Newt Survey Report

Blackglen Road

Dun Laoghaire Rathdown County Council

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SLR Project No.: 501.065378.00001

Client Reference No: 00591

4 October 2024

Revision: 1

Revision Record

Revision	Date	Prepared By	Checked By
1	4 October 2024	Jake Matthews	Michael Bailey

Basis of Report

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1.0 Introduction

SLR Consulting Ireland (SLR) were commissioned by Dun Laoghaire Rathdown County Council (DLRCC) to conduct a series of smooth newt surveys *Lissotriton vulgaris* on waterbodies located within the site known as 'Gorse Hill', located north of Blackglen Road (see **Drawings 1 & 2**).

A total of eight waterbodies in Gorse Hill were surveyed by SLR in 2023 (SLR, 2023) relating to an adjacent planning application, and smooth newt presence, as well as the presence of common frog *Rana temporaria*, were confirmed.

1.1 Site Description

The Site known as 'Gorse Hill' is located to the south of Fitzsimon's Woods proposed National Heritage Site (pNHA) at approximate ITM coordinates 717991 725443 and comprises several permanent and ephemeral waterbodies situated within dense gorse scrub.

1.2 Previous Surveys and Reports

SLR conducted two newt presence / absence surveys on eight waterbodies in 2023. In summary, the presence of smooth newts and common frog were confirmed:

- Survey 1 was conducted on 04 May 2023 and found one adult female smooth newt in WB6; and WB2 adult common frog in WB2 and WB6.
- Survey 2 was conducted on 24 May 2023 and found a total of seven smooth newts (four adult males; two adult females) across WB4, WB5, and WB6.

1.3 Purpose of this Report

The aim of this study is to provide a population assessment of smooth newts across the waterbodies within the site, which will allow for the future management and monitoring of this protected species.

1.4 Evidence of Technical Competence and Experience

This report has been prepared by SLR Senior Ecologist Jake Matthews. Jake is an Associate member of the Chartered Institute of Ecology and Environmental Management (ACIEEM) Jake has an MSc in ecology and environmental management from Liverpool Hope University and a BSc (Hons) in Wildlife Conservation from the University of Salford. Jake has over five years' experience in the ecological sector in the UK and Ireland and has attained experience across a range of species surveys, including newt surveying and trapping, and report writing.

This report underwent a technical review by SLR Associate Ecologist Michael Bailey. Michael is a full member of CIEEM (MCIEEM). Michael Bailey holds a BSc. in Biology and Ecology from the University of Ulster and an MSc. in Quantitative Conservation Biology from the University of the Witwatersrand in Johannesburg. He has extensive experience in ecological studies and assessments across a range of sectors in UK and Ireland and of agricultural, mining, and renewable energy projects across Africa. He is a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM).

All surveys were conducted under National Parks and Wildlife Service NPWS licence held by Michael Bailey and Jake Matthews (No. 42/2024). Surveys were led by Jake Matthews and assisted by SLR Graduate Ecologist Hugo Brooks. Hugo is a Graduate Ecologist with SLR and has worked in ecological consultancy since 2022. Hugo graduated from University College Dublin in 2021 with a BSc degree in Zoology. Hugo has contributed to a range of projects including wind farm, residential development, and transport infrastructure projects. Hugo's

field experience includes habitat surveys, a range of bird surveys, preliminary bat roost assessments, bat surveys, and newt surveys.

1.5 Smooth Newt Ecology and Status

1.5.1 Ecology

The smooth newt is the only native species of newt and one of three native amphibians in Ireland, with the others comprising common frog and natterjack toad *Epidalea calamita*.

The smooth newt is well distributed and widespread across Ireland, although gaps in distribution do exist (Meehan, 2013; NBDC, 2024) and can be found in a range of terrestrial and aquatic habitats. Hibernation occurs during the winter months, whereby newts will make use of dense vegetation, logs, rocks or other hibernacula. They also spend a significant amount of time terrestrially outside the breeding season. However, they will return to suitable waterbodies between February and March to breed.

Suitable waterbodies for breeding can range between large lakes to small waterbodies, typically made up of still or very slow-flowing water. Breeding sites must contain suitable vegetation for egg laying (O'Neil et al., 2004; Buckley, 2012). Generally newts are more likely to be found in non-linear waterbodies than linear ditches, with small waterbodies (<200m^2) between 0.5-1.0m deep and partly vegetated being the ideal breeding habitat for smooth newts (O'Neil et al., 2004).

Courting, mating and egg-laying will all occur during the breeding season, which is considered between March – June (Inns, 2009). Females will use submerged aquatic vegetation for egg-laying, by laying several hundred eggs onto broad-leaved vegetation and concealing them by folding the leaf using the hind feet. Males are easily differentiated from the females by the presence of a conspicuous dorsal crest and heavily spotted throats (Inns, 2009).

Eggs will hatch after two weeks, with the solitary larvae remaining near the bottom of the waterbody to avoid predation and emerging between July and September (Inns, 2009).

1.5.2 Legislative Protection

Smooth newts are considered 'least concern' under the *Ireland Red List (No.5) – Amphibians, reptiles and freshwater fish* (King et al., 2011). They are protected in Ireland under Schedule 5 of the Wildlife Act, 1976 (as amended) (Nelson et al., 2019). The species is also afforded protection under Appendix II of the Convention of European and Natural Habitats (The Bern Convention).

In addition, smooth newts are identified within the DLR County Development Plan, which states the following:

> *"The Council will aim to protect and enhance biodiversity and landscape and will strive to ensure the protection of environments and habitats (consistent with RPO 7.15 of the RSES). DLR, stretching from the coastal strip along South Dublin Bay to the uplands of the Dublin Mountains, contains a wealth of diverse natural habitats and species.*
>
> *These include our marine and coastal environments, our hedgerows, rivers, streams, wetlands, woodlands and areas of upland grassland, heath, fen, and bog. Various species can be found across the County in all of these habitats, from our protected harbour porpoise, our seals and birds in our marine and coastal areas to our red squirrels in Killiney Hill, bats roosting and foraging across the County, terns, swallows and swifts that fill our summer skies, to our watercourses and wetland with otter, newts and frogs. The less shy of our species visit our gardens such as urban foxes, badgers and hedgehogs, and not forgetting all our wonderful flora including many rare species."*

2.0 Methodology

2.1 Relevant Guidance

The following guidance was followed and referred to across the surveys and this report:

- *Great crested newt conservation handbook* (Langton et al., 2001);
- *Guidance - Licensing - Guidelines for trapping Great Crested Newts* (NatureScot, 2020).
- *Great crested newt mitigation guidelines* (English Nature, 2001);
- *Newt surveys – Northern Ireland Environment Agency (NIEA) specific requirements* (NIEA, 2017);
- *Herpetofauna workers' manual* (Gent and Gibson, revised 2003); and
- *Ecological surveying techniques for protected flora and fauna during the planning of national road schemes* (National Roads Authority (NRA), 2008).

2.2 The scope of the surveys

11 waterbodies were identified within the survey area. Seven of these were very small and were highly ephemeral (although it should be noted that all waterbodies were found to be dry by the latter stages of the surveys). The locations of these waterbodies are detailed in Table 1 and shown on Drawing 2. All of these waterbodies were subjected to newt surveys (detailed in Section 2.3).

Table 1: Waterbody references and approximate locations

Waterbody ref.	Location	
	Latitude	Longitude
WB1	53.26622209	-6.231826584
WB2	53.2661065	-6.231651977
WB3	53.266072	-6.231591627
WB4	53.26611632	-6.231530942
WB5	53.2659938	-6.231491379
WB6	53.26586927	-6.231405884
WB7	53.26613778	-6.230894588
WB8	53.26623142	-6.230991483
WB9	53.26619132	-6.231257357
WB10	53.26641887	-6.231113196
WB11	53.26641887	-6.231113196

2.3 Survey methodology

The Site underwent a total of six newt surveys following the methodology set out in the *Great crested newt conservation handbook* (Langton et al., 2001). Several techniques were used for each survey, which are detailed further in Section 2.3.1 – 2.3.3.

All surveys were undertaken under NPWS licence, which is provided in Appendix A. Survey metadata is provided in Table 2. Table 3 details the survey techniques implemented for each waterbody.

All PM surveys began approximately 1.5 – 2 hours before sunset and ended following the completion of the torchlight surveys, which were conducted after sunset, and once it was sufficiently dark. All AM surveys began at sunrise and ended once all bottles were accounted for and all ponds had been netted, where this was possible.

Table 2: Survey metadata

Date	Survey no.	Weather conditions	PM survey	AM Survey
08/04/2024 & 09/04/2024	1	Temperature (ºC)	8	6
		Cloud cover (Oktas)	8/8	2/8
		Wind speed (Beaufort (Bft))	2	4
		Precipitation	Moderate rain	None
22/04/2024 & 23/04/2024	2	Temperature (ºC)	10	9
		Cloud cover (Oktas)	8/8	7/8
		Wind speed (Bft)	1	1
		Precipitation	None	None
06/05/2024 & 07/05/2024	3	Temperature (ºC)	11	10
		Cloud cover (Oktas)	8/8	7/8
		Wind speed (Bft)	1	1
		Precipitation	None	None
14/05/2024 & 15/05/2024	4	Temperature (ºC)	15	12
		Cloud cover (Oktas)	7/8	8/8
		Wind speed (Beaufort (Bft))	1	1
		Precipitation	None	None
28/05/2024 & 29/05/2024	5	Temperature (ºC)	15	12
		Cloud cover (Oktas)	5/8	8/8
		Wind speed (Beaufort (Bft))	2	2
		Precipitation	None	None
03/06/2024	6	Temperature (ºC)	15	N/A
		Cloud cover (Oktas)	6/8	N/A
		Wind speed (Bft)	1	N/A
		Precipitation	None	N/A

2.3.1 Bottle trapping / funnel-trapping

Bottle traps form a funnel trap whereby newts can easily enter but find it difficult to escape. Several bottle traps were positioned around the shallow areas of suitable waterbodies just before sunset and left *in situ* overnight and were inspected early the following morning. The number of traps was representative of the size of the waterbodies, with a density target of 1 trap per 2m of shoreline (English Nature, 2001). Where waterbodies were dry significantly or the water held was too shallow, bottle trapping was not conducted, or the number of bottle traps used was reduced (refer to Section 2.4.1 for further details).

2.3.2 Torchlight inspection

All waterbodies that held water were surveyed using a 1,000,000-candle strong Clulite Clubman torch. This survey was conducted after sunset and once sufficiently dark to clearly identify individual newts that may be present within the waterbodies.

2.3.3 Netting

Waterbodies were netted using a suitable aquatic dip-net. The surveyor positioned from the bank used the dip-net in a sweeping motion throughout areas of the waterbody within reach with the aim of capturing individual newts that may be present within the waterbodies. All waterbodies that held water were netted following the completion of the torchlight inspection (to avoid creating turbid conditions for these inspections).

Table 3: Survey methodologies undertaken for each waterbody per survey (B = bottle trapping; T = torchlight; N = Netting)

Survey	Waterbody (WB) ref. and surveys conducted																														
	1			2			3			4			5			6			7			8			9			10			11		
	B	T	N	B	T	N	B	T	N	B	T	N	B	T	N	B	T	N	B	T	N	B	T	N	B	T	N	B	T	N	B	T	N
1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	✓	✓	✓	✓	✓	✓	Dry			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	✓	✓	✓	✓	✓	✓	Dry			✓	✓	✓	✓	✓	✓	Dry			Dry			Dry			Dry			✓	✓	✓	Dry		
5	Dry			Dry			Dry			✓	✓	✓	Dry			Dry			Dry			Dry			Dry			✓	✓	✓	Dry		
6	Dry			Dry			Dry			Dry			Dry			Dry			Dry			Dry			Dry			Dry			Dry		

2.4 Peak Counts and Abundance

All newts were caught were recorded for their sex, age (i.e., adult or juvenile), and which waterbody they were present. The peak count of newts for each waterbody and for each survey was recorded. The highest peak count across the six surveys was used to score the population for each waterbody, as detailed in *The Great Crested Newt Conservation Handbook* (Langton et al., 2001). It is possible to assess populations in a closely-spaced group of waterbodies (i.e., within 250m of each other) to give a cumulative site score. This method was applied to the Site and the peak count for each waterbody were added together to provide the overall site score.

The system for assigning population status on newt counts is adapted from the Nature Conservancy Council's guidelines on biological Sites of Special Scientific Interest (SSSI) (NCC, 1989). Refer to Table 4.

Table 4: System for assigning population status based on newt counts. Extracted from The Great Crested Newt Conservation Handbook (Langton et al., 2001). Originally, from the Nature Conservancy Council's Guidelines on the selection of SSSI's (NCC, 1989).

Species	Survey method	Population score		
Smooth newt	Netted (day) / Counted (night)	**Low** <10	**Good** 10 -100	**Exceptional** >100

2.4.1 Limitations

Current guidance state that surveys should take place during optimal weather conditions and describe this as >5ºC, little to no wind, and no rain. The evening survey of Survey 1 was conducted during suboptimal weather conditions as there were spells of heavy rain during the survey (refer to Table 2). The morning survey of Survey 1 experienced optimal weather conditions. All other surveys were conducted during optimal weather conditions. Despite this, positive results were recorded during the evening survey of Survey 1, although it is possible that a higher number of newts may have been recorded had the weather been optimal. The same number or a greater number of newts were recorded during Surveys 4 and 5, which were conducted during optimal weather conditions, and it is unlikely that a significantly different result would have been attained had Survey 1 been conducted during optimal conditions. Therefore, this constraint is not anticipated to have impacted the assessment.

Limitations exist when using counts to measure newt abundance. The number of newts recorded can vary dramatically for a single population from one day to the next, and they can be significantly affected by variables such as temperature or other fluctuations in weather or water levels.

Several of the surveys encountered such limitations. Surveys 3, 4, 5, and 6 all experienced dry waterbodies, with all waterbodies completely dry during Survey 6 and all subsequent visits to the Site (Table 3). As such, it was not possible to conduct the full six surveys on any of the waterbodies. Similarly, where waterbodies did contain water, it was often too low to use bottle traps, which was found to be the most effective methodology when it was possible to employ them. Where vegetation was significantly dense, it made netting difficult and unlikely to capture newts and netting was often limited to smaller areas of waterbodies where vegetation was less dense if conducted at all.

Vegetation and turbulent water limited the effectiveness of torching as a survey method. Every effort was made to ensure that water turbulence was low such as allowing the water time to settle after putting bottle traps in the water. Overall, turbulence was not considered a constraint to the survey.

The use of three main methodologies (i.e., netting, torchlight, and bottle-trapping) caused a risk of repeat counts of newts. For example, a newt that was identified (either through netting or torch light) on the evening of one survey may also have been caught in a bottle trap and double counted on the following morning of the same survey. This limitation has been highlighted where considered possible and is not considered to comprise a major constraint to the assessment. Given that it is unlikely that not all newts were captured during each round of bottle trapping, this is unlikely to affect the assessment, and the peak count is considered likely to be under-representative of the overall newt population on the site.

The results of the population assessment comprise only a single years' data, as the 2023 surveys only established presence / absence and did not assess the population of newts on the site. The population of the newts on the site is anticipated to naturally fluctuate and this single snapshot in time may have been conducted during either the extreme high or extreme low of the natural population fluctuation. Repeated population assessments conducted over several years could provide a better representation of the population.

3.0 Survey Results

The survey results raw data are provided in Error! Reference source not found. The following sections provide the results of the six newt surveysError! Reference source not found.

3.1 Newts

Table 5 summarises the peak counts for each waterbody and the overall peak count for the Site across the six surveys.

Table 5: Summary of peak counts for smooth newts for each waterbody across the six surveys (M = male; F = female)

Survey no.	Waterbody ref. and peak count for smooth newt for each survey											Overall peak count per survey
	WB1	WB2	WB3	WB4	WB5	WB6	WB7	WB8	WB9	WB10	WB11	
1	0	0	1M	3F	0	0	0	0	0	0	0	4
2	0	0	0	3F	0	0	0	0	0	0	0	3
3	0	0	N/A	1F	1F	0	0	0	0	1M 1F	0	4
4	0	1F	N/A	1F	0	N/A	N/A	N/A	N/A	2M 2F	N/A	5
5	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A	1F	N/A	1
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0

In total, 18 newts were recorded on the site across the six surveys. These were distributed between WB2 (1 newt recorded), WB3 (1 newt recorded), WB4 (8 newts recorded), WD5 (1 newt recorded) and WB10 (7 newts recorded). WB1, WB6, WB7, WB8, WB9, and WB11 retuned no records of smooth newt throughout the surveys.

The most effective method was bottle trapping, which returned a total of 12 newts on the Site across the five possible surveys. Netting and torchlight methods returned a total of three newts each on the Site across the six surveys.

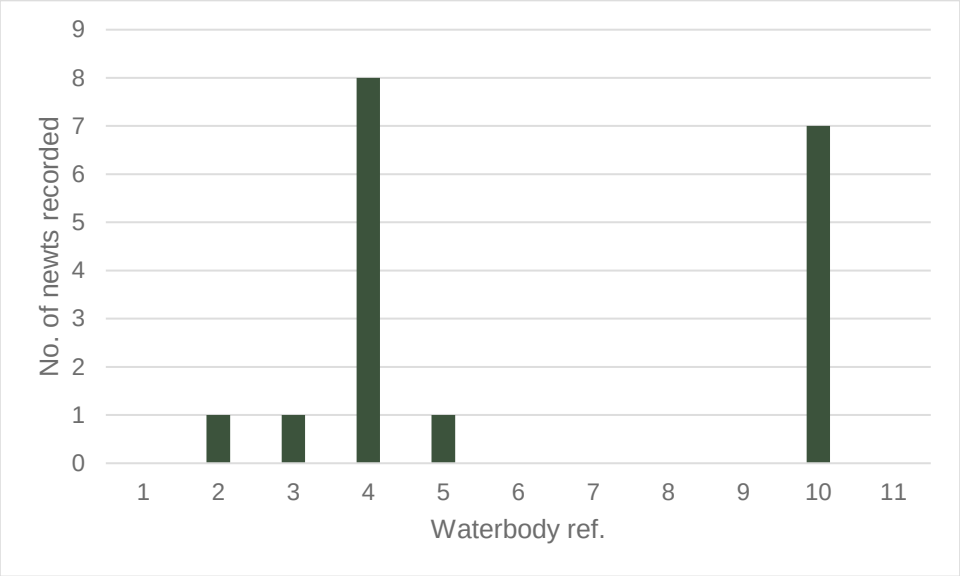


Figure 1: Number of newts caught per waterbody

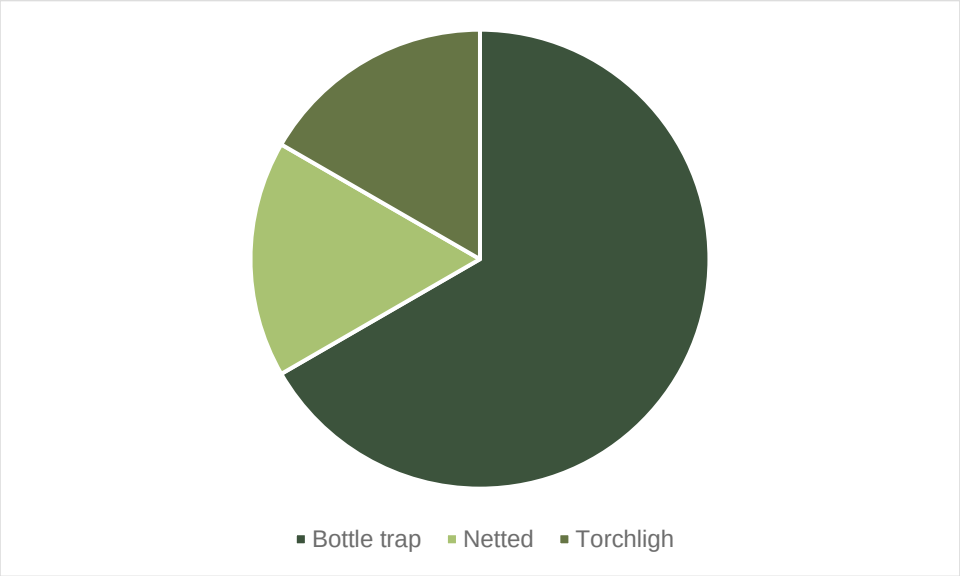


Figure 2: Survey methodology effectiveness (i.e., the proportion of newts caught via each methodology)

3.1.1 Peak Counts

The highest peak count was recorded during Survey 4 with a peak count of 5; followed by Surveys 1 and 3 with a peak count of 4; Survey 2 with a peak count of 3; and Survey 5 with a peak count of 1. No newts were recorded on Survey 6 due to all waterbodies being dry. WB10 returned the highest individual peak count during Survey 4 with 4 newts recorded; followed by WB4 with 3 newts. It should be noted that WB10 along with WB4 were the last waterbodies to dry out and were only dry on Survey 6.

Note that the 2023 surveys recorded a peak count of 6 during survey 2 (refer to Appendix B).

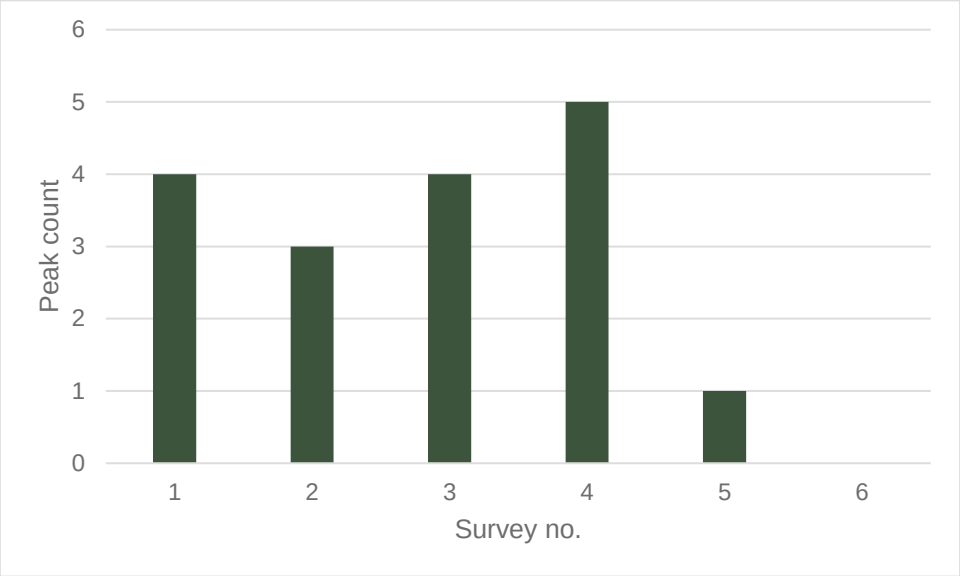


Figure 3: Peak count per survey

3.2 Common frog

Although not the within the aim of the survey, incidental sightings of common frogs for each waterbody that were also recorded during the six surveys. Table 6 summarises these.

Table 6: Summary of peak counts for common frog for each waterbody across the six surveys

Survey no.	Waterbody (WB) ref. and records of common frog for each survey										
	WB1	WB2	WB3	WB4	WB5	WB6	WB7	WB8	WB9	WB10	WB11
1	0	1	0	0	0	0	0	0	0	Tadpoles present	Tadpoles present
2	0	0	1	0	0	0	0	0	0	Tadpoles present	Tadpoles present
3	0	0	0	0	0	0	0	0	0	Tadpoles present	Tadpoles present
4	0	1	0	0	0	0	0	0	0	Tadpoles present	Tadpoles present
5	0	0	0	1	0	0	0	0	0	Tadpoles present	0
6	0	0	0	0	0	0	0	0	0	0	0

Significant numbers (i.e., within the hundreds) of tadpoles were identified in WB10 and WB11 prior to them becoming dry. Adult common frogs were occasionally identified either through incidental sightings, torch light or trapped in WB2 (2 frogs), WB3 (1 frog), and WB4 (1 frog). A total of four adult common frogs were identified in total across the six surveys as well as tadpole presence in WB10 and WB11.

4.0 Summaries and recommendations

4.1 Evaluation of results

The cumulative peak count for the Site was 5 newts obtained on Survey 4. Whilst it is likely that the surveys under-represent the actual population the guidance (as detailed in Table 4), states that a site cumulative peak count of <10 smooth newts is considered low. Therefore, the smooth newt population at the Site is considered to be low.

Bottle trapping was the most effective methodology for this Site with 66.67% of all newts recorded on the Site being recorded via this method. This is likely due to the small size of the waterbodies along with the limitations encountered during the surveys.

Dense aquatic vegetation often impeded netting surveys by preventing effective sweeping through the water. The dip net would also move the vegetation, which caused disturbance throughout the rest of the waterbody and likely caused newts located elsewhere within the water to seek refuge and remain unrecorded. Vegetation also prevented effective torchlight surveys as it completely impeded the visibility into the water where it was present. Without employing the bottle trapping method far fewer smooth newts will have been recorded and the Site would have been under-represented as a result. It is anticipated that netting and torchlight survey methodologies may be more effective for waterbodies that do not possess these limitations.

Despite the high volatility of the water levels, the newt population, although considered a low population, is present and breeding is taking place. This suggests that the Site does still offer some suitability for this species.

4.2 Possible factors limiting the newt population on the Site and potential management techniques

4.2.1 Low water levels

It is assessed that the ephemeral nature of the waterbodies is likely the biggest limiting factor to the survivability of the newts on the Site. Whilst adult and juvenile (i.e., >10 weeks old) newts are largely terrestrial and are capable of surviving within the terrestrial habitats on the Site, the species does need water and aquatic vegetation to lay their eggs and during their larva stage (Langton et al., 2001).

All of the waterbodies on the Site dried out over the course of the six planned the surveys. Therefore, the newts are likely susceptible to dry spells during their breeding season where their eggs and larva are unable to survive to adults.

The creation of a new waterbody that hold water permanently would greatly benefit the newts. It is unknown whether the water is lost through evaporation or through ground water levels decreasing. Therefore, the creation of a lined waterbody which holds significant water (i.e., to a central depth of 1 – 3m would prevent both evaporation and ground water levels decreasing from reducing the water level completely. Permanent water would allow fewer eggs and larva to be killed from waterbodies drying out and would allow newt breeding activity to occur throughout the full breeding season.

4.2.2 Sedimentation and scrub management

The waterbodies within the Site are located within densely vegetated scrub, with WB1, WB5, and WB10 located under dense tree foliage. Whilst the scrub does provide valuable terrestrial habitat, it also causes significant levels of shade and thus cools the water to suboptimal levels. In addition, the scrub and foliage causes leaf litter and dead tree limbs to enter the water over

time. This can create significant sedimentation and anaerobic conditions as well as causing the water level to become shallow as sediments build up and is not beneficial for newts.

The waterbodies within the Site were often shallow, with only relatively small areas of the largest waterbody (i.e., WB10) containing water with a depth near or greater than 1m. Sedimentation and leaf litter entering the waterbodies was noted throughout all the waterbodies on the Site. Langton et al. (2001) suggests that the optimal water depth for breeding newts is a 1 – 3m maximum central depth. Therefore, only WB10 could be described as having an optimal depth on a regular basis.

Waterbodies could be restored and deepened to improve breeding conditions for newts on the Site. In addition, scrub and foliage surrounding the waterbodies could be cut back to provide an open area around the waterbodies with grassland rather than scrub leading to the banks of each waterbody. Deadwood created from the vegetation clearance should be kept as brash and log piles within the open areas to provide suitable refugia for the newts. However, care must be taken to avoid works that might cause accidental harm to the existing newt population.

4.2.3 Aquatic vegetation

Aquatic vegetation is important to the newts, as the lay their eggs within it. Suitable egg-laying marginal vegetation can include the following species: water forget-me-not *Myosotis scorpioides*, floating sweet-grass *Glyceria fluitans* and great hairy willowherb *Epilobium hirsutum*. However, deep open areas are also important for breeding newts, and many of the waterbodies located on the Site were not optimal habitat because they were almost completely vegetated. Langton et al. (2001), state that it is beneficial to retain a fringe of marginal and emergent vegetation around at least half of the waterbody's edge. Where the marginal vegetation is invasive, its removal may be required. Such densely vegetated waterbodies may also attribute to increased sedimentation as detailed in Section 4.2.2.

Therefore, the management of existing vegetation to provide a mixture of vegetated areas and open areas within the waterbodies; as well as the inclusion of the suitable vegetative species listed above would improve the site for egg-laying and breeding newts.

4.2.4 Deer

The Site was anecdotally found to support large numbers of deer. Deer footprints around the waterbodies indicate that the deer enter the waterbodies and likely use them for drinking water. It is possible that the high numbers of deer noted on the Site may offer some benefits to the newts through keeping waterbodies partially clear of overly dense vegetation through trampling and potential grazing of aquatic vegetation. Conversely, deer may also cause trampling to individual newts in the waterbodies.

4.2.5 Timings

Table 7 details restorative management techniques and optimal times to do them.

Table 7: Management techniques and optimal times to do them

Management technique	Optimal timing
Build hibernacula in scrub	Summer
Place refugia near waterbodies	Winter
Remove excess floating and submerged vegetation	Autumn
Cut back scrub and trees to reduce shade	Autumn-winter
De-silt waterbodies	Autumn-winter

Management technique	Optimal timing
Re-profile waterbody / create new waterbody	Autumn-winter

5.0 Conclusion

A total of six newt surveys were conducted on the waterbodies located within the Site during April – June 2024, employing a mixture of survey techniques, including netting, torchlight and bottle trapping. The methodology is detailed in Section 2.0.

Breeding newts were recorded during the surveys with the Site found to support a 'low' smooth newt population. Survey results are provided in Section 3.0.

It was assessed that several factors are likely limited the 'low' smooth newt population on the Site including:

- Low water levels and breeding waterbodies drying out over the breeding season;
- High shade and sedimentation of the waterbodies on the Site;
- Dense vegetation inhibiting open areas within the water; and
- Deer were considered a minor factor.

Potential management techniques have been suggested in Section 4.2 following current conservation guidance for newts.

6.0 References

- Buckley, D.J. (2012). National Newt Survey - Final Report 2012. Irish Wildlife Trust, Dublin.
  English Nature (2001). Great crested newt mitigation guidelines. Available online: https://mokrady.wbs.cz/literatura_ke_stazeni/great_crested_newt_mitigation_guidelines.pdf. Accessed April 2024.
- Gent and Gibson (revised 2003). Herpetofauna workers' manual. Available online: https://data.jncc.gov.uk/data/9d7da8c4-9d76-4b65-8263-6b925b3433a4/Herpetofauna-Workers-Manual-2003.pdf. Accessed April 2024.
- Inns, H. (2009) Britain's Reptiles and Amphibians. Wildguides, Hampshire.
- King, J.L., Marnell, F., Kingston, N., Rosell, R., Boylan, P., Caffrey, J.M., FitzPatrick, Ú., Gargan, P.G., Kelly, F.L., O'Grady, M.F., Poole, R., Roche, W.K. & Cassidy, D. (2011) Ireland Red List No. 5: Amphibians, Reptiles & Freshwater Fish. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.
- Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001). Great Crested Newt Conservation Handbook, Froglife, Halesworth.
- Meehan S.T. (2013). IWT National Smooth Newt Survey 2013 Report. Available from https://iwt.ie/wp-content/uploads/2017/09/Newt-Survey-2013.pdf. Accessed February 2024.
- NatureScot (2020). Guidance - Licensing - Guidelines for trapping Great Crested Newts. Available online: https://www.nature.scot/doc/guidance-licensing-guidelines-trapping-great-crested-newts. Accessed April 2024.
- Nelson, B., Cummins, S., Fay, L., Jeffrey, R., Kelly, S., Kingston, N., Lockhart, N., Marnell, F., Tierney, D. and Wyse Jackson, M. (2019). Checklists of protected and threatened species in Ireland. Irish Wildlife Manuals, No. 116. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.
- NIEA (2017). Newt surveys - NEIA specific requirements. Available online: https://www.daera-ni.gov.uk/sites/default/files/publications/daera/newt-survey-specifications.pdf. Accessed April 2024.
- NRA (2008). Ecological surveying techniques for protected flora and fauna during the planning of national road schemes. Available online: https://www.tii.ie/technical-services/environment/planning/Ecological-Surveying-Techniques-for-Protected-Flora-and-Fauna-during-the-Planning-of-National-Road-Schemes.pdf. Accessed April 2024.
- O'Neill, K., Jennings, S., Forsyth, L., Carey, R., Portig, A., Preston, J., Langton, T. & McDonald, R. (2004). The distribution and status of smooth newts in Northern Ireland. Environment & Heritage Service, Belfast (Unpublished).
- SLR (2023). Blackglen Road Development. Ref.: 501.00591.065093.

Figures

Drawing 1 – Site location plan

Drawing 2 - Waterbody location plan

117800 117900 118000 118100

382800

382700

N

Sandyford Road

Sandyford Road

Blackglen Road

Blackglen Road

Blackglen Road

Blackglen Court

Sandyford Road

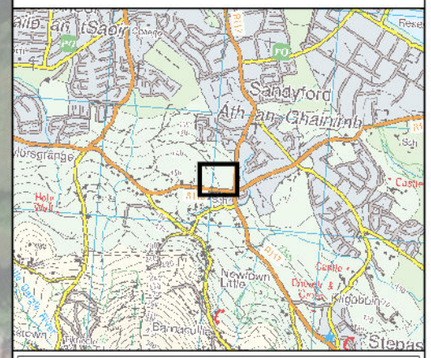
0 25 50

Metres

LEGEND

NOTES

NO SITE BOUNDARY CURRENTLY EXISTS



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SLR

NEWT MONITORING FOR BLACKGLEN

NEWT MONITORING PROJECT
AT BLACKGLEN ROAD

SITE LOCATION PLAN

DRAWING 1

Scale 1:1,000 @ A3

Date AUGUST 2024

501.065378.00001.0001.0 Site Location Plan

117800 117900 118000 118100

382800

382700

WB 10
WB 11
WB 1
WB 8
WB 9
WB 7
WB 2
WB 4
WB 3
WB 5
WB 6

Sandyford Road
Sandyford Road
Sandyford Road

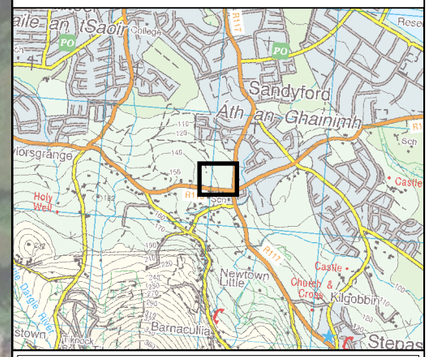
Blackglen Road
Blackglen Road
Blackglen Road
Blackglen Court

N

0 25 50
Metres

LEGEND

Waterbody



dlr Comhairle Contae County Council

SLR

NEWT MONITORING FOR BLACKGLEN

NEWT MONITORING PROJECT
AT BLACKGLEN ROAD

WATERBODY LOCATION PLAN

DRAWING 2

Scale 1:1,000 @ A3

Date AUGUST 2024

501.065378.00001.0002.0 Waterbody Location Plan

Appendix A NPWS Licence

Newt Survey Report

Blackglen Road

Dun Laoghaire Rathdown County Council

SLR Project No.: 501.065378.00001

4 October 2024

National Parks & Wildlife Service LICENCE

An Roinn Tithíochta, Rialtais Áitiúil agus Oidhreachta
Department of Housing, Local Government and Heritage

Licence No. 42/2024

NATIONAL PARKS & WILDLIFE SERVICE

Wildlife Acts 1976 to 2018 – Sections 23 and 34

LICENCE TO CAPTURE PROTECTED WILD ANIMALS FOR EDUCATIONAL, SCIENTIFIC OR OTHER PURPOSES

The Minister for Housing, Local Government and Heritage in exercise of the powers conferred on him by Sections 9, 23 and 34 of the Wildlife Acts 1976 to 2018 authorises:

Michael Bailey and Jake Matthews of SLR Consulting, 7 Dundrum Business Park, Windy Arbour, Co. Dublin D14 N2Y7

To disturb specimens of the species specified in Column 1 of the Schedule hereunder in the area specified in Column 2 by the means specified in column 3 for scientific, educational or other purposes during the period beginning on **March 15th 2024** and ending on **June 30th 2024,** subject to the conditions listed overleaf.

SCHEDULE

1	2	3
Species	**Area**	**Means of capture**
Smooth Newt *(Lissotriton vulgaris)*	**Four ponds: Gorse Hill close to Fitzsimons Woods and Blackglen Road.**	**Bottle Trapping, Torchlight, Netting and where necessary egg searching.**

Dated 15 March 2024

For the Minister for Housing, Local Government and Heritage

Claire Crowley

_____

Conditions

1. This licence shall be produced for inspection on a request being made on that behalf by a member of An Garda Síochána or any person appointed by the Minister for Housing, Local Government and Heritage under Section 72 of the Wildlife Acts 1976 to 2018, to be an authorised person for the purposes of the Acts.

2. The local NPWS District Conservation Officer or Conservation Ranger must be contacted prior to the activity commencing under the terms of this licence.

3. Newts should be returned to where they were caught after minimum necessary holding time.

4. Licensees are encouraged to submit all amphibian and reptiles records to the National Biodiversity Data Centre

5. **On expiry of this licence a return stating the work carried out must be provided to the National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, 90 North King Street, Dublin 7, D07 N7CV, email wildlifelicence@npws.gov.ie. Any subsequent applications for a Section 23 & 34 licence will be judged against the full, proper and timely submission of returns under the licence. (A 'Nil' return should be submitted if applicable.)**

6. Any query in relation to this licence should be addressed to National Parks and Wildlife Service, 90 North King Street, Dublin 7, D07 N7CV. Telephone: 01-888 3287.

Note: This licence does not confer right of entry onto any lands.

Appendix B 2023 and 2024 Survey Results

Newt Survey Report

Blackglen Road

Dun Laoghaire Rathdown County Council

SLR Project No.: 501.065378.00001

4 October 2024

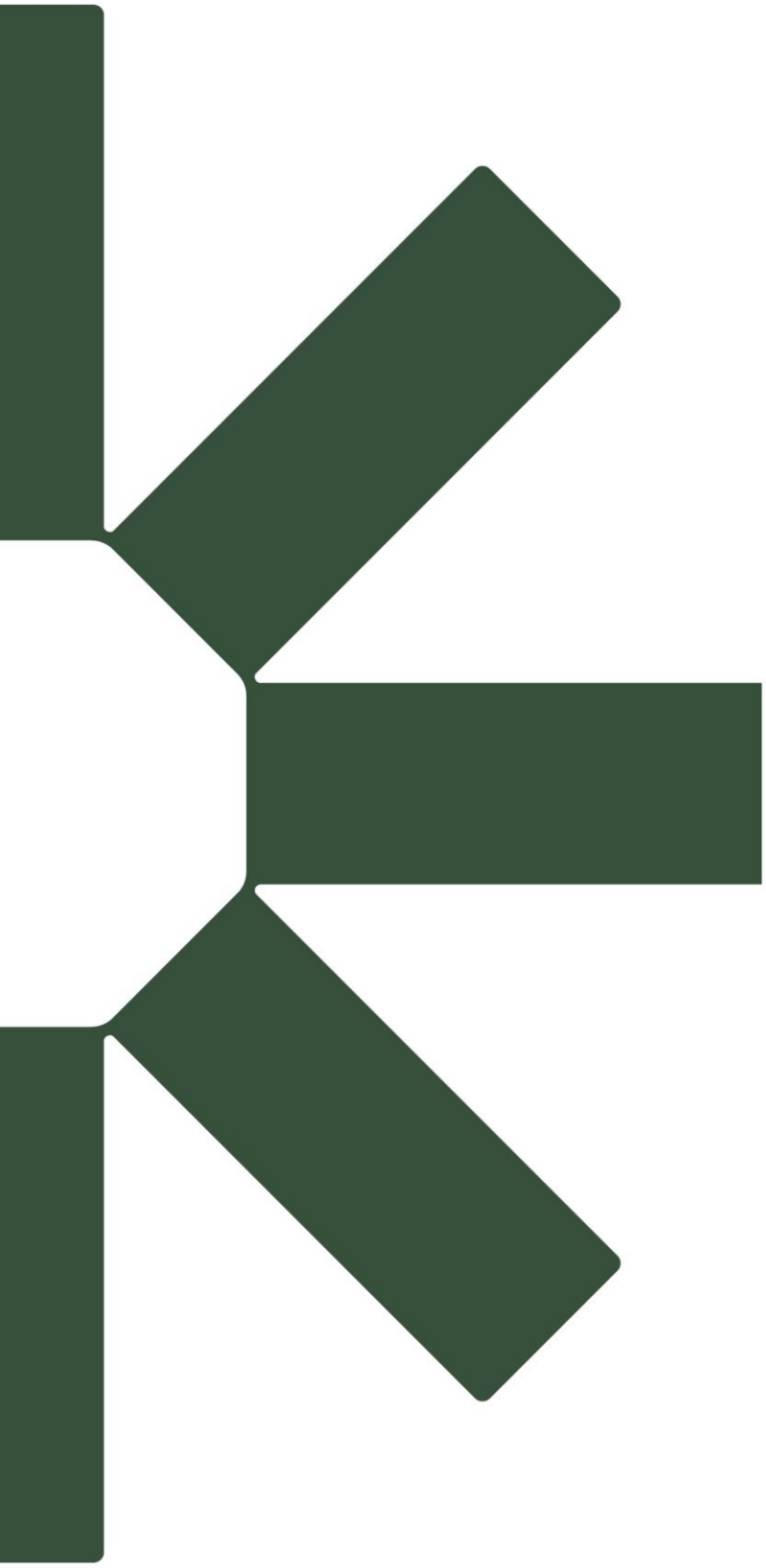
B.1 2023 Smooth Newt Survey Results[1]

Survey no.	Waterbody (WB) ref. and peak count for smooth newt for each survey								Overall peak count per survey
	1	2	3	4	5	6	7	8	
1	0	0	0	0	0	1F	0	0	**1**
2	0	0	0	1M 2F	3M	0	0	0	**6**

B.2 2024 Smooth Newt Survey Results

Survey no.	Waterbody (WB) ref. and peak count for smooth newt for each survey											Overall peak count per survey
	1	2	3	4	5	6	7	8	9	10	11	
1	0	0	1M	3F	0	0	0	0	0	0	0	**4**
2	0	0	0	3F	0	0	0	0	0	0	0	**3**
3	0	0	N/A	1F	1F	0	0	0	0	1M 1F	0	**4**
4	0	1F	N/A	1F	0	N/A	N/A	N/A	N/A	2M 2F	N/A	**5**
5	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A	1F	N/A	**1**
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0**

[1] Note that not all waterbodies were surveyed in the 2023 surveys.



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