

Dolphin House Regeneration

Bat Survey 2019



Final Report

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Faith Wilson

ECOLOGICAL CONSULTANT

*Faith Wilson Ecological Consultant BSc (Hons) MCIEEM CEnv
Kestrel Ridge, Tigroney West, Avoca, Co. Wicklow*

Dolphin House Regeneration

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SECTION 1

1.1. Introduction

Dublin City Council proposes to demolish two buildings and build a new building at Dolphin House – see **Figure 1** below. As is best practice a bat survey was conducted in advance of any works to detect any evidence of these protected species, to assess the proposed project’s impact on wildlife and to demonstrate that any such impact will be minimised. Faith Wilson, ecological consultant and licensed bat specialist, was requested by Dublin City Council to conduct a bat survey of the property.

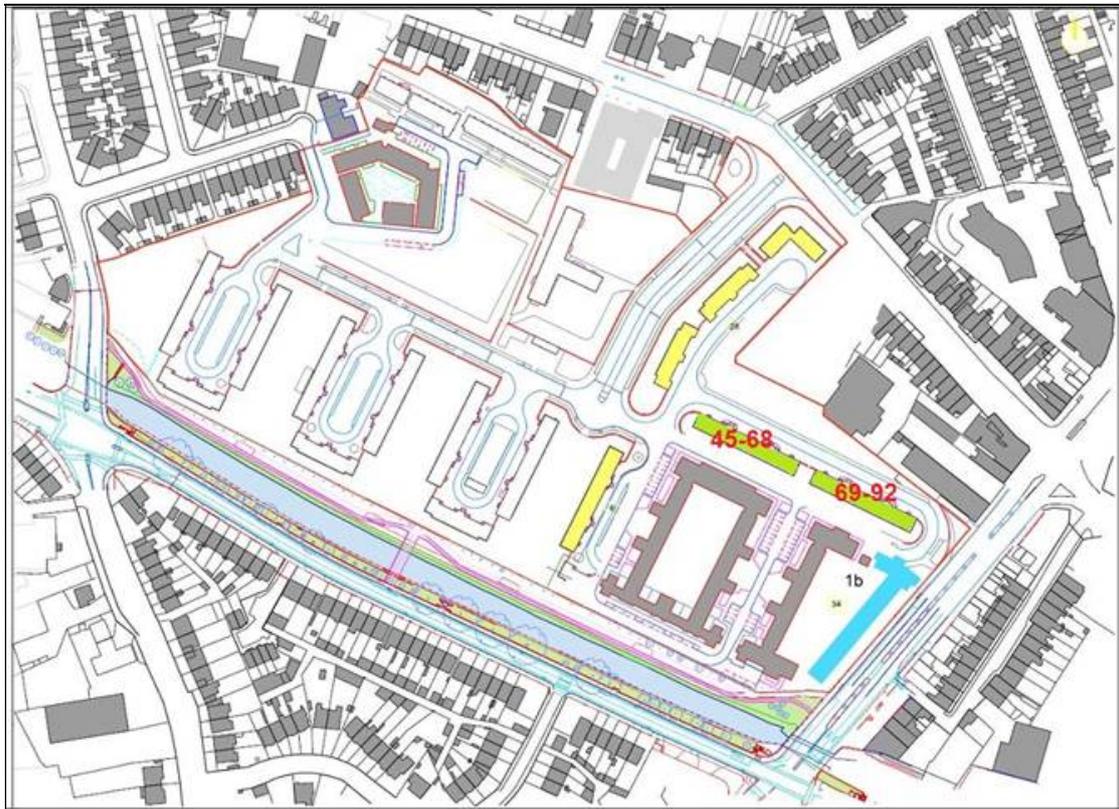


Figure 1. Overview of the buildings scheduled for demolition (45-68 and 69-92) at Dolphin House – shown in green and the new build area (Phase 1B) shown in blue.

This report presents the results of a site visit by Faith Wilson on 29th September 2019 and 14th October 2019. The bat fauna observed on site are described and the likely impacts of the proposed works on the bat fauna are discussed with recommendations for appropriate mitigation measures.

1.2. Methodology

1.2.1 Desktop Research

The Bat Conservation Ireland (BCI) database was queried to determine records of bats from the general area (within 10km).

1.2.2 Structure Survey

The buildings at Dolphin House due for demolition were examined externally on 29th September 2019 and internally on 14th October 2019 for signs of potential roosting spaces by bats. There are no attics present at the complex. The presence of bats is indicated principally by their signs, such as staining, lack of spider webs, feeding signs or droppings - though direct observations are also occasionally made. The nature and type of habitats present are also indicative of the species likely to be present.

1.2.3 Tree Survey

Bats often use both trees and buildings to roost in. Trees within the site were assessed using the following standard criteria, which were created by bat specialists from Bat Conservation Ireland for use in the assessments of tree roosts on large infrastructural projects and are summarised in NRA (2006):

- Presence or absence of bat droppings (these can be hard to find amongst leaf litter or may be washed away following periods of wet weather),
- Bat droppings may also be seen as a black streak beneath holes, cracks, branches, etc.,
- Presence or absence of smooth edges with dark marks at potential entrances to roosts,
- Presence or absence of urine stains at potential entrances to roosts,
- Presence of natural cracks and rot holes in the trunk or boughs of the tree,
- Hollow trees,
- Presence or absence of creepers such as ivy or honeysuckle on trees (ivy clad trees are often used by bat species such as pipistrelles as roosts),
- Presence or absence of loose bark such as that of sycamore, or flaky bark on coniferous species such as cedars, cypress and Scot's pine,
- Presence or absence of bracket fungi which may indicate a rotten or potentially hollow centre to the tree,
- Known bat roosts previously identified,
- Trees with storm or machinery damage or broken boughs,
- Clutter level - where the branches and trunk are easily accessible, this is considered a better tree for bat roosts,

- Adjoining habitat - if there are a variety of feeding opportunities for bats, this increases the potential of a tree as a bat roost,
- Adjoining potential roosts / known roosts. This raises the likelihood of a tree being of benefit as bats may move roosts if the roost becomes too hot or cold during roosting and a nearby alternative roost is highly desirable.

1.2.4 Detector Survey

A bat detector survey was carried out at dusk on the 29th September 2019 using two types of bat detectors - a Batbox Duet Heterodyne/Frequency Division detector and a Pettersson D100 Heterodyne detector. The emergence of any bats from potential roosting locations at dusk was monitored and a walkover survey of the grounds of the property was also conducted.

Bat activity is predominantly bi-modal, with bats taking advantage of increased insect numbers on the wing during the periods after dusk and before dawn, (there is usually a lull in activity in the middle of the night). While this holds true for 'hawking' species (bats that capture prey in the open air), 'gleaning' species such as brown long-eared (*Plecotus auritus*), Natterer's (*Myotis nattereri*) and Whiskered/Brandt's bats (*Myotis mystacinus/brandtii*) remain active throughout the night, as prey is available on foliage for longer periods.

1.2.5 Survey constraints

There were no seasonal constraints to the detector survey which was conducted towards the end of the active bat season. Weather was suitable at the time of survey with initial temperatures of 13°C falling to 10°C, clear skies and calm conditions.

SECTION 2 RESULTS

2.1 Description of the Plan or Project

Dublin City Council is proposing to demolish two buildings and construct one new block of buildings at Dolphin House as illustrated on **Figure 1** above. The buildings proposed for demolition are mostly vacated with only a small number remaining in use as residences.

2.1.1 Description of the receiving environment at Dolphin House.

The lands at Dolphin House are already developed and in use as described above. There is little in the way of natural habitats or elements of interest to biodiversity on the site beyond areas of mown grassland which are found to the east of the buildings adjacent to Dolphin's Barn Street (the R110).



Plate 1. Developed nature of Dolphin's Barn.

At the southern end of this open space (outside the fence) is a small grouping of immature sycamore. A treeline of sycamore extends west along the edge of the Dolphin Barn lands adjoining the towpath of the Grand Canal which lies to the south.



Plate 2. Open space proposed for development.

The main interest in the site is therefore potentially for bats, which may roost in the buildings on site and the area is well used by urban foxes. The adjoining canal and its tow paths are a proposed Natural Heritage Area and act as an important wildlife corridor through the city. They have been recognised as part of the city green infrastructure by Dublin City Council.

2.1.2 Bat Survey

Desktop Review

Consultation with Bat Conservation Ireland has identified that several species of bats have been recorded within the 10km square in which the proposed development is located. These include Leisler's bat (*Nyctalus leisleri*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Nathusius's pipistrelle (*Pipistrellus nathusii*) and an unidentified pipistrelle species (*Pipistrellus* sp. and probably one of the above three). These records include both detector records and records of known roosts.

The closest area of known interest to bats is the Grand Canal which adjoins the property to the south.

Bat surveys conducted for the Grand Canal cycle route from Portobello Bridge to the Grand Canal Basin at Ringsend in 2009 recorded several species of bat from the area (Wilson & Keeley (2009)). These included common pipistrelles along the Grand Canal from Portobello to Baggot Street, soprano pipistrelle activity at Grand Canal Quay on the Grand Canal Basin and Nathusius' pipistrelle which was recorded in the stretch of Grand Canal between Baggot Street Bridge and Warrington Place. Leisler's bat was heard in the stretch of the Grand Canal between Portobello and Charlemont Street. Leisler's bats have also been recorded from along the Grand Canal near to Leeson Street.

Daubenton's bats are relatively rarely recorded in the Dublin city centre area albeit that there are two canals within Dublin City and other watercourses such as the Dodder, Liffey, Camac, Tolka etc. Daubenton's bats have been observed by Enda Mullen (NPWS DCO) at the Grand Canal Basin.

Common pipistrelle, soprano pipistrelle and Leisler's bat were also recorded along this stretch of the canal during bat surveys conducted for the Grand Canal Cycle Premium Route from Portobello Bridge to Blackhorse Bridge in 2012 (Wilson & Keeley (2012)).

Tree Survey

There are no trees on site that offer roosting potential for bats. The sycamore along the southern boundary of the site are too immature and do not contain any crevices/cavities which would offer bats a roosting opportunity but they do provide shelter, support insects and act as an important corridor for foraging and commuting bats.

Building Inspection

There are limited opportunities for bats to roost in the buildings as they are constructed of solid concrete and brick and have no attic spaces. The majority of the flats have been vacated and are boarded up and secured. There are

several water tanks located on the flat roofs of the buildings, which potentially could support roosting bats but these could not be physically inspected due to health and safety issues with access. There was no evidence of use by bats of any of the buildings in Dolphin House which were examined and are scheduled for demolition.



Plate 3. Vacated flats.

Detector Survey

No bats were recorded emerging from any of the buildings proposed for demolition at Dolphin House during the detector survey. No bats were recorded from within the general environs of Dolphin House.

There were good levels of bat activity recorded from the wider area of the property. Species recorded commuting and foraging along the Grand Canal later in the night included common and soprano pipistrelle. The lighting associated with the newly rebuilt blocks has been sensitively designed for wildlife and light spill from these lamp standards does not illuminate

adjoining the canal, which provides a dark corridor for foraging bats and other fauna.



Plate 4. Well-lit buildings and environs.

Conclusion

A bat derogation licence is not required for the proposed demolition of these buildings as part of planning permission.

Recommendations for improving biodiversity within the site for both bats and other fauna are presented in **Section 3**.

SECTION 3 CONCLUSIONS & RECOMMENDATIONS

A bat derogation licence is not required for these works.

3.1 Bat Mitigation Measures

A series of mitigation measures are recommended below as per best practice.

Measure 1: care during demolition

Any demolition works should be done carefully as there is a low possibility that individual bats may be found for example in vents, between window frames and walls or in the water tanks on the roofs of the buildings. This essentially requires the removal of such features by hand, checking for the presence of bats behind/under these structures. If discovered, the animals shall be retained in a box until dusk and released on site. Please inform a bat specialist and ask for further advice.

Health and Safety Issues:

Workers in the building should be informed that bats are a protected species under both Irish and European legislation. Ideally bats should only be handled by a licensed bat specialist. If a grounded bat is encountered (typically a young bat) it should only be handled wearing gloves and lifted up in a piece of cloth (such as a tea towel) before being returned to the roost. As with all wild animals bats can carry diseases and hence protective measures to ensure that one is not bitten by a bat should be taken.

3.2 Biodiversity Measures

General recommendations for improving biodiversity within the site are presented below:

1. Lighting should be designed and installed with controlled targeting a priority:

The buildings and surrounds are already well lit. It is recommended that any lighting proposed for the southern environs of the new building near the canal should be directional to ensure that it is restricted to the grounds of the buildings and does not overspill onto the adjoining trees or the treeline along the Grand Canal as this area is used by bats. This can be achieved in a number of ways including low mounting position, cowls, low intensity, direction of light, etc.

2. Planting of native species:

The development will include new landscaping proposals including the planting of trees and shrubs. This could include the use of native and local plant species such as hawthorn, blackthorn, hazel, mountain ash, alder,

willows, oak, ash, broom, elder and gorse. Species used should be native and of local origin.

Other planting used should be pollinator friendly.

The use of green roofs in the new buildings could also be considered as they will also be of benefit to invertebrates.

3. Provision of roosting and nesting opportunities:

Nesting and roosting opportunities should be provided for both bats and birds (swifts, house sparrow, starling and swallow) within the site. These can include nest boxes, bat boxes and the incorporation of specialised bricks/pre-constructed opportunities in the walls of the new buildings. These should be specified by an ecologist at detailed design stage.

Appendix 1. Tree Protection Measures

Trees being retained on the site should be protected from unnecessary damage during the construction process by effective construction-proof barriers that will define the limits for machinery drivers and other construction staff. Ground protected by the fencing will be known as the Construction Exclusion Zone (CEZ).

Sturdy protective fencing should be erected outside the drip line of the canopy of the trees prior to any soil disturbance and excavation work starting; this is essential to prevent any root or branch damage to the retained trees. The British Standard BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations* specifies appropriate fencing; see below.



For pedestrian movements within the Root Protection Area the installation of ground protection in the form of scaffold boards may be acceptable.

When the fencing has been erected, the construction work can commence.

All weather notices should be erected on the fence with words such as: "Construction Exclusion Zone – Keep Out".

The fencing should be inspected on a regular basis during the duration of the construction process and shall remain in place until heavy building has finished and its removal is authorised by a qualified arborist/ecologist.

Trench digging or other excavation works for services etc should not be permitted in the CEZ unless approved and supervised by a qualified arborist

using methods outlined in BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

In addition the following should be addressed or avoided:

- Care will be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible.
- Materials, which can contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, will not be discharged within 10 m of a tree stem.
- Fires will not be lit in a position where their flames can extend to within 5 m of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.
- Notice boards, wires and such like will not be attached to any trees.
- Site offices, materials storage and contractor parking will all be outside the CEZ.