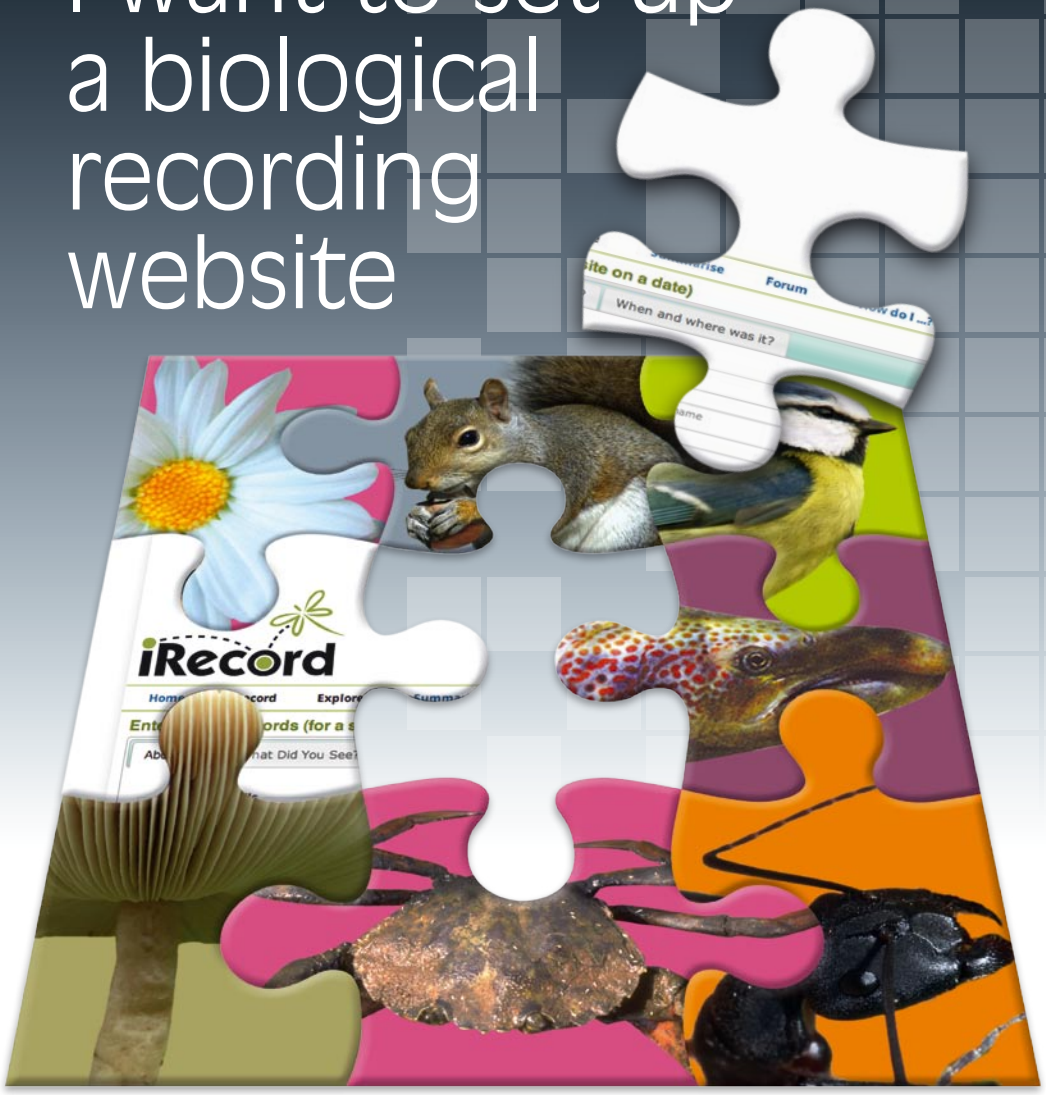
NBN
National Biodiversity Network

I want to set up a biological recording website



SHARING INFORMATION ABOUT WILDLIFE

Biological recording websites allow recorders to contribute their wildlife observations directly to a database.

Indicia

Such websites offer great opportunities not only to speed up the flow and increase the volume of data, but also to improve the quality of the records. They do this by checking that the record is valid before it is even saved to the database, for example by checking grid references against a map, or that dates are in the correct format. Furthermore, online recording can streamline the verification process, by providing tools which allow experts to check the records.

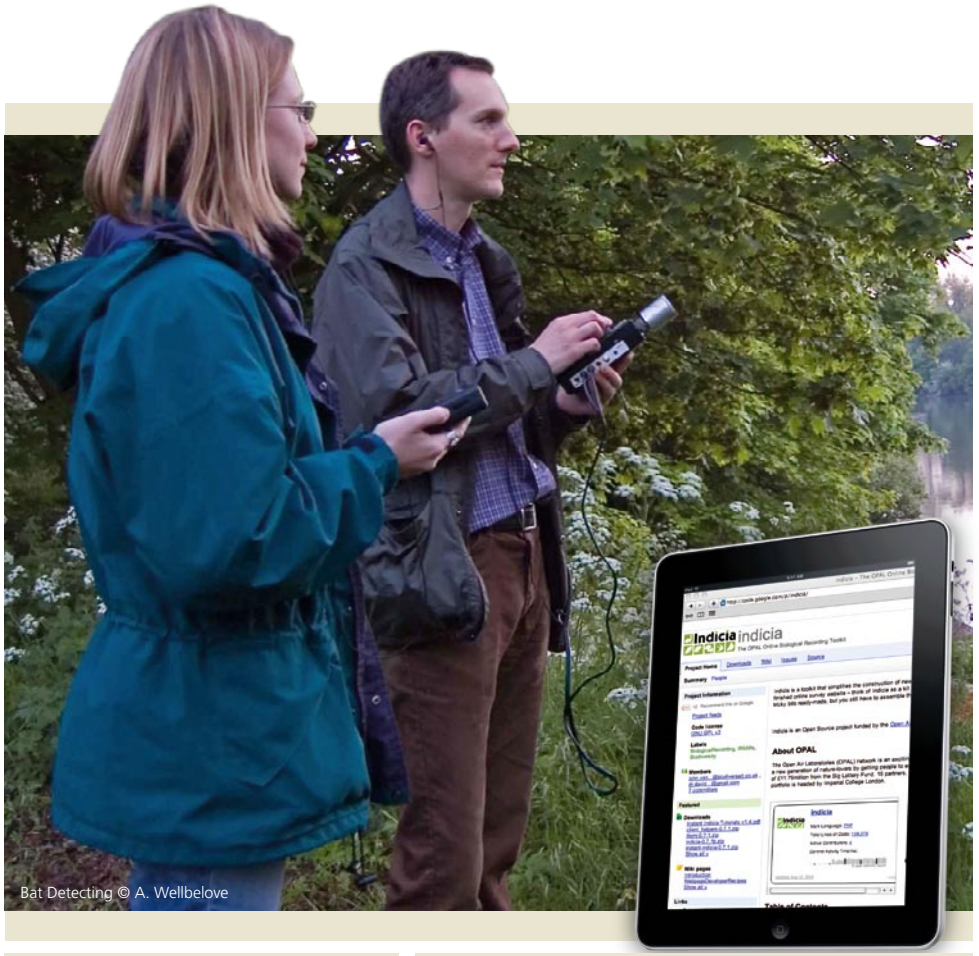
There has been an explosion of online recording. Until now however, if you wanted to set up your own recording website for this purpose you would have needed to develop the site from scratch, a costly and time consuming process. Buying into an off-the-shelf solution is another possibility, but this does not give you the flexibility to develop the site to your own requirements.

Indicia provides a solution for developing online biological recording. A toolkit that simplifies the construction of websites, Indicia supports wildlife observation recording forms that are as simple or advanced as you need, allow photo upload, reporting, mapping and verification of the records. By providing these facilities via a comprehensive set of highly configurable components, Indicia can be used to build diverse and unique recording solutions, which avoid reinventing the wheel and minimise the cost of development.

> **Indicia provides a set of services, tools and examples that can be added to almost any website to provide rich online recording functionality.**

Indicia is not an off the shelf solution for online recording. Rather, it is a toolkit that simplifies the development by providing ready-made components required to build online recording websites. Indicia provides a set of services, tools and examples that can be added to almost any website to provide rich online recording functionality.

© Natural England



Bat Detecting © A. Wellbelove

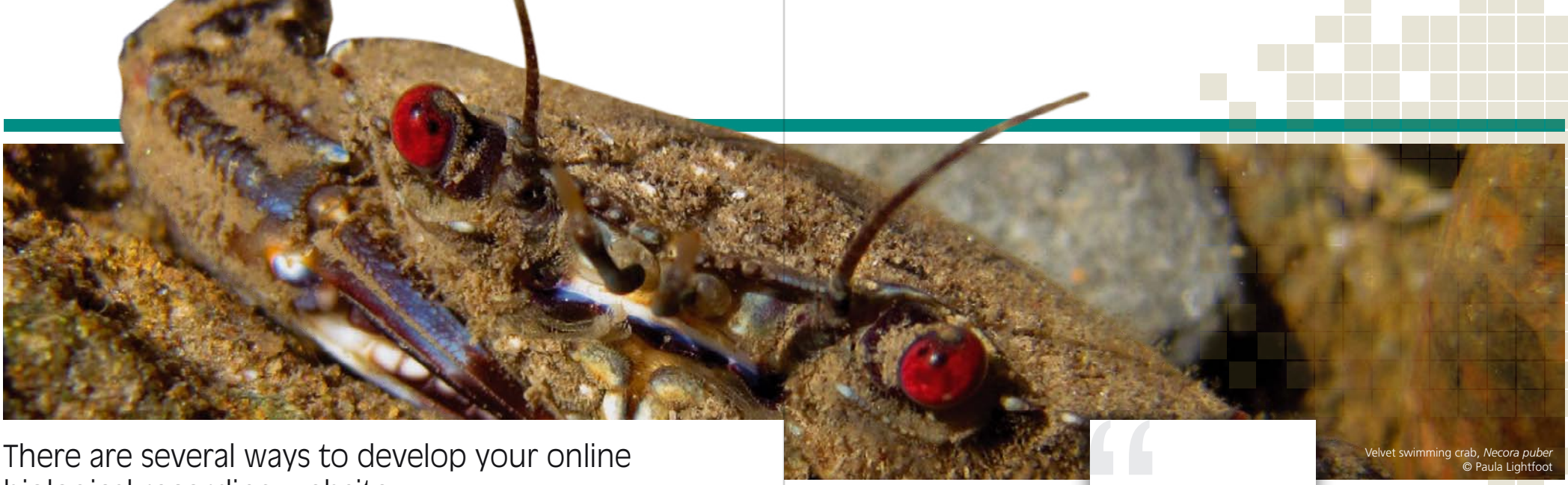
Instant Indicia

Instant Indicia is a new product and is the quickest way to build websites using Indicia. Instant Indicia is based on the Drupal Content Management System, a popular and widely supported way of building websites that allow you to add content without writing code. Online recording functionality is integrated right into the Drupal platform so you can simply select from the list of "features" you want to enable on your website – input forms, reports, maps, verification etc – and Instant Indicia does the rest.

Websites built using Indicia are divided into two key parts; the online recording website itself and a data store known as a Warehouse.

- The online recording website stores all records in the Warehouse. Tools are provided to make the development of this link to the Warehouse as easy as pasting a few lines of code in to a web page or configuring a content management system.
- The Indicia Warehouse can support many surveys for many online recording websites. You can host your own Warehouse or use one provided by another organisation such as the Biological Records Centre.

More information on the Warehouse options can be found on page 6



Velvet swimming crab, *Necora puber*
© Paula Lightfoot

There are several ways to develop your online biological recording website:

- You are starting from scratch to build a new website
- You already have a website which uses a Content Management System
- You already have a simple website with static HTML pages

Juvenile Starfish © Paula Lightfoot

1 You are starting from scratch

If you are starting from scratch you might like to consider using Instant Indicia to build your website, as it gives you a ready to configure installation which can be set up without any coding. Like Indicia, it is based on the Drupal content management system, which is free, open source and based on the PHP programming language. Instant Indicia provides a complete package for setting up online recording websites by providing everything you are likely to need in a single installation. Alternatively, if you already have a Drupal website, Drupal and Indicia already integrate well and this can be enabled by a simple installation. There are also already a number of sites using this combination of technology, so you won't be on your own. Drupal not only provides a system for building and publishing the content of the website, but it can be extended with a choice of thousands of available modules. For example you can add a forum, online shopping and many other features just by using the modules. With Drupal installed, it is possible to use Indicia as a site editor without needing to understand any PHP code. If you do have PHP skills however, more possibilities will be available to you.

Another option when starting from scratch would be to develop a site using hand coded PHP. Although this approach gives you great flexibility, in most cases you will end up re-writing functionality that would have been provided for free by a content management system, so we do not recommend this approach for new developments. Don't forget that even within Drupal you are not restricted to using particular recording forms and can still write your own customised forms using PHP directly.

"Instant Indicia provides a complete package for setting up online recording websites"

2 You have an existing website which uses a content management system

There are many different content management systems based on a variety of different technologies. Unless the content management system is Drupal (the only one which we provide an Indicia module for) you will need to find out if it is possible to embed your own PHP code into the web pages. This will depend both on the web server and the selected content management system. Fortunately all web servers are capable of running PHP as long as it is installed, and many content management systems are able to embed PHP into their web pages. If this is not possible, other solutions are available and advice can be found on the website.

3 You already have a simple website

If you have an existing, simple website with static HTML pages then first, you need to check that your server has PHP installed so you can embed PHP code into your web pages. We offer advice on how to do this on the Indicia website.

If you do have an existing website, now may be the time to think about converting to a content management system. This will allow you to manage the site and create new content more simply.

© Ian Wallace

The Indicia Warehouse

The second component that needs to be in place to have your own online recording website is the Indicia Warehouse, which will normally run on a second web server. The Warehouse provides both an interface for you to administer your website and also allows the Indicia components to store and access data including species lists, sites, recorders and the observation records themselves. If you have your own web hosting capability you may like to install your own Warehouse, but don't worry if this is not possible. A single Warehouse is designed to be able to support multiple recording websites so the overheads of running a Warehouse can be shared. For example, the Biological Records Centre hosts a Warehouse which is available to recording schemes or other small organisations in the UK subject to agreement and this would be a good option to choose.

How much does it cost?

Indicia is free, open source software and there are no costs for the software itself or any of its dependent parts. However, before implementing a project using Indicia please take into account the cost of web-hosting and developing your Indicia powered site. The table on page 7 will help in this respect.

How do I get started?

Once you have considered the options for building your website and the data warehouse, all of the installation information can be found on the Indicia website. There are detailed tutorials, guidance and information available to take you through the whole process.

Who will use Indicia?

There are 3 likely users for Indicia:

- Those who contribute wildlife observations. This includes anyone from members of the general public or schoolchildren through to professional surveyors and recording scheme members.
- Those who provide the websites used for data capture. These include national recording schemes, local record centres and wildlife or conservation charities. Fundamentally, these are organisations that want to build up their store of biodiversity information by making it simpler to contribute wildlife observations.
- Those who provide the core services required by an online recording website. Things like managing the lists of species that are available to record, storing the actual data that is captured and so forth.

Many organisations are already using Indicia.

Some examples are:

iRecord

- iRecord – one of the major Indicia implementations, iRecord has been created to make it easier for wildlife sightings to be collated, checked by experts and made available to support research and decision-making at local and national levels.

- NatureSpot
- British Dragonfly Society
- Plantlife
- Riverfly Partnership
- Crayfish Recording Scheme
- North East Cetacean Project
- The Mammal Society
- Norfolk Biodiversity Information Service
- Orthoptera & Allied Insects
- Black Squirrel Project

What do I want from a biological recording website?

An alternative to building websites using Indicia is to host your online recording survey forms on the iRecord website itself, or to use iRecord to provide forms which you insert onto your own site via an iframe. The following table explains the differences:

	Indicia	iRecord	iRecord via iframe
Price: How much will it cost me to set up a biological recording site?	c. £1000 - £2000 *(depending on actual requirements: planning time, development, setting up the forms)*	c. £100 *(depending on actual requirements: planning time, development, setting up the forms)*	c. £150 *(depending on actual requirements: planning time, development, setting up the forms)*
Timescale: How quickly can I set up the site - from project development to implementation?	Quickly! *(depending on actual requirements it will be around 2 months, but could be quicker)*	Quicker! *(depending on actual requirements it could take as little as 2 weeks)*	Quicker! *(depending on actual requirements it could take as little as 2 weeks)*
Branding: Can I have my own corporate style?	Yes	Limited *(Colours and styles can be used, but the branding will not be as strong as if using Indicia)*	Yes
Infrastructure: Do I need my own web service provider or server?	Yes	No	Yes
Ownership: Will I own and manage the website?	Yes	No	Yes
Functionality: Can I control all aspects of the features on the site?	Yes	No	No
User management: Do I have the opportunity to communicate with registered users through email?	Yes	No	No
Data verification: Can records be made available for verification?	Yes	Yes	Yes

Want to find out more?

The information provided here is only introductory, top-line information. If you would like to find out more, please visit the Indicia website for general information, the Indicia wiki for all the background and technical information, including comprehensive tutorials, and the NBN Forum for the latest development chat and interaction.

You can also sign up to receive NBN eNews so that you are kept up to date with the latest news and developments on Indicia as well as from across the Network.

You can also contact us at support@nbn.org.uk

Website information

NBN – www.nbn.org.uk

Indicia wiki - http://code.google.com/p/indicia/

Indicia website - http://www.indicia.org.uk/

Drupal - http://drupal.org/

iRecord - http://www.brc.ac.uk/irecord/

NBN Forum - http://forums.nbn.org.uk/index.php

Online recording toolkit - http://nbn.org.uk/Tools-Resources/Recording-Resources/Online-Recording-Toolkit.aspx

The following is a selection of websites that are using Indicia

Nature Spot - http://www.naturespot.org.uk/user/login?destination=content/submit-records

British Dragonfly Society - http://www.british-dragonflies.org.uk/content/submit-records

Plantlife - http://www.wildflowerscount.org.uk/entry_form.php

Riverfly Partnership - http://www.brc.ac.uk/mayfly/recording.php

Crayfish Recording Scheme - http://www.brc.ac.uk/crayfish/

North East Cetacean Project - http://www.northeastcetaceans.org.uk/submit-sighting

The Mammal Society - http://www.brc.ac.uk/mammals/recording.php

Norfolk Biodiversity Information Service - http://www.nbis.org.uk/NNNSIForm?newSample

Orthoptera & Allied Insects - http://www.orthoptera.org.uk/Recording/index.php?q=orthoptera

Black Squirrel Project - http://blacksquirrelproject.org/submit-sightings-tabbed

Indicia is an Open Source project funded by the National Biodiversity Network through the Big lottery funded project Open Air Laboratories Project (OPAL) and is managed by NBN and the Centre for Ecology and Hydrology.

NBN National Biodiversity Network

OPAL

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