

Limerick City & County Council,
Merchant's Quay,
Limerick.

Our Reference JOC/BL/003_2535
Your Reference
Date 24th February 2021

Issued by email only

Attn: Richard Gorey

RE: University of Limerick to National Technology Park Cycle Lanes
➤ **Fee Proposal for Ecological Surveys and Reports**

Dear Richard,

Ryan Hanley has been requested by Limerick City and County Council (LCCC) to provide a fee-proposal for undertaking the following ecological surveys for the proposed University of Limerick (UL) to National Technology Park (NTP) Cycle Path:

1. **Bat Surveys**
2. **Bird Surveys**
3. **Tree Surveys**
4. **Terrestrial Surveys**
5. **Aquatic Surveys**

The total length of the proposed main cycle path is 6.5km of which 4.2km is adjacent to the River's Shannon and Mulkear, in addition to 3 No. proposed links from Plassey Road. An existing pathway exists along much of the proposed route which is already used by pedestrian and cyclists.

Surveys undertaken to date include a baseline ecological walkover and invasive species survey. We propose that the Ecological Surveys will comprise of the following tasks:

1. **Bat Surveys**

A desk-based study has been undertaken as part of the baseline ecological survey. This included an investigation of the available biodiversity records and publicly available current and historic mapping and aerial imagery. A number of bat species were identified in proximity to the proposed cycleway route including records of the Lesser Horseshoe Bats which are listed on Annex II of the European Habitats Directive. Additional information will be sought from the National Biodiversity Data Centre and other relevant organisations including Bat Conservation Ireland as appropriate.

Ground Level Assessment Survey's

Ground level assessment surveys will be undertaken for trees, buildings and bridges to assess how likely these features could support bats within the development site. This type of survey can be carried out at any time of the year and is undertaken during daylight hours. This survey involves using binoculars and torches to identify any evidence of bats, for example staining, bat droppings etc to identify potential roost sites. The ground level assessment will inform the requirements for additional bat surveys as described below.

Passive Static Survey

This survey involves leaving a static bat detector unit in a specific location and set to record for a specified period of time (at least 10 nights of good weather) from mid-April (weather permitting) to August. Bat detectors are left either within buildings, on trees or in hedgerows and remain onsite for a number of nights to record bat activity. The aim of the passive surveys is to help determine the range of species present and to provide information on the relative importance of some of the key areas of the project to bats.

Note: Passive static surveys are likely to be required after the ground level assessment. After the scope of works is known the fee proposal will be prepared and sent to LCCC.

Emergence Surveys

The aim of these surveys is to identify the presence of any roosting locations and important commuting and feeding areas for bats which may be affected by the proposed works. These surveys will be carried out two weeks apart from late April to end of June. A minimum of two visits will be required and will be carried out at dawn and/or dusk. These surveys will identify the species, the number and the type of roosts present. If a derogation licence is required, the licence application will be made after the June survey. This information then enables a mitigation plan to be drawn up if required. Mitigation season runs from mid-August to the end of October or mid-November dependant on a temperature record of below 15°C for five consecutive days.

2. Bird Surveys

During the desk-based evaluation of the site a number of Annex I bird species have been recorded in the area including Little Egret, Corncrake, Golden Plover, Whooper Swan and Kingfisher. Surveys are required in order to determine the presence of these and other bird species in the area and whether these species will be affected by the proposed works.

Breeding Bird Surveys

Breeding bird surveys will be undertaken by linear transects on foot along the proposed cycle route. Transects will be of suitable and accessible lengths in the field and start and end points will be marked by a hand-held GPS. Fieldwork will be carried out between 05:00 and 10:00. Where problems of accessibility are encountered (e.g. dense vegetation or no access to land) these areas will be recorded.

All bird species seen or heard along transect routes will be recorded in distance bands of 0-25m, 25m-100m and 100m+. Birds will be assigned to the category's 'instream' and 'riparian zone' in relation to the river corridor, therefore a note will be made as to the broad habitat type each bird was in (Fossitt codes). Birds flying over and obviously not interacting with the site will be recorded separately. Breeding evidence will be recorded where possible using the standard system of the British Trust of Ornithology (BTO). Photos will be taken to record features of note.

Two Winter Bird surveys will be required in late February and late March. Breeding bird surveys will be required in late April, May, and July. A Winter Bird survey will also be required in November and December, and if the February survey is not carried out in 2021, a survey will be carried out in January/February 2022 instead.

3. Tree Surveys

The tree surveys will include a visual inspection from the ground of existing trees and tree groups within the proposed development area and will comply with British Standards BS5837:2012. These surveys will provide an appraisal of these trees, including identification of species, dimensions, location, structural condition and physical health on site. It will also provide information on the constraints presented by trees on and adjacent to the proposed cycleway above and below ground and inform which trees are to be kept and which trees can be removed. Root Protection Zones (RPZ) are the minimum area around the base of a tree that contains enough rooting volume to ensure that a tree can survive and grow. The RPZ will be established that will require protection from works upon completion of the tree survey. Tree surveys can be undertaken at any time of the year.

4. Terrestrial Surveys

There are records of both badger and otter within proximity to the proposed cycleway.

Otter Survey

All riverbanks in the vicinity of the site will be searched for holts, couches and any other evidence of otters (feeding signs, spraint, entry/exit points from rivers) following best practice survey methodology. Otter surveys can be conducted throughout the year, but are most effective during spring following a period of prolonged dry weather before the emergence of dense vegetation. If there are signs of holt sites a camera trap survey may be required to determine whether the holt is active. A licence is required from NPWS to directly monitor rest sites. If evidence of otters is found within the development site, we will provide a quotation for mitigation measures to avoid disturbance of breeding or resting places and a derogation licence application to the National Parks and Wildlife Service if required.

Badger Survey

Badger surveys consist of a walkover survey to search for evidence of badgers on site (latrines, signs of feeding, trails and footprints) and a survey to monitor any setts for signs of activity. Badger surveys can be conducted throughout the year, but are less effective in mid to late summer when undergrowth is most dense with February to April and September to November considered optimal. A licence is required from NPWS to directly monitor rest sites. If evidence of badger sett is found within the development site, we will provide a quotation for mitigation measures to avoid disturbance of setts and a derogation licence application to the National Parks and Wildlife Service if required.

5. Aquatic Surveys

The Lower River Shannon Special Area of Conservation (SAC) was identified as being within close proximity to the proposed cycle route. There are a number of aquatic qualifying interests designated as part of this SAC including Sea, Brook and River lamprey AND Salmon along with a number of nationally important species. This site has the potential to be impacted as a result of the works and therefore further aquatic assessment is required.

Aquatic Survey

An aquatic walkover survey will be undertaken to identify sensitive aquatic habitats and/or any vulnerable or protected species which may be affected by the proposed works. Species of interest include fish, macroinvertebrates and white-clawed crayfish. This walkover will identify waterbodies that may require further aquatic surveys and inform any mitigation, licensing and consent that may be required.

Aquatic Ecological Appraisal

An aquatic ecological appraisal is proposed as, although limited in nature, there will be bank stabilising (gabions and sheet piling) works. Such works have the potential to adversely impact the aquatic environment. We propose an aquatic walk over survey to identify sensitive aquatic habitats and/or any vulnerable / protected species potentially threatened by the scheme and any adjacent areas where there may be potential for direct or indirect effects.

WFD Preliminary Assessment Survey

The WFD preliminary assessment survey will include a range of biological, chemical, hydromorphological and physico-chemical elements defined under the WFD.

Our proposed Ecology team for this assessment will be led by John O'Connor (Environmental Team Lead) who will be supported by Nicholas Duff, Grace Kilbane and Eoin Gilson (Environmental Scientists), and Ryan Hanley's UL to NTP Cycle Lanes project team. Our Tree specialist will be Keith Mitchell from CSR, and our Aquatic specialist will be APEM.

Fee Proposal

The table below presents of our envisaged time input for the 5 No. tasks described above.

No.	Survey Type	Fee Proposal
1	Bats Survey	
	Ground Tree and Bridges Survey	
	Produce Tree and Bridges Survey report and populate	
	Emerging Surveys (No. 1) - Dusk, Overnight, Dawn (Two Ecologists)	
	Emerging Surveys (no. 2) - Dusk, Overnight, Dawn (Two Ecologists)	
	Update Tree and Bridges Survey report	
		€ 5,762.50
2	Birds Survey	
	Winter Birds - February Survey (2021, or 2022)	
	Produce Birds Survey report and populate	
	Winter Birds - March Survey	
	Update Report	
	Breeding Birds - Late April	
	Update Report and incorporate into EIAR	
	Breeding Birds - Late May	
	Update Report and incorporate into EIAR	
	Breeding Birds - July	
	Update Report	
	Winter Birds - November Survey	
	Update Report	
	Winter Birds - December Survey	
	Update Report	
		€ 8,350.00
3	Tree Survey	
	CSR to Carry out Survey	
	CSR to Produce Survey report	
		€ 4,525.00
4	Terrestrial - Otter and Badger Survey	
	Carry out Survey	
	Produce Survey report	
		€ 1,637.50
5	Aquatic Survey	
	APEM to Carry out Aquatic Ecological Appraisal	
	Apem to Produce EAE report	
	APEM to WFD preliminary assessment survey	
	Apem to Produce WFD report	
		€ 5,815.00
	Sub-Total for Surveys	€ 26,090.00

	Expenses, Overnight, and Mileage	
	Ryan Hanley	€ 2,570.00
	Cunnane Stratton Reynolds	€ 625.00
	APEM	€ 659.00
		€ 3,854.00
	Grand Total for Fee Proposal	€ 29,944.00

We propose a fee of **€29,944.00 + VAT** for the above services.

Note: this excludes the fee associated with a passive survey that may be required for Bats (TBC post survey).

We trust the above is acceptable. Please contact the undersigned if you require any clarification on the above.

Yours sincerely,



Brendan Larkin