

Bat and Bird Survey (with other ecological observations)

Brooke Bridge, Co. Kildare



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SUMMARY

Constraints	Results	Recommendations
Bats	Rated 1 = crevices present may be of use to bats. There were no bats in the bridge at the time of the survey. Potential is limited.	Further bat survey required in advance of works.
Birds	No bird nests recorded in bridge	Survey again in advance of works
Otters	No signs of otter activity	Otters can potentially occur on any watercourse.
Aquatic invertebrates	No notable observations / potential	Crayfish plague / crayfish presence needs to be considered.
Salmonids	Sub-optimal salmonid habitat, impacted by agricultural activities.	Water quality protection
Lampreys	Sub-optimal Brook lamprey habitat.	Water quality protection
Annex I Habitats	None present	No action required
Non-native invasive species	None recorded	Biosecurity required



1. INTRODUCTION

Kildare County Council has proposed bridge rehabilitation on seven bridges. Ecofact were commissioned to complete a Bat and Bird survey at each of the seven bridges in 2021. Other general ecological constraints of the proposed works were also considered in the bridge assessments. The current report provides the results of these surveys at Brooke Bridge, Co. Kildare.

This assessment has been prepared with regard to the NRA (2008a) 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes', the CIEEM (2016) 'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, and Coastal', and the NRA (2009) 'Guidelines for Assessment of Ecological Impacts of National Road Schemes'.

2. METHODOLOGY

2.1 Desk Study

A desk study was undertaken to obtain data on the receiving environment and to identify important ecological features near the subject bridge in Co. Kildare. The websites of National Biodiversity Data Centre (NBDC), National Parks Wildlife Service (NPWS) and Bat Conservation Ireland (BCI) were accessed to collate information from reports and records of protected sites (Natura 2000 designations) and flora and fauna species in the study area. Online aerial imagery was also accessed in order to gain a better understanding of the site and its surrounding habitats.

2.2 Field Surveys

The subject bridge site was visited in April 2021 during bright conditions and normal water flow levels. A general walkover survey was completed at the site within 50m upstream and 50m downstream of the subject bridge. A bat and bird survey of the site was completed including an assessment of the bridge and surrounding habitats in terms of suitability for birds and bats and checks for potential for, or evidence of, use by bats and birds. Any other features of particular ecological interest were also noted. The location of the subject bridge is shown in Figure 1.

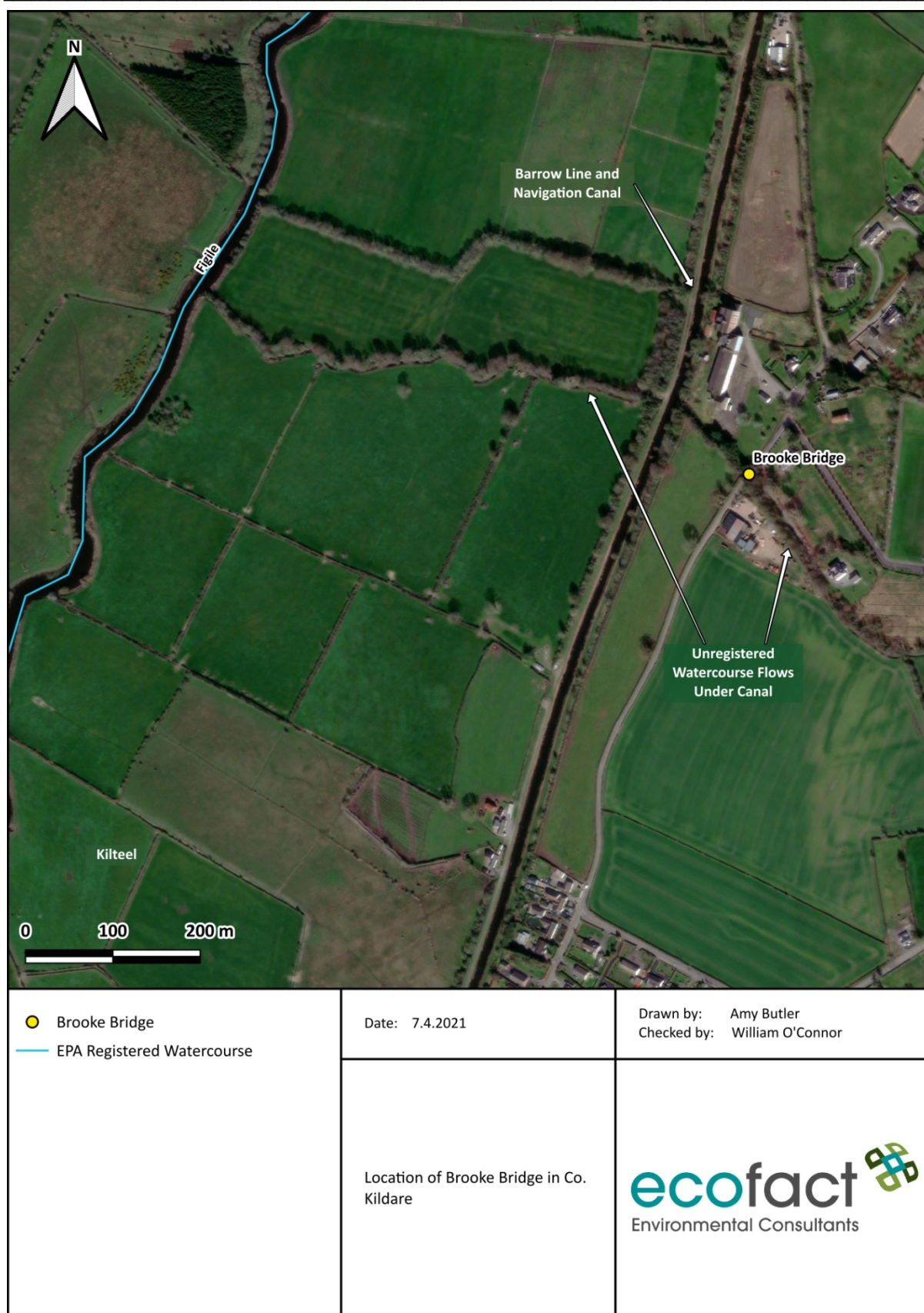


Figure 1 Location of the proposed bridge works at Brooke Bridge in Co. Kildare.



2.2.1 Birds

The bird survey involved the inspection of the bridge structure and the environs for potential for and evidence of bird nesting sites. The bridge structure was thoroughly inspected for signs of bird nesting / roosting, including under arches or spans, abutments and parapets. Common nest locations include cavities in the bridge structure, on ledges or pipes, on stones jutting out from the bridge or in vegetation growth on the bridge structure. Binoculars were used where access did not allow closer inspection. Suitable nesting cavities were checked for presence of nests where possible. Other evidence of use was also noted such as dropping marks under potential roosting / nest places. Vegetation growth including dense ivy cover was noted if present, which can provide potential habitat for roosting and nesting as well as feeding opportunities by attracting insects or providing berries to feed on.

Nesting potential within and around the environs of each bridge was assessed. The riparian and habitat along the watercourse in the vicinity of the bridge was inspected for waterbird nesting. The river banks in the bridge vicinity were assessed to establish the suitability / presence of foraging, roosting and nesting habitat for protected waterway birds such as Kingfisher. Assessment of other adjacent habitats included identifying nearby trees and shrubs with potential for bird nesting. Large mature trees situated within hedgerows and treelines were considered in addition to scrub habitats.

Bird species present at the bridge site were recorded during the field survey, particularly any species considered likely to use the subject bridge for nesting. Species that are known to nest in bridges in Ireland include Dipper, Grey Wagtail, Pied Wagtail, Wren, Coal Tit, Blue Tit, Swallow, House Martin and Blackbird (Masterson *et al.*, 2008). Copland (2012) notes the regular use of bridge nest sites by Dipper and Grey Wagtail in particular. Behaviour of birds present was also observed and any indications that individuals were likely to be nesting at the bridge site were noted. Any inactive nests found were also noted.

2.2.2 Bats

A daytime bat survey was completed at the bridge site to determine the potential for bat usage. The survey methodology followed that of Billington and Norman (1997) and had regard to the methodology outlined in *Bat Mitigation Guidelines for Ireland* by Kelleher & Marnell (2006) and *Bat Surveys for Professional Ecologists: Good Practice Guidelines* by Collins (2016). Each bridge was assigned a rating based on the assessment. The rating categories are as follows:

- 0 = no potential (no suitable crevices)
- 1 = crevices present may be of use to bats
- 2 = crevices ideal for bats but no evidence of usage
- 3 = evidence of bats (e.g. bats present, droppings etc.)

Any potential roosting opportunity, such as cracks and crevices in the bridge structure were noted. Certain factors such as the presence of cobwebs in crevices on the bridge, or low profile of the structure, indicates that active bat use is unlikely. If bat potential was not ruled out the bridge structure was carefully examined for evidence of use where access allowed. Evidence of bat usage / habitation may present in the form of actual bats present in crevices (examined with borescope if necessary), bat droppings, urine staining, grease marks (oily secretions from glands) and claw marks. Bat-use could not be ruled out for bridges rated 3 and further activity surveying during the active bat season (late April – early September) is required.



2.2.3 Other Ecology

The general walkover survey of the subject bridge site comprised an overview of the ecological features within 50m upstream and 50m downstream of the bridge. The habitats present at the survey site were assessed, including the aquatic habitat present. Any potential salmonid or lamprey spawning habitat, as well as any protected Annex I habitats of the EU Habitats Directive, were identified and recorded. Any invasive species were also identified and recorded. Checks for signs of mammal usage and potential mammal dwellings were carried out, particularly for Otter features such as spraints, slides, dwellings etc..

3. RESULTS

3.1 Desk Study

This bridge site is located over a small unregistered watercourse in the townland of Ballykelly c. 1.8km north of Monasterevin town centre. Brooke Bridge is situated immediately adjacent to the site of Ballykelly Mill and Ballykelly GFC grounds is c.160m to the east. The Barrow line of the Grand Canal is located just over 100m west of the subject bridge site. The small unnamed watercourse over which the subject bridge is located, flows under the canal to the west and connects to the 4th order River Figile c. 0.7rkm downstream of the subject bridge. The River Figile flows in a southerly direction at this point along the County Kildare – County Laois border. Downstream of the junction between the unnamed watercourse and the River Figile, the lower Figile is designated within the River Nore and River Barrow SAC before the Figile confluence with the main River Barrow. The River Barrow is located a total of c. 2.1rkm downstream of Brooke Bridge and the SAC boundary is just 1.6rkm from the subject bridge.

The National Biodiversity Data Centre (NBDC) maps landscape suitability for bats based on Lundy *et al.*, (2011). The maps are a visualisation of the results of the analyses based on a 'habitat suitability' index. The index ranges from 0 to 100, with 0 being least favourable and 100 most favourable for bats. Table 1 below gives the suitability of the study area for the bat species found in Ireland (based on NBDC) along with their Irish Red List Status (from Marnell *et al.*, 2009). The overall assessment of bat habitats for the current study area is given as 31.78.

Table 1 Bat suitability index for the subject bridge, with Irish Red List status also indicated.

Common name	Scientific name	Suitability index	Irish red list status
All bats	-	31.78	
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	41	Least Concern
Brown long-eared bat	<i>Plecotus auritus</i>	42	Least Concern
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	47	Least Concern
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	0	Least Concern
Leisler's bat	<i>Nyctalus leisleri</i>	44	Near Threatened
Whiskered bat	<i>Myotis mystacinus</i>	34	Least Concern
Daubenton's bat	<i>Myotis daubentonii</i>	34	Least Concern
Nathusius's pipistrelle	<i>Pipistrellus nathusii</i>	4	Least Concern
Natterer's bat	<i>Myotis nattererii</i>	40	Least Concern



3.2 Field surveys

3.2.1 Birds

There were no bird nests recorded on or under the bridge structure during the site visit in early April 2021.

3.2.2 Bats

This bridge does have crevices, but they are very shallow and bat potential is limited. No bats were recorded and no evidence of previous use by bats was recorded.

3.2.3. Other observations

No other significant ecological observations were made. The river at this site is very silted due to agricultural inputs. However, this is a salmonid stream and lampreys could be present. This site is within the distribution of White-clawed crayfish and downstream areas are affected by crayfish plague.

4. CONCLUSIONS AND RECOMMENDATIONS

This bridge is rated as '1 - crevices present may be of use to bats. There were no bats in the bridge at the time of the survey and the potential for bats is limited. No birds' nests were present. It is recommended that the bridge be checked again for bats in advance of works.



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PLATES



Plate 1 Brooke Bridge viewed from upstream.



Plate 2 Brooke Bridge viewed from upstream.



Plate 3 Cattle access downstream of Brooke Bridge.