

**Sorensen Civil Engineering Ltd.,
Unit 5,
Westpoint Buildings,
Westpoint Business Park,
Link Rd.,
Ballincollig
Cork City
P31 XK11**

30/01/2025

Re: Derogation Licence Application for Otter (indirect disturbance) under Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No 477 Of 2011) in respect of the Glashaboy Flood Relief Scheme, Glanmire, Co. Cork.

Dear Sir/Madam,

An Otter survey was carried out in January 2025 on behalf of the Main Contractor Sorensen Civil Engineering Ltd. (SCE) in respect of the Glashaboy Flood Relief Scheme at Glanmire and Sallybrook, Co. Cork. The Otter survey undertaken by Ross Macklin of Triturus Environmental Ltd., detected the presence of several active and inactive Otter (*Lutra lutra*) holts and couches along the Glashaboy River (see Table 1.1).

Based upon a review of the 2025 construction programme for the Scheme, there are 7 no. active holts and 1 no. active couch located within 150m of the flood relief works proposed for 2025. Given the likelihood of indirect impacts to the breeding and/or resting place of Otter, SCE wish to apply for a derogation licence in respect of works to be undertaken within 150m of these holts/couches.

The following sections outline the need for a derogation licence, potential risks (if any) to the favourable conservation status of Otter as a result of the flood relief works and the mitigation measures to be deployed in respect of Otter as part of the Glashaboy Flood Relief Scheme.

Explanation as to why the Derogation licence sought is the only available option for works and no suitable alternative exists as per Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations.

There is a history of flooding in the Glashaboy River catchment, which has led to considerable flood damage to both residential and commercial properties in the urban areas of Glanmire and Sallybrook, Co. Cork. In recent years there was significant flood events, most notably in June 2012, during the winter of 2015/2016 and again in October 2023.

The Catchment Flood Risk Assessment and Management (CFRAM) Study for the Lee Catchment included a preferred option for the alleviation of flood risk in the Glashaboy River catchment. As a result, Cork City Council, acting as Agents for the OPW commissioned the development of the Glanmire/Sallybrook Drainage Scheme. The Scheme has been designed to provide protection to properties from 1 in 100 year fluvial and 1 in 200 year tidal flood events.

SCE were subsequently appointed to construct the Scheme, with works commencing in July 2023. Since their appointment as the Main Contractor in 2023, SCE have constructed flood defences and made conveyance improvements along the Glashaboy River and its tributaries, in the Glanmire/Sallybrook area, under the Scheme. The flood defences include RC walls, embankments and sheetpile walls, while the conveyance improvements include channel widening, and the installation/upgrading of culverts/bridges.

In relation to Regulation 54(2)(A-E) of the European Communities (Birds and Natural Habitats) Regulations, it has been determined the Scheme falls under (C) *'being in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment'*.

Given the presence of existing residential and commercial properties which are liable to flooding along the Glashaboy River, and the review of alternative options as part of the environmental assessments undertaken in respect of the Scheme, there is no alternative means of avoiding works within the riparian corridor (Otter habitat) of the Glashaboy River.

In light of the above several derogation licence applications have been submitted and granted to date in respect of Otter to facilitate works under the Scheme. It should be noted that prior to the appointment of SCE in 2023, the derogation licences were applied for by JBA Consulting Engineers and ARUP Consulting Engineers on behalf of Cork City Council.

The Derogations granted to date are as follows:

Permanent closure of holts in advance of main construction stage

- Glenmore River (Licence No.s DER-OTTER-2017-137 (amended) and DER-OTTER 2017-170)

Temporary disturbance of holts under due to advanced tree felling works

- Glashaboy River (Licence No. DER-OTTER-2022-09)

Construction of artificial Otter holts prior to the main construction stage

- Glashaboy River (Licence No. DER-OTTER-2022-09)

Temporary disturbance of holts during main construction stage

- Glashaboy River (Licence No. DER-OTTER-2023-90)
- Glashaboy River (Licence No. DER-OTTER-2024-47)

The most recent derogation licence which was granted in January 2024 (i.e. Licence No. DER - OTTER – 2024 – 47) to SCE covered the construction of the flood relief works for the period February 2024 to December 2024.

SCE are now seeking a new derogation licence in respect of the continuation of the flood relief works for the period February 2025 to December 2025.

Evidence that actions permitted by a derogation licence will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range as is required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations.

Based on the current understanding and knowledge of the Otter distribution, patterns of activity and occupancy of holts and couches along the Glashaboy River derived from a combination of the baseline surveys and “Live” surveillance monitoring, it is considered that the flood relief works are not likely to impact on the favourable conservation status of the Otter population given the extent of alternative suitable habitat outside of the footprint of the Scheme. Numerous holt structures and large stretches of undisturbed riparian habitat are present along the river outside of the works areas, which can provide alternative holt/couch sites for the Otter population. The presence of this alternative suitable habitat together with proposed mitigation measures will minimise impacts associated with the temporary disturbance of Otter within the footprint of the Scheme.

To date the baseline surveys and trail camera footage have demonstrated that the Otter population has relocated a number of its holt/couch sites to relatively undisturbed stretches of riparian habitat to avoid the flood relief works. This is confirmed by the lack of activity at the former breeding/natal holt at Sallybrook in 2024 and 2025 and an increase in activity at Glanmire GAA and at Meadowbrook in 2024 and 2025. Furthermore, the Otter population has taken up occupancy of the artificial Otter holt at Mill Race Island which was constructed in 2022, to mitigate against the disturbance associated with Advanced Tree Felling and the anticipated level of indirect disturbance to Otter holts and couches as a result of the Scheme.

It should be noted that there will be no direct impact on the breeding and or resting areas of Otter, requiring permanent set closure under the Scheme.

The most recent conservation evidence from Article 17 reporting highlights Otter conservation status as ‘favourable’ (NPWS, 2019). Otters were considered to be previously ‘Near Threatened’ (Marnell, 2009) based on a 20-25% decline between 1980 and 2005 (Bailey & Rochford, 2006). However, the current conservation status is now of ‘Least Concern’ (Marnell et al., 2019) due to national observations of population expansions. In conclusion is considered that the current derogation would not be detrimental to the maintenance of Otter populations(s) at favourable conservation status in the Glashaboy River catchment.

Details of any mitigation measures planned for the species affected by the derogation at the location, along with evidence that such mitigation has been successful elsewhere.

Mitigation Measures

As the flood relief works are being constructed within the riparian corridor of the Glashaboy River and its tributaries, and the footprint of the works overlaps with the breeding/resting places of Otter (i.e. both holts and couches) the following mitigation measures have been deployed on the Scheme in respect of Otter since 2016.

Summary of Baseline Surveys

A baseline Otter survey in respect of the Glashaboy Flood Relief Scheme was first undertaken in 2016 as part of the Environmental Impact Statement (EIS). This baseline survey was undertaken by Ross Macklin of Triturus Environmental Ltd. Further baseline surveys were subsequently undertaken in 2017, 2021, 2022, 2023, 2024 and 2025 by Triturus Environmental Ltd. as follows:

- ARUP (2016) Glashaboy (Glanmire/Sallybrook) Drainage Scheme - Environmental Impact Statement, Prepared for Cork County Council and Office of Public Works. November 2016.
- Triturus Environmental Ltd. (2017) Trail Camera Survey of Otter on the Glenmore River, Co. Cork. Prepared on behalf of JBA Consulting Engineers.

- Triturus Environmental Ltd. (2021) Glashaboy Flood Relief Scheme Otter Survey 2021. December 2021. Prepared on behalf of ARUP Consulting Engineers.
- Triturus Environmental Ltd. (2022) Glashaboy Flood Relief Scheme Otter Survey 2022. April 2022. Prepared on behalf of ARUP Consulting Engineers.
- Triturus Environmental Ltd. (2023) Glashaboy Flood Relief Scheme Otter Survey 2023. Prepared on behalf of Sorensen Civil Engineering Ltd. October 2023.
- Triturus Environmental Ltd. (2024) Glashaboy Flood Relief Scheme Otter Survey 2024. Prepared on behalf of Sorensen Civil Engineering Ltd. February 2024.
- Triturus Environmental Ltd. (2025) Glashaboy Flood Relief Scheme Otter Survey 2025. Prepared on behalf of Sorensen Civil Engineering Ltd. January 2025.

The baseline surveys were undertaken to identify the presence of otters relative to the planned works areas and to map the species distribution within the footprint of the works area by identifying the occurrence of otter field signs. The surveys also informed the mitigation measures recommended in respect of the Scheme which aimed to maintain the favourable conservation status of the Otter population on the Glashaboy River and its tributaries.

During the course of the baseline surveys the smaller tributaries of the Glashaboy River namely, Springmount Stream, Cois na Gleann Stream, Sallybrook Stream and the Glashaboy mill race channels were described as being of poor fisheries value with limited foraging opportunities for Otter, in addition to a lack of optimal breeding and resting areas.

Trail Cameras & Live Surveillance Monitoring

With respect to mitigation measures ‘Live’ surveillance monitoring of Otter holts has been undertaken using cellular trail cameras to elucidate distribution and patterns of activity and occupancy of the holts and couches by Otter before, during and after a (suspected) holt closure in 2017, advanced tree felling in 2022, and the construction of temporary and permanent works during the main construction stage in 2024.

A number of licences to photograph/film wild animals for educational, scientific or other purposes were applied for under Sections 9 & 23(6)b of the Wildlife Acts 1976 to 2012 given that the use of trail camera equipment near a potential breeding and resting area, may constitute a disturbance.

The following licences have been granted to date to facilitate the live surveillance monitoring:

- Glashaboy River (Licence No. 025/2017)
- Glashaboy River (Licence No. 003/2022)
- Glashaboy River (Licence No. 034/2024)

It is proposed to continue with “Live” surveillance monitoring for the 2025 construction period. A licence application to facilitate the use of the trail cameras has also been submitted to NPWS.

Permanent Holt Closures

In 2017 the baseline ecological survey of the Glashaboy River and its tributaries within the footprint of the Scheme, identified the presence of a suspected Otter holt i.e. a burrow on the Glenmore River at Brooklodge. The burrow was located within a gap created by collapsed rock armoring on the left handbank of the Glenmore River immediately downstream of the existing culvert apron at

Brooklodge. An Otter sprainting site was also recorded on instream boulders adjacent to suspected holt entrance with fresh fish remains observed to be present.

Further to monitoring of the suspected holt between April and June 2017, it was determined that the suspected holt was not occupied given the absence of entry or exit sequences from the holt structure on the recorded footage. It was concluded that the instream boulders at the entrance to the holt were utilised for spraint marking.

As a precaution, to ensure no future occupancy, it was proposed to close the suspected holt closure permanently in advance of the flood relief works. A derogation was applied for under Regulation 54 of the European Communities (Birds & Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) to close the suspected Otter holt.

A temporary plug using plastic and expanding foam was placed within the entrance of the holt structure and left in situ for 48 hours to further validate the absence of occupancy in advance of permanent closure. The temporary plug at the entrance was also monitored in conjunction with a trail camera. Following review of trail camera footage and a physical check on the temporary barrier the suspected Otter holt was permanently closed on the 9th November 2017 by Cork City Council staff under the supervision of Triturus Environmental Ltd. The holt structure was sealed permanently with dry mix and fast setting 30N concrete. A single trail camera was repositioned on the newly closed suspected holt structure to continue monitoring after closure to establish whether patterns of Otter usage of the area remained the same or changed following closure.

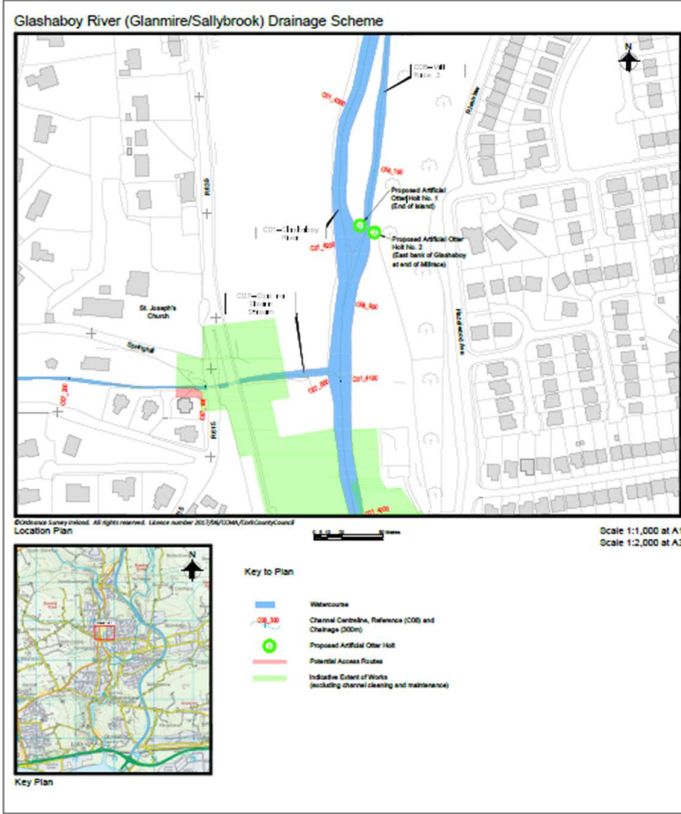
Following submission of the trail camera monitoring report to the development applications unit and subsequent review of the monitoring report, it was deemed that there was no requirement for an artificial holt replacement as the suspected holt was considered 'unoccupied and suboptimal' for Otter.

Advanced Tree Felling Works

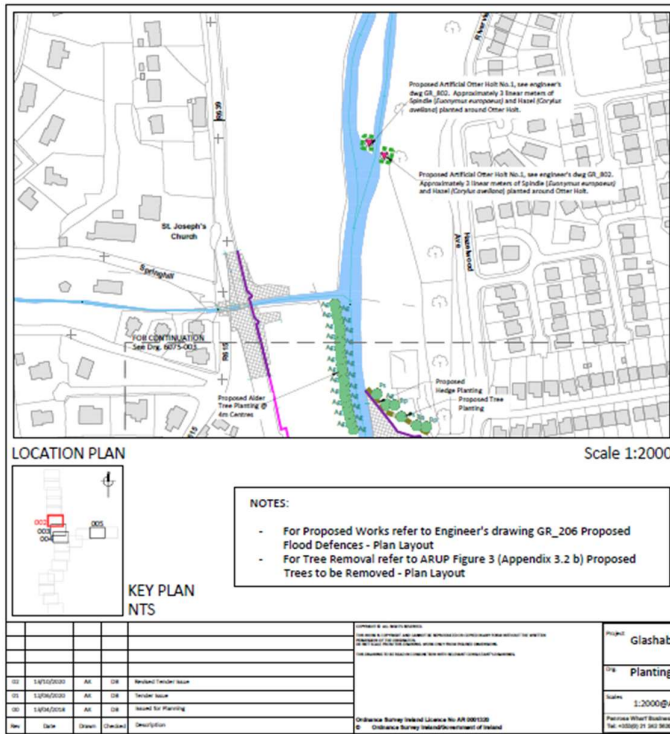
During advanced tree felling works in 2022, mitigation measures were put in place to avoid significant impacts on Otter. The duration of the tree felling works was minimised and the holt areas were demarcated by hazard tape to avoid direct impacts from accidental ingress. A Site Ecologist supervised the felling works near the Otter holts to ensure that there was no accidental ingress. Soft felling (i.e., felling of trees in sections followed by gentle lowering to ground level) was deployed in areas adjoining the holts. The tree surgeons were informed of the locations of the Otter holts. Works were carried out during daylight hours only. A Section 9 & 23(6)b license to film/photograph Otter was obtained in advance of works in order to monitor Otter behaviour before and after tree felling to confirm there was no significant change in Otter activity as a result of the works.

Artificial Holts

To mitigate against the disturbance associated with the Advanced Tree Felling works completed in 2022, and the anticipated level of indirect disturbance to Otter holts and couches on the main channel of the Glashaboy River as a result of the Scheme as a whole, two artificial holts were constructed at Mill Race Island just south of Glanmire GAA pitch on the Glashaboy River. These artificial Otter holts were construction in 2022, in advance of the commencement of the main construction stage in July 2023. The location of the artificial Otter holts was agreed with local NPWS staff and was based on maximising the likelihood of use by placing the holts near a known area used by Otter.



Appendix 6.3b
Figure 1. Proposed Artificial Otter Holt Locations



LEGEND:

- PROPOSED TREE PLANTING. FOR SPECIES REFER TO TREE PLANTING SCHEDULE ON DRAWING 6075-001. ALL TREES TO BE SUPPLIED AND PLANTED IN ACCORDANCE WITH BS 8545:2014, BS 3998-1:1992 AND BS 4428:1989. ALLOW ROOT BARRIERS WHERE REQUIRED TO MEET IRISH WATER REQUIREMENTS.
- PROPOSED OTTER HOLT SCREEN PLANTING, APPROXIMATELY 3 LINEAR METERS AROUND EACH PROPOSED OTTER HOLT. SPECIFICATION:
 - EUONYMUS EUROPAEUS, 0.9-1.2m, 1+1, BUSHY, ROOTBALLED, PLANTED AT 450mm CENTRES.
 - CORYLUS AVELLANA, 2.5-3.0m, MULTISTEM, ROOTBALLED, PLANTED AT 3m CENTRES.
- ▼ PROPOSED OTTER HOLT. REFER TO ENGINEERS DRAWING GR 802 AND THE COMPENSATORY OTTER HOLT STUDY FOR GLASHABOY RIVER, CO. DUBLIN.
- PROPOSED FLOOD DEFENCE STRUCTURES - REFER TO ENGINEERS DRAWINGS FOR DESIGN DETAIL.
- PROPOSED BOUNDARY REPAIR/IMPROVEMENT WORKS - REFER TO ENGINEERS DRAWINGS FOR DESIGN DETAIL.

LANDSCAPE NOTES:

1. EXISTING TREES AND HEDGEROWS TO BE RETAINED AND TO BE PROTECTED IN ACCORDANCE WITH BS 5887:2012 TREES IN RELATION TO CONSTRUCTION.
2. EXISTING TREE TO BE FELLED/REMOVED DUE TO CONSTRUCTION. ALL TREE WORKS TO BE CARRIED OUT IN ACCORDANCE WITH BS 3998:2010 TREE WORK. FOR TREE REMOVAL REFER TO ARUP DRAWINGS GR_702-705 PROPOSED TREES TO BE REMOVED.
3. ALL TREES RETAINED IN PROXIMITY OF THE CONSTRUCTION WORKS (I.E. WITHIN ROOT PROTECTION AREA (RPA) AS PER BS 5887) SHALL BE SUBJECT OF A DETAILED POST-CONSTRUCTION TREE SURVEY TO BE CARRIED BY THE WORKS CONTRACTOR AND COMPETENT ARBORICULTURAL PROFESSIONAL. THE POST CONSTRUCTION SURVEY SHALL BE MADE AVAILABLE TO THE OPW FOR APPROVAL AND ANY TREE WORKS RECOMMENDED SHALL BE UNDERTAKEN BY THE CONTRACTOR.
4. LANDSCAPE WORKS TO BE CARRIED IN ACCORDANCE WITH BS 4428:1989 CODE OF PRACTICE FOR GENERAL LANDSCAPE OPERATIONS.
5. ALL TOPSOILING TO COMPLY WITH BS 3882:2007.
6. DRY SIDE AMENITY GRASS TO SPECIFICATION ON DRAWING 6075-001 (LOW MAINTENANCE GRASS MIX).
7. WET SIDE MEADOW MIX TO SPECIFICATION ON DRAWING 6075-001 (WETLAND WILD FLORA SEASONALLY FLOODED ECOS).

NOTES:

- For Proposed Works refer to Engineer's drawing GR_206 Proposed Flood Defences - Plan Layout
- For Tree Removal refer to ARUP Figure 3 (Appendix 3.2 b) Proposed Trees to be Removed - Plan Layout

<p>PROJECT: glashaboy River Drainage Scheme</p> <p>DWG: Planting Plan Layout (Sheet 1 of 4)</p> <p>Scale: 1:2000@A3</p> <p>Revision: 02</p> <p>Date: 13/10/2020</p> <p>Author: AR</p> <p>Checked: DB</p> <p>Drawn: DB</p>		<p>PROJECT No. 6075</p> <p>Drawing No. Figure 002</p> <p>Rev. 02</p> <p>Date: 13/10/2020</p> <p>Author: AR</p> <p>Checked: DB</p> <p>Drawn: DB</p>	<p>BSM</p> <p>Est. 1968</p>
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Mammal Ledges

The design of new bridge/culvert structures under the Scheme includes ledges to facilitate the movement and passage of Otters in accordance with Transport Infrastructure Ireland's 'Guidelines for the treatment of otters prior to the construction period of national road schemes' (TII/NRA, 2008) and 'Guidelines for the crossing of watercourses during the construction of national road schemes' (TII/NRA, 2008). The ledges will tie into the adjoining riverbanks, or riverbed where practicable. A 500mm wide ledge will be constructed at 150mm above the 1 in 5-year flood event. The ledge will be placed on one side of the bridge/culvert structure only.

These ledges will be provided at the following culverts:

- 1 no. bridge/culvert structure on the Glashaboy River at Hazelwood Shopping Centre
- 3 no. bridge/culvert structures on the Glenmore River

Light Pollution

Lighting will be directional and will prevent unnecessary light spillage and light pollution. Night-time working will not be permitted within 20m of the known active Otter holts and resting place.

Excavations & Storage of Materials

To minimise the potential for Otters becoming trapped, all excavations will be left open for the minimum possible time, and not overnight. If excavations have to be left open over-night, they will be fitted with an escape ramp (at a slope of no more than 45°) to allow accidentally trapped animals to escape. Materials to cover excavations or create escape ramps will be on site at all times so that all excavation areas can be made safe before leaving site. All materials stored on site will be stacked securely so as to prevent accidental collapse if investigated by an Otter, or any other large mammal.

Demarcation

No works will take place within 20m of known active Otter holts and resting place (TII/NRA, 2008). Signage will be erected denoting an 'Ecologically Sensitive Area'. The 20m zone will be appropriately demarcated and fenced if necessary.

As much information as possible to allow a decision to be made on this application.

See Table 1 – Current Activity Status & Flood Relief Works Occurring within 20m and 150m of an Active holt or couch (in green).

Current Levels of Otter Activity

The 2024 and 2025 Survey Reports completed by Triturus Environmental Ltd are attached (see Appendix I and II).

As per the most recent Otter survey in January 2025, there are 7 no. active holts i.e. H3, H4, H5, AH1, H7A, H7B and H8 and 1 no. active Couch i.e. C1, located within 150m of the flood relief works proposed for 2025 (see Table 1). It should be noted that there will be no direct impact i.e. permanent loss or damage to these active holts/couches as a result of the flood relief works.

SORENSEN

I.D. no.	Location	River bank	2023 Survey	February 2024 Survey	January 2025 Survey	Works within 20m radius	Works within 150m radius	Derogation Required
H1	Sallybrook Industrial Estate	East	Inactive holt – historical	Inactive holt	Inactive holt	Embankment installation,	Embankment installation,	X
H2	Sallybrook Industrial Estate	West	Active holt - evidence of natal/breeding activity	Active holt – evidence of natal/breeding activity	Inactive holt	drainage, sheetpiling and other associated works	drainage, sheetpiling, site compound and other associated works	X
H3	Glanmire GAA	East	Active holt	Active holt	Active holt	None	Drainage, pavement construction, footpath construction, watermain, site compound and other associated works	✓
C1	Glanmire GAA	West	Active couch	Active couch	Active couch	None		✓
H4	Glanmire GAA	East	N/A	New Active holt	Active holt	None		✓
H5A & H5B	Glanmire GAA	East	N/A	New Active holt with 2 entrances	Active holt	None		✓
AH1	Mill Race Island	East	Inactive artificial holt	Inactive artificial holt	Newly active artificial holt	None		✓
AH2	Mill Race Island	East	Inactive artificial holt	Inactive artificial holt	Inactive artificial holt	None		X
H6A	Circus Field/ Hazelwood	West	Active holt	Inactive – historical natal/breeding holt filled in after riverbank collapsed during a flood event	Inactive holt	None	Hazelwood Bridge widening, flood relief culvert & RC wall, drainage, pavement construction, footpath construction and watermain	X

I.D. no.	Location	River bank	2023 Survey	February 2024 Survey	January 2025 Survey	Works within 20m radius	Works within 150m radius	Derogation Required
H6B	Hazelwood	East	Inactive holt	Inactive – holt collapsed in during a flood event	Inactive holt	Pumping station, bridge demolition and new bridge construction, drainage works & pavement construction, flood relief walls	installation (directional drill)	X
H6C	Meadowbrook	East	N/A	New active holt	Inactive	Sheetpile wall installation, RC wall, flood relief culvert	RC wall, drainage, pavement construction	X
H6D	Meadowbrook	East	N/A	New active holt	Inactive			X
C2	Springmount	East	Active	Active	Inactive			X
H7A	Meadowbrook	West	Inactive holt – historical with 2 entrances	Inactive – collapsed in during a flood event	Active holt – one entrance remains open	Sheetpile wall installation, RC wall installation, drainage works, weather gauge installation, tree felling works	Drainage works, pumping station, footpath construction, erosion protection matting, and earthworks	✓
H7B	Meadowbrook	East	Inactive – for a number of years	Inactive	Active holt			✓
H8	John O’Callaghan Park	North	Active holt	Active	Active holt	None	Footpath construction, erosion protection matting, drainage works and earthworks	✓

Given the character, scale, duration and potential magnitude of noise, light, visual and human interaction related impacts associated with the flood relief works relative to the location of the existing holts/couches, indirect disturbance is unavoidable.

While the active holts H3, H4, H5, AH1 and H8 and 1 no. active Couch C1 are located within 150m of the flood relief works, there is a high degree of natural separation between these holts/couches and the works as they are located on the opposite side of the Glashaboy River and/or due to the extent of existing riparian vegetation. In this regard, it is considered that these holts/couches are at lower risk of indirect disturbance related impacts from noise, light, vibration and visual disturbances (human activity/interactions).

As per Triturus Environmental Ltd. (2025) the highest risk of indirect impacts is posed to the recently active holts H7A and H7B at Meadowbrook given that they are located within 20m of flood relief works. H7B is at a lower risk of disturbance related impacts than H7A, as it is located on the eastern and opposite bank of the river to the works. While sheetpiling works are required at Meadowbrook, it should be noted that the majority of sheetpiles were installed in 2024 under DER-OTTER-2024-47 with only 2-3 days of sheetpiling works remaining to be completed in 2025. Therefore potential temporary disturbance of Otter at Meadowbrook as a result of sheetpiling will be of a very short duration.

Specific Mitigation Measures

Specific mitigation measures have been proposed in respect of holts H7A and H7B by Triturus Environmental Ltd. as follows:

- Holts H7A and H7B will be monitored by trail cameras during the 2025 construction works programme in order to establish patterns of occupancy and to inform live decision-making process based on potential disturbance for the duration of the construction period.
- In addition to the trail cameras the Site Ecologist will monitor the works area in the vicinity of the holts to ensure that there is no direct disturbance to the holts. They will ensure that all machine drivers and construction staff are aware of the sensitivity of the holt and signage will be erected denoting an 'Ecologically Sensitive Area'.
- The trail camera monitoring will determine the presence/absence of a breeding/natal holt at H7A and H7b. Where a natal holt is confirmed works consultation will be undertaken with NPWS.
- Timber hoarding will be constructed along the west bank of the Glashaboy River for 15m either side of the centre point of holt H7A. Alternatively an acoustic barrier will be constructed.
- Construction works including the remaining 3 days sheetpiling at Meadowbrook will be monitored by the Site Ecologist to ensure that the holt H7A on the western bank is not directly disturbed.
- Piling works should employ soft start piling. An assessment of the threshold for the onset of temporary threshold shifts (TTS) and permanent threshold shifts (PTS) derived from the most recent scientific literature is summarised below (NMTS, 2018). According Matuschek and Betke (2009) vibration pile drivers peaked at around 170dB with peak frequencies between 100 and 500 hertz. These would be below the peak thresholds that would impact Otter following the criteria outlined by the NMTS (2018) that would cause the onset of permanent threshold shifts (non-recoverable damage to hearing) and temporary threshold shifts (TTS) i.e. fully recoverable. The soft start piling approach would allow Otter sufficient

time to become evasive of the sound should it be uncomfortable despite being outside the likely PTS range.

- Water quality will also be monitored by the Site Ecologist to ensure that the food resources (i.e. salmonid prey) of Otter are not impacted by water quality deterioration as a result of the works.
- Works will be conducted during daylight hours only with no lighting inclusive of security lighting cast on the river.
- Soft felling (i.e., felling of trees followed by gentle lowering to ground level) in areas adjoining the holts will be undertaken. Trees will be felled by lowering limbs away from riparian areas and this will be undertaken during daylight hours only.

Summary

In summary given that Otter are afforded legal protection under the Wildlife Acts 1976-2021 and the European Communities (Birds and Natural Habitats) Regulations 2011-2021, SCE wish to apply for a derogation license to conduct works that may indirectly disturb the breeding and or resting places of Otter under Regulation 54 of S.I. No. 477 of 2011 (Birds and Natural Habitats Regulations). Specifically, this would include for the indirect disturbance of Otter holts and couches within 150m of the flood relief works i.e. holts H3, H4, H5, AH1, H7A, H7B and H8 and 1 no. active Couch i.e. C1 (see Table 1 above and Figures 1-2 below).

It is understood that trail camera monitoring will be required in advance of the commencement of works at H7A and H7B to establish patterns of occupancy and to inform live decision-making process based on potential disturbance for the duration of the construction period. In this regard, an application has also been made under Sections 9 & 23(6)b of the Wildlife Acts 1976 to 2012 given that the use of trail camera equipment near a potential breeding and resting area, may constitute a disturbance.

Please be advised that in addition to the trail camera monitoring, the Glashaboy River and the Glenmore River will be resurveyed in January 2026 by Ross Macklin of Triturus Environmental Services Ltd. to establish any changes in Otter distribution, patterns of activity, occupancy of holts and couches, holt activity levels, and to check for the establishment of new holts, prior to 2026 works commencing. Any mitigation measures recommended by Triturus Environmental Ltd. will be implemented.

Please do not hesitate to contact me should you require any further information.

We would be grateful if you could please expedite your response to this application at your earliest convenience as it is hoped that works can commence in late-February 2025.

Kind Regards,

A handwritten signature in black ink, appearing to read 'Lisa Dolan'.

Lisa Dolan

Site Ecologist

Tel: +353 85 199 8632



Figure 1.1 Locations of Otter holts and couches

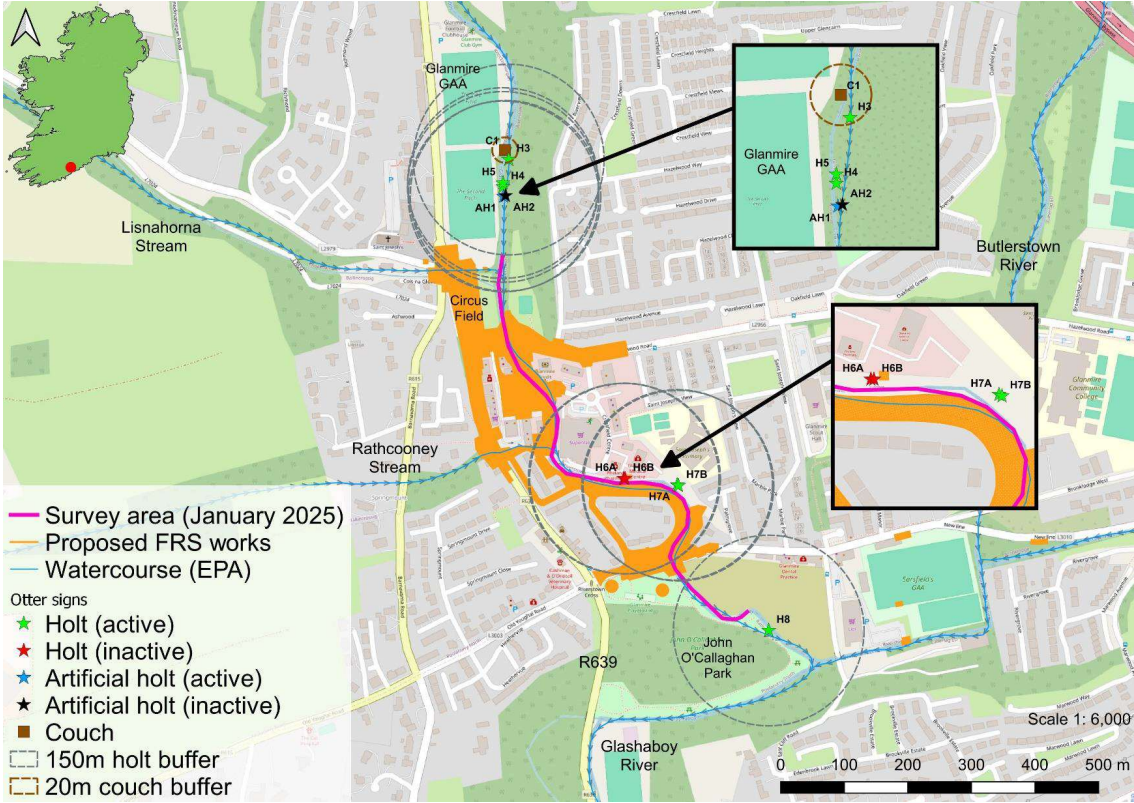


Figure 1.2 Locations of Otter holts and couches