

**Attachment C**



# Saggart Reservoir - Design and Build Contract

**A mammal assessment undertaken on behalf of Rowan Engineering and Coffey Group for the Irish Water Reservoir at Saggart, County Dublin relating to the area within which earth spoil is proposed for storage**

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## Introduction

The following report examines the area proposed for the storage of excavated soil resulting from construction operations and preparatory earthworks at the Saggart Reservoir to allow its expansion . All survey work was carried out by Brian Keeley, who has over thirty years' experience in the field assessing for bats, badgers and otters.

The area relating to the storage of spoil is shown in Figure 1.



Figure 1: Area proposed for the storage of spoil in lands adjoining the Reservoir. The triangle is indicative of the area under discussion and does not denote the footprint of the spoil heap. The yellow box denotes areas of otter and badger activity noted within the surrounding lands

The conditions relating to the storage of any spoil are the same as the measures stated within the ecological assessment of the project and are shown below for ease of reference.

#### **3.4.7.4 Trees and Bats**

“The Contractor shall comply with planning permission and conditions attached to it. Care shall be taken to preserve the natural amenities of the areas and to avoid damaging any trees, bushes or hedges on or in the vicinity of the Works. The lands at Saggart were found to be used for foraging and commuting bats (Common pipistrelle, Soprano pipistrelle, and Leisler’s bat). The locations of roosts for these species are unknown, although they are unlikely to be immediately adjacent to the site given the time postemergence that activity was recorded. For areas for which Medium to High Roost potential was identified (i.e. removal of mature trees with medium bat roost potential), the Contractor shall carry out a detailed bat activity survey by a suitably qualified and licenced bat surveyor to inform species and population status. Where bat roosts are confirmed, the suitably qualified and licenced bat surveyor shall advise on the appropriate course of action, including the need for application for a derogation licence from the National Parks & Wildlife Service (NPWS). The Contractor shall implement the following mitigation measures: • Visible cordons shall be erected around trees/vegetation that have been identified as important for bats and shall not be felled/cleared unless clear instruction is given from the Bat Specialist that it is safe to do so and/or under supervision of the Bat Specialist where required; • In advance of any tree felling works on-site, the Contractor shall liaise with a licenced bat specialist. Any trees showing crevices, hollows, for example, shall be removed while a bat specialist is present to manage any bats found therein; • Care shall be taken when removing branches as removal of loads may cause cracks or crevices to close, crushing any animals within. These cracks should be wedged open prior to load removal. The dead branches should be lowered to the ground using ropes to avoid impacts which may injure or kill bats within; • In the event that bats are found on the site during construction works, works shall immediately cease in that area and the local NPWS Conservation Ranger shall be contacted; • The bats shall be removed by hand by a suitably qualified and licenced bat handler, under licence from the NPWS; • All trees requiring removal in the proposed development area shall be felled and left in place on the ground for 24 hours prior to removal/disposal to allow any bats beneath foliage to escape overnight; • Artificial light creates a barrier for commuting bats so lighting should be avoided where possible. If any external lighting is required to facilitate night time working or security lighting in the construction areas, it shall be sensitive to the presence of bats in the area; • Directional lighting (i.e. lighting which is focussed on work areas and not nearby countryside) shall be used to prevent overspill. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvers and shields to direct the light to the intended area only. Lighting levels should be the minimum required for health and safety requirements, and vertical light spill at light sources should be below 3m to avoid potential bat flight paths. Where construction activity takes place adjacent to hedgerows, treelines or dense scrub the Contractor shall: • Restrict activity to the footprint required for construction of the Works; • The proposed works area shall be clearly demarcated with temporary fencing or another suitable method to restrict access to areas adjacent to the works area;

• Trees and hedgerow located adjoining/adjacent to the construction area shall be protected from root damage by machinery by an exclusion zone/root protection area. This is generally calculated as an area equivalent to a circle with a radius of 12 times the stem diameter at breast height, or more roughly, it should extend to below the edge of the outermost branches of the tree. Such protected trees shall be fenced off by adequate temporary fencing prior to other works commencing; • NRA guidelines on the protection of trees and hedges prior to and during construction shall be followed

(NRA, 2006). No soil, spoil, construction materials or rubbish shall be stored or tipped and no construction plant or vehicles will be parked within the spread of existing trees or hedgerows; • All site personnel shall be made aware of the trees/vegetation on-site that are known to be important for commuting/foraging bats and the legal protection afforded to bats and their habitat”.

#### **Bats and trees evaluation 28<sup>th</sup> January 2021**

All trees along the hedgerow through which access to spoil storage is required and within all hedgerow close to the planned spoil heap were examined for potential as bat roosts in the winter of 2020 / 2021.

Evaluation from ground level was sufficient during this assessment and was based on the availability of roost features for bats. As this is a period of hibernation, features affording stability of environmental conditions are sought by bats. Therefore, areas of loose bark or shallow crevices or ivy are less suitable due to the greater variation in temperature and humidity based on the heating effect of the sun (and chilling impact of snow or crosswinds).

None of the trees proposed for removal offer roost potential. There are a small number of trees with low roost potential along the western section of the hedgerow to be crossed with spoil loads for storage within this field. The tree roots shall be protected by avoidance of storage on them. The required distance is discussed in the mitigation measures shown below:

- Restrict activity to the footprint required for construction of the Works;
- The proposed works area / storage area shall be clearly demarcated with temporary fencing or another suitable method to restrict soil deposition to areas adjacent to the works area;
- Trees and hedgerow located adjoining/adjacent to the construction area shall be protected from root damage by machinery by an exclusion zone/root protection area. This is generally calculated as an area equivalent to a circle with a radius of 12 times the stem diameter at breast height, or more roughly, it should extend to below the edge of the outermost branches of the tree. Such protected trees shall be fenced off by adequate temporary fencing prior to other works commencing;
- NRA guidelines on the protection of trees and hedges prior to and during construction shall be followed (NRA, 2006). No soil, spoil, construction materials or rubbish shall be stored or tipped and no construction plant or vehicles will be parked within the spread of existing trees or hedgerows;
- All site personnel shall be made aware of the trees/vegetation on-site that are known to be important for commuting/foraging bats and the legal protection afforded to bats and their habitat”.

#### 3.4.7.5 Badgers

“The Contractor shall engage the services of a suitably qualified ecologist to conduct a pre-construction badger survey of the development area including habitat features within 50m of same. The Contractor shall note in particular the probable badger setts along the hedgerows on the southern and western boundaries of the site. A 50m exclusion zones around setts, if any, shall be demarcated by fencing. The Contractor shall liaise with the local Conservation Ranger of the National Parks & Wildlife Service before the destruction or direct interference with any badger sett. The Contractor shall obtain a licence to carry out such works from the Department of Culture, Heritage and the Gaeltacht. In addition the Contractor shall maintain a regular watching brief along all topsoil stored on site for potential establishment of badger setts during the construction phase”.

A badger assessment was undertaken on 28<sup>th</sup> January 2021 to determine whether there were any badger setts within and immediately adjacent to the proposed spoil area. This involved a search for badger latrines, feeding routes and feeding signs.

No badger setts were identified within the site proposed for soil storage or in the nearby hedgerow. Badger foraging signs were evident from badger paw prints in the field south of the proposed storage area.



Badger paw prints south of the proposed storage area at the River Camac



The following measure applies:

- “the Contractor shall maintain a regular watching brief along all topsoil stored on site for potential establishment of badger setts during the construction phase”.

## Otters

The Camac River and Millrace were examined for evidence of otters. This involved a walk along the banks of each examining the site for evidence of otter holts, otter slides, otter spraints and otter paw prints. Access along the Millrace was unhampered except in one stretch but this was all visible from each end of the section and was assessed with 10 x 42 Nikon Aculon binoculars. An evaluation of the Camac river within the area identified for assessment revealed evidence of otter activity but no otter holts. There were two partial spraints identified on rocks within the river and one paw print. The otter had territorially marked a site level with the rear of the workyard on two occasions. This area is subjected to high levels of disturbance from the use of equipment to manufacture cabins from freight containers including at the time of survey an angle grinder. The presence of a holt is highly improbable based on the visual assessment and the industry of the site.

**Otters are present within the Camac and adjoining lands but not within the footprint proposed for spoil storage. The above measures apply:**

- **Where otter activity is confirmed onsite, the EnCOW shall engage a suitably qualified Ecologist to advise and or supervise works during construction of the discharge infrastructure.**
- **The Contractor shall maintain a ten metre riparian zone alongside all watercourses within the site boundary or lands for which the contractor may require as a working corridor for the construction of the discharge pipes. A narrow working corridor, clearly delineated shall be put in place alongside the Camac River during the construction period.**
- **No works or storage of materials outside of the working corridor shall be permitted. Works in the area shall be scheduled to coincide with dates that will be approved by IFI and/or NPWS and shall be completed in a timely manner to reduce all unnecessary environmental impacts/disturbance to otter.**



Otter spraints and paw print