

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Summary of Site-Specific Mitigation and Residual Impacts (for pre-mitigation impacts of at least Moderate significance)

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
Section FL1					
Terrestrial Habitats	Fishermyre Wood south (F10), Fishermyre Wood Limpet Burn (F7). Wet habitats to the south of Allochie Croft (F12)	Habitat loss of UK BAP and other habitats including wet woodland and fen at Allochie Croft. Severance and fragmentation of habitats. Potential hydrological impacts on wetland habitats. Potential pollution and disturbance to habitats.	Major	Sympathetic Landscape mitigation planting as per Chapter 41 (Landscape) and Chapter 42 (Visual) will offset the loss of habitat and linear features and enhance the conservation value of certain habitat areas. Habitat loss will be offset by habitat creation in several locations in this Section of the route. landscape planting (Ch50–600) landscape planting (Ch50–300) riparian planting (Ch1390–1480) landscape planting (Ch2500–2900) landscape planting (Ch2950-3480) Generic mitigation including Best Practice PPG guidelines from SEPA and SUDS guidelines will prevent / mitigate for Pollution events and hydrological impacts. Habitat creation will reduce the impacts associated with Habitat fragmentation and reduce disturbance to remaining habitats. Best practice methods will minimise disturbance to vegetation.	Minor
Badger	Limpet Burn Group B (F6, F7)	Direct mortality due to loss of main sett B1 and outlier sett B2	Moderate	Badgers will be excluded from setts B1 and B2 between July 1 and November 30 inclusive, prior to sett closure. Exclusions will be undertaken using prescribed methods, under licence and in consultation with SNH.	Negligible
		Direct mortality due to RTAs during operation of the road	Moderate	The installation of badger-proof fencing at ch1550 - ch2300 , in conjunction with otter fencing as below will prevent badgers finding their way onto the carriageway while the provision of the following crossings with integral mammal ledges: Megray Burn culvert (ch0), A90 Underbridge (ch0580), Limpet Burn Bridge (ch1400), U889K Underbridge (ch1500), Megray Wood	Negligible

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
				mammal underpass (ch1750), U88K Underbridge (ch2940), and box culverts at Green Burn (ch3125 and side road), will allow badgers to cross the scheme safely.	
		Loss of setting territory during construction and operation, effective loss of social group	Moderate	An artificial sett will be provided within close proximity to the existing sett B1. The location and design of the compensatory sett will be decided in agreement with SNH.	Minor
		Fragmentation of setting and foraging territory during operation of the road	Moderate	Severance will be minimised through the provision of crossing points as above. There will however be no crossing structure between Megray Burn and Limpet Burn meaning that badgers would still face energetically expensive detours.	Minor
		Direct mortality through increased territorial conflicts	Moderate	An artificial sett will be provided within close proximity to the existing sett B1. The location and design of the compensatory sett will be decided in agreement with SNH.	Minor
Wintering Birds	Green Burn F10, F12	Direct mortality through RTA during operation	Moderate	Generic mitigation and the provision of safety barriers, set back from the road in addition to sensitively designed landscaping will minimise direct mortality	Negligible
		Habitat loss and disturbance due to fragmentation of habitat and foraging corridors Potential pollution during construction and operational runoff	Moderate	Habitat loss would be offset by the creation of habitat as detailed in the terrestrial habitat mitigation above This habitat creation and landscaping will reduce and offset habitat disturbance and fragmentation. Generic mitigation including best practice PPG guidelines from SEPA and SUDS guidelines will prevent / mitigate for pollution events	Negligible
Otter	Megray Burn (F3, F4), Green Burn (F8, F12, F13)	Direct mortality and disturbance during construction	Moderate	Best practice guidelines will be followed during construction including the suspension of night time works within 30m of the watercourse and holt/couch and siting works compounds away from valuable areas of habitat. This will ensure that minimal disturbance would be caused to otters using the burn.	Negligible
		Direct mortality due to RTAs and/or drowning during operation	Moderate	Provision of safe crossing points in box culverts and bridges as per badgers above thus allowing otters to continue their nightly journeys within the confines of the burn corridor.	Negligible

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
				Otter-proof fencing will be located at the following locations: ch0 – ch1550, ch2300 – ch4850 preventing otters from entering the carriageway.	
		Loss of habitat during construction	Moderate	Habitat creation along Megray Burn as detailed in the terrestrial habitat mitigation above will partially offset Habitat Loss; scrub planting at Green Burn will partly offset loss of existing habitat, although this will take some time to mature. Best practice guidelines will be adhered to.	Minor
		Disturbance and fragmentation during operation	Moderate	The above mitigation will reduce the majority of fragmentation and disturbance impacts. However, some otters may be reluctant to use the lengthy culvert proposed for Green Burn.	Negligible (Megray Burn); Moderate (Green Burn)
		Potential pollution during construction and operation	Moderate	Road drainage system will ensure that road runoff entering the burn complies with Environmental Quality Standards.	Negligible
	Limpet Burn (F7)	Direct mortality during construction	Major	Best practice guidelines will be followed during construction including the suspension of night time works within 30m of the watercourse and holt/couch and siting works compounds away from valuable areas of habitat. This will ensure that minimal disturbance would be caused to otters using the burn.	Negligible
		Direct mortality due to RTAs and/or drowning during operation	Major	Construction of a buried structure with adequate clearance either side of the realigned burn to ensure otters can pass without having to climb up to the road during high water levels. The installation of otter/badger proof fencing along the scheme will prevent otters finding their way onto the carriageway.	Negligible
		Loss of habitat during construction	Moderate	Riparian planting in this area will offset loss of existing habitat, although this will take some time to mature and the section under the buried structure will be irreversibly lost. Loss of invertebrate and fish habitat along realigned reach of the burn will be minimised through careful design of realignment, while best practice guidelines will be adhered to.	Minor

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
		Fragmentation of habitat during construction and operation	Major	The construction of a buried structure with space between the burn and walls will allow otters to move freely within and between available areas of habitat.	Negligible
		Potential pollution during construction and operation	Major	Road drainage system will ensure that road runoff entering the burn complies with Environmental Quality Standards.	Negligible
Freshwater	Megray Burn (F3, F4), Limpet Burn (F7), Green Burn (F8)	Risk of direct mortality due to release of sediment or pollutants during construction	Moderate	Generic mitigation including Best Practice on construction site such as reed bed traps and SUDS.	Minor
		Reduction in habitat complexity and alteration of species distribution during operation		Culverts with suitable replacement substrate to be installed at Megray and Green Burns. Ensure that substrate and habitat complexity is maintained through maintenance of at least current channel width and reduce impact on surrounding habitat at Limpet Burn. Create suitable habitat within, and transfer substrate to, the new realignment channel at Green Burn.	Minor
	Megray Burn	Loss of burn habitat and species due to burn realignment	Moderate	Replacement of substrate and transplantation of current substrate during construction and operation. Fish to be removed via electric fishing prior to dewatering and translocated to appropriate receptor sites	Minor
Water Vole	Green Burn and adjacent grasslands, Fishermyre Moss Drain, Fishermyre Moss (F1 – F12)	Risk of direct mortality during clearance for construction and operation	Major	Generic mitigation including adherence to best practice guidelines, translocation of water voles from works areas and rendering of water bodies unsuitable for water vole prior to site clearance will prevent mortality. Sensitive design of culverts to allow safe access.	Negligible
		Habitat loss of wet grassland, drainage ditch and marshy grassland habitat and local hydrological processes during construction and operation.	Major	Loss of suitable habitat will be mitigated by creation and management of new areas of wetland connected to existing water vole habitat as per terrestrial habitats above	Minor in short – medium term; negligible in long term

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
		Habitat fragmentation, isolation and disturbance of water vole habitats and meta-populations resulting in reduced potential for future colonisation of habitats.	Major	Habitat creation as per terrestrial habitats above will be undertaken adjacent to fragmented wetland habitat in order to retain large enough area to support water voles. Fragmentation and isolation of water vole colonies will be reduced by translocating water vole colonies to new habitat west of the road thereby maintaining connectivity between separate colonies. Underpasses to be installed as per badgers and otters above and habitat creation west of the road as per terrestrial habitats above will reduce barrier effects however this impact will not be completely obviated. Generic mitigation includes no works to be undertaken close to water vole colonies.	Minor
		Potential pollution of aquifers	Major	Best Practice Guidelines including prevention / emergency response measures will ensure that there are no negative impacts attributable to pollution.	Negligible
Bats	Megray Wood, Limpet Burn, Agricultural fields to the north of Megray Farm, Fishermyre Wood south (F6, F7, F8, F10)	Risk of direct mortality where the proposed carriageway passes through Megray Wood and through woodland adjacent to Megray Burn and Fishermyre during construction of the scheme.	Moderate	Generic mitigation methods will be followed throughout the construction period. Pre-construction surveys will be carried out in impacted areas where bats are potentially present. Exclusion of bat roosts will require a licence from SEERAD at least year in advance of development commencing.	Minor

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
	Megray Burn and Limpet Burn (F3, F7)	Fragmentation and severance to commuting routes during construction of the scheme.	Moderate	Pre-construction surveys will be carried out in impacted areas where bats are potentially present. Exclusion of bat roosts will require a licence from SEERAD at least year in advance of development commencing.	Minor
	Agricultural fields between the A90 and Stonehaven (F2)	Possible disturbance to bats roosting at New Mains of Ury during construction of the scheme.	Moderate	Pre-construction surveys will be carried out in impacted areas where bats are potentially present. Night time working will be avoided where practicable. Carriageway lighting will be reduced or designed to be sympathetic to bats. A 30m buffer will be marked out around all bat roosts that are not to be excluded and destroyed. No construction activities that constitute disturbance to bats will take place within the 30m buffer zone.	Minor
	Megray Wood and Limpet Burn (F6, F7)	Disturbance to foraging and commuting bats if night works are used during bridge construction of the scheme.	Moderate	Pre-construction surveys will be carried out in impacted areas where bats are potentially present. Night time working will be avoided where practicable. Carriageway lighting will be reduced or designed to be sympathetic to bats. A 30m buffer will be marked out around all bat roosts that are not to be excluded and destroyed. No construction activities that constitute disturbance to bats will take place within the 30m buffer zone.	Minor
	Megray Burn and Limpet Burn (F7, F8)	Potential risk of direct mortality due to severance of known commuting routes and loss of high value foraging and roosting habitat adjacent during operation of the scheme.	Moderate	Pre-construction surveys will be carried out in impacted areas where bats are potentially present. Site fencing will be established to prevent access to areas outside of working areas, particularly in areas adjacent to features of interest / value. Exclusion of bat roosts will require a licence from SEERAD at least year in advance of development commencing.	Negligible
	Limpet Burn (F8)	Risk of potential pollution reducing suitability of Limpet Ponds as foraging habitats during operation of the scheme.	Moderate	Best Practice Guidelines with the use of Sustainable Urban Drainage Systems (SUDS). SEPA Pollution Prevention Guidelines (PPGs) will be applied to prevent pollution of water courses through siltation or chemicals. For further prevent of pollution to watercourses refer to Water Environment mitigation methods.	Negligible

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
Breeding Birds	North and South Fishermyre (F10, F12)	Habitat fragmentation / isolation, disturbance and pollution due to accidental spills during construction and operation of the scheme. Direct mortality and habitat loss during operation of the scheme.	Moderate	<p>Generic mitigation methods will be followed throughout the construction period.</p> <p>Provision of safety barriers, set back from the road in addition to sensitively designed landscaping.</p> <p>Construction activities including the felling of trees and clearing of scrub will be timed to avoid periods where birds are nesting i.e. March – July inclusive.</p> <p>Bird boxes will be erected in pre-identified locations to compensate for habitat loss.</p> <p>Best Practice Guidelines with the use of Sustainable Urban Drainage Systems (SUDS).</p> <p>SEPA Pollution Prevention Guidelines (PPGs) will be applied to prevent pollution of water courses through siltation or chemicals.</p> <p>For further prevent of pollution to watercourses refer mitigation measures in Water Environment (Chapter 39).</p>	Minor to Negligible
Section FL2					
Terrestrial Habitats	Burn of Muchalls F15	Habitat loss of valuable stream habitat, fragmentation and disturbance of farmland habitat, potential pollution of aquifers during construction and operation.	Major	<p>Sympathetic Landscape mitigation planting as per Chapter 41 will offset the loss of habitat and linear features and enhance the conservation value of certain habitat areas. Habitat loss will be offset by habitat creation in several locations in this Section of the route. Offset mitigation will mitigate for the loss of riparian habitat at the Burn of Muchalls as follows:</p> <p>riparian planting (ch4700);</p> <p>roadside (ch4700–5270 and ch5960–6350); and</p> <p>drainage basin (ch4730-4800) planting.</p> <p>Habitat creation as detailed above will reduce the impacts associated with Habitat Fragmentation and reduce Disturbance to remaining habitats. Best Practice methods will minimise Disturbance to</p>	Negligible

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
				vegetation. Generic mitigation including Best Practice PPG guidelines from SEPA and SUDS guidelines will prevent / mitigate for Pollution events.	
Badger	Clayfolds Group D (F16)	Direct mortality due to RTAs during operation of the road	Moderate	The installation of badger-proof fencing between ch4850 – ch5175 in conjunction with otter fencing will prevent badgers finding their way onto the carriageway while the provision of crossing structures will allow badgers to cross the scheme safely. Severance will be minimised through the provision of the following crossing points: Mammal underpass (ch3925), Burn of Muchalls Road Underbridge (ch4625), Burn of Muchalls Bridge (ch4700), C12K Overbridge (ch5040), and mammal underpass (ch5600).	Negligible
		Fragmentation of setting and foraging territory during operation of the road.	Moderate		Negligible
Wintering Birds	Allochie Burn (F13), Burn of Muchalls (F15), Burn of Blackbutts (F16)	Habitat loss and disturbance due to fragmentation of habitat and foraging corridors Potential pollution due to construction and operational runoff	Moderate	Habitat loss will be offset by the creation of habitat as detailed in the terrestrial habitat mitigation above This habitat creation and landscaping will reduce and offset habitat disturbance and fragmentation Generic mitigation including Best Practice PPG guidelines from SEPA and SUDS guidelines will prevent / mitigate for pollution events Generic mitigation and the provision of safety barriers, set back from the road in addition to sensitively design landscaping will minimise direct mortality	Negligible
	Allochie Burn (F13), Burn of Blackbutts (F16)	Direct mortality through RTA during operation	Moderate		Negligible
Otter	Back Burn (F13)	Disturbance and fragmentation of habitat during construction and operation	Moderate	Best practice guidelines and demarcation of the burn within 30m of active otter lying up sites to ensure that otters are not killed or disturbed during construction. Otters are likely to become accustomed to disturbance as a result of the proposed scrub and riparian planting and as such, disturbance is anticipated to be minimal in the long-term.	Negligible
	Burn of Muchalls (F15)	Direct mortality during construction	Major		

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
				watercourse and holt/couch and siting works compounds away from valuable areas of habitat. This will ensure that minimal disturbance would be caused to otters using the burn	
		Direct Mortality due to RTAs and/or drowning during operation	Major	Construction of a buried structure with adequate clearance on the south bank side of the burn to ensure otters can pass without having to climb up to the road during high water levels. The installation of otter proof fencing along the scheme at ch2300 – 4850, ch5175 – 5750 and ch6325 – 7090 and as per badgers above will prevent otters finding their way onto the carriageway.	Negligible
		Habitat loss	Major	Riparian planting in this area will offset loss of existing habitat, although this will take some time to mature and the section under the buried structure will be irreversibly lost. Best practice guidelines will be adhered to ensure no overall loss of habitat.	Minor
		Disturbance and fragmentation of habitat during construction and operation	Major	The construction of a buried structure with space between the burn and walls will allow otters to move freely within and between available areas of habitat. Otters are likely to become accustomed to disturbance as a result of the proposed scrub and riparian planting and as such, disturbance is anticipated to be minimal in the long-term.	Negligible
		Potential pollution during construction and operation	Major	Road drainage system will ensure that road runoff entering the burn complies with Environmental Quality Standards.	Negligible
Bats	Burn of Muchalls (F15)	Risk of direct mortality due to felling of trees with roost potential during construction of the scheme.	Major	Generic mitigation methods will be followed throughout the construction period. Pre-construction surveys will be carried out in impacted areas where bats are potentially present. Exclusion of bat roosts will require a licence from SEERAD at least year in advance of development commencing.	Minor
	Agricultural fields surrounding Hill of Muchalls (F13, F16)	Disturbance during construction to roosts located within 200m of proposed scheme and site compounds.	Moderate	Pre-construction surveys will be carried out in impacted areas where bats are potentially present to reduce disturbance. Night time working will be avoided where practicable. Carriageway lighting will be reduced or designed to be	Minor

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
				sympathetic to bats to reduce disturbance. A 30m buffer will be marked out around all bat roosts that are not to be excluded and destroyed. No construction activities that constitute disturbance to bats will take place within the 30m buffer zone to reduce disturbance.	
	Burn of Muchalls and the Burn of Blackbutts (F13, F15, F16)	Direct mortality due to severance of commuting routes during operation of the scheme.	Major	Pre-construction surveys will be carried out in impacted areas where bats are potentially present. Exclusion of bat roosts will require a licence from SEERAD at least year in advance of development commencing to prevent direct mortality.	Negligible
	Burn of Muchalls (F15)	Reduced habitat suitability for foraging and commuting due to habitat loss at the Burn of Muchalls and severance of Fisherymyre during the construction of the scheme.	Moderate	Pre-construction surveys will be carried out in impacted areas where bats are potentially present to reduce disturbance. Bat boxes will be erected in pre-identified locations to compensate for habitat loss. Exclusion of bat roosts will require a licence from SEERAD at least year in advance of development commencing to prevent direct mortality.	Negligible
Breeding Birds	Burn of Muchalls and area surrounding Cookney (F15, F16)	Potential pollution due to accidental spills during the construction of the scheme.	Moderate	Best Practice Guidelines with the use of Sustainable Urban Drainage Systems (SUDS) to prevent pollution incidents. SEPA Pollution Prevention Guidelines (PPGs) will be applied to prevent pollution of water courses through siltation or chemicals. For further prevent of pollution to watercourses refer mitigation measures in Water Environment (Chapter 39).	Minor to Negligible.
Section FL3					
Terrestrial Habitats	Stoneyhill (F19), wet habitats around East Crossley (F21), Dry heath/acid grassland mosaic to the west of Wedderhill (F23), Bog/heath to the immediate west of	Habitat loss of marshy grassland and developing UK BAP habitat, grassland and heath habitats and fragmentation and disturbance of wetland habitats	Moderate	Habitat Loss, fragmentation and severance of wet, grassland and heath habitats will be offset by habitat creation in several locations in this section of the route, including sensitive design of Landscaping as per Chapter 41. These include:	Minor (F19 – F23), Negligible (F24)

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
	Wedderhill (F24)			<p>Landscape scrub planting (ch6400–6600) and standard tree planting (ch6300-6400) provides wildlife refuges</p> <p>Landscape planting (ch6350–7180) provides wooded habitat in area dominated by arable and improved fields</p> <p>Woodland planting (ch6500-6930) reduces fragmentation by connecting marsh to dry stone walls connected to scrub and acid grassland habitats.</p> <p>Landscape planting (ch9950–10210) offsets habitat loss.</p> <p>Landscape planting (ch11150–11500) provides wooded habitats in an area dominated by arable and improved fields.</p> <p>Secondary mitigation through landscape planting will reduce and offset disturbance to remaining areas of semi-natural habitat and improve connectivity of remaining fragments of habitat.</p>	
		Potential pollution and hydrological impacts due to runoff and particulates into aquifers and adjacent land during construction and operation of the road	Moderate	Generic mitigation including best practice PPG guidelines from SEPA and SUDS guidelines will prevent / mitigate for pollution events.	
Badger	West Stoneyhill Group E (centred outside the study area) Stranog Hill Group F (F22) Craigentath Group G (F22, F23)	<p>Direct mortality due to RTAs during operation of the road</p> <p>Fragmentation of setting and foraging territory during operation of the road.</p>	<p>Moderate</p> <p>Moderate</p>	<p>The installation of badger-proof fencing at ch7090 – 7400 and ch8200 – 8575 in conjunction with otter fencing as below will prevent badgers finding their way onto the carriageway while the provision of crossing structures will allow badgers to cross the scheme safely.</p> <p>Severance will be minimised through the provision of the following crossing points: C25K Overbridge (ch6340), two box culverts at North Cookney (6480), Stoneyhill Ditch (ch6700), Balnagubs Burn (ch7550), Burn of Elsick (ch7975); C13K Overbridge (ch8540), box culverts at Whiteside and Crossley Burns (ch8850 and ch9170), mammal underpass (ch10075), C5K Underbridge (ch10210), and box culvert at Craigentath Burn (ch10630).</p>	<p>Negligible</p> <p>Negligible</p>

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
Wintering Birds	Whiteside Burn (F21), Circle Burn (F23), Craigentath Burn and Ditch, Wedderhill Burn and Burnhead Burn (F26)	Direct mortality through RTA, during operation	Moderate	Generic mitigation and the provision of safety barriers, set back from the road in addition to sensitively design landscaping will minimise direct mortality	Negligible
		Habitat loss and disturbance due to fragmentation of habitat and foraging corridors	Moderate	Habitat loss would be offset by the creation of habitat as detailed in the terrestrial habitat mitigation above This habitat creation and landscaping will reduce and offset habitat disturbance and fragmentation	Negligible
	Whiteside Burn (F21), Cairns Burn, Crossley Burn (F22), Circle Burn (F23), Craigentath Burn and Ditch, Wedderhill Burn and Burnhead Burn (F26)	Potential pollution of aquifers due to particulates during construction and operation	Moderate	Generic mitigation including Best Practice PPG guidelines from SEPA and SUDS guidelines will prevent / mitigate for pollution events	Negligible
Otter	Balnagubs Burn (F18), Crossley Burn (F22)	Direct mortality during construction	Moderate	Best practice guidelines and demarcation of the burn within 30m of active otter lying up sites to ensure that otters are not killed or disturbed during construction. Best practice guidelines will be followed during construction including the suspension of night time works within 30m of the watercourse and holt/couch and siting works compounds away from valuable areas of habitat. This will ensure that minimal disturbance would be caused to otters using the burn.	Negligible
		Direct mortality due to RTAs and/or drowning during operation	Moderate	Depressed invert box culverts with integral mammal ledges and scrub planting to promote usage will be constructed where the scheme crosses the burn, thus allowing otters to continue their nightly journeys within the confines of the burn corridor. The erection of otter proof fencing at ch6325 – 7090, ch7400 – ch8200 and ch8575 – Cleanhill Junction in conjunction with badger fencing above will prevent otters finding their way onto the carriageway.	Negligible
		Habitat loss	Moderate	Scrub planting to promote use of culvert by otters will offset loss of habitat and cover for otters and provide a screen from disturbance from the road.	Negligible

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance	
		Disturbance and fragmentation of habitat during construction and operation	Moderate	The construction of depressed invert culverts at crossing points will allow otters to move freely within and between available areas of habitat.	Negligible (Balnagubs Burn); Minor (Crossley Burn)	
		Potential pollution during construction and operation	Moderate	Road drainage system will ensure that road runoff entering the burn complies with Environmental Quality Standards.	Negligible	
	Burn of Elsick (F18)	Direct mortality during construction	Major	Best practice guidelines and demarcation of the burn within 30m of active otter lying up sites to ensure that otters are not killed or disturbed during construction. Best practice guidelines will be followed during construction including the suspension of night time works within 30m of the watercourse and holt/couch and siting works compounds away from valuable areas of habitat. This will ensure that minimal disturbance would be caused to otters using the burn	Negligible	
		Direct mortality due to RTAs and/or drowning during operation	Major	Depressed invert box culverts with integral mammal ledges and scrub planting to promote usage will be constructed where the scheme crosses the burn, thus allowing otters to continue their nightly journeys within the confines of the burn corridor. The erection of otter/badger proof fencing along the entire scheme will prevent otters finding their way onto the carriageway.	Negligible	
		Habitat loss	Moderate	Scrub planting to promote use of culvert by otters will offset loss of habitat and cover for otters and provide a screen from disturbance from the road.	Negligible	
		Disturbance and fragmentation of habitat during construction and operation	Moderate	The construction of depressed invert culverts planted with scrub to promote use by otters at crossing points will allow otters to move freely within and between available areas of habitat. However, some otters may be reluctant to use the culvert the lengthy Burn of Elsick, although other routes exist.	Minor	
		Potential pollution during construction and operation	Moderate	Road drainage system will ensure that road runoff entering the burn complies with Environmental Quality Standards.	Negligible	

Aberdeen Western Peripheral Route
Environmental Statement Appendices 2007
Part D: Fastlink
Appendix 40.11 – Mitigation and Residual Impacts

Ecological Receptor	Habitat Area	Potential Impact Description	Impact Significance	Site-specific Mitigation	Residual Impact Significance
Bats	North Cookney Croft (F18)	Risk of direct mortality where the carriageway passes close to a pipistrelle roost during operation of the scheme.	Major	Generic mitigation methods will be followed throughout the construction period. Pre-construction surveys will be carried out in impacted areas where bats are potentially present. Exclusion of bat roosts will require a licence from SEERAD at least year in advance of development commencing.	Negligible
Breeding Birds	Harecraig and Stranog Hill (F18, F19, F24, F25)	Potential pollution due to accidental spills during construction of the scheme.	Moderate	Best Practice Guidelines with the use of Sustainable Urban Drainage Systems (SUDS) to prevent pollution incidents. SEPA Pollution Prevention Guidelines (PPGs) will be applied to prevent pollution of water courses through siltation or chemicals. For further prevent of pollution to watercourses, refer mitigation measures in Water Environment (Chapter 39).	Minor to Negligible
	North Cookney Croft, Stoneyhill, Grassland and bog heath west of Wedderhill (F18, F19, F23, F24)	Risk of potential pollution due to runoff during the operation of the scheme.	Moderate	Best Practice Guidelines with the use of Sustainable Urban Drainage Systems (SUDS) to prevent pollution incidents. SEPA Pollution Prevention Guidelines (PPGs) will be applied to prevent pollution of water courses through siltation or chemicals. For further prevent of pollution to watercourses, refer mitigation measures in Water Environment (Chapter 39).	Minor to Negligible