16s, W21s, W28s, W36s, W38s, W39s			
	<b>Operation</b>				
	Hydrology - Change to discharge regime due to road run-off discharge to the burn may lead to siltation and the requirement for dredging, which in turn may impact the hydrological functioning of the Moss.	W19s, W20s, W22s, W28s	High		
	Geomorphology – Road run-off discharge to the burn may lead to siltation and scouring of bed and banks.	W19s, W20s, W22s, W28s			
Water Quality - Sediment -loaded untreated road run-off, soluble and insoluble pollution may occur increasing levels of copper and zinc over EQS values. - Increased accidental spillage risk due to traffic loadings. - Pollution may impact upon Hare Moss water quality. - Infiltration to groundwater may occur.	W19s, W20s, W22s, W28s, W35s		Negligible	Slight/ Negligible	
Burn of Ardoe	<b>Construction</b>		High	Negligible	Slight/ Negligible
	Hydrology – Extent and duration of works may impact upon the surface water hydrology and flow paths associated with the watercourse.	W1s, W11s, W17s, W25s,			
	Geomorphology - Culverting of existing straightened channel will involve some earthworks, possibly resulting in sediment release and short-term change to morphological diversity and turbidity of the water column.	W1s-W6s, W10s- W15s, W17s, W24s, W25s, W32s, W36s, W41s, W43s			

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	Water Quality- Potential for small scale spillage of potential pollutants; however this has the potential to impact the moss downstream.	W1s-W17s, W25s, W32s, W36s, W41s, W44s		Negligible	Slight/ Negligible
	<b>Operation</b>				
	Hydrology - Minimal change to flow and sediment regime as a result of culvert provided it is sized correctly.	W18s, W24s			
	Geomorphology – Interruption to the morphology of the watercourse through introduction of a culvert.	W18s, W24s			
	Water Quality - No outfall planned therefore only impacted as a result of diffuse pollution. Infiltration to groundwater may occur.	W18s, W24s, W35s			
Bishopston Ditch	<b>Construction</b>		High	Negligible	Slight/ Negligible
	Hydrology - Culvert construction provides temporary obstruction to hydrological pathways to Hare Moss.	W1s, W17s, W25s			
	Geomorphology - Culverting of existing straightened channel will involve some earthworks, possibly resulting in sediment release and short-term change to morphological diversity and turbidity of the water column.	W1s-W6s, W10s-W17s, W25s, W32s, W36s, W41s, W44s			
	Water Quality- Potential for small scale spillage of potential pollutants; however this has the potential to impact the moss downstream.	W1s-W17s, W25s, W32s, W36s, W41s, W43s, W44s			
	<b>Operation</b>				
	Hydrology – Culverting could impact flow paths and potential flood risk.	W18s, W24s			
	Geomorphology – Minimal change to flow and sediment regime as a result of culvert.	W18s, W24s			
	Water Quality - No outfall planned therefore only impacted as a result of diffuse pollution and culvert blocking light. - Infiltration to groundwater may occur.	W18s, W24s, W35s			
Heathfield Burn	<b>Construction</b>		High	Negligible	Slight/ Negligible
	Hydrology - Culvert construction provides temporary obstruction to hydrological pathways to Hare Moss.	W1s, W17s, W25s			
	Geomorphology - Culverting of existing straightened channel will involve some earthworks, possibly resulting in sediment release and short-term change to morphological diversity and turbidity of the water column.	W1s-W6s, W10s-W17s, W25s, W32s, W36s, W41s, W44s			

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				Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)					
	Water Quality- Potential for small scale spillage of potential pollutants; however this has the potential to impact the moss downstream.	W1s-W17s, W25s, W32s, W36s, W41s, W43s, W44s		Negligible	Slight/ Negligible
	<b>Operation</b>				
	Hydrology – Culverting could impact flow paths and potential flood risk.	W18s, W24s			
	Geomorphology – Change to flow and sediment regime as a result of culvert.	W18s, W24s			
	Water Quality - No outfall planned therefore small impact as a result of diffuse pollution and culvert blocking light. - Infiltration to groundwater may occur.	W18s, W24s, W35s			
Hare Moss	<b>Construction</b>		High	Negligible	Slight/ Negligible
	Hydrology – Culverting of 3 burns which provide hydraulic connectivity to the moss may disrupt flow paths.	W1s, W17s, W25s			
	Geomorphology – not applicable	n/a			
	Water Quality – Potential indirect pollution from feeder burns during works and construction of outfall at Jameston Ditch.	W1s-W17s, W19s-W22s, W25s, W28s, W32s, W38s, W39s, W41s, W43s, W44s			
	<b>Operation</b>				
	Hydrology – Indirectly affected through disturbance of water balance of hydrological inputs in the area.	W18s, W24s, W28s			
	Geomorphology – not applicable	n/a			
	Water Quality - Introduction of polluted water from hydrological inputs of Moss especially due to the direct outfall to Jameston Ditch. Infiltration to groundwater may occur.	W18s-W22s, W24s, W28s, W35s			
Whitestone Burn	<b>Construction</b>		Low	Negligible	Slight/ Negligible
	Hydrology - Changes to the discharge regime as a result of extent and duration of works.	W1s, W11s, W17s, W25s,			
	Geomorphology - Culverting of existing straightened channel will involve some earthworks, possibly resulting in sediment release and short-term change to morphological diversity and turbidity of the water column.	W1s-W6s, W10s-W17s, W25s, W32s, W36s, W41s, W44s			

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				Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)					
	Water Quality – Potential for small scale spillage of potential pollutants.	W1s-W17s, W25s, W32s, W36s, W41s, W43s, W44s		Negligible	Negligible
	<b>Operation</b>				
	Hydrology – Culverting and realignment will impact flow paths and potential flood risk.	W18s, W24s			
	Geomorphology – Minimal change to flow and sediment regime as a result of culvert.	W18s, W24s			
	Water Quality - No outfall planned therefore small impact as a result of diffuse pollution.	W18s, W24s			
Burnhead Burn	<b>Construction</b>		High	Negligible	Slight/ Negligible
	Hydrology - Changes to the discharge regime as a result of extent and duration of works	W1s, W11s, W17s, W25s, W30s			
	Geomorphology - Extensive culverting and realignment will involve major earthworks, possibly resulting in sediment release and straightening of the channel, leading to loss of morphological diversity and increasing short-term suspended solid loads possibly impacting the downstream SAC.	W1s-W6s, W10s- W17s, W21s, W25s, W30s, W32s-W34s, W36s, W38s, W39s, W41s, W44s			
	Water Quality – Construction of a culvert, realignment and an extensive outfall may increase risk of accidental spills/pollution due to amount of major construction activity near watercourse.	W1s-W17s, W21s, W25s, W30s, W32s- W34s, W36s, W38s, W39s, W41s, W43s, W44s			
	<b>Operation</b>				
	Hydrology - Road run-off outfall and realignment has the potential to change discharge regime leading to siltation and the requirement for dredging. - Potential flood risk to properties as a result of potential blockage of the new culvert.	W18s, W19s, W24s, W30s			
	Geomorphology – Long term decreased geomorphological diversity due to burn realignment, with culverting.	W18s, W19s, W20s, W22s, W24s, W30s		Negligible	Slight/ Negligible

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				Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)					
	Water Quality - Sediment loaded untreated road run-off, soluble and insoluble pollution may occur and increased risk from accidental spillage likely as a result of traffic volumes. - Length of culvert likely to impact on water quality due to lack of light. - Infiltration to groundwater may occur.	W18s, W19s, W20s, W22s, W24s, W30s, W35s			
Blakiewell Burn	<b>Construction</b>		High	Negligible	Slight/Negligible
	Hydrology – Bridge construction will have short term impact on surface water and flood risk.	W1s, W23s			
	Geomorphology - Bridging will involve extensive earthworks, possibly resulting in sediment release, leading to short term increase to suspended sediment loads and turbidity within the channel. Geomorphological diversity likely to be reduced.	W1s-W6s, W10s- W16s, W23s, W33s, W34s, W36s,			
	Water Quality – Sediment loads and turbidity in the channel decreases water quality. Infiltration to groundwater may occur.	W1s-W16s, W23s, W33s-W36s			
	<b>Operation</b>			Negligible	Slight/ Negligible
	Hydrology - Installation of a bridge may result in an increased discharge to the burn (in addition to upstream proposed outfall).	W23s			
	Geomorphology – Increased discharge will change sediment regime and erosion/deposition patterns impacting upon the turbidity.	W23s			
Water Quality – Increased turbidity will impact on water quality of the channel and perhaps the downstream SAC.	W23s				
Kingcausie Burn	<b>Construction</b>		High	Low	Moderate
	Hydrology – Changes to the discharge regime as a result of extent and duration of works.	W1s, W11s, W17s, W25s			
	Geomorphology – Extensive culverting and realignment will involve earthworks, possibly resulting in sediment release and straightening of the channel, leading to loss of morphological diversity and short-term increase in suspended solid loads.	W1s-W6s, W10s- W17s, W25s, W32s- W34s, W36s, W41s, W44s			
	Water Quality – Potential risk of accidental spillage of pollutants due to the length of works in close proximity to the watercourse.	W1s-W17s, W25s, W32s-W34s, W36s, W41s, W43s, W44s			
<b>Operation</b>		Negligible	Slight/Negligible		
Hydrology – Culverting and realignment will impact flow paths and potential flood risk.	W18s, W24s, W37s				

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				Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)					
	Geomorphology - Long-term decreased morphological diversity due to long section of culverting and proposed realignments which straighten the channel reducing sinuosity and decrease morphological diversity in close proximity to the SAC. - Change to discharge regime due to shortening realignment may lead to localised siltation or erosion.	W18s, W24s, W35s, W37s			
	Water Quality - Length of culvert may impact on water quality due to lack of light. Infiltration to groundwater may occur.	W18s, W24s, W35s, W37s			
Cumulative Impacts on Crynoch Burn	<b>Construction</b> Overall – Potential release of sediment and pollutants during works from burns draining into Crynoch Burn (Burnhead, Blakiewell and Kingcausie).	W1s-W17s, W21s, W23s, W30s, W32s- W34s, W36s, W38s, W39s, W41s, W43s, W44s	High	Negligible	Slight/ Negligible
	<b>Operation</b> Overall - Drainage outfall to Burnhead Burn is likely to release sediment and pollutants which may reach Crynoch Burn in lesser quantities, therefore reducing impact on water quality and geomorphology with distance.	W18s, W23s, W30s			
River Dee	<b>Construction</b> Hydrology – Impacts due to amount and duration of works required on floodplain.	W1s, W23s, W31s	High	Negligible	Slight/ Negligible
	Geomorphology - Bridging will involve extensive earthworks, possibly resulting in sediment release leading to short term increase to suspended sediment loads and turbidity.	W1s-W6s, W10s- W16s W23s, W31s, W33s, W34s, W36s, W38s, W39s,			
	Water Quality- Bridging across an active floodplain likely to impact on water quality through increased sediment supply and turbidity.	W1-W16, W23, W31, W33, W34, W36, W38, W39			
	<b>Operation</b> Hydrology - Potential change to discharge regime due to road run-off outfall. Bridging will cause localised constriction to flow and increased flood risk.	W19s, W23s, W31s			
	Geomorphology – High volumes of fine sediment potentially deposited in the river, increasing turbidity and disrupting current morphological forms.	W19s, W20s, W22s, W23s, W31s			

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				Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)					
	Water Quality - Sediment loaded untreated road run-off, soluble and insoluble pollution may occur - Increased risk from accidental spillage likely as a result of traffic volumes. - Infiltration to groundwater may occur.	W19s-W23s, W31s, W35s			
Milltimber Burn	<b>Construction</b>		Low	Negligible	Negligible
	Hydrology – Impact due to culverting and associated realignment.	W1s, W17s, W25s			
	Geomorphology - Culverting of existing straightened channel will involve some earthworks, possibly resulting in sediment release and short-term change to morphological diversity and turbidity of the water column.	W1s-W6s, W10s- W17s, W25s, W32s, W36s, W41s, W44s			
	Water Quality- Potential for small scale spillage of potential pollutants.	W1s-W17s, W25s, W32s, W36s, W41s, W43s,W44s			
	<b>Operation</b>			Negligible	Negligible
	Hydrology – Impact due to culverting and realignment of already straightened channel.	W18s, W24s			
	Geomorphology - Minimal change to flow and sediment regime as a result of culvert and associated realignment.	W18s, W24s			
Water Quality - No outfall planned therefore only impacted as a result of diffuse pollution. Infiltration to groundwater may occur.	W18s, W24s, W35s				
Culter House Burn	<b>Construction</b>		Low	Negligible	Negligible
	Overall - Watercourse to be re-directed into pre-earthworks drainage design. Release of fine sediment or construction pollutants may occur.	W1s-W17s			
	<b>Operation</b>			Negligible	Negligible
	Overall - Entire section of watercourse to be filled in.	n/a			
Beans Burn	<b>Construction</b>		Low	Negligible	Negligible
	Overall – A section of the watercourse downstream of the proposed road may be lost through re-direction. Release of fine sediment or construction pollutants may occur.	W1s-W17s			
	<b>Operation</b>			Negligible	Negligible
	Overall - A section of the watercourse downstream of road may be lost.	n/a			
Upper Beanshill Burn	<b>Construction</b>		Low	Negligible	Negligible
	Overall – A section of the watercourse downstream of the proposed road may be lost through re-direction. Release of fine sediment or construction pollutants may occur.	W1s-W16s			

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				Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)					
	<b>Operation</b>				
	Overall – A section of the watercourse downstream of road may be lost.	n/a		Negligible	Negligible
Gairm Burn	<b>Construction</b>		Medium	Negligible	Negligible
	Hydrology – Short-term constriction of flows and alteration of pathways.	W1s, W17s, W25s, W26s			
	Geomorphology - The construction of an extensive outfall, culvert and realignment will involve major earthworks, possibly resulting in sediment release, leading to loss of morphological diversity and increasing short-term suspended solid loads.	W1s-W6s, W10s-W17s, W21s, W25s, W26s, W32s, W36s, W38s, W39s, W41s, W44s			
	Water Quality- Increased risk of accidental spills/pollution due to amount of major construction activity near watercourse.	W1s-W17s, W21s, W25s, W26s, W32s, W36s, W38s, W39s, W41s, W43s, W44s			
	<b>Operation</b>				
	Hydrology - Potential change to discharge regime due to road run-off outfall, culvert and realignment.	W18s, W19s, W24s, W26s, W40s, W42s			
	Geomorphology - Road run-off discharge to the burn may lead to siltation and scouring of bed and banks.	W18s-W22s, W24s, W26s			
Water Quality - Sediment loaded untreated road run-off, soluble and insoluble pollution may occur and increased risk from accidental spillage likely as a result of traffic volumes. - Infiltration to groundwater may occur. - Length of culvert may impact upon water quality due to lack of light.	W18s-W22s, W24s, W26s, W35s				
Moss of Auchlea Drainage System	<b>Construction</b>		High	Negligible	Slight/ Negligible
	Hydrology – Changes to the discharge regime as a result realignments and culverting.	W1s, W17s, W25s			
	Geomorphology - Culverting of existing straightened channel will involve some earthworks, possibly resulting in sediment release and short-term change to morphological diversity and turbidity of the water column.	W1s-W6s, W10s-W17s, W25s, W32s, W36s, W41s, W44s			
	Water Quality - Potential for small scale spillage of pollutants, which has the potential to impact the moss downstream.	W1s-W17s, W25s, W32s, W36s, W41s, W43s, W44s			
	<b>Operation</b>				
Hydrology – Culvert will potentially cause localised constriction of flow and flood risk.	W18s, W24s		Negligible	Slight/ Negligible	



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				Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)					
	Geomorphology – realignment may cause slight increase in channel gradient and decrease in bank height.	W18s, W24s			
	Water Quality - No outfall planned therefore only impacted as a result of diffuse pollution. Infiltration to groundwater may occur.	W18s, W24s, W35s			
Moss of Auchlea	<b>Construction</b>		High	Negligible	Slight/ Negligible
	Hydrology – Disturbance to surface water pathways feeding into the moss during works	W1s, W17s, W25s, W36s			
	Geomorphology – not applicable	N/A			
	Water Quality - Culverting provides high potential for pollution of the moss.	W1s-W16s, W36s			
	<b>Operation</b>				
	Hydrology - There are no direct hydrological impacts to the Moss of Auchlea assuming that the catchment area draining to the burn is maintained. The culvert on the Moss of Auchlea drainage system allows connectivity of the moss to the catchment area upstream of the road.	W18s, W24s, W40s, W42s			
	Geomorphology – not applicable	n/a			
Water Quality - No outfall planned therefore only impacted as a result of diffuse pollution. Infiltration to groundwater may occur.	W35s		Negligible	Slight/ Negligible	
Westholme Burn	<b>Construction</b>		Low	Negligible	Negligible
	Hydrology – Potential change to discharge regime during outfall construction.	W1s, W27s			
	Geomorphology - The construction of an extensive outfall will involve major earthworks, possibly resulting in sediment release, leading to loss of morphological diversity and increasing short-term suspended solid loads possibly impacting the downstream fisheries designated river.	W1s-W6s, W10s-W16s, W21s, W27s, W36s, W38s, W39s, W44s			
	Water Quality- Construction of an extensive outfall may increase risk of accidental spills/pollution due to amount of major construction activity near watercourse.	W1s-W16s, W27s, W36s, W38s, W39s, W44s			
	<b>Operation</b>				
	Hydrology - Potential change to discharge regime due to road run-off outfall.	W19s, W20s, W22s, W27s, W40s, W42s			
	Geomorphology - Road run-off discharge to the burn may lead to siltation and changes in channel morphology.	W19s, W20s, W22s, W27s			
Water Quality - Sediment loaded untreated road run-off, soluble and insoluble pollution may occur. - Increased risk from accidental spillage likely as a result of traffic volumes.	W19s, W20s, W22s, W27s		Low	Negligible	

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			Magnitude	Significance
<b>Ecology and Nature Conservation (Chapter 25)</b>				
See Table 35.2				
<b>Landscape (Chapter 26)</b>				
<b>Directly Affected Areas</b>				
<u>Open Farmland : Loirston (ch 206100-207200)</u> <ul style="list-style-type: none"> <li>• A90/A956 Corridors</li> <li>• Loirston Loch</li> <li>• Scattered Settlement and local access routes</li> <li>• Farmland</li> </ul>	L1s-L10s, L11s-L21s			Slight to Moderate
		Low	Low	
		Low/Medium	Low	
		Low/Medium	Medium	
<u>Wooded Farmland: Duffs Hill (ch205200-206100)</u> <ul style="list-style-type: none"> <li>• All areas</li> </ul>	L1s-L10 s,L22s	Low	Medium	Slight
<u>Open Farmland: Hare moss (ch202200-2052000)</u> <ul style="list-style-type: none"> <li>• Hare moss</li> <li>• Open rural landscape</li> <li>• Sattered dwellings and farms</li> </ul>	L1s-L10s, L23s-L32s			Moderate to Substantial
		Medium	Medium	
		High	High	
<u>Open Farmland: Merchants Croft (ch201100-202200)</u> <ul style="list-style-type: none"> <li>• All areas</li> </ul>	L1s-L10s, L33s-L35s	Medium	Medium	Moderate
<u>Open Farmland: Blaikiewell (ch200000-201100 and 100000-100100)</u> <ul style="list-style-type: none"> <li>• All areas</li> </ul>	L1s-L10s, L36s-L42s	Medium to High	Medium to High	Moderate to Substantial
<u>Hill: Craiangles (ch101100-101400)</u> <ul style="list-style-type: none"> <li>• All areas</li> </ul>	L1s-L10s, L43s-L47s	High	Medium	Substantial
<u>Wooded Farmland: Netherly / Altries (ch101400-101900)</u> <ul style="list-style-type: none"> <li>• All areas</li> </ul>	L1s-L10s, L48s-L49s	High	Medium	Moderate to Substantial
<u>Valley Type: Dee Valley (ch101900-102800)</u> <ul style="list-style-type: none"> <li>• All areas</li> </ul>	L1s-L10s, L50s-L52s	High	Medium to High	Substantial to Severe
<u>Urban Type: Milltimber (ch102800- 10,600)</u> <ul style="list-style-type: none"> <li>• All areas</li> </ul>	L1s-L10s, L53s-L55s	Medium to High	Medium to High	Substantial to Severe
<u>Wooded Farmland Type: Craigton (ch103600-104400)</u> <ul style="list-style-type: none"> <li>• All areas</li> </ul>	L1s-L10s, L56s-L58s	Medium to High	Medium to High	Moderate
<u>Hill Type: Beanshill (ch104400-106000)</u> <ul style="list-style-type: none"> <li>• North of Beanshill</li> <li>• Agricultural land south of Beanshill</li> </ul>	L1s-L10s, L59s-L63s			Substantial
		Medium	High	
		Medium	High	

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			Magnitude	Significance
<u>Wooded Farmland Type: Broomfold (ch106000-107700)</u> <ul style="list-style-type: none"> <li>West of Bishops Court</li> <li>Silverburn</li> </ul>	L1s-L10s, L64s-L68s	Low	Low	Moderate
		High	High	
<u>Hill Type: Fifeshill (ch 107700-108500)</u> <ul style="list-style-type: none"> <li>Kingshill Wood coniferous plantation</li> <li>Farmland on lower slopes of Kingshill</li> </ul>	L1s-L10s, L69s-L72s	Low to Medium	High	Substantial
		Low to Medium	High	
<u>Hill Type: Auchlea (ch107700-108500)</u> <ul style="list-style-type: none"> <li>All areas</li> </ul>	L1s-L10s, L69s-L72s	Low to Medium	Medium	Moderate
<u>Open Farmland Type: Clinterly / West Brimmond (ch108500-109000)</u> All areas	L1s-L10s, L70s-L73s	Low to Medium	Medium to High	Moderate to Substantial
<u>Wooded Farmland Type: Kingswells (ch109000-111300)</u> <ul style="list-style-type: none"> <li>Kingswells Bypass road corridor</li> <li>Woodland and farmland west of Kingswells Bypas</li> </ul>	L1s-L10s, L74s-L80s	Low	Medium	Moderate
		Medium to High	High	
<b>Indirectly Affected Areas</b>				
<u>Hill: Kincorth Hill</u> <ul style="list-style-type: none"> <li>All areas</li> </ul>	L1s-L10s	Medium to High	Low	Negligible
<u>Open Farmland: Den of Leggart</u> <ul style="list-style-type: none"> <li>All areas</li> </ul>	L1s-L10s	Medium	Low	Slight to Negligible
<u>Hill: Greenhowe</u> <ul style="list-style-type: none"> <li>All areas</li> </ul>	n/a	Low to Medium	No change	None
<u>Hill: Lochend</u> <ul style="list-style-type: none"> <li>All areas</li> </ul>	L1s-L10s	Medium	Low	Negligible
<u>Coast: Kincardine Cliffs</u> <ul style="list-style-type: none"> <li>All areas</li> </ul>	n/a	Medium	No change	None
<u>Wooded Farmland: Auchlunies</u> <ul style="list-style-type: none"> <li>All areas</li> </ul>	L1s-L10s	Low to Medium	Low	Slight to Negligible
<u>Hill: Clochandighter</u> <ul style="list-style-type: none"> <li>All areas</li> </ul>	L1s-L10s	Low to Medium	Low	Negligible
<u>Urban: Badentoy Park</u> <ul style="list-style-type: none"> <li>All areas</li> </ul>	n/a	Low	No change	None

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			Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)				
<u>Recreation: Portlethen Golf Course</u> • All areas	n/a	Low to Medium	No change	None
<u>Urban Type: Portlethen</u> • All areas	n/a	Low to Medium	No change	None
<u>Hill: Stranog</u> • All areas	L1s-L10s	Medium to High	Low	Slight
<u>Open Farmland Type: Craiglug</u> • All areas	n/a	Low to Medium	No change	None
<u>Wooded Farmland Type: Normandykes</u> • All areas	n/a	Low to Medium	No change	None
<u>Urban Type: Peterculter</u> • All areas	n/a	Low to Medium	No change	None
<u>Wooded Farmland: Murtle</u> • All areas	n/a	Medium	No change	None
<u>Open Farmland: Anguston</u> • All areas	L1s-L10s	Low to Medium	Low	Negligible
<u>Open Farmland: Westfield</u> • All areas	n/a	Low to Medium	No change	None
<u>Wooded Farmland: Countesswells</u> • All areas	n/a	Low to Medium	No change	None
<u>Wooded Farmland: Hazelhead</u> • All areas	n/a	Low to Medium	No change	None
<u>Recreation: Hazelhead Golf Course</u> • All areas	n/a	Low to Medium	No change	None
<u>Open Farmland: Kingshill / Bogskeathy</u> • All areas	n/a	Low to Medium	No change	None
<u>Open Farmland: Maidencraig</u> • All areas	n/a	Low to Medium	No change	None
<u>Urban Type: Kingswells</u> • All areas	L1s-L10s	Medium	Low	Slight
<u>Open Farmland: Greenferns (assessed with Northern Leg)</u> • All areas	n/a	Low to Medium	No change	None

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			Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)				
Hill Type: Brimmond Hill (assessed with Northern Leg) <ul style="list-style-type: none"> <li>All areas</li> </ul>	L1s-L10s	Medium	Low	Negligible
<b>Visual (Chapter 27)</b>				
Overall impact from Southern Leg of the new road across open farmland in winter year of scheme opening: <u>Built receptors</u> : 782 receptors affected by moderate or greater adverse impact <u>Outdoor receptors</u> : 174 receptors affected by moderate or greater adverse impact	L1s-L10s & V1s, V2s	n/a	Various magnitude dependant of a variety of factors	<u>Built receptors</u> : 436 affected by moderate or greater impact <u>Outdoor receptors</u> : 137 affected by moderate or greater impact
<b>Cultural Heritage (Chapter 28)</b>				
Removal of known and unknown remains of cultural heritage significance.	CH1s, CH2s, CH3s, CH4s	Less than Local – National	Low - Medium	None - Slight
Visual impact on known site of cultural heritage significance.	CH5s	Low - High	Unknown	Unknown
<b>Air Quality (Chapter 29)</b>				
Change in annual mean nitrogen dioxide concentrations at 202 sample properties within 500m of the Southern Leg	n/a	High	Increase in NO <sub>2</sub> (number of sample properties in brackets):  Extremely small (5) Very small (6) Small (11) Medium (5) Large (15) Very large (129)	Negligible (11) Slight (31) Moderate (129)

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			Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)			Reduction in NO <sub>2</sub> (number of sample properties in brackets):  Extremely small (6) Very small (9) Small (10) Medium (5) Large (1)	Negligible (15) Slight (16)
Change in annual mean PM <sub>10</sub> concentrations at 202 sample properties within 500m of the Southern Leg	n/a	High	Increase in Annual Mean PM <sub>10</sub> (number of sample properties in brackets):  Extremely small (13) Very small (50) Small (78) Medium (27) Large (13)	Negligible (61) Slight (116) Moderate (4)
			Reduction in Annual Mean PM <sub>10</sub> (number of sample properties in brackets):  Extremely small (13) Very small (8)	Negligible (16) Slight (5)
Change in the number of exceedences of 50 µg/m <sup>3</sup> as a 24-hour PM <sub>10</sub> concentration at 202 sample properties within 500m of the Southern Leg	n/a	High	Change in number of exceedences: No change (202)	No change (202)

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			Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)				
<b>Traffic Noise and Vibration, (Chapter 30)</b>				
At ground floor level within 300m, 177 properties would experience a residual significance of Moderate adverse or worse at the design year.	N1s (generic) N2s (generic) N3s – N22s (specific receptors)	High	Low-High	Moderate - Substantial
At first floor level within 300m, 175 properties would experience a residual significance of Moderate adverse or worse at the design year.	N1s (generic) N2s (generic) N3s – N22s (specific receptors)	High	Low-High	Moderate - Substantial
Properties expected to experience $L_{A10(18hr)} > 59.5\text{dB}$ , with an unmitigated impact significance of Moderate Adverse or worse at ground floor, where the mitigation threshold of 59.5dB can be achieved by the installation of noise barriers.				
Newtonsyde & Novara, Nigg	N3s	High	High	Moderate/Substantial
Midfield Cottage, Portlethen	N4s	High	High	Substantial
Heatherknowe, Blairs	N5s	High	High	Substantial
Whitestones, Blairs	N6s	High	High	Substantial
Blair-Crynoch, Blairs	N7s	High	High	Substantial
Eastlands (Eastland Cottage and Eastland House), Maryculter	N8s	High	High	Substantial
Corbie Lodge and Corbie Lynn, Maryculter	N9s	High	High	Moderate/ Substantial
Camphill, Milltimber, AB13 0AP and The Gables, Milltimber	N10s	High	High	Substantial
Approx 10 properties (Milltimber Brae/Culterhouse Rd/North Deeside Rd)	N11s	High	Low	Moderate
Hillview	N12s	High	High	Substantial
Gairmpark	N13s	High	High	Substantial
East Silverburn	N14s	High	High	Substantial
Craiglug, Brackendale and Aonachrigh	N15s	High	High	Substantial
Moss-side of Auchlea (incl Kingswood Learning Centre)	N16s	High	High	Substantial
Tigh-na-braich	N17s	High	High	Substantial
Benview and Lythewood	N18s	High	High	Substantial
Westholme	N19s	High	High	Substantial

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			Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)				
West Hatton and Highfield	N20s	High	High	Substantial
The Steadings and Woodside of Cloghill	N21s	High	High	Substantial
The Coach House and Bonvista	N22s	High	High	Substantial
<b>Pedestrians, Cyclists, Equestrians and Community Effects (Chapter 31)</b>				
<b>Journey Length</b>				
C34K: Hilldownie-Causeyport Road will be closed. The AWPR Southern leg will dissect the road 150m north of the U58K.	P2s, P5s	High	Minor Negative	Slight
U59K: The road will be closed. The AWPR will dissect the road just north of Bishopton Farm, closing access to vehicles.	P2s, P5s	Low	Moderate Negative	Slight
Sunnyside Steading access track: The track will be closed. The AWPR will dissect the track just north of Sunnyside Steading.	P4s, P5s	High	Minor Beneficial	Slight Beneficial
Merchant's Croft access track: The track will be closed. The AWPR will dissect the track 150m west of the C30K.	P4s, P5s	High	Negligible Adverse	Slight
Whitestone track: The track will be closed. The AWPR will dissect the track 100m east of Whitestone.	P4s, P5s	High	Moderate Adverse	Moderate
Blaikiewell Farmhouse track (east): The track will be closed.	P5s	High	Major Adverse	Major
Boundary track in Cleanhill Wood: The track will be closed as the AWPR will dissect it in two locations.	P4s, P5s	High	Negligible Beneficial	Slight Beneficial
Eastland track: The track will be closed.	P2s, P4s, P5s	High	Negligible Adverse	Slight
Mitchell Farm access track (south): The track will be closed.	P2s, P4s, P5s	High	Moderate Adverse	Slight
Mitchell Farm access track (north): The track will be closed.	P2s, P4s, P5s	High	Major Adverse	Moderate
Old Deeside Line ROW (GC45): The AWPR will dissect the ROW east of Milltimber Farm.	P5s	High	Negligible Adverse	Slight
Culter House access road: Culter House access road will be closed.	P4s, P5s	Very High	Minor Adverse	Moderate
Culter House Road: Culter House Road will be closed.	P4s, P5s	Very High	Major Adverse	Major
Upper Beanshill track/ROW across Contlaw Road (GC46): The AWPR will dissect the path/ROW.	P4s, P5s	High	Negligible Adverse	Slight
Gairn Farm access track: The track will be closed.	P2s, P5s	High	Moderate Adverse	Slight
Track from Kingshill Wood to Moss of Auchlea: The path will be closed.	P2s, P5s	High	Major Adverse	Moderate
Short ROW (GC23) joining the two other ROWs: from A944 (East Kingsford) south to Kingshill Wood (GC25), and A944 (West Kingsford) to Auchlea (GC22): The path will be closed. The AWPR will dissect the path 100m west of Ben View.	P2s, P5s	High	Major Adverse	Major
ROW (GC25) from A944 (East Kingsford) south to Kingshill Wood: The path will be closed. The AWPR will dissect the path between Hillview and Ben View.	P2s, P5s	High	Major Adverse	Major



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			Magnitude	Significance
Note: these are potential environmental impacts (i.e. before specific mitigation)				
A944: The AWPR will intersect the A944 100m east of Kingsford Industrial Estate. The AWPR mainline will be taken under the A944, and a new roundabout will allow traffic to access the AWPR from the A944.	P3s, P4s, P5s	Low	Negligible Adverse	Negligible
Road from A944 past East Kingsford Cottage to West Hatton Croft: The road will be closed.	P3s, P5s	High	Moderate Adverse	Moderate
Consumption Dyke track to West Hatton Croft: The track will be closed. The AWPR will cross the track 100m north east of Highfield Farm.	P2s, P4s, P5s	High	Major Adverse	Moderate
Access track to Denhead of Cloghill from West Hatton: The track will be closed.	P2s, P4s, P5s	Medium	Minor Adverse	Slight
Track along the bottom of Cloghill, north of Denhead of Cloghill: The track will be closed. The AWPR will cross the track at Cloghill.	P2s, P4s, P5s	High	Negligible Adverse	Slight
Access road to Woodside of Cloghill: The road will be closed.	P2s, P4s, P5s	Medium	Major Adverse	Moderate
Track to the north of Woodside of Cloghill ad to the northeast of Fairly Home Farm: The track will be closed.	P2s, P4s, P5s	Medium	Major Adverse	Moderate
Track from Fairley House to Brimmond Hill: The track will be closed.	P2s, P4s, P5s	High	Negligible Beneficial	Slight Beneficial
Track from Derberth Farm to Hillhead of Derberth: The track will be closed.	P2s, P4s, P5s	High	Moderate Adverse	Slight
<b>Amenity Value</b>				
Old Stonehaven Road (U168K)	P6s	High	n/a	Negligible
Hilldowntree - Causeyport Road (C34K)	P7s	High	n/a	Negligible
C5K Lochton-Nigg Auchlunies Road	P7s	High	n/a	Moderate
Blaikiewell Road (U63K)	P7s	High	n/a	Moderate
B9077 South Deeside Road	P7s	High	n/a	Slight
North Deeside RoW (GC40)	n/a	High	n/a	Moderate
Mitchell Farm access track (south)	n/a	High	n/a	Moderate
Milltimber Brae Road	P6s, P7s	High	n/a	Negligible
A93 (North Deeside Road)	P6s	High	n/a	Slight
Culter House access road	P6s, P7s	High	n/a	Moderate
Contlaw Road	P7s	High	n/a	Slight
Silverburn Road (C127)	P7s	High	n/a	Moderate
Track from Kingshill Wood to Moss of Auchlea	P7s	High	n/a	Slight
A944: Pedestrians and cyclists will need to negotiate the new roundabout.	P6s	High	n/a	Moderate
Track along the bottom of Cloghill, north of Denhead of Cloghill	n/a	High	n/a	Moderate
Track from Fairley House to Brimmond Hill	P7s	High	n/a	Negligible

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			Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)				
<b>Community Severance</b>				
Redwing Livery Yards and Blaikiewell Animal Sanctuary	P5s	Negligible	n/a	Slight
Redwing Riding School (Eastland Lodge)	P5s	Negligible	n/a	Slight
Kirkton of Maryculter Cemetery and Kirkton and Cookney Parish Church	n/a	Very High	n/a	Negligible Beneficial
Storybook Glen Theme Park	n/a	Negligible	n/a	Negligible Beneficial
Corbie Park Playing Fields	n/a	Very High	n/a	Negligible Beneficial
Corbie Hall (also known as Maryculter Community Hall)	n/a	Very High	n/a	Negligible Beneficial
Peterculter community facilities	P4s, P5s	Very High	n/a	Severe
Milltimber community facilities	P4s, P5s	Very High	n/a	Severe
Nether Beanshill Livery Yard	n/a	Negligible	n/a	Slight
East Brotherfield Livery Yard	n/a	Negligible	n/a	Slight
Kingswood Learning Enhancement Centre	P5s	Negligible	n/a	Slight
Ardene House Veterinary Hospital	n/a	Negligible	n/a	Slight
Five Mile Petrol Station & Garage	n/a	Negligible	n/a	Slight
East Kingsford Livery Yard	n/a	Negligible	n/a	Slight
Friends Burial Ground	P5s	High	n/a	Slight
Denburn Stud Farm and Livery	P2s, P5s	High	n/a	Slight
Kingswells community facilities	P2s, P5s	Very High	n/a	Moderate
Westhill community facilities	n/a	Very High	n/a	Negligible
Relocation of the bus stops from the A90 to the A90 slip road at the Charleston Junction	P5s, P6s	Very High	n/a	Slight Beneficial
<b>Vehicle Travellers (Chapter 32)</b>				
Views from the AWPR will offer significant change to those currently available from the A90(T). Sections for the route will offer attractive open views across the rolling countryside around Aberdeen, which will become more enclosed as proposed planting matures. The journey will provide a more pleasant experience for drivers than the generally enclosed urban journey through Aberdeen.	L1s-L10s & VT1s, VT2s	n/a	<u>Significance not assessed. Impacts considered as % and type of view:</u> <i>No View:</i> 25.2% of views in winter year of opening increasing to 38.9% in summer 15 years after. <i>Restricted View:</i> 24.8% of views in winter year of opening reducing to 18.1% in summer 15 years after. <i>Intermittent View:</i> 17.5% of views in winter year of opening increasing to 33.3% in summer 15 years after. <i>Open View:</i> 32.5% of views in winter year of opening reducing to 9.7% in summer 15 years after.	
Changes to driver stress levels: main sections of road network where driver stress levels are predicted to decrease due to the proposed scheme.	VT2s	n/a	Key predicted driver stress decreases: • The A90(T) Charleston to Bridge of Dee (Moderate to Low).	

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			Magnitude	Significance
			<ul style="list-style-type: none"> <li>• The A944 Aberdeen to Westhill Road westbound (west of Kingsford Industrial Estate) (Moderate to Low).</li> <li>• The B979 between A93 and A944 southbound (High to Moderate).</li> <li>•</li> <li>• The B979 between A944 and A96 southbound (High to Moderate).</li> </ul>	
<b>Disruption due to Construction (Chapter 33)</b>				
Damage to land (e.g. due to movement of machinery, storage of materials, access routes).	D1s	See Land Use Impact summary	Not assessed	Not Significant
Dust and emission impacts on arable crop production (e.g. dust covering plant leaves - reducing photosynthesis).	D1s			
Temporary restriction of access to farm buildings and severance of land preventing movement of machinery or livestock.	D2s			
Temporary restriction of access to local business premises.	D3s			
Visual impact of machinery including heavy excavators, earth moving plant, concrete batching plant, pile drivers, cranes etc. Also vehicles moving machinery and materials to and from the site including barges used in bridge construction.	D4s	See Visual Impact summary	Not assessed	Significant adverse landscape and visual impacts possible near construction compounds, major structures and/or earthworks. Precise details of construction programme and approach required for full assessment
Visual impact of site compound areas including site accommodation and parking.	D4s			
Visual impact of construction works including structures, earthworks, road surfacing and ancillary works, temporary soil storage heaps, night-time working and construction material stockpiles.	D4s			
Generation of dust. A risk of soiling 1270 properties within 500m of the proposed length of the Southern Leg. A risk of enhanced PM <sub>10</sub> concentrations for 320 properties within 200m of the proposed length of the Southern Leg.	D5s, D6s	High	Large	Moderate
Construction related vehicle emissions.	D5s, D6s	High	Very Small	Negligible
Increased noise and vibration levels to properties nearby to construction works.	D7s	High	Not assessed	Adverse impacts likely at several properties close to the works

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			Magnitude	Significance
Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)				
Temporary obstruction of routes used by pedestrians and others due to construction activities.	D8s	See Pedestrian Impact summary	Not assessed	Short-term adverse impacts likely on some routes
Increases to driver stress (e.g. due to increased journey times, diversions, queuing traffic).	D9s, D10s	Not assessed	Not assessed	Not significant
<b>Policies and Plans (Chapter 34)</b>				
Refer to Policy Summaries (Tables 34.3 to 34.6 in Chapter 34)				

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**Table 35.2: Environmental Impact Table, Ecology and Nature Conservation (Chapter 25)**

Impact Description		Mitigation Item Number (refer to Chapter 21)	Sensitivity/value of Receptor	Residual Impact (i.e. <i>with</i> mitigation)	
				Magnitude	Significance
<b>Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)</b>					
<b>Ecology and Nature Conservation (Chapter 25)</b>					
<b>Section SL1 Predicted Construction Impacts on Habitats and Species</b>					
Terrestrial Habitats	Blue Hill Woods (S3) - Severance and fragmentation of woodland habitats on either side of route. Disturbance and pollution impacts to adjacent habitats.	E1s – 2s, E9s – 10s, E14s – 15s	County	Low negative	Minor
	Hare Moss (S10) - Potential hydrological damage to bog habitats due to disruption of drainage and site hydrology. Potential damage to sensitive bog habitats from pollution and disturbance during construction.		Regional	Negligible	Negligible
Bat	Lochview Croft (S2) - Increased disturbance to roost due to noise.	E1s-E7s, E10s, E12s- E15s	Regional	Low negative	Minor
	Hare Moss, agricultural fields around Sunnyside to Causeyport (S10, S13) - Habitat loss, fragmentation and severance of commuting and foraging routes adjacent to Hare Moss cottages.		County	Low negative	Minor
	Agricultural fields around Sunnyside to Causeyport (S13) - Loss of foraging habitat as a result of changes in water regime. Reduced suitability of roost sites.		County	Low negative	Minor
Breeding Birds	Hare Moss Cottages (S10, S13) -, Fragmentation and severance of commuting and foraging routes.	E1s-E7s, E9s, E10s, E14s,E15s, E24s, E26s- E27s, E52s, E54s	County	Low negative	Minor
	Greenhowe Wood (S6) - Potential fragmentation, isolation, disturbance and pollution due to accidental spills.		County	Low negative	Minor
Otters	Loriston Burn and tributary (S2, S4, S5, S6) – Risk of direct mortality and / or disturbance to otters using the burn due to construction.	E1s- E15s, E28s-E33s, E47s, E54s, E79s-E82s	County	Negligible	Negligible
	Burn of Ardoe (S13) - Risk of direct mortality and / or disturbance to otters using the burn due to construction.		County	Low negative	Minor
Wintering Birds	Hare Moss (S10) -Potential pollution of the Burn of Ardoe due to accidental spills.	E1s-E6s, E9s, E10s, E14s,E15s, E25s, E27s, E50s	County	Negligible	Negligible
	Greenhowe Woods (S6) - Fragmentation and isolation, disturbance and potential for pollution to Loirston Burn/Loirston Loch due to accidental spills.		County	Low negative	Minor
<b>Section SL2 Predicted Construction Impacts on Habitats and Species</b>					
Badger	Merchant's Croft Group I (S16) - Scheme would come within 30m of main sett I1 and therefore badgers in the sett are likely to suffer disturbance during the construction period.	E1s – 13s, E15s – 19s, E79s – 82s	County	Low negative	Minor
Bat	Greenloaning (S17) - Demolition of potential roost at Greenloaning resulting in increased risk of potential direct mortality.	E1s – 7s, E9s – 13s, E15s, E20s – 23s	County	Negligible to Low negative	Negligible to Minor

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Impact Description  Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)		Mitigation Item Number (refer to Chapter 21)	Sensitivity/value of Receptor	Residual Impact (i.e. <i>with</i> mitigation)	
				Magnitude	Significance
Breeding Birds	Agricultural fields around Sunnyside to Causeyport and agricultural fields to the east of Burnhead to Greenloaning (S13, S16) -Potential pollution due to accidental spills.	E1s-E7s, E9s, E10s, E14s,E15s, E24s, E26s-E27s	County	Negligible to Low negative	Negligible to Minor
Otter	Burnhead Burn (S16) – Otters may suffer direct mortality or disturbance from construction activities including Cleanhill junction and C5K Overbridge construction.	E1s-E15s, E28s-E33s, E57s, E81s-E82s Refer to Water Environment	County	Negligible	Negligible
Wintering Birds	Bishopston (S13) – Potential pollution of Heathfield Burn and Bishopston Ditch due to accidental spills.	E1s-E6s, E9s, E10s, E14s,E15s, E25s, E27s	County	Negligible	Negligible
	Burnhead (S16) -Potential pollution of Whitestone Burn due to accidental spills.		Local	Negligible	Negligible
Freshwater	Burnhead Burn (S16) – Culverting of existing channel would involve some earthworks, possibly resulting in sediment and/pr other pollution release. This is a particular concern due to the burn’s proximity to the Blaikiewell Burn and the Crynoch Burn. A short –term localised decrease in bankside and in-stream habitat complexity may also occur.	E1s-E6s, E9s, E10s, E12s, E14s, E15s, E40s-E46s Refer to Water Environment	County	Low negative	Minor
<b>Section on SL3 Predicted Construction Impacts on Habitats and Species</b>					
Terrestrial Habitats	Cleanhill Wood (S20) – Severance and fragmentation of blocks adjacent to route, possible loss of status as DWI, disturbance and pollution impacts, including impacts on land drains through forest blocks.	E1s – 2s, E9s– 10s, E14s – 15s	County	Low negative	Minor
	Floodplain and immediate surrounds of Crynoch Burn (north) and Blaikiewell Burn (S22) – Risk of disturbance during construction and hydrological impacts to the wider habitat.		Regional	Low negative	Minor
	Agricultural fields within Kingcausie (S23) – Severance of grassland from other side of route, potential pollution and disturbance to areas adjacent to route.		County	Low negative	Minor
	Kingcausie (S24) – Severance of dry stone wall, severance and fragmentation of habitats adjacent to route, disturbance and pollution impacts at Kingcausie Burn, possible hydrological impacts to wetland within Kingcausie Wood.		County	High negative	Moderate
	Floodplain and immediate surrounds of River Dee (S28) – Potential disturbance and pollution impacts at Kingcausie Burn, possible hydrological impacts to wetland within Kingcausie Wood.		Regional	Negligible	Negligible
	Deeside Old Railway (S31) – Severance of linear features, possible loss of status as DWI, loss of ability to act as wildlife corridor and potential pollution and disturbance impacts.		County	Low negative	Minor

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Impact Description  Note: these are potential environmental impacts (i.e. <i>before</i> specific mitigation)		Mitigation Item Number (refer to Chapter 21)	Sensitivity/value of Receptor	Residual Impact (i.e. <i>with</i> mitigation)	
				Magnitude	Significance
Bats	Kingcausie (S24) – Potential risk of direct mortality due to demolition of currently unsurveyed mature trees at Kingcausie	E1s-E7s, E10s, E12s-E15s	National	Negligible to Low negative	Negligible to Minor
	(S17 – S31) – Potential for disturbance from increased human presence, felling of trees, junction and bridge construction through out whole section. Possible reduction of suitability of roosts located nearby to proposed carriageway.		County	Low negative	Minor
	River Dee (S28) – Potential pollution of the River Dee having an adverse impact on prey species availability.		National	Negligible	Negligible
	Deeside Old Railway (S31) – Severance of foraging and possible commuting route along the Old Deeside Railway.		County	Low negative	Minor
Breeding Birds	River Dee (S27, S28) – Potential pollution to River Dee due to accidental spills.	E1s-E7s, E9s, E10s, E12s, E14s, E15s, E24s, E26s-E27s	County	Negligible to Low negative	Minor
Otter	Blaikiewell Burn (S22) – Otters may suffer direct mortality or disturbance from construction activities including junction and bridge construction: including at potential couch C4 within 100m of the scheme.	E1s- E15s, E28s-E33s, E59s-E61s, E63s, E82s-E83s  Refer to Water Environment	County	Negligible	Negligible
	Blaikiewell Burn (S22) – Severance of commuting routes due to bridge construction.		County	Low negative	Minor
	Kingcausie Burn (S20, S22, S24) –Risk of direct mortality and /or disturbance due to otters using the burn.		County	Negligible	Negligible
	River Dee (S28) – River is used regularly by otters for foraging, commuting and lying up. Couch C12 is directly below the proposed scheme and there are holts within 100m to the east of the scheme. Therefore otters may suffer direct mortality, disturbance and restricted movement up and down the river as a result of construction activities.		International	Negligible	Negligible
	Milltimber Burn (S29, S30) – Risk of direct mortality and / or disturbance to otters using the burn due to construction activities.		County	Negligible	Negligible
	Cleanhill Wood and Kingcausie (S20, S24) – Risk of direct mortality during clearance for construction.	E1s – 10s, E12s, E14s – 15s, E31s – 32s	Regional	Negligible	Negligible

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				Magnitude	Significance
Red Squirrel	Cleanhill Wood and Kingcausie (S20, S24) – Risk of disturbance through increased noise levels and human presence during the construction phase of the scheme. Likely to force red squirrels that are in close proximity to construction works to retreat deer into the woodland.			Low negative	Minor
Freshwater	Blaikiewell Burn (S22) – Bridging of existing channel would involve some earthworks, possibly resulting in sediment and/or other pollution release. This is a particular concern due to the burn's proximity to the Crynoch Burn. A short-term localised decrease in bankside and in-stream habitat complexity may also occur.	E1s-E6s, E9s, E10s, E12s, E14s, E15s, E40s-E46s  Refer to Water Environment	Regional	Low negative	Minor
	Kingcausie Burn (S20, S22, S24) – Culverting and realignment of existing semi-natural channel would involve earthworks, resulting in considerable sediment and / or other pollution release. This is a particular concern due to the burns' proximity to the Crynoch Burn (part of the River Dee SAC).		Regional	Low negative	Minor
	River Dee – (S28) – Bridge construction (and installation of settlement pond discharge pipe) would involve earthworks with associated sediment and other pollution release into the River Dee. Sediment release may directly impact upon the integrity of salmonid spawning areas through the smothering of eggs in the river gravels. There may be noise and vibration issues associated with piling activities which may affect migratory fish, in particular Atlantic salmon, one of the qualifying species for the River Dee SAC		International	Negligible	Negligible
Freshwater Pearl Mussel	Crynoch Burn (F27, S18, S22) – Sedimentation of Crynoch Burn during construction could affect salmonoid populations within the watercourses and may result in mortality ultimately affecting pearl mussel populations.	E1s-E6s, E9s, E10s, E12s, E14s, E15s, E42s-E44s, E46s  Refer to Water Environment	County	Negligible	Negligible
	River Dee (S28) – Construction activities associated with proposed crossing have the potential to affect the freshwater pearl mussel populations directly through sediment release and indirectly through any impacts on salmonid populations.		County	Negligible	Negligible
Wintering Birds	River Dee (S28) - Potential pollution of the River Dee due to accidental spills.	E1s-E6s, E9s, E10s, E14s, E15s, E25s, E27s	County	Negligible	Negligible
<b>Section SL 4 Predicted Construction Impacts on Habitats and Species</b>					
Terrestrial Habitats	Beans Hill north (S39) – Potential impacts to hydrology of heathland habitat during construction.	E1s – 2s, E9s – 10s, E14s – 15s	County	Low negative	Minor



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				Magnitude	Significance
Badger	Milltimber badger Social Group L (S35) – One outlier sett (L3) may (distance dependent) be damaged / lost during works, leading to the possible injury or fatality of badgers in the sett.	E1s-E11s, E14s, E15s, E16s-E19s	County	Negligible	Negligible
Bats	Peterculter and Western Milltimber (S32) – Risk of direct mortality due to demolition of mixed common pipstrelle and brown long-eared bat roost at the International School in Milltimber.	E1s – 13s, E15s– E19s, E79s – 82s	Regional	Negligible to Low negative	Negligible to Minor
Red Squirrel	Guttrie Hill Wood (S34) – Risk of direc mortality during clearance for construction works.	E1s – 10s, E12s, E14s – 15s, E31s – 32s	Regional	Negligible	Negligible
	Guttrie Hill Wood (S34) – Risk of disturbance through increased noise levels and human presence during the construction phase of the proposed scheme. Woodland areas in close proximity to construction works are likely to become less attractive to red squirrels causing them to retreat westwards into the wood.		Regional	Low negative	Minor
<b>Section SL 5 Predicted Construction Impacts on Habitats and Species</b>					
Terrestrial habitats	Rotten O'Gairn (S42) –Potential hydrological impacts during the construction phase.	E1s – 2s, E9 s– 10s, E14s – 15s	County	Low negative	Minor
	Gairnhill and Kingshill Wood (S43) – Risk of hydrological damage to wet woodland during construction		County	Low negative	Minor
	Moss of Auchlea (S45) – Potential hydrological impacts during the construction phase.		Regional	Negligible	Negligible
Badger	Gairnhill badger Social Group N (S43) – Scheme would result in the partial loss / damage of main sett N1 and outlier sett N3, leading to the possible injury or fatality of badgers in the setts.	E1s – E19s, E79s – 82s	Regional	Negligible	Negligible
	Gairnhill badger Social Group N (S43) – Scheme is within 30m of annexe sett N2 and therefore badgers are likely to suffer disturbance during construction and /or possible fatality.		Regional	Low negative	Minor
Bats	(S40-S45) – Fragmentation and isolation between areas of key foraging habitats and roosts between Rotten O'Gairn. East Silverburn Woods and Gairnhill Wood and between Auchlea Moss and Kingshill Wood.	E1s – 7s, E9s – 15s, E20s – 23s	County/ Regional	Low negative	Minor
Breeding Birds	East Silverburn (S42) – Pollution of watercourses within the East Silverburn area due to accidental spills.	E1s-E7s, E9s, E10s, E14s,E15s, E24s, E26s-E27s	County	Negligible to Low negative	Negligible to Minor
Otter	Upper Beanshill Burn (S40, S42, S48) – Risk of direct mortality and / or disturbance to otters using the burn due to construction activities.	E1s- E15s, E28s-E33s, E70s-E71s, E74s, E80s-	County	Negligible	Negligible

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				Magnitude	Significance
	Gairn Burn (S40, S42, S44) – Risk of direct mortality and / or disturbance to otters using the burn due to construction activities.	E81s Refer to Water Environment	County	Negligible	Negligible
	Moss of Auchlea (S45) – Risk of disturbance from construction activities if otters are lying up, breeding or foraging in the Moss.		County	Low negative	Minor
Red Squirrel	Gairnhill Wood and Silverburn Wood (S43, S41) – Risk of mortality during clearance for construction works/	E1s – 10s, E12s, E14s – 15s, E31s – 32s	Regional	Negligible	Negligible
	Gairnhill Wood and Silverburn Wood (S43, S41) – Risk of disturbance through increased noise levels and human presence during the construction phase of the scheme. Likely to force red squirrels that are in close proximity to construction works to retreat deeper into the woodland.		Regional	Low negative	Minor
Wintering Birds	Silverburn (S42) – Potential pollution of Gairn Burn and field drains feeding Upper Beanshill Burn due to accidental spills.	E1s-E6s, E9s, E10s, E12s, E14s, E15s, E25s, E27s	County	Negligible	Negligible
<b>Section SL 6 Predicted Construction Impacts on Habitats and Species</b>					
Terrestrial Habitats	Cloghill (S48) – Loss of farmland habitat, severance from farmland on other side of route and of northern edge of plantation woodland, loss of ability of linear woodland to act as wildlife corridor. Potential pollution and hydrological impacts upon acid grassland pockets. Combined impacts and disturbance to habitats likely to result in loss of designation status of site.	E1s – 2s, E9s – 10s, E14s – 15s	Regional	Low negative	Minor
	West Hatton Wood (S47) – Severance and fragmentation of linear habitat. Also pollution and disturbance impacts likely to be significant during construction.		County	Low negative	Minor
Bats	Woodland at Fairley Home Farm and Derbeth Farm (N3) – Potential for direct mortality due to tree roosts being felled in the tree lines north of Fairley Home Farm.	E1s – 7s, E9s – 15s, E20s – 23s	Regional	Negligible to Low negative	Negligible to Minor
	Woodland at Fairley Home Farm and Derbeth Farm (N3) – Habitat loss due to tree roosts being felled in the tree lines north of Fairley Home Farm.		Regional	Low negative	Minor
	Agricultural fields to the north of the A944, West Hatton Wood, agricultural land around Fairley Home Farm and Derbeth Farm (S46, S47, N3) –Disturbance during felling of West Hatton Wood, Fairley Home Farm Wood and tree lines near Dykeside.		County	Low negative	Minor
	Agricultural fields to the north of the A944, West Hatton Wood, Woodland at Fairley Home Farm and Derbeth Farm (S46, N3) – Severance of important linear connecting habitat restricting accessibility to foraging resources and fragmenting an already small area of optimal foraging and roosting habitat. Therefore reducing viability of supporting foraging and roosting bats in the long term.		Regional / County	Low negative	Minor

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				Magnitude	Significance
Breeding Birds	Agricultural fields North of the A944 and Cloghill (S46, S48) – Potential pollution to Westholme Burn due to accidental spills.	E1s-E7s, E9s, E10s, E14s, E15s, E24s, E26s-E27s	County	Negligible to Low negative	Negligible to Minor
Red Squirrel	Hillhead of Derbeth (N6, N7) – Risk of red squirrel mortality during clearance of woodland for construction works.	E1s – 10s, E12s, E14s – 15s, E31s – 32s	County	Negligible	Negligible
	Hillhead of Derbeth (N6, N7) – Risk of disturbance through increased noise levels and human presence during the construction phase of the scheme. Likely to force red squirrels that are in close proximity to construction works to retreat deeper into the woodland.		County	Low negative	Negligible
Wintering Birds	Cloghill (S46) – Potential pollution to Westholme Burn due to accidental spills.	E1s-E6s, E9s, E10s, E12s, E14s, E15s, E25s, E27s	County	Negligible	Negligible
<b>Section SL1 Predicted Operational Impacts on Habitats and Species</b>					
Terrestrial Habitats	Blue Hill Wood (S3) – Direct habitat loss of woodland and open habitat including loss of quarry pond and associated habitats. The scheme would fragment woodland habitats on either side of the route. Disturbance and pollution impacts to adjacent habitats may also occur.	E1s – 2s, E9s – 10s, E14s – 15s, E47s – 52s	County	Low negative	Minor
	Hare Moss ( S10) – Potential hydrological damage to bog habitats due to disruption of drainage and site hydrology. Potential pollution and disturbance to sensitive bog habitats may also occur during operation.		Regional	Negligible	Negligible
Badger	Greenhowe badger Social Group H (S3, S6) – Increased risk of RTAs, particularly where the proposed scheme crosses actual and probable badger paths at ch205400, ch205700, ch20600 and ch20650.	E1s– 2s, E11s, E14s, E18s, E47s – 48s, E50s, - 51s, E54s, E79s – E82s	County	Negligible	Negligible
	Greenhowe badger Social Group H (S3, S6) – Severance of approximately 50% of badger group's territory, including potential foraging habitat. This is likely to lead to increased territorial conflict with neighbouring social groups.		County	Negligible	Negligible
Bats	Duff's Hill (S7) – Potential risk of direct mortality along edges of Duff's Hill plantation where commuting bats were observed.	E1s – 2s, E11s, E13s – 14s, E22s, E48s – 49s, E51s – 52s, E80s – 82s	County	Low negative	Negligible
	Hare Moss, Clochandigther Wood (S10, S13) – Habitat loss likely along southern edge of Hare Moss as a result of the changes in water regime.		County	Low negative	Minor
	Clochandigther Wood (S13) – Reduced suitability potential roosts of Lochview Cottages and cottages east of Hare Moss.		County	Low negative	Minor
Breeding Birds	Greenhowe Wood (S6) – Potential risk of direct mortality due to RTAs, fragmentation / isolation, disturbance, habitat loss and pollution due to run off.	E1s-E7s, E9s, E10s, E14s, E15s, E24s, E26s-E27s, E50s	County	Negligible to Low negative	Negligible to Minor
	Hare Moss (S10) – Potential risk of pollution.		County	Negligible to Low negative	Negligible to Minor
Otter	Loriston Burn (S2, S4, S5, S6) – Increased risk of direct mortality due to RTAs and / or drowning where the scheme crosses the burn.	E1s-E15s, E29s-E33s, E47s, E54s, E80s-E82s	County	Negligible	Negligible

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				Magnitude	Significance
	Loriston Burn (S2, S4, S5, S6) – Risk of deterioration in water quality due to runoff from the scheme is compounded by the multiple burn crossings and potential impacts on Loriston Loch, which is a valuable foraging resource to the east of the scheme.	Refer to Water Environment	County	Negligible	Negligible
	Burn of Ardoe (S13) – Increased risk of direct mortality due to RTAs where the proposed scheme passes close to the burn.		Regional	Negligible	Negligible
	Burn of Ardoe (S13) – Risk of deterioration in water quality due to runoff from the scheme. Such events would have potentially serious indirect effects on local otter populations, as the River Dee downstream represents a primary prey resource to otters in this area.		Regional	Negligible	Negligible
Wintering Birds	Greenhowe Woods (S6) – Direct mortality due to RTA, fragmentation and isolation, potential pollution to Loriston Burn / Loriston Loch due to runoff and habitat loss of coniferous plantation woodland.	E1s-E6s, E9s, E10s, E14s, E15s, E25s, E27s, E50s	County	Low negative	Minor
	Hare Moss (S10) – Potential pollution of the Burn of Ardoe due to runoff.		County	Negligible	Negligible
<b>Section SL2 Predicted Operational Impacts on Habitats and Species</b>					
Badger	Merchant's Croft Social Group I (S16) – Increased risk of RTAs, particularly where the scheme crosses probable badger paths at ch201300, ch201350, ch201550, ch201700.	E1s – 2s, E9s – 10s, E14s – 15s, E53s – 57s	County	Negligible	Negligible
	Merchant's Croft Social Group I (S16) – Severance of approximately 50% of badger group's territory, including potential foraging habitat. Subsidiary sett I2 and outlier setts I9-I13 will be cut-off from the main sett. This is likely to lead to increased territorial conflicts with neighbouring social groups (Groups G and J).		County	Low negative	Minor
Bats	Agricultural fields around Sunnyside to Causeyport and agricultural fields to the east of Burnhead to Greenloaning (S13, S16) – Severance of commuting routes including access track to Heatherknowe, the road between Clochandigther and Auchlunies, the access track south of Whitestone and the road to the south of Cleanhill Wood.	E1s – 2s, E11s, E13s, E22s, E54s – 56s, E80s – 82s	County	Low negative	Minor
	Agricultural fields around Sunnyside to Causeyport and agricultural fields to the east of Burnhead to Greenloaning (S13, S16) – Permanent habitat loss through the loss of potential roosts at Greenloaning Cottage and the loss of small areas of high value linear foraging and commuting habitat alongside roads and field boundaries at Bishopston and south of Whitestone.		County	Low negative	Minor

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				Magnitude	Significance
Breeding Birds	Agricultural fields around Sunnyside to Causeyport and agricultural fields to the east of Burnhead to Greenloaning (S13, S16) – Potential risk of direct mortality, fragmentation/ isolation, disturbance, habitat loss and pollution due to runoff.	E1s-E7s, E9s, E10s, E14s, E15s, E24s, E26s-E27s, E54s, E57s	County	Negligible to Low negative	Negligible to Minor
Otter	Burnhead Burn (S16) – Increased risk of direct mortality through RTAs and / or drowning where scheme crosses the burn, including forcing otters up towards the U63K Blaikiewell Road.	E1s- E15s, E29s-E33s, E57s, E81s-E82s Refer to Water Environment	County	Negligible	Negligible
	Burnhead Burn (S16) – Loss of medium value habitat comprising riparian scrub woodland and associated foraging and potential lying – up habitat adjacent to Blaikiewell Farm.		County	Negligible	Negligible
	Burnhead Burn (S16) – Scheme would sever otter movements between upstream reaches of Burnhead Burn and Crynoch Burn and the River Dee to the northwest, which represents key foraging areas downstream.		County	Low negative	Minor
	Burnhead Burn (S16) – Risk of deterioration in water quality due to runoff from the scheme. Such events would have potentially serious indirect effects on local otter populations as the Crynoch Burn and River Dee downstream represent primary prey resources for otters in the area.		County	Negligible	Negligible
Freshwater	Burnhead Burn (S16) – There would be a slight localised impact upon habitat complexity within the length of culvert, which may also lead to localised changes in species distribution. Discharge from the detention ponds has the potential to alter the water quality within the burn with subsequent impacts upon species assemblages.	E1s-E6s, E9s, E10s, E12s, E14s, E15s, E40s-E46s Refer to Water Environment	County	Low negative	Minor
Wintering Birds	Bishopston (S13) – Direct mortality through RTA, isolation, disturbance and habitat loss of improved, semi-improved grassland with occasional broad-leaved copses and marshy grassland. Potential pollution of the Heathfield Burn and Bishopston Ditch due to runoff.	E1s-E6s, E9s, E10s, E14s, E15s, E25s-E27s, E54s, E57s	County	Low negative	Minor
	Burnhead (S16) – Direct mortality due to RTA, fragmentation, disturbance and habitat loss of improved grassland, marshy grassland, dense/continuous scrub and occasional broad-leaved standard trees. Potential pollution of the Whitestone Burn due to runoff.		County	Negligible	Negligible
<b>Section SL3 Predicted Operational Impacts on Habitats and Species</b>					
Terrestrial Habitats	Cleanhill Wood (S20) – Direct habitat loss of woodland habitat and habitat severance would occur. Potential disturbance and pollution impacts, including impacts on land drains through forest blocks, would also be predicted.	E1s – 2s, E9s – 10s, E14s – 15s, E58s – 64s	County	Low negative	Minor

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				Magnitude	Significance
	Floodplain and immediate surroundings of Crynoch Burn (north) and Blaikiewell Burn (S22) – Direct loss of fen and wet woodland of Blaikiewell Burn and severance of wet habitats from other side of route. Increased risk of hydrological impacts to the wider habitat. Potential pollution and disturbance to areas adjacent to route, including Blaikiewell Burn may also occur.		Regional	Low negative	Minor
	Agricultural fields within Kingcausie (S24) – Direct loss of semi-natural grassland and severance of grassland from other side of route would occur. Increased risk of potential pollution and disturbance to areas adjacent to the operational scheme.		County	High negative	Moderate
	Kingcausie (S24) – Direct loss of semi-natural woodland habitat, lowland wood pasture and parkland would occur. Severance and fragmentation of habitats adjacent to route would occur, along with severance of a dry stone wall. Disturbance and pollution impacts, including impacts on Kingcausie Burn and also possible hydrological impacts to wetland within Kingcausie Wood may occur due to the operational scheme.		County	High negative	Moderate
	Floodplain and immediate surrounds of the River Dee (S28) – Direct loss of rich semi-improved grassland and severance of grassland from other side of route would occur. Disturbance and pollution impacts, including impacts to River Dee are also possible.		Regional	Negligible	Negligible
	Deeside Old Railway (S31) – The scheme would lead to direct loss of semi-natural habitats and severance of the linear feature impeding its suitability as a wildlife corridor. Potential pollution and disturbance impacts may also occur		County	Low negative	Minor
Badger	Cleanhill badger Social Group J (S20) – Increased risk of RTAs, particularly where the scheme crosses probable badger paths at ch100950		Regional	Negligible	Negligible
	Kingcausie badger Social Group K (S24, S26, S27, S28) – Increased risk of RTAs, particularly where the scheme crosses probable badger paths at ch101200 and ch101875.	E1s – 2s, E11s, E14s, E18s, E58s, E62s, E79s – E81s, E83s	Regional	Negligible	Negligible
	Kingcausie badger Social Group K (S24, S26, S27, S28) – Severance of approximately 15% of badger group territory, including high value foraging habitat adjacent to the River Dee. Woodland and pasture fields at Kingcausie would be severely fragmented.		Regional	Negligible	Negligible
Bats	Kingcausie (S24) – Risk of direct mortality as a result of RTAs within Cleanhill Wood where the proposed scheme would sever at least five commuting routes at the woodland edges and along the South Deeside Road.	E1s – 2s, E11s, E13s – 14s, E22s, E60s, E62s, E64s, E80s – 83s	National	Negligible to Low negative	Negligible to Minor
	Agricultural fields south of the River Dee (S27)- Risk of direct mortality as a result of RTAs within Cleanhill Wood where the proposed scheme would sever at least five commuting routes at the woodland edges and along the South Deeside Road.		County	Negligible to Low negative	Negligible to Minor
	Floodplain and immediate surrounds of the River Dee (S28) – Potential pollution of the River Dee which would have an adverse impact upon prey species available.		National	Negligible	Negligible

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				Magnitude	Significance
	Deeside Old Railway (S31) – Severance of foraging and probable commuting route along Old Deeside Railway Line.		County	Low negative	Minor
	Cleanhill Wood (S20) – Permanent habitat loss, fragmentation and severance of areas with high potential for roosting bats within Cleanhill Wood.		Regional	Low negative	Minor
	Kingcausie (S24) – Severance of high value roosting, foraging and commuting habitat as a result of realignment and regarding of Kingcausie Burn.		National	Low negative	Minor
	Blaikiewell Farm (S19) – Long term disturbance of bat foraging and commuting areas as a result of lighting at Cleanhill Junction.		County	Low negative	Minor
Breeding Birds	River Dee (S28) Risk of potential pollution due to runoff.	E1s-E7s, E9s, E10s, E14s, E15s, E24s, E26s-E27s	County	Negligible to Low negative	Negligible to Minor
Otter	Blaikiewell Burn (S22) – Increased disturbance and unsuitability of burn for foraging and lying-up due to the operation of the road.	E1s-E15s, E29s-E33s, E59s-E61s, E63s, E82s-E83s  Refer to Water Environment	County	Negligible	Negligible
	Blaikiewell Burn (S22) – The length of the bridge may impact on water quality due to lack of light and fish populations may be affected by oxygen sag. There may also be pollution due to runoff from the scheme.		County	Negligible	Negligible
	Kingcausie Burn (S20, S22, S24) – Increased risk of direct mortality through RTAs where the scheme crosses burn.		County	Negligible	Negligible
	Kingcausie Burn (S20, S22, S24) – Scheme would sever otter movements overland between the upper reaches of the burn and Crynoch Burn		County	Negligible	Negligible
	Kingcausie Burn (S20, S22, S24) – Risk of increased disturbance and unsuitability of burn for foraging and lying- up due to operational scheme.		County	Negligible	Negligible
	Kingcausie Burn (S20, S22, S24) – Risk of deterioration in water quality due to runoff from the scheme.		County	Negligible	Negligible
	River Dee (S28) – Loss of medium value riparian habitat comprising of low scrub, grassland and pasture.		International	Negligible	Negligible
	River Dee (S28) – Risk of deterioration in water quality due to runoff from the scheme. Such events would have potentially serious indirect effects on local otter populations as the River Dee represents a primary prey resource in this area.		International	Negligible	Negligible
	Milltimber Burn (S29, S30) – Increased risk of direct mortality through RTAs and / or drowning where scheme crosses burn although otters may only use burn infrequently.		County	Negligible	Negligible
Milltimber Burn (S29, S30) – Risk of deterioration in water quality due to runoff from the operational scheme. Although otters are only likely to use Milltimber Burn infrequently, particularly when the River Dee is in spate, the burn flows into the River Dee therefore increasing the significance of such an impact.	County	Negligible	Negligible		

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				Magnitude	Significance
Red Squirrel	Cleanhill Wood and Kingcausie (S20, S24) – Risk of direct mortality through RTAs if red squirrels attempt to cross the carriageway when foraging or dispersing to other woodland areas.	E1s – 2s, E14s, E31s – 32s, E59s	Regional	Low negative	Minor
	Cleanhill Wood and Kingcausie (S20, S24) – Loss of high value habitat from Cleanhill Wood comprising of mature mixed broadleaved and coniferous woodland, which is likely to constitute red squirrels foraging and / or breeding habitat.		Regional	Low negative	Minor
	Cleanhill Wood and Kingcausie (S20, S24) – Proposed scheme fragments Cleanhill Wood and Kingcausie to the east from Durris Forest and woodland along Crynoch Burn on the western side of the proposed carriageway: thus severing red squirrel dispersal between these woodland areas and beyond.		Regional	Low negative	Minor
Amphibian	Eastlands Pond (S23) – Increased risk of disturbance and pollution during the operation scheme.	E1s-2s, E5s, E9s, E14s – 15s	County	Negligible	Negligible
Freshwater	Blaikiewell Burn (S22) – There would be a slight localised impact upon habitat complexity within the length of buried structure as a result of shading, which may also lead to localised changes in species distribution.	E1s-E6s, E9s, E10s, E12s, E14s, E15s, E40s-E46s Refer to Water Environment	Regional	Low negative	Minor
	Kingcausie Burn (S20, S22, S24) – Permanent loss of habitat and species assemblages from 404m of re-aligned section and significant habitat fragmentation. There would be a slight localised impact upon habitat complexity with the length of culvert, which may also lead to localised changes in species distribution.		Regional	Low negative	Minor
	River Dee (S28) – Night-time lighting of the bridge may result in behavioural changes of migratory salmonids. The road bridges may result in shading of the river resulting in small localised changes in species distributions. Discharge from the detention ponds may have a localised impact on water quality.		International	Negligible	Negligible
Freshwater Pearl Mussel	Crynoch Burn (F27, S18, S22) – Risk of deterioration in water quality due to runoff from the operational scheme. Pollutants such as copper, zinc and sediment would damage potential freshwater pearl mussel habitat.	E1s-E6s, E9s, E10s, E12s, E14s, E15s, E42s-E44s, E46s Refer to Water Environment	International	Negligible	Negligible
	River Dee (S28) – Changes to water quality and as a result of sediment contributions from road drainage would pose a potential threat to freshwater pearl mussels.		International	Negligible	Negligible
Wintering Birds	River Dee (S28) – Potential pollution of the River Dee due to runoff.	E1s-E6s, E9s, E10s, E14s, E15s, E25s, E27s	County	Negligible	Negligible
<b>Section SL4 Predicted Operational Impacts on Habitats and Species</b>					
Terrestrial Habitats	Beans Hill North (S39) – The scheme would lead to the direct loss of acid grassland habitat. Potential hydrological impacts to acid grassland and hydrological connections to adjacent dry heath may also occur, as would potential pollution and disturbance impacts.	E1s – 2s, E9s – 10s, E14s – 15s, E65s – 69s	County	Low negative	Minor



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				Magnitude	Significance
Badger	Milltimber Social Group (S39) – Increased risk of RTAs, particularly where the scheme crosses actual and probable badger paths at ch103550, ch103750, ch104150 and ch 104600.	E1s – 2s, E11s, E18s, E67s – 68s, E79s – E82s	County	Negligible	Negligible
	Milltimber Social Group (S39) – Severance of approximately 50% of badger group's territory, including high value foraging habitat at Kippie Lodge Glef Course. This is likely to lead to increased territorial conflict with neighbouring social groups (Group N and Murtle Den Wood Group) and threaten the survival of the social groups.		County	Medium negative	Moderate
Bats	Agricultural fields south of Milltimber, Peterculter and West Milltimber and Milltimber (S29, S32, S33) – Risk of direct mortality as a result of RTAs where carriageway crosses known commuting routes along the North Deeside road, Culter House Wood, Culter House Road, Conlaw Road and the access track to Beans Hill.	E1s – 2s, E11s, E13s, E22s	Regional / County	Negligible to Low negative	Negligible to Minor
	Beans Hill (S38, S39) – Loss of foraging habitat and habitat fragmentation at Beans Hill due to demolition of trees and buildings with roosts and roosting potential.		Regional	Low negative	Minor
Red Squirrel	Guttrie Hill Wood and Milltimber (S34, S35) – Risk of direct mortality through RTAs if squirrel attempts to cross the carriageway when foraging or dispersing between the woodland areas.	E1s – 2s, E31s – 32s	Regional	High negative	Major
	Guttrie Hill Wood and Milltimber (S34, S35) – Proposed scheme would isolate Milltimber Wood from nearby Guttrie Hill Wood thus severing red squirrel dispersal between the two woodlands. This could lead to a loss of genetic diversity and ultimately local extinction.		Regional	High negative	Major
<b>Section SL5 Predicted Operational Impacts on Habitats and Species</b>					
Terrestrial Habitats	Rotten O'Gairn (S42)– Direct loss of marsh habitat and severance marsh on other side of route would occur. Potential hydrological impacts to wetland site and hydrological connections and potential pollution and disturbance impacts are also predicted.	E1s – 2s, E9s – 10s, E14s – 15s, E70s – 74s	County	Low negative	Minor
	Gairnhill and Kingshill Wood (S43) – The scheme would result in the loss of woodland edge habitat, including wet woodland. Potential hydrological impacts to wetland site and hydrological connections along with potential pollution and disturbance impacts may also occur.		County	Low negative	Minor
	Moss Auchlea (S45) – Potential hydrological impacts from pollution and disturbance in adjacent habitat may occur during the operational scheme.		Regional	Negligible	Negligible
Bats	Rotten O'Gairn, East Silverburn Wood and Gairnhill Wood and between Auchlea Moss and Kingswell (S40-S45) – Risk of direct mortality as a result of RTAs where the scheme crosses known bat commuting routes.	E1s – 2s, E11s, E14s, E18s, E70s – 74s, E79s	County / Regional	Negligible to Low negative	Negligible to Minor

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				Magnitude	Significance
	Rotten O'Gairn, East Silverburn Wood and Gairnhill Wood and between Auchlea Moss and Kingswell (S40-S45) – Risk of fragmentation and isolation where the proposed scheme would pass through roosts and key foraging habitat.	– E80s, E83s	County/ Regional	Low negative	Minor
Breeding Birds	East Silverburn (S42) – Potential pollution of watercourses due to run off.	E1s-E7s, E9s, E10s, E14s, E15s, E24s, E26s-E27s	County	Negligible to Low Negative	Negligible to Minor
Otter	Upper Beanshill Burn (S40, S42, S48) – Increased risk of direct mortality through RTAs where the scheme passes within 50m of the source of the burn and between catchments.	E1s- E15s, E29s-E33s, E70s-E71s, E74s, E80s-E81s  Refer to Water Environment	County	Negligible	Negligible
	Upper Beanshill Burn (S40, S42, S48) - Scheme would sever otter movement between catchments including Silver / Ord Burns to the west and Beanshill Burn and features to the east.		County	Low negative	Minor
	Upper Beanshill Burn (S40, S42, S48) – Although the scheme does not cross the burn its proximity to the source of the burn means there would be a risk of deterioration in water quality due to runoff from the scheme.		County	Negligible	Negligible
	Gairn Burn (S40, S42, S44) – Increased risk of direct mortality through RTAs.		County	Negligible	Negligible
	Gairn Burn (S40, S42, S44) – Loss of medium value habitat comprising woodland scrub suitable for lying-up in area used regularly by otters.		County	Negligible	Negligible
	Gairn Burn (S40, S42, S44) – Scheme would sever otter movements between the Moss of Auchlea to the north, Silver/ Ord Burns to the south and Upper Beanshill Burn to the east, although Gairn Burn is already culverted at the side road.		County	Negligible	Negligible
	Gairn Burn (S40, S42, S44) – Risk of deterioration in water quality due to runoff from the operational scheme.		County	Negligible	Negligible
	Moss of Auchlea (S45) – Increased risk of direct mortality through RTAs where the proposed scheme passes between the Moss and Kingshill Wood.		County	Negligible	Negligible
	Moss of Auchlea (S45)- Operational scheme would pass within 50m of the edge of the Moss and may therefore result in disturbance if otters are lying- up, breeding or foraging in the Moss.		County	Negligible	Negligible
	Moss of Auchlea (S45) – Risk of deterioration in water quality and long-term changes in the suitability of the Moss due to runoff from the operational scheme. Impacts on the regime in the Moss may also occur.		County	Negligible	Negligible
Red Squirrel	Gairnhill Wood (S43) – Risk of direct mortality through RTAs if squirrels attempt to cross the carriageway when foraging or dispersing between the woodland areas.	E1s – 2s, E14s, E31s – 32s	Regional	Medium negative	Moderate
	Gairnhill Wood (S43) – Proposed scheme would isolate Gairnhill from adjacent Silverburn Wood by fragmenting the potential commuting corridor and thus severing dispersal between the two woodlands.		Regional	Low negative	Minor

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				Magnitude	Significance
	Silverburn Wood (S41) – Risk of direct mortality through RTAs if squirrels attempt to cross the carriageway when foraging or dispersing between the woodland areas.		Regional	High negative	Major
	Silverburn Wood (S41) – Proposed scheme would isolate Gairnhill Wood from adjacent Silverburn Wood by fragmenting the potential commuting corridor and thus severing dispersal between the two woodlands.		Regional	High negative	Major
	Silverburn Wood (S41) – Risk of increased disturbance through noise and / or traffic pollution during the operation scheme.		Regional	Low negative	Minor
Wintering Birds	Silverburn (S42) – Potential pollution of Gairn Burn and field drains feeding the Upper Beanshill Burn due to runoff.	E1s-E6s, E9s, E10s, E14s, E15s, E25s, E27s	County	Negligible	Negligible
<b>Section SL6 Predicted Operational Impacts on Habitats and Species</b>					
Terrestrial Habitats	West Hatton Wood (S47) – Direct habitat loss in both east and north sections of woodland and severance and fragmentation of linear habitat would compromise ability to act as wildlife corridor. Pollution and disturbance impacts are likely to be significant during the operational phase.	E1s – 2s, E9s – 10s, E14s – 15s, E75s – 78s	County	Low negative	Minor
	Cloghill (S48) – Direct loss of edge grassland habitat and farmland habitat. Habitat severance would compromise ability of linear woodland to act as wildlife corridor. Potential hydrological impacts upon acid grassland pockets and potential pollution and disturbance impacts may also occur.		Regional	Low negative	Minor
Badger	Cloghill Social Group R (N2) – Increased risk of RTAs, particularly where the scheme crosses actual and probable badger apths at ch109550 and ch110790.	E1s – 2s, E11s, E14s, E18s, E75s – 78s, E79s – E81s – 8s	County	Negligible	Negligible
	Cloghill Social Group R (N2) - Severance of approximately 15% of social group's territory, including potential foraging habitat leading to increased territorial conflict with neighbouring social groups (Brimmond Hill Social Group).		County	Negligible	Negligible
Bats	Agricultural fields to the north of the A944, West Hatton Wood, Woodland at Fairley Home Farm and Derbeth Farm (S46, N3) – Risk of direct mortality due to RTAs where the carriageway severs West Hatton Woods and commuting routes near Cloghill, Fairley Home Farm and tree lines toward Brimmond Hill.	E1s – 2s, E11s, E13s – 14s, E22s, E70s – 71s, E76s, E77s	Regional	Negligible to Low negative	Negligible to Minor
	Agricultural fields to the north of the A944, West Hatton Wood, Woodland at Fairley Home Farm and Derbeth Farm (S46, N3) – Habitat loss and severance of important linear connect habitat restricting accessibility to foraging resources and fragmenting an already small area of optimal foraging and roosting habitat. Therefore reducing viability of supporting foraging and roosting bats in the long term.		Regional	Low negative	Minor
	Woodland at Fairley Home Farm and Derbeth Farm (N3) – Reduced suitability and viability of existing roosts and particular tree roosts within 50m of the alignment near Fairley Hoome Farm and in shelterbelts towards Dykeside due to loss of connecting habitat and proposed lighting at North Kingswell Junction		Regional	Low negative	Minor

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				Magnitude	Significance
Red Squirrel	Hill of Derbeth (N6 N7) - Risk of direct mortality through RTAs if red squirrel s attempt to cross the carriageway when foraging or dispersing to other woodland areas.	E1s – 2s, E31s – 32s, E76s, E81s	County	Low negative	Minor
	Hill of Derbeth (N6, N7) –Fragmentation of this woodland area would exacerbate the existing isolated nature of the woodland.		County	Low negative	Minor
Wintering Birds	Cloghill (S46) – Direct mortality due to RTA, fragmentation and isolation, disturbance and habitat loss of semi-improved grassland, improved grassland, scattered scrub and tall ruderal. Potential pollution to Westholme Burn due to runoff.	E1s – E6s, E9s, E10s, E14s, E15s, E25s, E27s, E75s	County	Low negative	Minor