

Bat Roost Potential of Vegetation along the Father Russell Road Cycle Scheme Limerick City

MEC Ltd.

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Bat Roost Potential of Vegetation

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1 Introduction

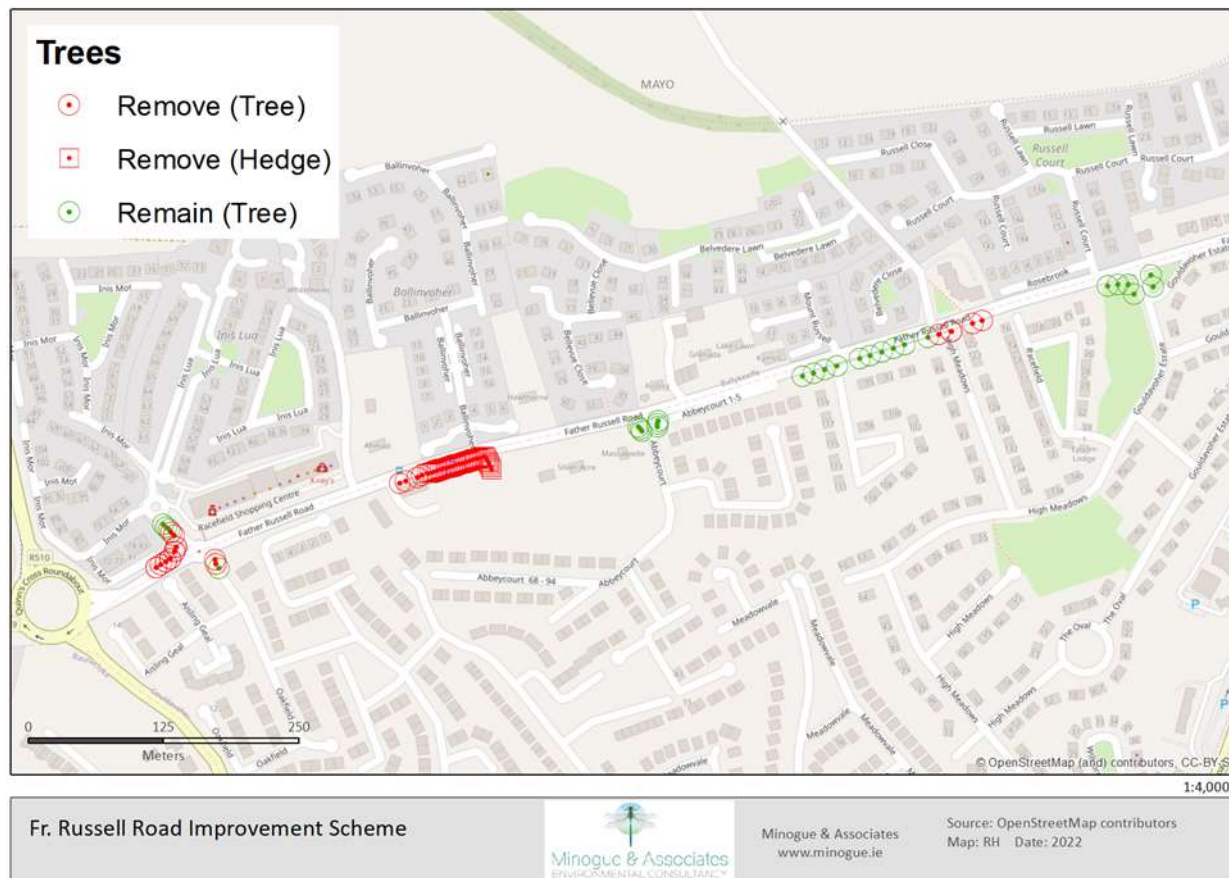
Minogue Environmental Consultants (MEC) Ltd. has been commissioned by Limerick City & County Council to undertake a bat roost potential evaluation of vegetation that is to be felled and cleared along Father Russell Road, Limerick. The works are to be carried out to facilitate the upgrade of the road corridor to incorporate cycle track installations. The area of vegetation to be felled and cleared is indicated on Figure 1-1.

1.1 Roost potential Evaluation Aims & Objectives

The aim of the activity survey and roost potential evaluation was to identify the potential for trees occurring within the area of vegetation to be removed for their potential to function as tree roost habitat for bats.

Figures 1.1 and 1.2 present the trees proposed for removal at Father Russell Road.

FIGURE 1-1 TREES PROPOSED FOR REMOVAL FATHER RUSSELL ROAD



1.2 Legislative Context

All bat species occurring in Ireland are protected under both European and National legislation. All species are European Protected Species, listed on *Annex IV* of the *EU Habitats Directive (92/43/EEC)*, transposed into Irish law under the *European Communities (Birds and Natural Habitats) Regulations 2011*. Lesser horseshoe (*Rhinolophus hipposideros*) bats are afforded special protection as an *Annex II* listed species. At the national level all species are protected under the *Wildlife Acts, as amended (1976 and 2000)*.

1.3 Conservation Status

A total of 9 species of bats are resident in Ireland. The overall conservation status of each of these species, as assigned by the NPWS (2019) is as follows:

- Lesser horseshoe bats is inadequate and deteriorating;
- Common pipistrelle is favourable and improving
- Soprano pipistrelle is favourable and improving
- Nathusius pipistrelle is unknown
- Natterer's bat is favourable and stable
- Daubenton's bat is favourable and improving
- Whiskered bat is favourable and stable
- Brown long-eared bat is favourable and improving
- Leisler's bat is favourable and improving.

2 Methodology

2.1 Desk Study

A search for records of bat species held by the National Biodiversity Data Centre (NBDC) website for an area of search shown on Figure 2.1 was completed on the 24th February 2022. The bat landscapes suitability index hosted on the NBDC website biodiversity.ie for the project site and surrounding area was also reviewed.

FIGURE 2-1: AREA OF SEARCH SHOWN IN RED FOR NBDC BAT RECORDS



2.2 Bat roost potential of Trees

The bat roost potential of trees follows the guidelines outlined in Chapter 6 of the Bat Conservation Trust's Bat Surveys for Professional Ecologists (2016). The trees occurring within the woodland were visually inspected on site for the signs of preferred roost features (PRFs). PRFs include holes, cracks and splits in stems or branches; loose or platy bark; knot holes, cankers in which cavities have developed; detached ivy with stem diameters in excess of 50mm; existing bat or bird boxes. Definitions of the potential suitability of roosting habitat, based on Collins (2016). Suitability Description of Roosting habitats

Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to

	support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

A daytime inspection of tree roost potential was undertaken on the 25th February 2022. The daytime inspection involving visually inspecting the trees occurring within the route of the walking and cycling routes along Fr Russell Road, where vegetation is to be removed and trees are to be felled for the PRFs listed above.

3 Results

3.1 Desk top Review

A review of National Biodiversity Data Centre (NBDC) revealed historical records for bat species within the area of search shown on Figure 2.1. These were as follows:

Lesser Noctule (<i>Nyctalus leisleri</i>)	1	01/06/2005
Pipistrelle (<i>Pipistrellus pipistrellus sensu lato</i>)	1	01/06/2005
Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	1	01/06/2005

The all-Ireland Bat Landscape Classification has classified the area in which the project site is located as being of high to high potential for supporting all bat species occurring in Ireland.

3.2 Tree Roost potential Evaluation Results

3.2.1 Father Russell Road

Table 3.1 below shows the schedule of trees. 16 out of 78 surveyed trees are to be felled and are presented below.

Table 1: Schedule of trees to be removed to accommodate the design
 (To be read in conjunction with Appendix 1 and the Tree Protection Plan.)

Tree number	Species	Age Class	Tree category
4586	Lime	Mature	C2
4587	Lime	Mature	C2
4588	Birch	Mature	B2
4589	Lime	Mature	B2
4602 x 4	Birch	Early-Mature	B2
4603	Norway maple	Semi-Mature	C2
4604	Norway maple	Semi-Mature	C2
4606-07 x 4	Norway maple	Semi-Mature	C2
4608 x 2	Norway maple	Semi-Mature	C2

Total trees to be removed =16

None of these above trees supported PRFs such as holes, cracks and splits in stems or branches; significant loose or platy bark; knot holes or cankers in which cavities suitable for supporting roosting bat have developed.

One tree for removal (Tree no: 4589, mature Lime, *Tillia spp*, see Plate 1 overleaf) has limited loose bark and occasional small holes present. No ivy growth is present on this tree. Overall this tree is in good condition with little evidence of decay that would increase its potential for roosting bats. This tree has low potential roost features given its condition and absence of other features such as bark.



Plate 1: Lime tree

3.3 Conclusions and Recommendations

Overall the trees on Father Russell Road have negligible potential to function as a hibernating roost for bats and have low potential to function as roosting sites for bats during the bat activity season. The trees in the area to be felled do not support PRFs and offer no potential roosting habitat for bat species. The felling of these trees is not predicted to result in the loss of any moderate to high potential roosting features.

There are limited records for the presence of bats in the wider area surrounding the subject site with one record each for Soprano and Common pipistrelle and Leisler Bats. These date from 2005 with no recent records.

During the tree roost evaluation survey suitable PRFs were largely absent from all trees occurring along Father Russell Road.

3.3.1 Father Russell Road Recommendations

One lime tree has low potential roost features and no field signs of bat hibernating were identified. This tree has negligible potential to supporting hibernating bats and the absence of any field signs confirms this.

Following this inspection and the confirmation of the continued absence of roosting bats the Lime Tree should be felled according to the following procedure:

- Where a large machine such as an excavator is to be used to fell the two trees warning should be given to any roosting bats that may be present and not recorded by pushing the tree lightly 3 to 4 times with the excavator bucket. A pause of 30 seconds should be implemented between each

push. The tree should then be pushed to the ground slowly and should remain in place until it has been inspected by the bat specialist.

- Where a chainsaw is to be used, limbs will be first cut and allowed to fall to the ground. For the felling of the main trunks ropes or winches will be put in place so that once the trunk is cut at the base it can be lowered slowly to the ground to thus avoiding any high impact a potential fatalities to any unidentified bats present in the ivy cover.

Reference

Collins, J. (ed) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O’Neill.

Transport Infrastructure Ireland (TII) (2006). Guidelines for the Treatment of bats during the construction of National Road Schemes.