Bat & Bird Survey
(with other ecological observations)

Moone Village Bridge, Co. Kildare

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SUMMARY

Constraints	Results	Recommendations
Bats	Rated 1 = Crevices present may be of use to bats. Bridge is unlikely to be used due to obstructions and the fact the bridge is very low.	Crevices should be checked again in advance of works.
Birds	No bird nests recorded in bridge	Any vegetation clearance outside of bird nesting season
Otters	No signs of otter activity	None required.
Aquatic invertebrates	No notable observations / potential	None
Salmonids	No notable observations / potential	None
Lampreys	No notable observations / potential	None
Annex I Habitats	None present	No action required
Non-native invasive species	None recorded	Biosecurity required

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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 Moone Village Bridge in 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 Desktop review

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 daytime 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.

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 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.

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

3. RESULTS

3.1 Desk Study

Moone Village Bridge is located at the northern end of Moone Village on the Moone Road to the east of the R448. This is a small single-span structure over the 1st order Timolin14 (Segment: 14_1517) stream, a tributary of the River Greese.

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 23.78.

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	-	23.78	
Soprano pipistrelle	*Pipistrellus pygmaeus*	30	Least Concern
Brown long-eared bat	*Plecotus auritus*	34	Least Concern
Common pipistrelle	*Pipistrellus pipistrellus*	37	Least Concern
Lesser horseshoe bat	*Rhinolophus hipposideros*	0	Least Concern
Leisler's bat	*Nyctalus leisleri*	32	Near Threatened
Whiskered bat	*Myotis mystacinus*	22	Least Concern
Daubenton's bat	*Myotis daubentonii*	23	Least Concern
Nathusiius's pipistrelle	*Pipistrellus nauthusii*	8	Least Concern
Natterer's bat	*Myotis nattererii*	28	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 late April 2021. It is noted however that there is some dense vegetation growth and ivy around the bridge that could provide nesting habitat for small passerine species, and nests could be made here later on in the bird nesting season.

3.2.2 Bats

Moone Village bridge is very low and is unlikely to have bats. No bat droppings, staining or smearing marks were noted on site. The dense vegetation noted during the survey may also provide obstructions to bats that could use the parapet walls. There was a general paucity of crevices in the parapet walls, however. The bridge is rated as 1 = crevices present may be of use to bats as per Billington & Norman (1997). There are some crevices in the parapet walls, but these are considered unlikely to be used. Nonetheless, there is some potential and crevices should be checked in advance of works.

3.2.3. Other observations

No other significant ecological observations were made.

4. CONCLUSIONS AND RECOMMENDATIONS

This bridge is rated as ‘1 = crevices present may be of use to bats. However, it is considered unlikely to be used by bats as the bridge is low and crevices on the parapets are suboptimal and obstructed. No derogation licenses are required at this stage. Nonetheless, there is some potential and crevices should be checked in advance of works. No birds’ nests were present. Any vegetation clearance works should be undertaken outside of the bird nesting season.

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PLATES

Plate 1 Moone Village bridge is very low with minimal space underneath, which is suboptimal for bats.

Plate 2 The upstream side showed clear evidence of recent vegetation clearance and debris. Small passerine birds could nest in the adjacent vegetation.