

## BIOACOUSTIC MONITORING: PROCESS OVERVIEW

Our easy-to-use recording technology can be scaled for all sizes of land and is standardised for repeat measurement. Recording devices are shipped in advance of the survey, and can be easily set up onsite.

If you are unsure about the optimum placement of recording units across your site, please reach out to a member of the Carbon Rewild team, and we can provide survey design recommendations free of charge.



Devices are posted to site with clear set up instructions



Recording units deployed.

LED Status check made for all recording units during deployment (see next page)



Client updates Carbon Rewild with recording locations.

A link to an online form will be provided to submit this information



At end of survey period, recording units are collected and returned via post for results analysis



Report completed and results stored on your online Nature Dashboard



Further analysis and human verification performed to increase results accuracy.





Data is processed for automated species classification.

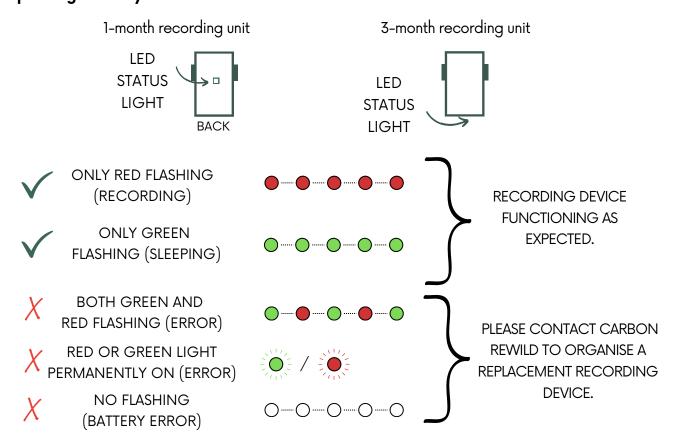
Data is analysed and validated each month separately



### RECORDING UNIT CHECKS

The survey duration shall be defined in advance, commencing from the agreed-upon start date. In preparation, recording units will be dispatched prior to the commencement date, accompanied by instructions and guidance for their setup and deployment. Please keep the original packaging for the return of the recording units.

The recording device has a LED status light which can be used to check if it is correctly operating. The LED can be seen through a small port on the back or underside of the recording unit. The Status light must be checked during deployment to ensure recording unit is operating correctly.

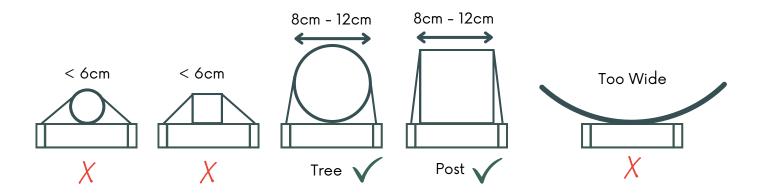


Should any issues arise with the recording units from these checks, replacement units will be promptly dispatched by the Service Provider. Provided Carbon Rewild is informed of any operating status issues no more than three working days after the agreed-upon start date then the agreed-upon start date will be adjusted to be one day after arrival of the replacement unit(s) at the Client's chosen delivery address. It is important to note that **any units damaged due to external factors, during the deployment or survey period, will not be eligible for replacement.** 

## **RECORDING UNIT SETUP & RETURN**

Carbon Rewild will provide separate guidance on finding a suitable recording location. Once the recording location(s) have been determined, you will need to have a suitable fixing point to attach the recording unit, which is commonly a post or tree. This fixing points need to be accessible, and be a suitable width to attach the device.

The post or tree should be approximately the same width as the recording unit, preferably with a width of 8cm - 12cm. The fixing point should not be narrower than 6cm, or there is a risk the strap cannot remain securely tightened for the monitoring period. Attaching to wider trees is also not advisable, as the strap may not be long enough, and they can block sound from the surrounding environment.



The strap for the recording unit should be tightened as much as possible, to ensure the recording unit remains fixed in the same position during the monitoring period. The recording units can be setup at a height 1m - 2m from the ground, unless otherwise advised. Recording units can be setup at greater heights (e.g. for bat surveying), although this should only be conducted if suitable safety equipment is used with the necessary risk assessments conducted. Users are deploying recording units at their own risk.

At the end of the monitoring period, the recording units must be safely retrieved from the site and suitability prepared for shipment in the original packaging by the Client for courier collection. The recording units must be made available for return within 10 working days of the survey end date.

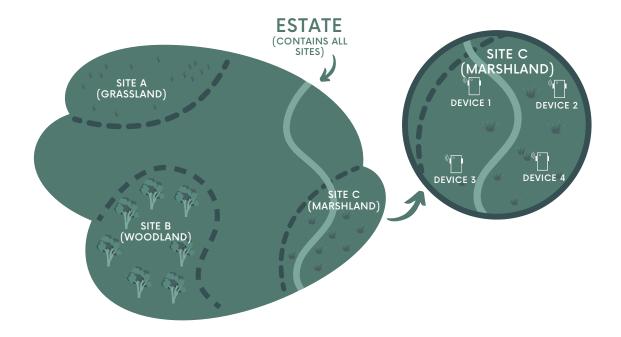


## **MONITORING LOCATIONS**

Once the recording units have been setup onsite, the Client must provide the locations of each recording unit deployed either via longitude and latitude (to at least four decimal places) or via a What3Words address. Carbon Rewild will provide a form requesting this location information, along with relevant site information that inform our analysis and validation processes.

For reporting purposes, your recording units can be grouped into "Estates" and "Sites", as illustrated below. "Estates" are distinct areas of land that can contain multiple "Sites" (e.g. multiple managed woodlands or distinct habitats). On your dashboard, you can view the overall Estate biodiversity levels, and compare the sites side-by-side. All of the survey data for your Sites will be combined to show the biodiversity values for your whole Estate.

You may wish to have all your recording units grouped into a single site. How you structure your Estates and Sites account is your choice. You can request separate sites and estates for your reporting dashboard when you submit the recording location data.



## **REPORTING & DATA**

We aim to deliver reporting to meet your requirements, and custom reporting documentation can be provided on request. The format & reporting output needs to be agreed in advance of the survey, and custom reporting may also require additional time to deliver. Please find the standard reporting metrics available on the following page.

We aim to deliver the survey reports within 4 weeks of the return of the recording units. However, during busy times of year, the report delivery timeframe may be up to 6 weeks, and we will updated you on any extended delivery timeframes if this is applicable.

The Client shall recognise that every effort will be made by the Service Provider to provide information that is accurate and accessible, which includes human verification of some of the identified species. Nevertheless, the Client shall also recognise that errors in species identification and information provided may occur. The Client shall recognise that software is used to measure the acoustic activity from the audio recorded during the survey. The absence of a detection does not necessarily imply the absence of a species from a location.

Carbon Rewild acts as Data owner for the monitoring service and maintenance of audio & survey data. Unless agreed otherwise, Carbon Rewild agrees to retain data records as follows:

- Deliverables and raw numerical data relating to the service delivery to be retained indefinitely.
- Full survey audio to be retained for 6 months following the completion of the survey period.
- Sample of audio for all identified species to be retained for 5 years following the completion of the survey period.

If you require long-term storage of survey audio data as part of our service, please get in touch to discuss this further.

## **REPORTING OVERVIEW**

### **SURVEY SITE RESULTS**

**SPECIES RICHNESS** 

CONSERVATION BREAKDOWN OF SPECIES IDENTIFIED

INFORMATION ON KEY SPECIES OF CONSERVATION CONCERN

#### **SPECIES DISTRIBUTION**

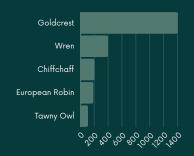


#### **SPECIES BREAKDOWN PER RECORDING LOCATION**

IDENTIFIED SPECIES AND CONSERVATION STATUS

Species	Scientific Name	Conservation Status					
Chiffchaff	Phylloscopu s collybita	green					
Мадріе	Pica pica	green					
Robin	Erithacus rubecula	green					
Long-tailed Tit	Aegithalos caudatus	green					
Song Thrush	Turdus philomelos	amber					

SPECIES' ACTIVITY TO BENCHMARK FOR REPEAT SURVEYS



DAYS PRESENT METRICS

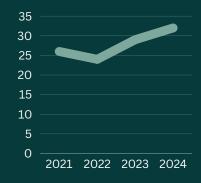




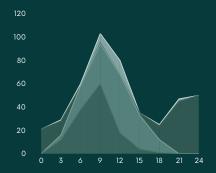
### **ONLINE DASHBOARD**

FURTHER INSIGHTS ARE AVAILABLE VIA OUR ONLINE DASHBOARD

#### VIEW PORTFOLIO OF SITES AND SURVEYS TO MONITOR BIODIVERSITY CHANGE OVER TIME



## MEASURE SPECIES BEHAVIOUR, WITH HOURLY/DAILY IDENTIFICATIONS BREAKDOWN





## INTRODUCING CARBON REWILD CORE: YOUR NATURE DASHBOARD

High quality reporting and insights is essential to help you understand your land and bioacoustic monitoring results. **Carbon Rewild Core** is your dashboard and nature data platform: a single online location for you to store your survey data and monitor biodiversity change over time.

Carbon Rewild Core brings together all your bioacoustic survey results from different survey locations and sites in an intuitive and interactive format. Clear metrics are presented to communicate your results to key stakeholders, and results can be further explored to offer insights into species and ecosystem health. Users can dive into species-specific information, analyse activity trends, and compare locations.



- Helps you understand biodiversity performance and measure change over time.
- Clear metrics to help you understand your nature data
- See temporal trends and daily/hourly activity breakdown for species
- Measure species distribution and breakdown of species activity across sites.
- All your surveys stored in the same please for easy comparison and review.

# UK BIOACOUSTIC SURVEY CALENDAR

	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV
Birds												
Birds (Breeding Season)												
Birds (Summer Visitors)												
Birds (Winter Bird Surveys)												
Birds (Migrant Birds)												
Bats												
Small Terrestrial mammals												
Voles* (Field Voles, Bank Vole, Water Vole)												
Mice* (Harvest Mouse, Edible Dormouse etc.)												
Shrews* (Common shrew, pygmy shrew etc.)												



Optimal monitoring period



Acceptable monitoring period. Some species may be less active or present during this period.

<sup>\*</sup> The breeding times of small mammal species vary significantly, please check in advance if you are interested in monitoring specific species.