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Appropriate Assessment Screening – Note TO270/RM02

Project:	5162555_TO 270 Munster Bridges		
Subject:	Reactive Maintenance - AA Screening No. 2		
Author:	Paul O'Donoghue, Atkins Principal Ecologist	Atkins No.:	Appropriate Assessment Screening – Note TO270/ RM02. Revision 1.0
Date of Query:	30/10/2018	Date Issued:	5/11/2018
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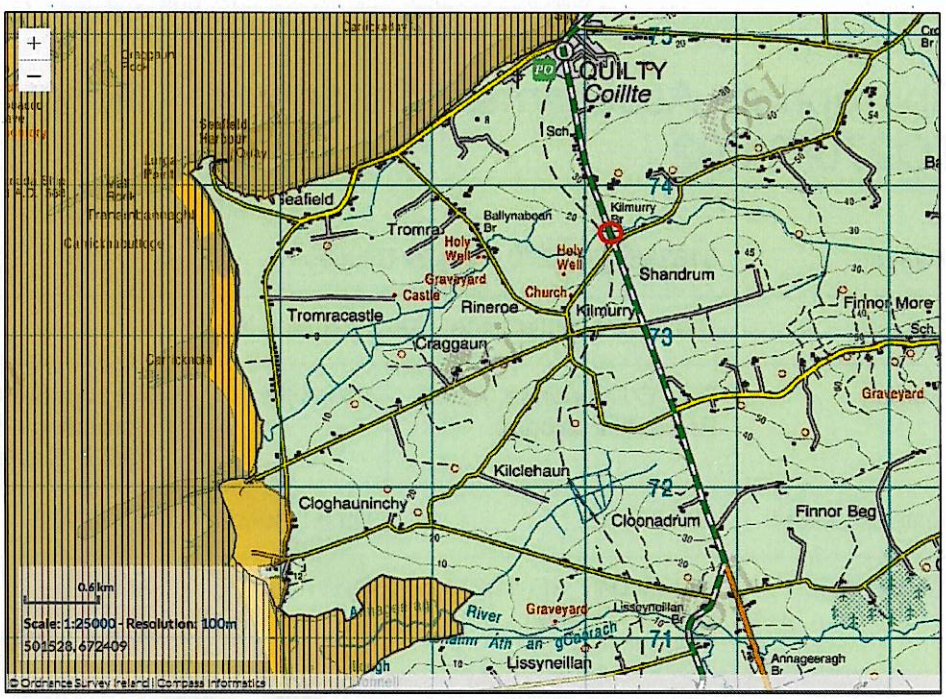
Bridge / Culvert Details

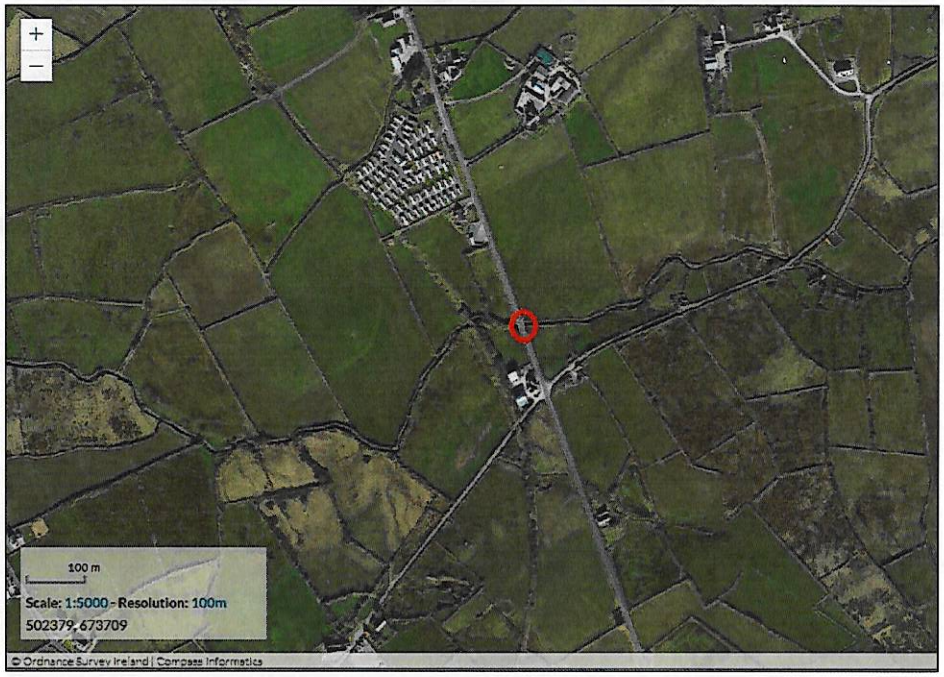
Bridge	**Kilmurry Bridge**
Structure ID	CL-N67-015.00
County	Clare
Location	On the N67, approximately 1km south of Quilty, Co. Clare (ITM ref: 502140.997, 673733.9987).

DRAFT

Maps



Map 1. Kilmurry Bridge (circled in Red); Carrowmore Point to Spanish Point and Islands SAC shown in brown; Mid-Clare Coast SPA - hatched. [Source: https://maps.biodiversityireland.ie/Map]



Map 1. Kilmurry Bridge. [Source: https://maps.biodiversityireland.ie/Map]

Photos

Plate 1. Kilmurry Bridge. View from deck [Source: Atkins R.E.; 26/10/2018].

Plate 2. Kilmurry Bridge and stream [Source: Atkins R.E.; 26/10/2018].

Plate 3. Stonework requiring repointing at base of arch [Source: Atkins R.E.; 26/10/2018].

Plate 4. Kilmurry Bridge arch [Source: Atkins R.E.; 26/10/2018].

Proposed Works	Appropriate Assessment Screening was previously carried out on Kilmurry Bridge (CL-N67-015.00) in 2018. Works assessed under the routine maintenance works were - *Vegetation clearance from embankments, wing walls and parapets (63m²)* as well as *Establish 1 no. drain along verge*. There were no in stream works. A Principal Inspection undertaken in 2017 noted the opening along the base of the arch and described it as an open joint to be repointed (Plate 3); however following a recent site visit the condition of the bridge was re-assessed. The mortar has been fully washed out resulting in settlement of the masonry. The affected areas need to be repaired and grouted (backfilled) to prevent further masonry being washed away and the arch barrel settling and cracking. The arch barrel in its present condition is fine apart from areas of mortar loss on both sides above the springing point (i.e. the level where an arch or vault rises from a support). Some additional repointing is also to be undertaken as noted below. Works to be carried out at Kilmurry Bridge are as follows: - • 15m² of parapet repointing (mix between internal and external faces; with the latter over water); • 15m² repointing to wing/spandrel walls (including over water – ca. 3-4m²); • 17m² repointing to the abutments (full area of each wall); • 10m² repointing of arch barrel (mainly above abutment springing); and • Grouting of backfill behind the south abutment. Instream works will be required. The riverbed in front of both abutments would need to be dried out to facilitate repointing. This would be done by creating a line of sealed sandbags in order to create a dry works area along the base of the bridge arch. The repointing will most likely be by hand given the small area; though the appointed Contractor may elect to pressure point the abutments[1]. No pre-washing by e.g. power hosing is required. The mortar to be used will be NHL 5. NHL 5 is a natural lime mortar with no artificial additives or plasticisers. Mixing the mortar involves adding water and mixing in a drum or by hand to the correct consistency. This would be done on the bridge deck with prepared mortar brought to the works area. Any waste material will be collected and removed from the works area. Should it be necessary clean pea gravel will be laid within the works area to fully reinstate the river bed following completion of works. Sandbags will then be removed allowing water to re-enter. Duration of works is likely to be 2-4 days. In order to avoid the risk of water over-topping the sand bags, the Contractor is required to assess river flow / depth and the short-term weather forecast prior to the commencement of works. Works are to be timed when there is a 3-4 day dry / low rainfall window predicted in order to avoid flooding of the works area. The Contractor will also be required to inform Inland Fisheries Ireland of the timing of proposed works.

Appropriate Assessment Screening Decision Matrix

Natura 2000 Sites	Natura 2000 sites with 15km: - 1. Carrowmore Point to Spanish Point and Islands SAC (001021) 2. Carrowmore Dunes SAC (002250)

[1] An alternative to manual pointing / grouting; grout is pushed out from a hand-held *gun* under air pressure (generally under air pressure of 2 bar; 32 psi), which makes it more efficient at pushing grout to the back of void spaces.

3. Tullaher Lough and Bog SAC (002343)
4. Kilkee Reefs SAC (002264)
5. Mid-Clare Coast SPA (004182)
6. Cliffs of Moher SPA (004005)

Kilmurry Bridge is on a small un-named stream which joins the sea ca. 3.3km downstream (measured along the stream); the stream discharges into Carrowmore Point to Spanish Point and Islands SAC. Due to the hydrological link between the works location and Carrowmore Point to Spanish Point and Islands SAC, this site is discussed in further detail below. The stream also discharges to Mid-Clare Coast SPA which is also considered below.

Carrowmore Dunes SAC is located approximately 4.6km southwest of Kilmurry Bridge. It is designated for Reefs [1170]; Embryonic shifting dunes [2110]; white dunes [2120]; grey dunes [2130] and *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]. There is no physical overlap between the proposed works and this site; nor are the works hydrologically connected to the SAC. Therefore, there is no risk of direct impacts to Carrowmore Dunes SAC; while the distance between the works and the SAC are such that indirect impacts are not predicted. The SAC is not considered further.

Tullaher Lough and Bog SAC is a wetland site designated for Active raised bogs [7110]; Degraded raised bogs still capable of natural regeneration [7120]; Transition mires and quaking bogs [7140] and Depressions on peat substrates of the Rhynchosporion [7150]. The SAC is 11.7km southwest of the proposed works. There is no physical overlap between the proposed works and this site; nor are the works hydrologically connected to the SAC. Therefore, there is no risk of direct impacts to Tullaher Lough and Bog SAC; while the distance between the works and the SAC are such that indirect impacts are not predicted. The SAC is not considered further.

Kilkee Reefs SAC is located approximately 12.6km southwest of the proposed works. It is designated for Large shallow inlets and bays [1160]; Reefs [1170] and Submerged or partially submerged sea caves [8330]. There is no physical overlap between the proposed works and this site. The works are hydrologically connected to the SAC in that the stream discharges to the sea; however, the distance and dilution factors are such that negative impacts are highly unlikely. Therefore, there is no risk of direct impacts to Kilkee Reefs SAC; while the distance between the works and the SAC are such that indirect impacts are not predicted. The SAC is not considered further.

Cliffs of Moher SPA is located 13.7km north of the proposed works. It is designated for a number of cliff nesting birds (Fulmar (*Fulmarus glacialis*) [A009]; Kittiwake (*Rissa tridactyla*) [A188]; Guillemot (*Uria aalge*) [A199]; Razorbill (*Alca torda*) [A200]; and Puffin (*Fratercula arctica*) [A204]) as well as Chough (*Pyrrhocorax pyrrhocorax*) [A346]. The works area does not support habitat that would be used by seabirds nesting at the Cliffs of Moher; while the distance between the works and the SPA are such that indirect impacts to nesting birds are not predicted. Chough feeds on coastal grasslands; however the improved agricultural grassland located at the bridge does not represent good quality habitat for Chough (i.e. closely cropped cliff-top grassland) (Plate 2). The SPA is not considered further.

pNHA / NHA	Carrowmore Point to Spanish Point and Islands is also designated as a Natural Heritage Area. It overlaps with the SAC noted above.

Hydrological links	Kilmurry Bridge is on a small un-named stream which joins the sea ca. 3.3km downstream in the townland of Tromracastle.
FWPM	The small un-named stream upon which the Kilmurry Bridge is located is not located within a *Margaritifera* sensitive area. There are no records of Freshwater Pearl Mussel in the vicinity of the bridge.
Bats	Most of the bridge arch has been tightly mortared providing no suitable opportunities for roosting bats (Plate 4). Areas of mortar loss are low on the arch in areas liable to flood and are not suitable for use by roosting bats. With respect any other areas to be repointed instructions regarding bats in the Contract are to be followed and the advice of the Contractor's ecologist is to be sought prior to the commencement of works.
Invasive Species	There are no records of invasive species in the vicinity of the bridge. Japanese knotweed has been recorded from the townland of Kilcehaun just over 1km to the southwest of the bridge (R016726).
Other Ecology Notes	NBDC includes records of otter from Lough Donnell on the Annageeragh River to the south (R000711; R002708); as well as from Lurga Point (Q995742) to the north. It is possible that Otter may occur at Kilmurry Bridge; it is not, however, a qualifying interest of Carrowmore Point to Spanish Point and Islands SAC.

Brief Description of the Natura 2000 site(s)

Site	**Carrowmore Point to Spanish Point and Islands SAC (001021)**
Qualifying Interests: -	➢ Coastal lagoons [1150] ➢ Reefs [1170] ➢ Perennial vegetation of stony banks [1220] ➢ Petrifying springs with tufa formation (Cratoneurion) [7220]
Assessment	The location of the Qualifying Interests[2] relative to the works is detailed in the table below.

Qualifying Interests	Location	Within Zone of Influence
Coastal lagoons [1150]	Lough Donnell on the Annageeragh River is classified as a coastal lagoon (NPWS, 2014a[3]). The small stream on which Kilmurry Bridge is located is not hydrologically connected with Lough Donnell. The lough is ca. 3.1km southwest of the proposed works. No	No

[2] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001482.pdf

[3] NPWS (2014a). *Carrowmore Point to Spanish Point and Islands SAC (site code 1021).* Conservation objectives supporting document. Coastal Lagoons. Version 1.0. March 2014.

	direct or indirect impacts on Lough Donnell are anticipated.	
Reefs [1170]	The extent of reef habitats is illustrated in Figure 1 of NPWS, 2014b[4]; with constituent communities shown in Figure 2). Included within Reefs {1170] are the communities; Intertidal reef community complex and *Laminaria* -dominated community complex. These are widely distributed within the SAC.	Yes – surface water pathways.
Perennial vegetation of stony banks [1220]	The National Shingle Beach Survey (NSBS) was carried out in 1999 on behalf of the National Parks and Wildlife Service (NPWS) (Moore & Wilson, 1999[5]). Site no. 83 Carricknola / Tromcastle Strand is located close to the streams discharge point (see Appendix I to NPWS, 2014c[6]). The vegetated shingle at Carricknola / Tromcastle was rated of medium interest owing to some interesting formations even though the overall vegetation is considered poor. At Carricknola / Tromcastle strand, the vegetated shingle supports spear-leaved orache (*Atriplex prostrata*), beet (*Beta vulgaris*), common scurvygrass (*Cochlearia officinalis*), sea-milkwort (*Glaux maritima*) and sea mayweed (*Tripleurospermum maritimum*) (Moore & Wilson, 1999).	Yes – surface water pathways.
Petrifying springs with tufa formation (Cratoneurion) [7220]	This habitat has been recorded at two points within the SAC; just south of Spanish Point[7].	No

Potential impacts during construction:-

There is no spatial overlap with the SAC.

No direct or indirect impacts to Coastal lagoons [1150] or Petrifying springs with tufa formation (Cratoneurion) [7220] are predicted due to the lack of any direct or indirect connection between the proposed works and these habitats within the SAC.

Kilmurry Bridge is hydrologically connected to the SAC in that the stream discharges to the sea; however, the distance and dilution factors are such that negative impacts are highly unlikely. Perennial vegetation of stony banks [1220] is a terrestrial habitat located high on the shore and is very unlikely to be impacted should any pollutants enter the stream. The main risk from the proposed works include release of silts; or spillage of mortar into the river; however, this should be avoided by creating dry works areas which are to be cleaned and re-instated following completion of works and by closely monitoring the weather to avoid flooding of the works area.

However, even if such spillages were to occur the type and scale of impact associated with the proposed works, along with the dilution provided once the

[4] NPWS (2014b). *Carrowmore Point to Spanish Point and Islands SAC (site code 1021). Conservation objectives supporting document – marine habitats.* Version 1.0. February 2014.

[5] Moore D. and Wilson, F. (1999). *National Shingle Beach Survey of Ireland 1999.* Unpublished report to NPWS, Dublin. [Quoted in NPWS, 2014].

[6] NPWS (2014c). *Carrowmore Point to Spanish Point and Islands SAC (site code 1021). Conservation objectives supporting document - coastal habitats.* Version 1.0. March 2014.

[7] NPWS (2014d). *Mid-Clare Coast SPA. (Site Code 4182). Conservation Objectives Supporting Document.* Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. July 2014.

	stream reaches the sea, is such that negative impacts to Reefs [1170] is not anticipated. Potential impacts during operation:- Impacts during the operation 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.
Site	**Mid-Clare Coast SPA (001021)**
Qualifying Interests: -	➢ Cormorant (*Phalacrocorax carbo*) [A017] ➢ Barnacle Goose (*Branta leucopsis*) [A045] ➢ Ringed Plover (*Charadrius hiaticula*) [A137] ➢ Sanderling (*Calidris alba*) [A144] ➢ Purple Sandpiper (*Calidris maritima*) [A148] ➢ Dunlin (*Calidris alpina*) [A149] ➢ Turnstone (*Arenaria interpres*) [A169] ➢ Wetland and Waterbirds [A999]
Assessment	The location of the Qualifying Interests[8] relative to the works is detailed below. Kilmurry Bridge is located on the N67 surrounded by agricultural grassland (see e.g. Map 1; Plate 1 & 2). Within the SPA Barnacle geese occur on Mutton Island, an island just over 1km offshore. There will be no direct or indirect impacts to Barnacle Geese using the island from the proposed works. Barnacle Geese are not known to feed at the works area. Cormorant is an aquatic bird which feed on fish by pursuit diving. The stream at Kilmurry Bridge is too small to provide suitable habitat for Cormorant. Ringed Plover, Sanderling and Dunlin forage intertidally on sand and mudflats; while Purple Sandpiper and Turnstone favour more exposed shorelines. There will be no direct or indirect impacts to intertidal waders using the island from the proposed works. As there is no direct overlap with the SPA, there will be no impacts to wetland habitats used by wintering waterbirds (i.e. Wetland and Waterbirds [A999]).
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 **Carrowmore Point to Spanish Point and Islands SAC and Mid-Clare Coast SPA**. Thus, it is recommended that it is not necessary for the proposed project to proceed to Appropriate Assessment.

[8] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004182.pdf

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 TO270/ RM02. Revision 1.0*, 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 26/11/2018

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