



JOY OF BATS 2023 REPORT

ALEX KONIECZKA

Funded by:



An tSeirbhís Páirceanna Náisiúnta
agus Fiadhúlra
National Parks and Wildlife Service



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

1. DESCRIPTION OF PROJECT

1.1 PROJECT OBJECTIVES

- Promote citizen science and upskill individuals in bat surveying and bat roost potential of trees surveying.
- Collect data about bat species present in the areas of Greystones and Delgany.
- Contribute findings and observations with NPWS.

1.2 PROJECT RATIONALE

Several factors affect bat presence and abundance including the fragmentation of the Irish landscape and use of artificial lighting. We hope that the project will provide up to date information on the gaps in the distribution, presence and diversity of bats in Delgany and Greystones.

Both areas continue to draw the attention of investors and developers, evident from the numerous planning applications submitted each year. Significant transformations of landscape and infrastructure have already occurred, in an effort to meet the demands of society. This battle to find a harmonious balance between heritage conservation areas and development is an important one. Delgany and Greystones hold the status of Architectural Conservation Areas, signifying their rich architectural and historical heritage. They boast a multitude of historical sites, some of which are likely to be of great significance to local bat populations. It's worth noting that even seemingly minor alterations to the local heritage and environment can have unintended consequences, potentially affecting bat roosting sites.

To gain deeper insights into the current diversity and distribution of bat species, citizen scientists were trained in surveying techniques and supported throughout the project. By raising the profile of Irish bats and raising awareness about the bat roost potential of trees and structures, participants gained a better understanding of bat ecology and learned how they can take action to support these species in their own gardens and beyond. The 'Joy of Bats' project fostered a stronger sense of community engagement but also served as a powerful tool in our collective mission to protect and preserve these fascinating species. By participating in this initiative, individuals became an integral part of the ongoing efforts to safeguard the future of bats and the broader ecosystem in which they play a critical role.

1.3 PROJECT PARTNERS

The "Joy of Bats" project was led by Alex Konieczka (BSc Environmental Science) from Understory in partnership with Greystones TidyTowns and Delgany TidyTowns.

Understory is an environmental education and zero-waste organisation addressing a knowledge gap in nature education and societal need for connection in both children and adults. Understory's workshops, training and courses focus on experimental, hands-on learning in real-life environments through the senses, improving participant's learning, retention and confidence as a result. Understory's goal is to facilitate skills

development and climate and biodiversity action through authentic connection with people and nature in a supportive environment.

Greystones Tidy Towns' mission is to make Greystones the "most liveable community" not only for humans but for our 4-legged, no-legged, and winged residents. Greystones Tidy Towns believe in supporting initiatives in climate action, biodiversity, heritage, and environmental education, playing a role as a community educator and advocate for sustainability, biodiversity, climate action, preservation of local heritage, and "smart cities".

Delgany Tidy Towns was established in 1982 to promote awareness of natural heritage and resources, and the conservation of habitats and species. It is their mission to conserve natural wildlife areas and enhance them where necessary so that they are passed on in a healthy condition to future generations. Delgany Tidy Towns encourage and promote environmental awareness and education including waste minimization and reduction of the carbon footprint.

1.4 PROJECT LOCATION

Surveys mainly took place in Delgany and Greystones, Co. Wicklow as outlined in the proposal to the National Parks and Wildlife Service. Suitable sites were identified through:

- 1) Desktop research e.g. Bat Conservation Ireland, National Biodiversity Data Centre
- 2) Local knowledge
- 3) In-person suitability assessment

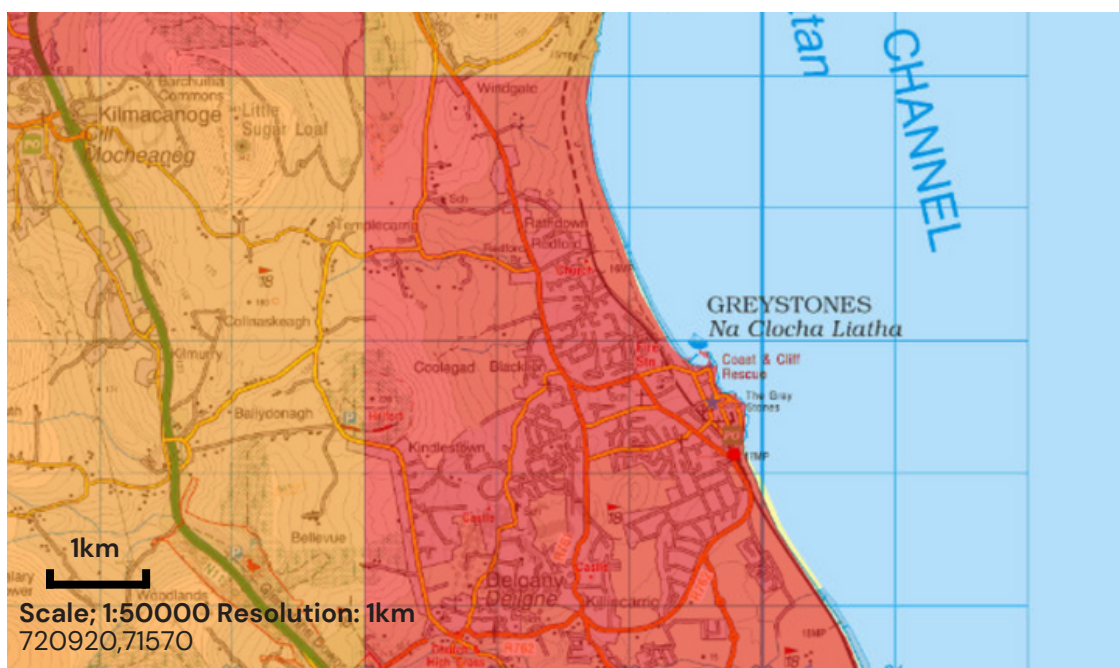


Figure 1.1 All Bat Suitability Index ranges from green, the lowest suitability to red, the highest habitat suitability. Those areas shown in red have the highest habitat suitability index. The index ranges from 0 to 100, with 100 being most suitable for bats. Greystones and Delgany have an index ranging from 28.67 to 42.78. Source: maps.biodiversityireland.ie

Daytime recce of the survey sites were carried out for health and safety reasons. Participants used a checklist to ensure the site was accessible, safe and suitable.

13 sites were surveyed in total as part of the Joy of Bats project. Locations can be seen in Figure 1.2.

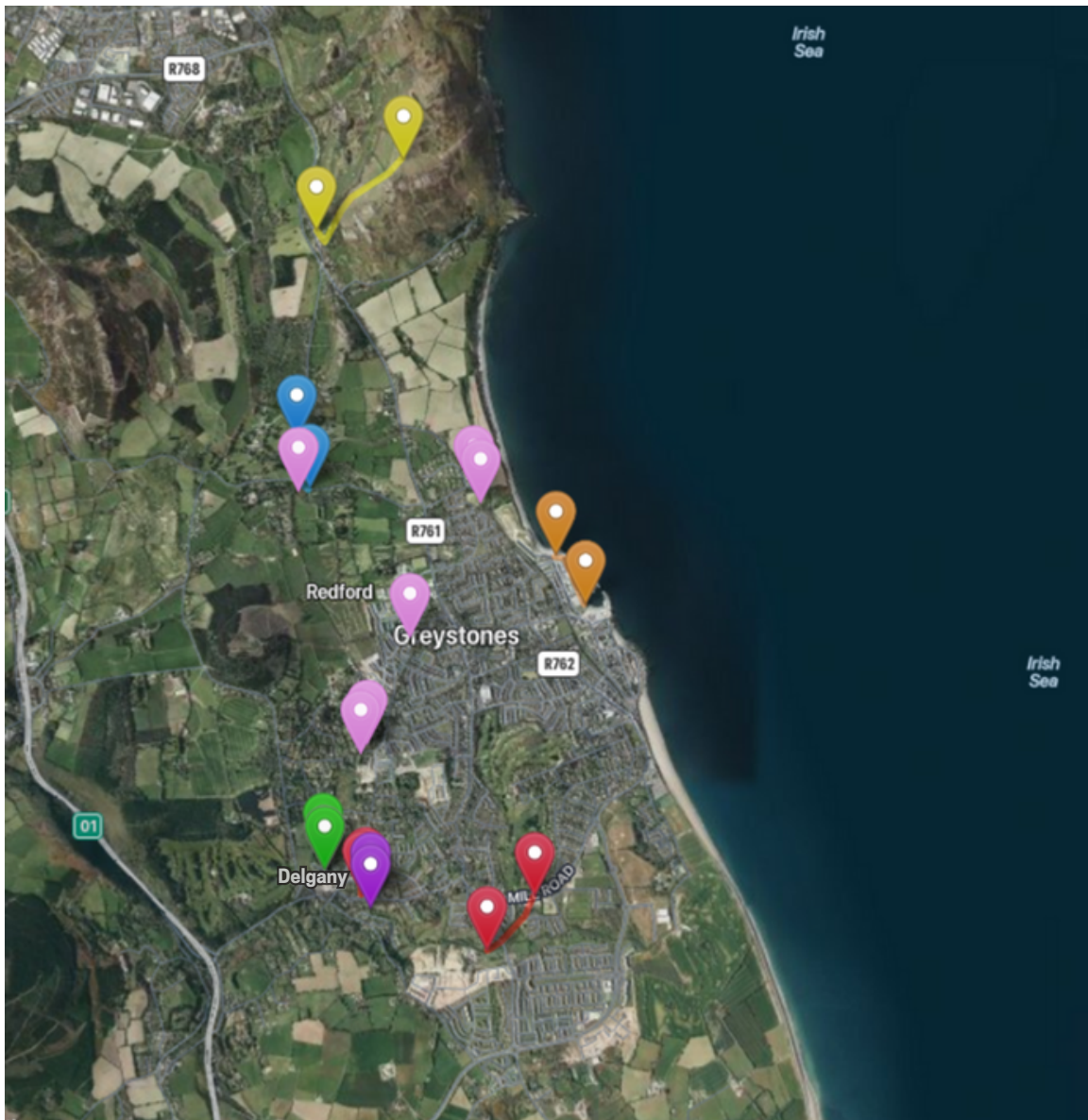


Figure 1.2 Survey Locations – Bat walk locations and survey sites. Bat walks have 2 same colour markers. All pink markers symbolise the location of an emergence/static survey.

3 Additional locations were surveyed as part of the tree roost potential of trees survey.

1.5 PROJECT DELIVERY

- Risk assessment was carried out.
- Communications and marketing resources were designed.
- Alex Konieczka attended in-person Glendalough bat survey delivered by NPWS and online bat survey training by Bat Conservation Ireland.
- Greystones Tidy Towns and Delgany Tidy Towns were engaged and became official project partners.
- Introductory video was recorded and project details launched on website and social media.
- Project launched with press releases and radio interviews.

- Online expression of interest and data submission forms were created
- 1.5 hour training was designed.
- In-person training sites were assessed.
- Equipment was purchased and divided up into survey bags.
- Info stand was hosted to recruit citizen scientists.
- Survey site suggestions with spots where bats were previously observed were collected from the community.
- Expression of interest forms of all potential participants were collected.
- Training was conducted in Delgany on Saturday 29th July 2023 and Greystones on 26th July 2023 including health & safety protocols.
- Bat walks and surveys were undertaken between July and September.
- Project report was written and data was analysed upon project completion.

2. DATA

2.1 BAT RECORDS

The bats observed in our survey were predominantly Leisler's bats, with the Common Pipistrelle also frequently recorded. The Soprano Pipistrelle was recorded twice. Nathusius' Pipistrelle and the Whiskered bat were each recorded once. These findings align with bat survey data published by Bat Conservation Ireland for Delgany/Greystones.

2.2 SURVEYS

Bat surveys were carried out during dry and calm weather to maximise the chances of spotting bats. Dusk survey began approximately 15 minutes before sunset and went on for 30–60 minutes or longer. 12 sites were surveyed in total, 11 within Delgany and Greystones and one bordering Bray. Some surveys resulted in no bat sightings, which could be a result of harsh artificial lighting such as in the case of Mill Lane or lack of favourable habitat and foraging resources. These areas require further study.

3. KEY PERFORMANCE INDICATORS

3.1 KPI'S

5 KPIs were devised during the design of the Joy of Bats project as a means of measuring it's success. The 5 KPIs were fully achieved. These KPIs and the level of achievement of each are listed below.

1. Video produced to launch the Joy of Bats project – Completed.
2. Twenty citizen scientists trained – 30 participants were trained in total.
3. One training session run – Two were carried out in total.
4. Minimum of 10 Surveys carried out – 14 surveys carried out in total.
5. Minimum 5 sites surveyed – 12 sites surveyed in total.

3.2 REACH

- Approximately 40 people engaged at the Info stand.
- 30 participants trained.
- Post on PPN Wicklow Network, 2,400+ followers on FB.
- News article by the Greystones Guide, 18,000 followers on FB.
- News article by the Wicklow Times delivered to 44,500 homes and 4,000 provided at supermarkets.
- News article by the Wicklow net news average of 60,000 unique readers and over 140,000 page views every week. Online.
- Morning Show Interview with East Coast FM listenership of 3.2 million every day.
- GTT Social media 1,351 followers on Instagram, 2,400+ followers on FB.
- DTT Social media 246 followers on Instagram, 703 followers on FB.
- Understory 135 website views with projects page explored by 89 viewers.
- 14 received Understory newsletter.
- Understory Social media, 2,183 followers on Instagram, 7,061 post reach and 2,193 stories views. 237 followers on FB, post reach 3,490. Post reach of 1,625 on X/Twitter, 1,393 views on TikTok.
- Interview on East Coast FM 'Ours to Protect', a Climate Change and Climate Action focused programme series listenership of 3.2 million every day.
- News article and video by The Irish Times 1,264,000 weekly total audience (print/online).

4. EVALUATION

An anonymous post-evaluation survey was used at the conclusion of the Joy of Bats project. The results from 8 responses can be found below.

- 75% extremely agree that they feel more confident in recording biodiversity.
- 100% agree that they have an increased awareness and understanding of bat ecology.
- 100% agree that the instructor delivered training in a clear and easy-to-understand approach.
- 100% agree that they learnt theoretical knowledge and practical skill that they will use in the future.
- All respondents enjoyed taking part in the Joy of Bats Project.
- Alex Konieczka received an average rating of 9.38 out of 10.
- 75% thought that the learning activities used in training were extremely effective.

EXCITING

EDUCATIONAL

UNIQUE/DIFFERENT

MEMORABLE

↖ Top words used to describe the Joy of Bats project

- All respondents reported an increase in understanding of bats and bat surveying after taking part in the Joy of Bats Project. The improvement ranged from 50% to 300%, increasing from poor and fair understanding to good, very good and excellent.

PARTICIPANTS' UNDERSTANDING OF BATS AND BAT SURVEYING BEFORE AND AFTER

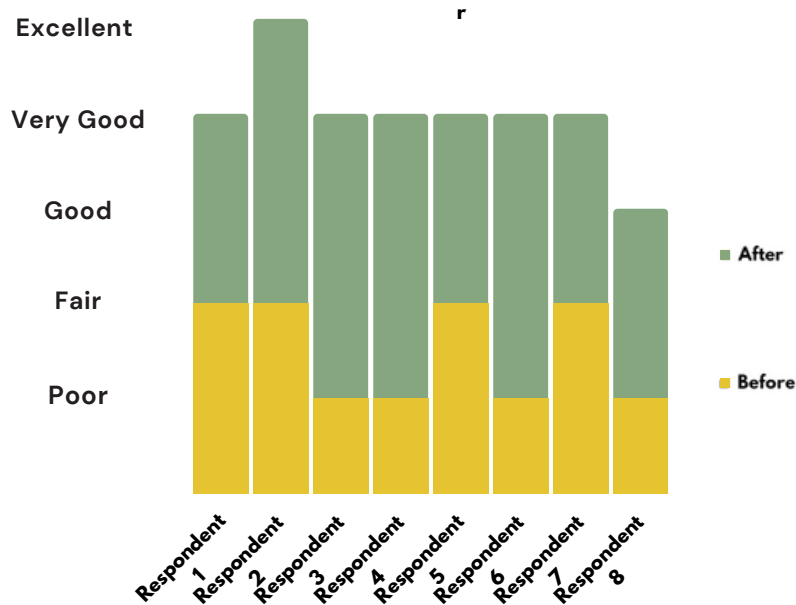


Figure 1.3 Chart showing participant's understanding of bats and bat surveying before and after taking part in the Joy of Bats Project.

100%

would like to take part in the Joy of Bats project next year

5. LESSONS LEARNED AND FUTURE PLANS

As this was the first year of running the Joy of Bats project, time was needed to purchase equipment, plan and coordinate various parts of the project after notification of successful application in late May. As a result, the bat surveying window was reduced to July–September. Moreover, weather was also a factor in the ability to carry surveys. According to Met Eireann, July 2023 is provisionally Ireland's wettest on record. Next year, the project could potentially start earlier as training, resources and visuals are already designed and relationships with the community and the press have been established.

Heterodyne bat detectors were used with sound recorders plugged in, to allow for validation and later analysis. Additional purchase of bat detectors will be necessary to allow all interested community members to take part. In particular, purchase of frequency division bat detectors would be hugely beneficial to allow for professional analysis using bat analysis software (however it's noteworthy that a CD-ROM is needed to install it).

Only one or two participants had previous experience using bat detectors. Evaluation also showed that more regular supervised group surveys would be welcome. Lack of confidence and experience among some participants and the number of bat detectors available, limited the overall number of surveys carried out. However, some people had a natural inclination and passion for bat surveying and went above and beyond with their engagement throughout the Joy of Bats project. These participants could be trained further to become Leaders of the Joy of Bats project next year in order to assist in leading group surveys.

If the project was to run again next year, the same locations would be surveyed again to establish more accurate records of bat species present. Moreover, locations that were surveyed where no bats were recorded should be re-assessed in order to determine if bats are in fact absent and ensure lack of observations weren't due to unfavourable weather conditions or inadequate time spent surveying.

The project could potentially expand geographically, as demand was observed for the Joy of Bats project to expand to Bray, Kilcoole and Newmountkennedy.

Last but not least, the development and publishing of resources is also on the cards to raise the profile of bats, share knowledge and build capacity nationwide.

6. CONCLUSIONS

The data collected has provided invaluable insights into the bat fauna that inhabit various areas of Greystones and Delgany. The project also gave individuals the opportunity to learn fieldwork and bat surveying skills.

The Joy of Bats project represents the beginning of a promising initiative with great potential for growth and expansion. With continued efforts, we can delve deeper into bat ecology, monitor changes in populations, and contribute to their conservation. By collaborating with local communities, organisations and researchers, we can work towards mobilising citizen scientists, collecting more data, increasing our knowledge on bat ecology, preserving the habitats and resources that these remarkable creatures depend on and enhancing our appreciation of the intricate ecosystems in which they thrive.

Understory wishes to thank all who took part and to the National Parks and Wildlife Service and the Department of Housing, Local Government and Heritage for funding the Joy of Bats Project.

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