



Monitoring Report Year 2

FEBRUARY 2021

NatureSpace District Licensing Scheme: Monitoring Results 2019-2020



Two clean water ponds created in the Forest of Dean in 2020

Only two years after the scheme began, great crested newt presence has been recorded in nearly two-thirds of compensation sites and in 36% of ponds created or restored to compensate for developer impacts. Monitoring is also providing evidence of the wider benefits of our work for priority species like common toad and other freshwater wildlife. These early results are encouraging and illustrate the potential for the District Licensing scheme to contribute meaningfully to great crested newt conservation.

Introduction

This is the first monitoring report of the Newt Conservation Partnership and it summarises results of the first two years of the NatureSpace great crested newt District Licensing scheme.

The Newt Conservation Partnership was established in 2018 to create and restore high quality aquatic and terrestrial habitat for the NatureSpace great crested newt District Licensing scheme. District Licensing is a new approach to compensating for habitat lost to development and is an alternative to “traditional” mitigation methods.

Great crested newt populations have declined dramatically in the UK over the last 40 years, largely due to a decrease in the extent and quality of aquatic and terrestrial habitat. Our work aims to reverse this trend by increasing the number of high quality, clean water ponds, connected by suitable terrestrial habitat, and create a network where newt populations can thrive. For every pond occupied by great crested newts that is lost through development, we create or restore at least four high quality ponds, and ensure suitable surrounding terrestrial habitat is in place.

Our main objective is to achieve a net improvement in conservation status of great crested newts,

to reach the target of Favourable Conservation Status across the region and in each participating planning authority. The conservation status of a species is considered ‘favourable’ when the population and range of the species is healthy and will be maintained in the long term. A comprehensive monitoring scheme is key to measure our progress and assess how our habitat creation and restoration work impacts great crested newt populations.

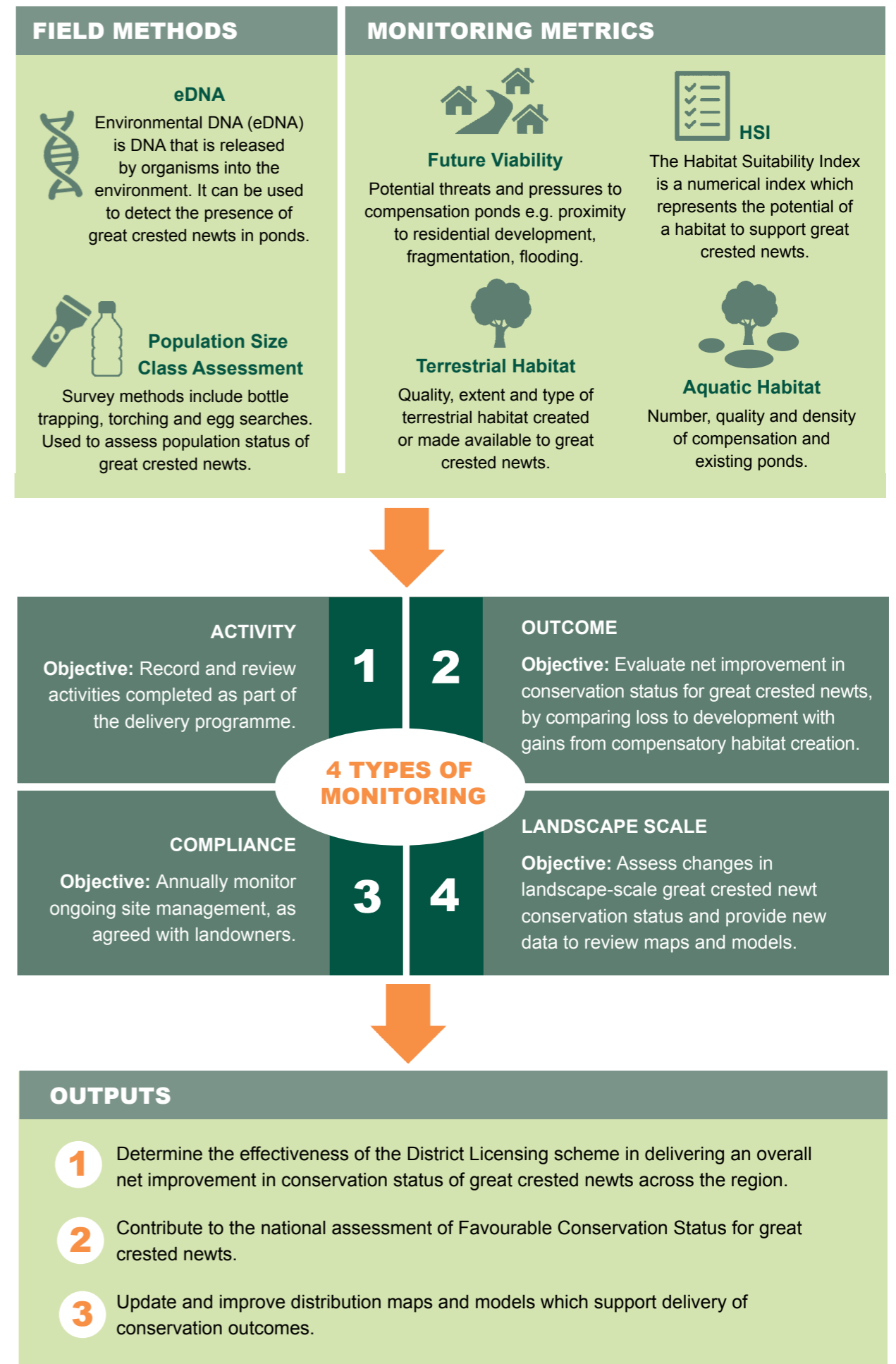
Our monitoring programme adds further value by sharing data with local record centres and other partner organisations. Once our sites have matured, we will also assess terrestrial habitat quality and wider benefits for wildlife, including wetland plants, invertebrates and other amphibians.

More information about the Newt Conservation Partnership and full details of the monitoring programme is available on our website: www.newtpartnership.org.uk.



Pond creation in progress in West Oxfordshire, 2020

Monitoring Programme Overview



Summary of Results

After two years of monitoring, early survey results indicate that great crested newts are already benefiting from the scheme. Great crested newts have been recorded in 60% of our sites and in 36% of our 112 new or restored ponds (88% of occupied ponds were created, rather than restored). The results presented here include eDNA and HSI surveys for 2019-20.

To date, the Newt Conservation Partnership has created 91, restored 19, and managed two ponds ("compensation ponds", Fig. 2), across the 18 participating planning authorities (full list on back page). Ten ponds have been lost to development through the District Licensing scheme, therefore we are well ahead of compensating for habitat loss caused by development.

In both monitoring years, all compensation ponds created or restored prior to March were surveyed for great crested newts, 66 ponds in 2020 and 39 ponds in 2019. In total, 21% of ponds had a positive result for great crested newts in 2019 increasing to 36% in 2020 (Fig. 3a). At the site level, occupancy increased from 42% in 2019 to 60% in 2020 (Fig. 1).

The increase in occupancy over the two monitoring years is unsurprising because we create high quality, clean water ponds within 1 km of existing newt populations, and often much nearer. Note that in 2019, 33% of ponds were dry at the time

of survey, due to the particularly warm and dry weather in spring 2019. In 2020 the proportion of dry ponds was lower (6%).

The mean HSI score of ponds created in 2018 increased from 0.69 (Good) in the first year of monitoring to 0.77 (Excellent) in the second year. This is expected because as ponds mature they become more vegetated, providing better newt breeding conditions and so improving the HSI score. The mean HSI of ponds created in 2019 and monitored in 2020 was 0.79 (Excellent).

In addition, we have made more than 430 hectares of suitable terrestrial habitat available to newts (within 250 m of a pond). Approximately 10.3 ha of woodland, hedgerow or species-rich grassland has been created.

Building on the work we have completed so far, more compensation sites are planned for 2021, including arable reversion projects and landscape-scale pond networks.

Site Monitoring Results 2019-20

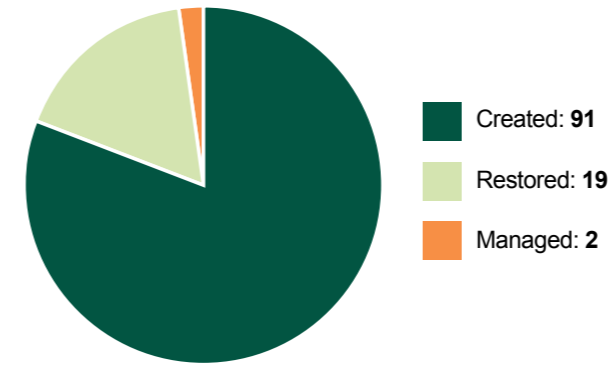


Fig. 2. The number of compensation site ponds created, restored or managed from February 2018 to November 2020.

COVID-19 IMPACTS

Due to the COVID-19 pandemic, our monitoring programme was scaled back in 2020 and we were unable to carry out the following:

- Population status assessments at compensation sites
- Development site monitoring
- Landscape-scale monitoring

Compensation and Development Site Monitoring

Within compensation sites, 39 ponds were surveyed in 2019 and 66 in 2020. A total of 14 ponds on or within 500 m of three development sites were targeted for monitoring in 2019.

OCCUPANCY

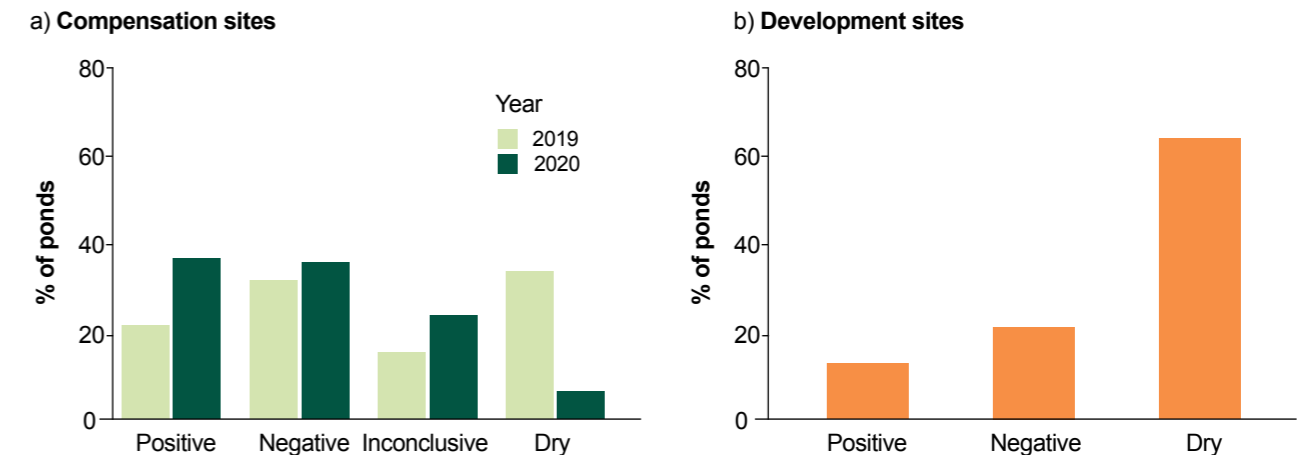


Fig. 3. Results of great crested newt occupancy surveys in (a) compensation site ponds monitored in 2019 and 2020 and (b) development site ponds monitored in 2019.

HABITAT SUITABILITY INDEX (HSI)

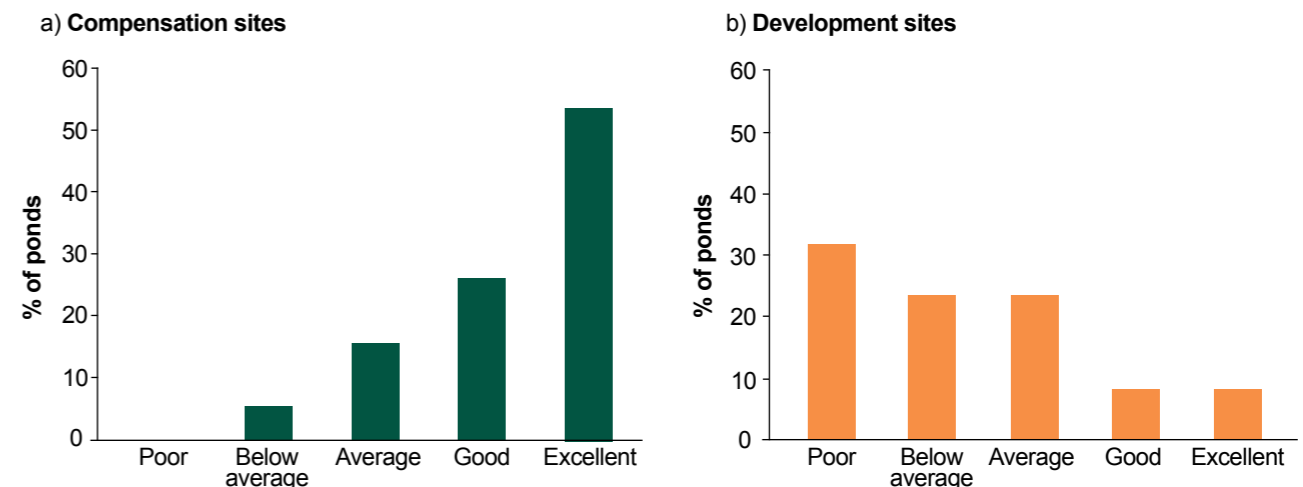


Fig. 4. HSI results for (a) compensation site ponds monitored in 2020 and (b) development site ponds monitored in 2019.

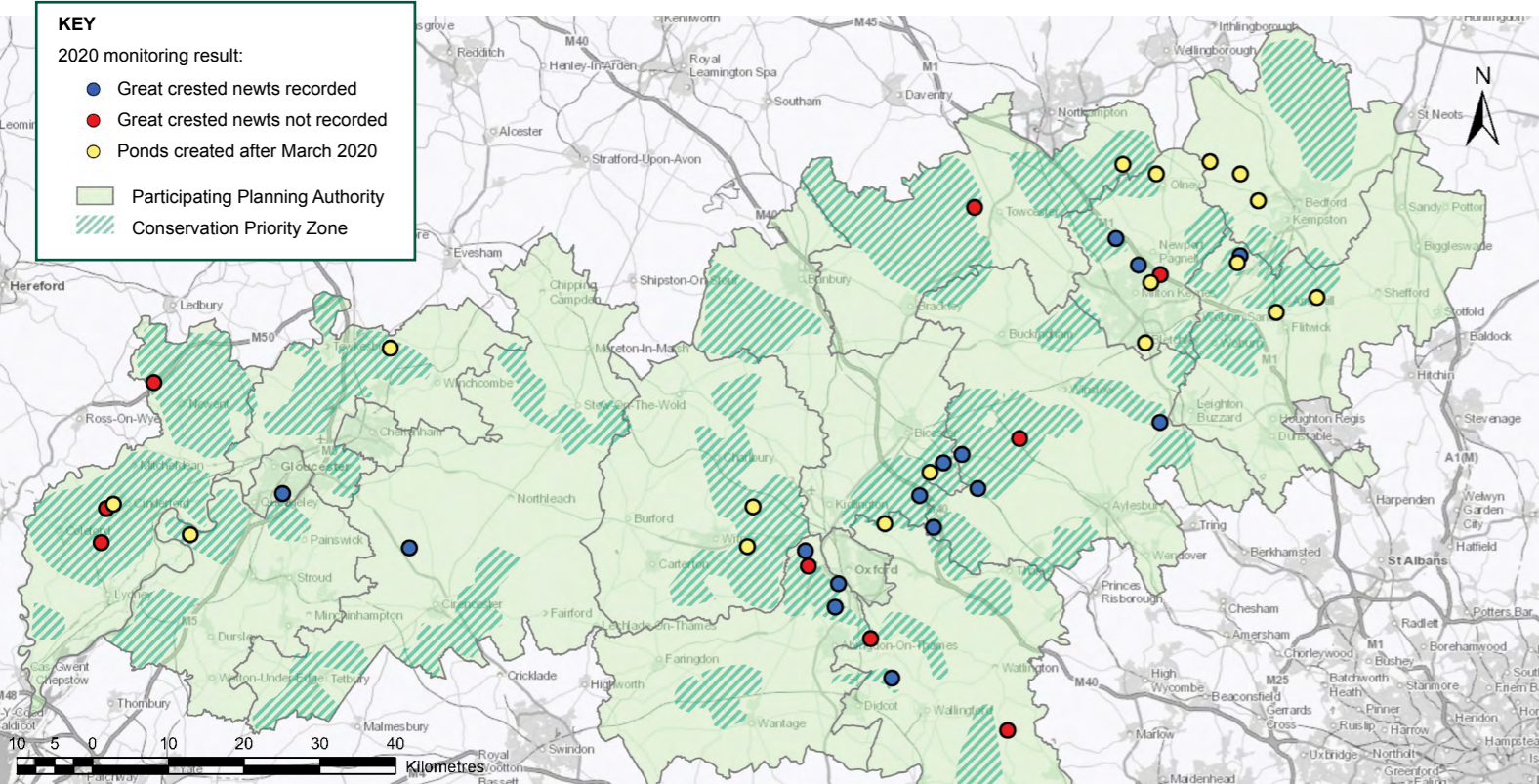


Fig. 1. Map of compensation sites within participating planning authorities and site-level 2020 monitoring results. Ponds created after March 2020 were not included in the 2020 monitoring programme, and are shown here as yellow dots.

Population Status Assessment and Wider Benefits

In 2019, we assessed great crested newt populations using standard methods (bottle trapping, torching and egg searches) at four compensation sites. Surveys included new ponds (13 ponds) and, where permission could be obtained, existing on-site ponds (24 ponds).

At three of the four sites, new ponds had been colonised by great crested newts, although they had lower peak counts than well-established ponds (Table 1). There is currently insufficient data to identify any significant trends.

These sites will be resurveyed at 3-year intervals to better understand how our work affects great crested newt populations at compensation sites.

As demonstrated by recently published research¹ and by other pond creation and restoration projects, well-designed, clean water ponds provide a critical habitat for freshwater plants and animals. More extensive plant and animal surveys are planned for new and restored ponds once they are more mature.

Population status assessments have already provided some evidence of benefits for freshwater plants and animals other than great crested newts. During population status assessments in 2019, new ponds in all four sites surveyed supported populations of smooth newt and common frog. Common toad, a priority species, were breeding in new ponds at three out of four monitored sites (Fig. 5).

Table 1. Peak counts of great crested newts in new and existing ponds carried out as part of population status assessments in four sites in 2019.

	Site 1	Site 2	Site 3	Site 4
Number of existing ponds	5	9	5	5
Number of new ponds	5	3	2	3
Peak count in existing ponds	16	24	12	1
Peak count in new ponds	6	4	0	1



Ponds support a wide variety of wildlife, for example, large quantities of common toad tadpoles were observed in new ponds in Shabbington Wood in 2020.

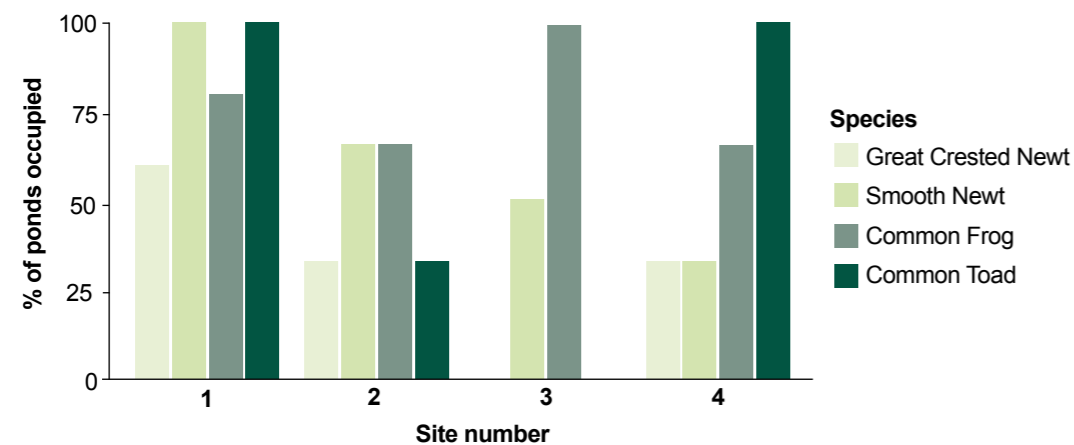


Fig. 5. Percentage of new ponds occupied by amphibian species in four compensation sites surveyed in 2019. Survey methods included bottle trapping, torching and egg searches.



Shabbington Wood is part of a 306 hectare Site of Special Scientific Interest (SSSI), designated primarily for its invertebrate fauna, and owned and managed by Forestry England. Over a period of 10 years, the number of ponds occupied by great crested newts has increased from two to 16, simply by creating well-designed and carefully located clean water ponds (Fig. 6).

Prior to 2011, only two great crested newt records existed for the site, which had a handful of ponds, mainly small, temporary and/or overshadowed waterbodies which were clean water habitats for freshwater wildlife, but provided sub-standard breeding conditions for great crested newts.

In 2011, nine clean water ponds were created as part of the Million Ponds Project to increase the number and variety of ponds available to great crested newts. Seven years later, all but one of the new ponds had been colonised by great crested newts – the only

pond not colonised was created specifically for use by dogs.

In 2018, the Newt Partnership created a further five clean water ponds in the southern block of woodland to allow the newt population to expand to new areas of the woodland. Within two years, great crested newts have been recorded in three of the five new ponds.

In addition, all new ponds supported populations of common toad, a UK priority species, and smooth newt. Four out of five ponds have been occupied by common frog.

We will continue to monitor great crested newt populations in new ponds and older ponds to assess trends, and to ensure the ponds remain suitable breeding habitat for great crested newts. These early results, and evidence of breeding in new ponds, illustrate how creating clean water ponds in high quality, semi-natural habitat, provides quick returns for nature conservation.

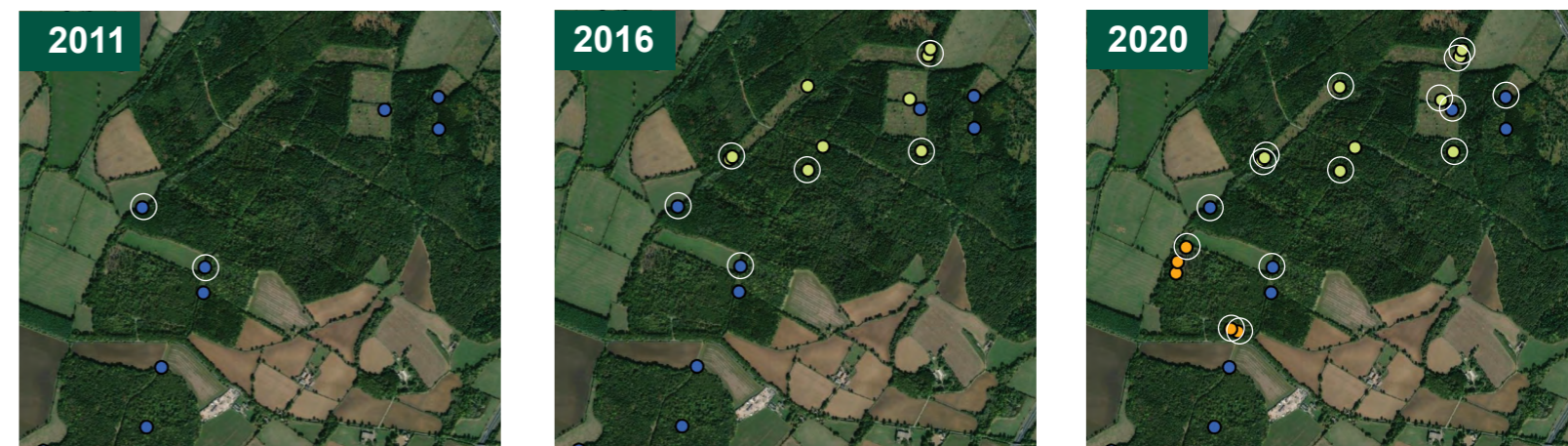


Fig. 6. The number of ponds within Shabbington Wood has increased over time to create a network of clean water ponds, encouraging great crested newt and other freshwater wildlife populations to expand across the whole wood.

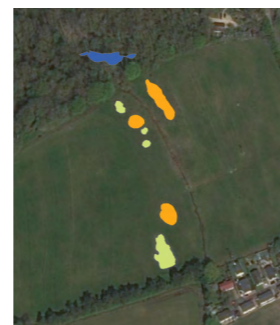
CASE STUDY: Foxcombe Farm



LPA: Vale of White Horse District Council
Number of new ponds: 3
Land use: Organic livestock farm

Prior to 2013, only one pond on an adjacent landholding supported a breeding population of great crested newts (see right, blue polygon). In 2013, a pond complex with four ponds was created by the Million Ponds Project (green polygons). The larger ponds quickly became occupied by great crested newts. In 2018, we created three additional clean water ponds to provide more breeding habitat (orange polygons). A year later, newts were recorded in two of these ponds.

What was an isolated population of great crested newts has now expanded and become more resilient, simply by creating well-designed, clean water ponds. In addition, 4,000 trees were planted on the surrounding, low quality grassland.



CASE STUDY: Millennium Woodland



LPA: Milton Keynes Council
Number of new ponds: 5
Land use: Amenity park

Millennium Woodland is an amenity park near Milton Keynes with woodland and rough grassland. This is perfect terrestrial habitat for great crested newts yet there were no existing records for the site. The only existing pond on site was dry for most of the year and heavily shaded.

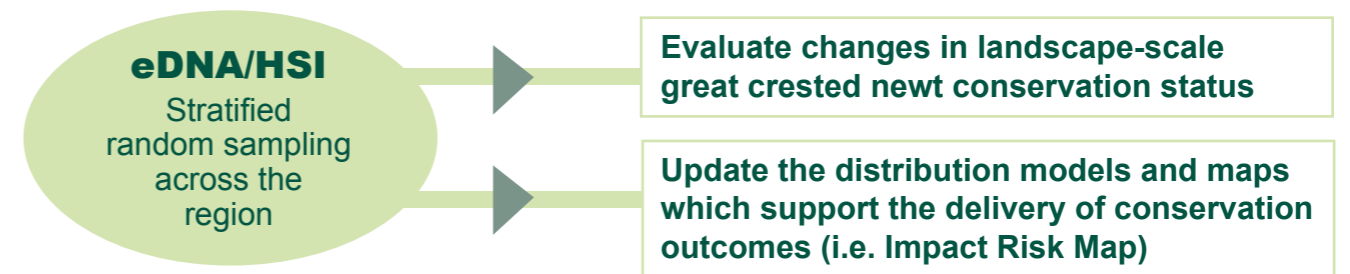
We created a complex of three clean water ponds in 2018 (see right, red polygons), two of which

have already become occupied by great crested newts.

A further two clean water ponds were created in 2020 (orange polygons). Future monitoring will focus on gathering evidence that great crested newts are using these ponds for breeding.



Landscape-scale Monitoring



Landscape-scale monitoring was carried out in 2019 in 44 x 1 km grid squares across the region, selected randomly to provide a representative sample. Unfortunately landscape-scale monitoring was not carried out in 2020 due to COVID-19.

Results from 2019 indicated that average pond density was 4.93 ponds per 1 km square, including dry ponds. 127 ponds in total were surveyed, 38% of which were positive for great crested newts.

There is currently insufficient data to evaluate changes in great crested newt distribution at the landscape scale. However, these surveys have provided further evidence of the predictive power of the Impact Risk Map. This map underpins the assessment of developer impacts on great crested newt populations. As illustrated in the two examples below (Fig. 7), areas which were predicted to have highly suitable habitat for great crested newts (red zone) returned positive records where none had been previously recorded.

For more information about landscape-scale monitoring, please see the Implementation Strategy on our website.

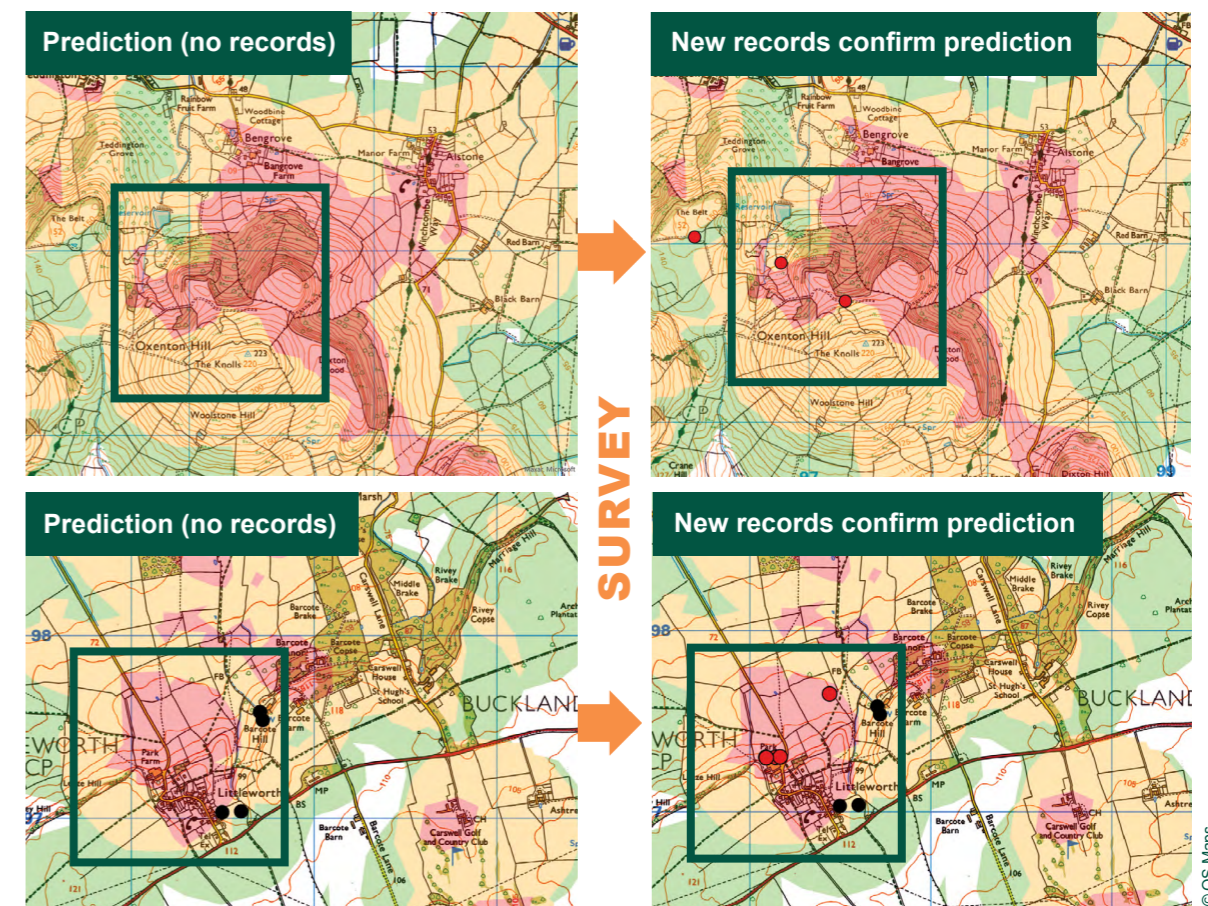


Fig. 7. Bangrove (top) and Littleworth (bottom) areas: no records of great crested newts before the landscape survey (left), but positive ponds following the survey (right) in high habitat suitability (red) zones. Amber indicates suitable habitat likely to contain newts, green indicates moderate habitat suitability, and white indicates low habitat suitability. Red dots are positive great crested newt records, black dots are negative great crested newt records.



Participating LPAs currently include: Bedford Borough Council, Buckinghamshire Council (Aylesbury Vale area), Central Bedfordshire Council, Cheltenham Borough Council, Cherwell District Council, Cotswold District Council, Forest of Dean District Council, Gloucester City Council, Gloucestershire County Council, Milton Keynes Council, Oxford City Council, Oxfordshire County Council, South Oxfordshire District Council, South Northamptonshire Council, Stroud District Council, Tewkesbury Borough Council, West Oxfordshire District Council and Vale of White Horse District Council.



Newt Conservation Partnership
Bury Knowle House, North Place, Oxford, OX3 9HY
01865 595505 | info@newtpartnership.org.uk

www.newtpartnership.org.uk

A Community-Benefit society registered in England and Wales number RS007634.

© Newt Conservation Partnership. All photos are copyright of the Newt Conservation Partnership unless otherwise stated.

Maps throughout this report were created using ArcGIS® software by Esri. ArcGIS® is the intellectual property of Esri and is used herein under license. Copyright © Esri. All rights reserved.

Designed by Corinne Welch (goodthinkingcommunications.net)

 @NewtPartnership

 @newt_partnership

We thank the Esmée Fairbairn Foundation for their financial support

