

Wildlife mitigation measures on BEAR Scotland NW Trunk Roads Unit

Road	Scheme	Location	Environmental issue
A9	Portgower	Portgower, Caithness	Fish migration inhibited by twin pipe culvert.
A9	Mound Sluices	The Mound, 5km south of Golspie, Sutherland	Parts of alder (<i>Alnus glutinosa</i>) woodland designated as SAC are inundated with water during flood events. A report ¹ commissioned by SNH concluded that dieback of some alders was occurring as a result of waterlogging and infection of roots with a pathogen (<i>Phytophthora alni</i>). It was also concluded that a change in management of the opening of the sluice gates in 2001 may have contributed to
A830	Dearg Bridge	6.5 km west of Glenfinnan, Lochaber	Otters use the watercourse as a foraging corridor. An otter couch (resting place) was present in close proximity to the scheme.
A82	Laggan Swing Bridge	3 km south of Invergarry	Otter resting places present near bridge. Evidence of them crossing trunk road here.
A82	Dochfour	7 km south of Inverness	Otters crossing busy trunk road to access River Ness. Mortalities of adults and cubs.
A830	Morar Bypass	4 km south of Mallaig	Exposed areas of soil post bypass construction.
A9	Dunachton Burn, Nr Kincaig	NH 824 048	Fish passage inhibited by structure carrying A9 over the watercourse.
A835	Blackwater, Strathgarve	NH 403 638	Dippers present on the Blackwater at Strathgarve.
A9	Mound	NH 77120 96751	Otters crossing trunk road.
A835	Leckmelm	NH 20430 78016	Red squirrel mortalities on trunk road.

A9	Craigellachie Nature Reserve	NH 891 122	Duck mortalities on the trunk road.
A86	Aberarder	NN 478 867	Small mammal mortalities on the trunk road.
A87	Skye Bridge, Plock of Kyle	NG 755 273	Otters crossing busy trunk road. Mortalities.
A87	Skye Bridge, Plock of Kyle	NG 753 274	Otters crossing busy trunk road. Mortalities.
A87	Skye Bridge, Plock of Kyle	NG 748 272	Otters crossing busy trunk road. Mortalities.
A87	Skye Bridge, Plock of Kyle	NG 747 272	Otters crossing busy trunk road. Mortalities.
A87	Skye Bridge, Plock of Kyle	NG 7461 2721	Otters crossing busy trunk road. Mortalities.
A82	Ba Bridge	NN 30874 49460	Destruction of otter resting place under SNH licence to facilitate temporary bridge footings.
A87	Skye Bridge, Plock of Kyle	NG 757 271	Otters crossing busy trunk road. Mortalities.
A87	Skye Bridge, Plock of Kyle	NG 755 272	Otters crossing busy trunk road. Mortalities.
A87	Skye Bridge, Plock of Kyle	NG 7460 2720	Otters crossing busy trunk road. Mortalities.
A87	Skye Bridge, Plock of Kyle	NG 753 275	Otters crossing busy trunk road. Mortalities.
A830	Loch Dubh (Church)	NM 752 827	Otters crossing busy trunk road. Mortalities.

A830	Arnipol South	NM 743 837	Otters crossing busy trunk road. Mortalities.
A830	Arnipol West	NM 742 838	Otters crossing busy trunk road. Mortalities.
A830	Glen Mama	NM 730 841	Otters crossing busy trunk road due to canalised river beneath trunk road. Mortalities.
A87	Allt a' Bhodaich	NG 731 259	Otters crossing busy trunk road. Mortalities.
A87	Waterloo (nr Broadford)	NG 660 229	Otters crossing busy trunk road. Mortalities.
A87	Allt Fearna	NG 617 261	Otters crossing busy trunk road. Mortalities.
A835	Foich Lodge	NH 186 828	Badgers crossing trunk road. Mortalities.

Mitigation measure	NGR	Date installed
Enhancement through improved access for migratory fish (buried invert) and low flow channel created by placement of boulders on the bed of the watercourse.	ND 01312 13695	2012
Liaison with SEPA and SNH to agree management plan. A level gauge was installed on the upstream side of Mound Sluices to monitor water levels. If trigger level reached in winter then the sluices are opened to reduce flooding pressure on woodland.	NH 77536 98207	2016
Provision of otter ledge beneath bridge.	NM 84119 81738	2014
Enhancement measures included installation of otter reflectors along the road on each side of the bridge to discourage otters from crossing trunk road.	NN 29981 98327	Pre 2015
Installation of otter reflectors along both sides of the carriageway for 1.1 km stretch of road.	NH 610 395	2012
Wildflower seeding with 8 varieties of native wildflower.	NM 680 925	2005
Watercourse restored to form pools and weirs through construction of 'steps'. Installation of alternating baffles to provide continuous flow of water beneath the structure.	NH 824 048	Pre 2005
Dipper nesting box installed on concrete shelf below road bridge.	NH 403 638	Pre 2005
Otter road signs installed to alert drivers of possible crossings.	NH 77120 96751	2012
Installation of red squirrel warning signs and awaiting installation of a rope bridge to protect a vulnerable population of red squirrels in this location.	NH 20430 78016	2016

Tunnel constructed beneath the A9 to join two lochans that are part of the nature reserve. Constructed to allow duck passage beneath the A9 but success inconclusive.	NH 891 122	Pre 2005	
Small tunnel passing under the A86 to allow mammals safe passage.	NN 478 867	Pre 2005	
Otter tunnel (1) directly underneath the A87 to connect a steep hollow on the north side with the rocky beach on the south side.	NG 755 273	Pre 2005	
Otter tunnel (2) runs underneath the A87, just west of the old toll booth. It connects the coastline with a freshwater pool constructed as part of the wildlife mitigation programme.	NG 753 274	Pre 2005	
Otter tunnel (3) located in what used to be a passage of the sea between two islands. The islands are now connected by large rocks used to construct the road.	NG 748 272	Pre 2005	
The tunnel (4) travels under the road from a grassy rocky slope on the south side to the rocky sea front at the north.	NG 747 272	Pre 2005	
The tunnel (5) opens onto the rocky sea front on the north side, close to the old freshwater pool and otter ledge. The south end opens onto a grassy slope and dense scrub.	NG 7461 2721	Pre 2005	
Artificial otter holt constructed as a condition of the SNH derogation EPS licence.	NN 30874 49460		2010
Artificial otter holt located on a rocky outcrop with vegetation growing on top and around it. Located 400m east of tunnel 1.	NG 757 271	Pre 2005	
Artificial holt on a rocky beach just beside the southern entrance to otter tunnel 1.	NG 755 272	Pre 2005	
Artificial holt on the rocky sea front created in the construction of the Skye bridge.	NG 7460 2720	Pre 2005	
Freshwater pool created and lined at northern entrance to tunnel 2.	NG 753 275	Pre 2005	
Concrete ledge installed in culvert with associated fencing to direct otters to use the ledge.	NM 752 827	Pre 2005	

Concrete ledges installed in culvert conveying watercourse beneath the A830. Associated fencing to direct otters to ledges.	NM 743 837	Pre 2005
Concrete ledges installed in culvert conveying watercourse through a deep gorge under the A830. Drainage channels at either end and a stone staircase for the watercourse at the southern end.	NM 742 838	Pre 2005
Otter fencing erected around the river and bridge to discourage otters from crossing over the road.	NM 730 841	Pre 2005
Ten otter reflectors installed along both carriageways.	NG 731 259	Pre 2005
Four otter reflectors installed in pairs on a bridge at Waterloo.	NG 660 229	Pre 2005
Six otter reflectors installed in pairs at the watercourse culverted beneath the A87 at Allt Fearnna.	NG 617 261	Pre 2005
Badger tunnel passing under the A835.	NH 186 828	Pre 2005