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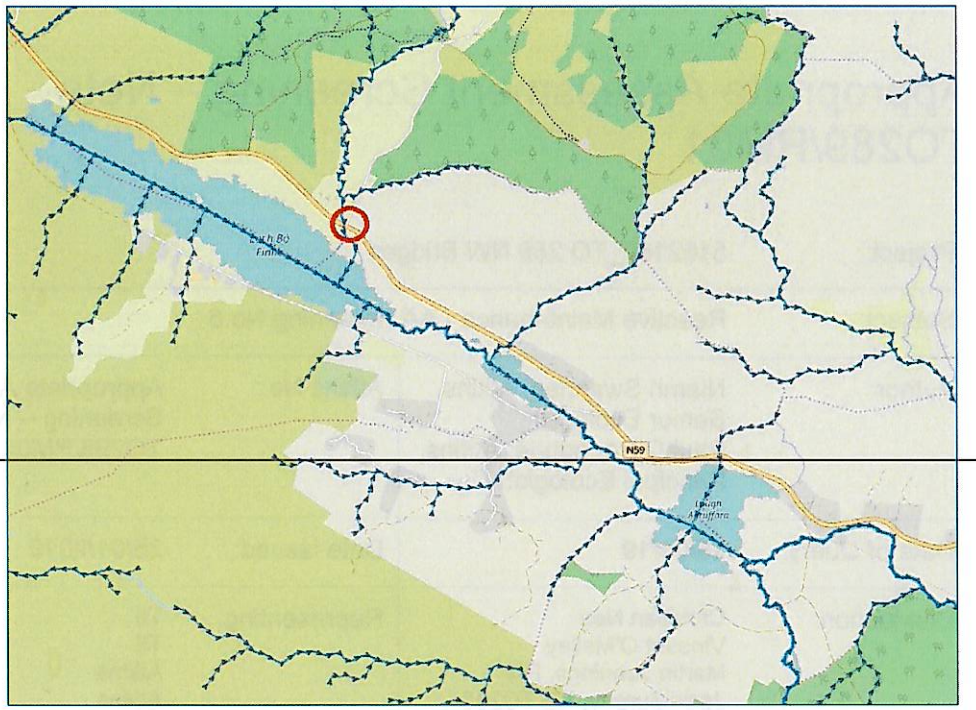
Appropriate Assessment Screening – Note TO289/RM01

Project:	5162160_TO 289 NW Bridges		
Subject:	Reactive Maintenance - AA Screening No.5		
Author:	Niamh Sweeney, Atkins, Senior Ecologist Paul O'Donoghue, Atkins, Principal Ecologist	Atkins No.:	Appropriate Assessment Screening – Note TO289/RM05. Revision 0
Date of Query:	16/01/19	Date Issued:	25/01/2019
Distribution:	Christian Nea Vincent O'Malley [redacted]	Representing:	TII TII Atkins Atkins

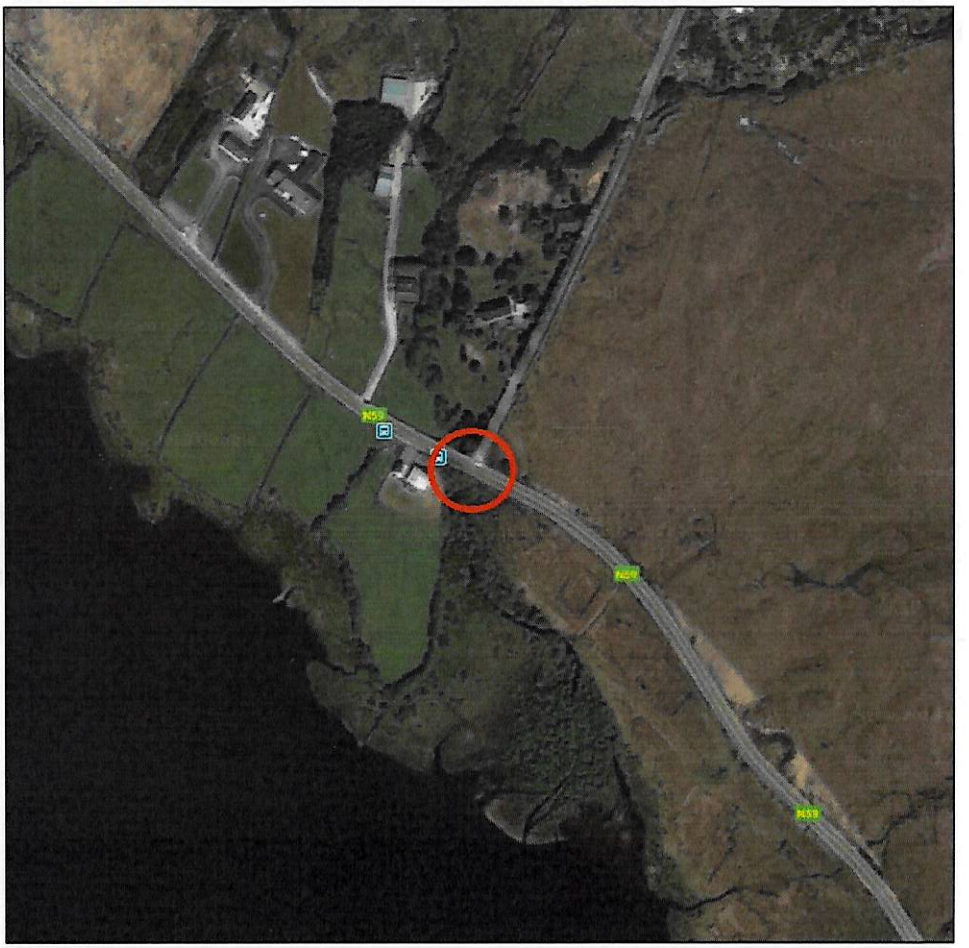
Bridge / Culvert Details

Bridge	Letterfore Bridge, Letterfore, Co. Galway
Structure ID	GC-N59-038.00
County	Galway
Location	Letterfore Bridge is located on the N59 between Maam Cross and Oughterard. Letterfore Bridge is approximately 7.3km east of Maam Cross. Letterfore Bridge spans the Letterfore River, which flows into Lough Bofin. Letterfore Bridge is located approximately 260m upstream of the confluence point with Lough Bofin. Letterfore River and Lough Bofin lie within the BallycuirkeLoughStream (SC_10) subcatchment. The outflow of Lough Bofin flows into Lough Adrehid, which in turns flows into Lough Agraffard. The outflow of Lough Agraffard is the Owenriff River that flows to Lough Corrib.

Maps



Map 1. Letterfore Bridge (circled in Red). [Source: https://gis.epa.ie/EPAMaps/]



Map 2. Letterfore Bridge [Source: GoogleMaps]

Photos

Plate 1. Letterfore bridge, parapet wall (a) [Source: Atkins R.E.; 16/01/2019]

Plate 2. Letterfore bridge, parapet wall (b) [Source: Atkins R.E.; 16/01/2019]

Proposed Works

The proposed works at Letterfore Bridge involves the rebuild of the damaged parapet wall on a like for like basis. The proposed works do not include any instream works and instream access will not be required. With respect to access, the proposed works will only require access to the carriageway.

The rebuild of the parapet wall will initially involve the removal of the wall capping for re-use. The damaged wall will be pulled over from the road side (towards the

carriageway), broken up and removed off site. A new blockwork wall will be built, the road side rendered, and the existing capping replaced.

Tree boughs adjacent to the parapet wall (Plate 2) may need to be cut, however there will be no need to completely remove the root system of any trees from the adjacent bank.

Appropriate Assessment Screening Decision Matrix

Natura 2000 Sites

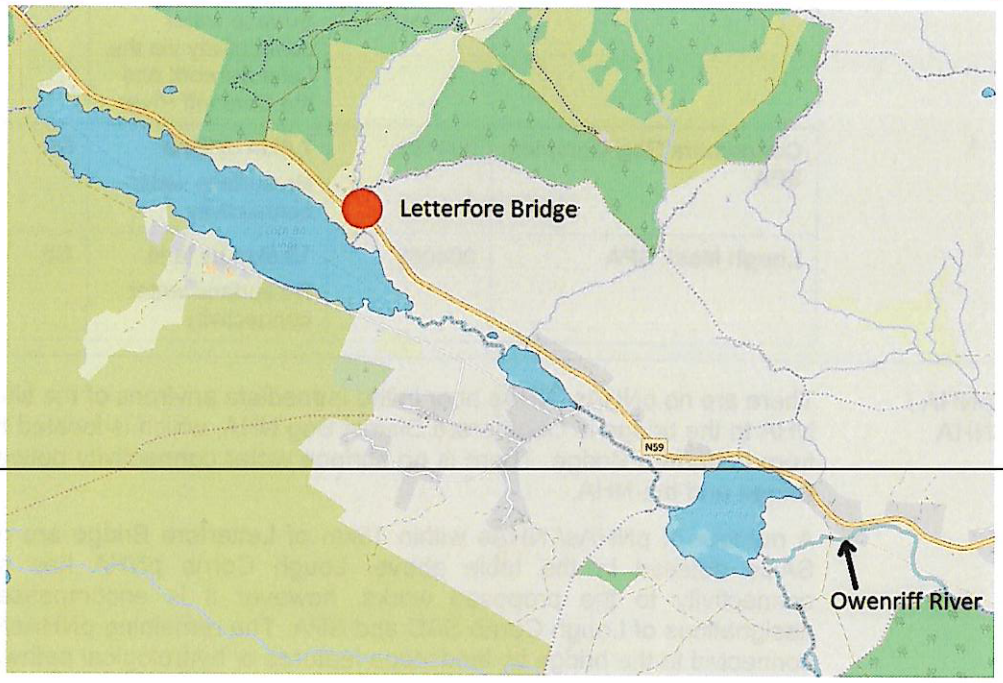
There are 11 Natura 2000 sites located within 15km of Letterfore Bridge, which are detailed in the table below.

In the table below, 2 Natura 2000 sites have surface water connectivity to the proposed works at Letterfore Bridge; Lough Corrib SAC (000297) and Lough Corrib SPA (0040402). Although Lough Corrib SPA has surface water connectivity to the bridge, the boundary of the SPA is confined to Lough Corrib itself. Thus Lough Corrib is located approx. 12.6km downstream (through a series of lakes) of the proposed works. Given the nature and extent of the proposed works and the fact that no instream works or access is required, Lough Corrib SPA is deemed to be outside the potential zone of influence of the proposed works and is not considered further.

Natura 2000 site	Site Code	Distance from site/ Connectivity	Within Potential Zone of Influence
Connemara Bog Complex SAC	002034	Within	Yes
Lough Corrib SAC	000297	2.7km by land Surface water connectivity via L. Bofin, L. Adrehid and L. Agraffard	Yes
Maumturk Mountains SAC	002008	5km by land No surface water connectivity	No
Kilkieran Bay and Islands SAC	002111	9.5km by land No surface water connectivity	No
Ballymaglancy Cave, Cong SAC	000474	13km by land No surface water connectivity	No
Lough Carra/Mask Complex SAC	001774	13.3km by land No surface water connectivity	No
Gortnandarragh Limestone Pavement SAC	001271	14km by land No surface water connectivity	No
Ross Lake and Woods SAC	001312	14.4km by land No surface water connectivity	No
Lough Corrib SPA	004042	4.8km by land	No

		Surface water connectivity via the Lake network and the Owenriff River	
Connemara Bog Complex SPA	004181	7.6km by land No surface water connectivity	No
Lough Mask SPA	004062	13.5km by land No surface water connectivity	No

pNHA / NHA	There are no pNHAs/ NHAs at or in the immediate environs of the site. The closest NHA to the bridge is Oughterard District Bog NHA, which is located 5.7km by land from Letterfore Bridge. There is no surface water connectivity between Letterfore Bridge and the NHA. A number of pNHAs/ NHAs within 15km of Letterfore Bridge are designated as SACs detailed in the table above. Lough Corrib pNHA has surface water connectivity to the proposed works, however it is encompassed within the designations of Lough Corrib SAC and SPA. The remaining pNHAs/NHAs are not connected to the bridge by landscape features or hydrological pathways. The rivers in the vicinity of the bridge are not designated as a pNHA or NHA.
Hydrological links	Letterfore Bridge spans the Letterfore River, which flows into Lough Bofin. Letterfore Bridge is located approximately 260m upstream of the confluence point with Lough Bofin. Letterfore River and Lough Bofin lie within the BallycuirkeLoughStream (SC_10) subcatchment. The outflow of Lough Bofin flows into Lough Adrehid, which in turns flows into Lough Agraffard. The outflow of Lough Agraffard is the Owenriff River that flows to Lough Corrib. Letterfore Bridge is located approximately 12.6km upstream of Lough Corrib. Therefore, Letterfore Bridge has surface water connectivity to Connemara Bog Complex SAC and Lough Corrib SAC.



FWPM	The BallycuirkeLoughStream subcatchment, which the Letterfore River falls within, is a *Margaritifera* sensitive area. This area is listed on the European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations, 2009 [S.I. 296 of 2009]. FWPM are not listed as a qualifying interest of Connemara Bog Complex SAC, which the Letterfore River and Lough Bofin lie within. FWPM are a qualifying interest of Lough Corrib SAC [redacted]
Bats	Letterfore Bridge was not surveyed as part of the 2018 bat surveys, however no masonry works are included in the proposed works.
Invasive Species	While Japanese knotweed (*Fallopia japonica*) has been recorded along the N59 at Oughterard, there is no evidence of it at the works location (Source: Atkins RE).
Other Ecology Notes	NBDC records show marsh fritillary areas to the west and east of Lough Bofin, however these are a considerable distance from Lettermore Bridge. NBDC records show otter present on the outflow from Lough Bofin. Given the series of lakes and their inflows in the surrounding landscape, otter are likely to frequent the Letterfore stream from Lough Bofin.

Brief Description of the Natura 2000 site

Site	**Connemara Bog Complex SAC (000297)**
Qualifying Interests: -	➢ Coastal lagoons [1150] ➢ Reefs [1170] ➢ Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] ➢ Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* [3130] ➢ Natural dystrophic lakes and ponds [3160] ➢ Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] ➢ Northern Atlantic wet heaths with *Erica tetralix* [4010] ➢ European dry heaths [4030] ➢ Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410] ➢ Blanket bogs (* if active bog) [7130] ➢ Transition mires and quaking bogs [7140] ➢ Depressions on peat substrates of the Rhynchosporion [7150] ➢ Alkaline fens [7230] ➢ Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] ➢ *Euphydryas aurinia* (Marsh Fritillary) [1065] ➢ *Salmo salar* (Salmon) [1106] ➢ *Lutra lutra* (Otter) [1355] ➢ *Najas flexilis* (Slender Naiad) [1833]

Assessment

The location of QIs[1] in relation to the works area are detailed in the table below. Connemara Bog Complex SAC is a large site that is designated for a range of habitat and species, not all of which are located in the vicinity of Letterfore Bridge.

Qualifying Interest	Location	Within Potential Zone of Influence
Coastal lagoons	The four coastal lagoons within the SAC are located a significant distance from the bridge. The lagoons are not hydrologically connected to the bridge.	No
Reefs	Reefs are located along the coastline and a significant distance from the bridge. The reefs are not hydrologically connected to the bridge.	No
Oligotrophic water	L. Bofin, Adrehid, Agraffard are not oligotrophic waters and therefore this	No

[1] Conservation Objectives for Connemara Bog SAC (002034) https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002034.pdf

	habitat type is not connected to the bridge.	
Oligotrophic to mesotrophic standing waters	L. Bofin is classified as this habitat type and L. Adrehid and Agraffard are potential waters. Thus, this habitat type has surface water connectivity to the bridge.	Yes
Natural dystrophic lakes and ponds	L. Bofin, Adrehid, Agraffard are not natural dystrophic waters and therefore this habitat type is not connected to the bridge.	No
Floating river vegetation	Floating river vegetation may occur in both upland and lowland depositing rivers. Therefore, this habitat may be present in the Letterfore River.	Yes
Northern Atlantic wet heaths with *Erica tetralix*	The distribution of this habitat has not been identified within the SAC, however the works only require access to the area in the immediate vicinity of the bridge.	No
European dry heaths	The distribution of this habitat has not been identified within the SAC, however the works only require access to the area in the immediate vicinity of the bridge.	No
Molina meadows	The distribution of this habitat has not been identified within the SAC, however the works only require access to the area in the immediate vicinity of the bridge.	No
Blanket bogs	The distribution of this habitat has not been identified within the SAC, however the works only require access to the area in the immediate vicinity of the bridge.	No
Transition mires and quaking bogs	The distribution of this habitat has not been identified within the SAC, however the works only require access to the area in the immediate vicinity of the bridge.	No
Depressions on peat substrates of the *Rhynchosporion*	The distribution of this habitat has not been identified within the SAC, however the works only require access to the area in the immediate vicinity of the bridge.	No
Alkaline fens	The distribution of this habitat has not been identified within the SAC, however the works only require access to the area in the immediate vicinity of the bridge.	No
Old sessile oak woodlands	The three woodland areas designated under the SAC are located in the south-west of north-western extents of the SAC, which are located a significant distance from the bridge. The	No

	woodlands are not hydrologically connected to the bridge.	
Marsh Fritillary	Marsh fritillary sites are not mapped for the SAC, but records on the NBDC show marsh fritillary records to the west and east of L. Bofin. The works only require access to the area in the immediate vicinity of the bridge.	No
Salmon	IFI have recorded Salmon in the Owenriff river and thus they are likely to be present in Lough Bofin and Letterfore River.	Yes
Otter	Otter are likely to be present in the vicinity of L. Bofin and the Letterfore River.	Yes
Slender Naiad	Slender Naiad is present in Lough Bofin. The bridge has a surface water link to L. Bofin.	Yes

Potential impacts during construction:-

The rebuild of the parapet wall will not cause direct impacts to the qualifying interests of the SAC as the works will be carried out from the carriageway and there will be no requirement to access adjacent lands. There are no instream works as part of the proposed project and no instream access will be required to carry out the works.

The bridge spans the Letterfore River and thus, the proposed works could potentially affect the water quality of the river and thus, indirectly impact floating river vegetation, salmon, otter, slender naiad and the integrity of the lakes through the degradation of water quality. However, all works will be carried out from the carriageway and all management of materials and wastes will be managed as per the requirements of the contract.

Thus, due to the nature, scale, extent and duration of the proposed works, the potential risk of impacts to water quality, and hence Lough Corrib SAC is considered negligible.

Potential impacts during operation: -

Impacts during the operational phase of the proposed works are not anticipated. The works will not affect the hydrological regime of the rivers and will not generate further emissions to the Letterfore River.

Site	**Lough Corrib SAC (000297)**
Qualifying Interests: -	➢ Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] ➢ Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* [3130] ➢ Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.* [3140] ➢ Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation [3260] ➢ Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210] ➢ Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410]

- Active raised bogs [7110]
- Degraded raised bogs still capable of natural regeneration [7120]
- Depressions on peat substrates of the Rhynchosporion [7150]
- Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210]
- Petrifying springs with tufa formation (Cratoneurion) [7220]
- Alkaline fens [7230]
- Limestone pavements [8240]
- Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]
- Bog woodland [91D0]
- *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]
- *Austropotamobius pallipes* (White-clawed Crayfish) [1092]
- *Petromyzon marinus* (Sea Lamprey) [1095]
- *Lampetra planeri* (Brook Lamprey) [1096]
- *Salmo salar* (Salmon) [1106]
- *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303]
- *Lutra lutra* (Otter) [1355]
- *Drepanocladus vernicosus* (Slender Green Feather-moss) [1393]
- *Najas flexilis* (Slender Naiad) [1833]

Assessment

The location of QIs[2] in relation to the works area are detailed in the table below. It is important to note that Letterfore Bridge is located outside Lough Corrib SAC. The SAC is located 2.7km from the bridge by land. The upper boundary of Lough Corrib SAC is located 3.7km downstream of the bridge, through a series of lakes. Lough Corrib itself is located approximately 12.6km downstream of the bridge.

Qualifying Interest	Location	Within Potential Zone of Influence
Oligotrophic waters	Lough Corrib is located 12.6km d/s of the bridge and thus has surface water connectivity to the bridge.	Yes – via surface water pathways
Oligotrophic to mesotrophic waters	Lough Corrib is located 12.6km d/s of the bridge. Ballycuirke Lake is located downstream of Lough Agraffard on the Owenriff river. Thus, the lakes have surface water connectivity to the bridge.	Yes – via surface water pathways
Hard oligo-mesotrophic water	Lough Corrib is located 12.6km d/s of the bridge and thus has surface water connectivity to the bridge.	No
Floating river vegetation	Floating river vegetation may occur in both upland and lowland depositing rivers. Therefore, this habitat may be present in the Owenriff river.	Yes – via surface water pathways

[2] Conservation Objectives for Lough Corrib SAC (000297) https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000297.pdf

Semi-natural dry grasslands on calcareous substrate	Small grassland areas are present in association with other habitats such as fens and limestone pavements.	No
Molinia meadows	*Molinia* meadows are present in association with habitats such as other grassland types and fens.	No
Active raised bogs	Addergoole Bog and Lough Tee Bog are located adjacent to Lough Corrib and north east of Athenry respectively.	No
Degraded raised bogs	Degraded raised bogs have not been identified within the SAC, but would be located at minimum of 2.7km from the proposed works.	No
Depressions of peat substrates with Rhynchosporion vegetation	The distribution of this habitat has not been identified within the SAC, but would be located at minimum of 2.7km from the proposed works.	No
Calcareous fens	Calcareous fens have not been mapped within the SAC, but would be located at minimum 2.7km from the proposed works.	No
Petrifying springs	Petrifying springs have not been mapped within the SAC, but would be located at minimum 2.7km from the proposed works.	No
Alkaline fens	Alkaline fens have not been mapped within the SAC, but would be located at minimum 2.7km from the proposed works.	No
Limestone pavement	Limestone pavement is located on the east and west of shores of Lough Corrib, which is located approximately 6km from the proposed works.	No
Oak woodlands	Oak woodlands are located around Lough Corrib and as described above, are located a significant distance from the proposed works.	No
Bog woodland	Bog woodland occurs on Addergoole Bog and around Lough Corrib. These are located a significant distance from the proposed works.	No
Freshwater pearl mussel	[redacted]	
White-clawed crayfish	White-clawed crayfish are not present in the Owenriff catchment.	No
Sea lamprey	Sea lamprey are present in the River Corrib in the vicinity of Galway City. Their upstream passage is impeded by the regulating weir located upstream.	No

	Inland Fisheries Ireland (IFI). Surveys[3] have not recorded sea lamprey on the Owenriff river.	
Brook lamprey	It is likely that brook lamprey at present in the Owenriff, which has surface water connectivity to the bridge.	Yes – via surface water pathways
Salmon	Salmon have been recorded by IFI on the Owenriff, which has surface water connectivity to the bridge.	Yes – via surface water pathways
Lesser Horseshoe bat	One important summer roost and associated foraging grounds are present along the northern shore of Lough Corrib. The proposed works are located a significant distance from this location and thus lie outside the 2.5km foraging zone.	No
Otter	Otter are present along many lakes, rivers and streams in Ireland. Thus, otter are likely to be present on the Owenriff.	Yes – via surface water pathways
Slender Green Feather-moss	Slender green feather moss is located at Gortachalla on the north-west of Lough Corrib.	No
Slender Naiad	Slender Naiad habitat is within Lough Corrib, which has surface water connectivity to the bridge.	Yes

Potential impacts during construction: -

The proposed works at Letterfore Bridge will not give rise to impacts via land and air pathways as the SAC is located 2.7km from the proposed works, with many qualifying interests located at greater distances. Letterfore Bridge spans the Letterfore River, which is hydrologically connected to the Lough Corrib SAC via and a series of lakes; L. Bofin, Adrehid and Agraffard.

Given the nature and scale of the works, i.e. works from the carriageway, no instream works and no instream access required, it is not anticipated that the works will result in impacts to water quality. All management of materials and wastes will be managed as per the requirements of the contract.

Thus, due to the nature, scale, extent, duration and location of the proposed works, the impacts to water quality to Lough Corrib SAC are not anticipated.

Potential impacts during operation: -

Impacts during the operational phase of the proposed works are not anticipated. The works will not affect the hydrological regime of the rivers and will not generate further emissions to the watercourses.

[3] IFI Water Framework Directive Fish Survey Map http://www.ifigis.ie/WFDFishMap/

Findings of this Assessment

Atkins Findings	This Screening for Appropriate Assessment report is based on the best available scientific information. It is concluded by the authors of this report that the proposed project poses no likely significant effects on the Connemara Bog Complex SAC and the Lough Corrib SAC. Thus, it is recommended that it is not necessary for the proposed project to proceed to Appropriate Assessment.

Findings of TII Appropriate Assessment

AA Determination

Having performed screening for Appropriate Assessment in respect of the proposed reactive maintenance works detailed in this document entitled *Appropriate Assessment Screening – Note TO289/RM05. Revision 0,* I accept the recommendations of Atkins Limited that the proposed reactive maintenance works, individually or in combination with other plans or projects, would not be likely to have a significant effect on any European site in view of the best scientific knowledge and the site's conservation objectives. I determine that an Appropriate Assessment of these proposed works is not required, as *it can be excluded* on the basis of objective scientific information following the screening done that the proposed works, individually or in combination with other plans or projects, will have a significant effect on any European site.

Vincent O'Malley 28/01/2019

Dr. Vincent O'Malley
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Transport Infrastructure Ireland