



# Hedgehog Improvement Areas (HIAs)

## 2019 Report

**Dr Deborah Wright**

The following report summarises the final year of the Solihull and Rugby HIAs. There was a change in staff during 2019 with the Hedgehog Officer leaving in April and the Senior Hedgehog Officer taking over the running of both the Solihull and Rugby HIAs. Activity is broken down into distinct areas of work throughout the report.

### 1. Community Engagement

#### 1.1. Events

The hedgehog team engaged with 1234 people face-to-face in 2019. People reached spanned from families, to older adult groups, to school children and college students.

Events included talks, training and networking events and practical workshops and activities. Highlights included a 'Family Fun Day' at Castle Bromwich Gardens and a talk to the *Rugby Gardener's Guild*, each attended by over 100 people.



Figure 1. A 'litter pick for wildlife' event held regularly at a park in Solihull. Copyright Warwickshire Wildlife Trust (WWT).

The events in 2019 had more of a focus on practical activities than previous years. For the final year of the project, it was considered especially important to encourage people to take action to help hedgehogs, rather than simply being made aware of the dangers they face. To this end,

events focussed on improving habitat and included hedgehog house making workshops and litter picks. A regular litter pick event was set up in a park in Solihull, following in the footsteps of *Prickles and Paws Hedgehog Rescue's* "Band Together!" campaign to reduce harmful litter that can injure hedgehogs, and also linking with both the *Great British Spring Clean* and *Love Solihull's* litter picking initiative, encouraging the local community to get involved and work together to make Solihull a clean, green and safe borough.

## 1.2. Education

Following the approach taken in 2018, educational work was significantly scaled down in 2019, with primary schools having been visited in previous years and offered footprint tunnel survey kits to continue using into the future. 330 school children were engaged with through assemblies and forest school learning, including practical activities. However, the focus in 2019 was on engaging older children, with secondary schools having proven difficult to engage with previously. Targeted work was conducted with students at *Solihull College and University Centre*, for the *Level 3 Animal Management Programme*. Topics included hedgehog ecology, survey methods and practical setting of footprint tunnels.



Figure 2. Surveying with Solihull College students. Copyright WWT.

There was also a focus on creating legacy with the development of freely downloadable 'Educational Resource Packs' for schools from the project website. Including lesson plans, games and activities for Key Stages 1 and 2, the packs link with the National Curriculum and allow teachers to easily educate children about hedgehogs in a fun and exciting way, into the future.

## 1.3. Community Groups

Survey work with community groups engaged in the project continued in 2019, including members of the *Rugby Wildlife Group* and *Friends of East Rugby Group (FERG)*. Work also continued with the *Coventry Diocesan Environment Group* to raise awareness of hedgehog conservation with church groups and encourage habitat improvement works.

## 1.4. Volunteers

The *Warwickshire Hedgehog Helpers (WHH)* group was established in 2018. Over 40 of these volunteers were involved in a range of hedgehog conservation activities in 2019, from community

engagement, to surveying, to practical habitat works, to data management, and gave over 400 hours of their time (see Table 1).

There was a focus on volunteer involvement in torchlight surveying, following the marking and monitoring programme set up in September 2018. As with community engagement events, there was also a focus on practical habitat management, including the creation and maintenance of hedges and planting of wildflowers.



Figure 3. Volunteers helping to lay a hedge on a Rugby Borough Council (RBC) recreation ground. Copyright WWT.

Community Engagement	38
Footprint Tunnel Surveys	52
Torchlight Surveys	210
Practical habitat works	119
Data management	25
<b>Total volunteer hours</b>	<b>444</b>

Table 1. Number of hours given by WHH volunteers in 2019.

Following on from the 2018 training events in hedgehog ecology and decline, surveying by footprint tunnel and torchlight, and learning how to maintain and lay hedges, a final training session was held in community engagement, along with a thank you event. These sessions have provided volunteers with skills that they can use to conserve hedgehogs into the future. It is envisaged that the WHH group will become a subsidiary of the *Warwickshire Mammal Group (WMG)* in 2020 following the project end.

### 1.5. Dissemination

The project continued to receive media attention in 2019, including television coverage by *BBC Midlands Today* and articles in the *Telegraph*, *Stratford Herald*, *Rugby Observer* and *Solihull Observer*. Articles were also included in magazines aimed at more local communities, such as the *Hampton-in-Arden Society*, *Earlswood*, *Ettington* and *Arden Farm Wildlife Network* newsletters.

The [www.helpforhedgehogs.co.uk](http://www.helpforhedgehogs.co.uk) project website was transitioned at the end of 2019 to a series of linked pages on the main WWT website. This area of the website now includes all new and



relevant resources developed throughout the HIA project. Despite the project end, this allows for legacy, with the new area acting a platform where people can find information and download a range of resources to enable them to set up their own self-sustaining hedgehog projects.

The HIAs also continued to be promoted and audiences engaged through social media, with over 1100 followers on the Help for Hedgehogs Facebook page and 3,500 on the Twitter page. The campaign #adventhog that had been hugely successful in 2016, 2017 and 2018 was relaunched for a final time in December 2019, comprising illustrations of popular hedgehog jokes by a local artist, increasing the outreach of the project and gaining new followers.

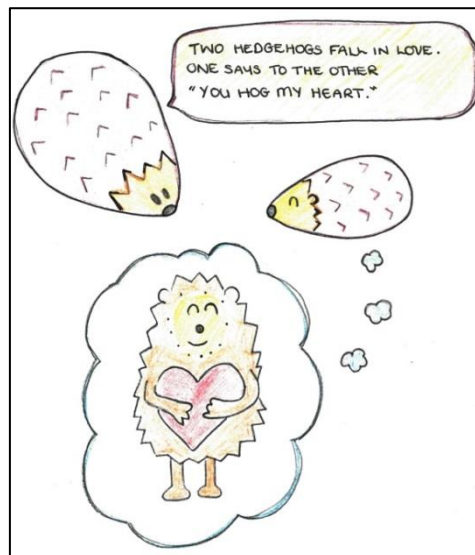


Figure 4. Example illustration from #adventhog 2019. Copyright Fabia Kerr.

Dissemination work was considered a priority in the final year of the project, with a focus on sharing knowledge. The work of the HIAs was disseminated in 2019 to over 100 biological recorders and advice was given regularly to those wanting to set up new hedgehog projects across the country. Support was given to, initiatives promoted for, and partnership work developed with existing projects, such as *HedgeOx* and *Hedgehog Street*. A learning document for the HIA project was also produced and disseminated, detailing the successes and challenges over the past 5 years and potential ways forward into the future by other projects.

## 2. Surveying

### 2.1. Sightings

In 2019, there was less of an emphasis on collecting sightings, rather a focus on ensuring the accuracy of current records. A volunteer from the *Warwickshire Biological Records Centre (WBRC)* systematically reviewed and verified the records for previous years, inclusive of 2019, collected in person, by telephone, by email and through the WWT and *Help for Hedgehogs* websites. These sightings were then shared with the WBRC.

A total of 203 hedgehog sightings were submitted for Warwickshire in 2019, including 18 in Solihull (89% alive) and 124 in Rugby (60% alive).

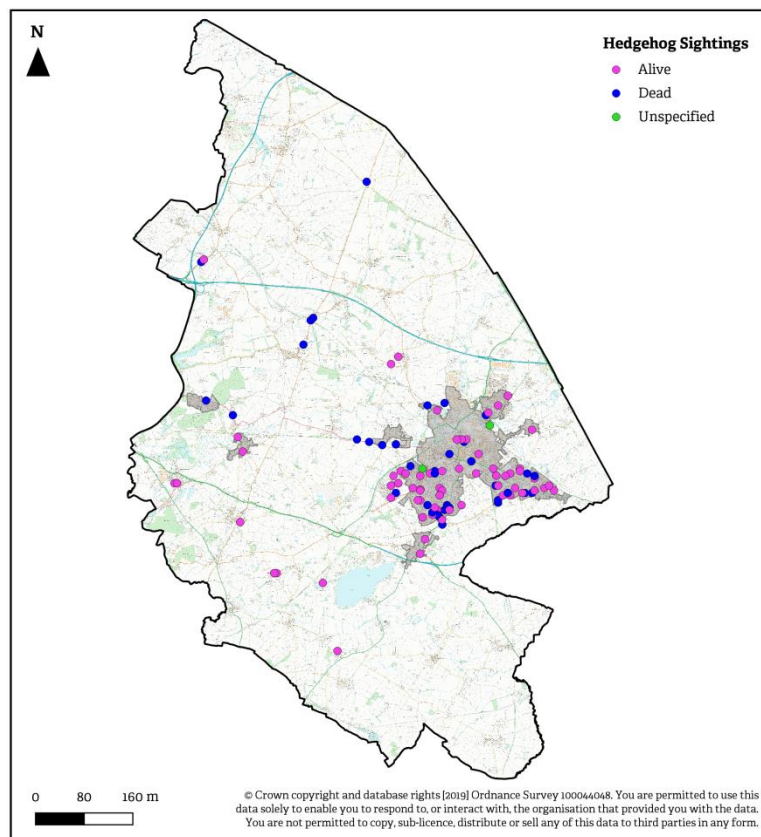
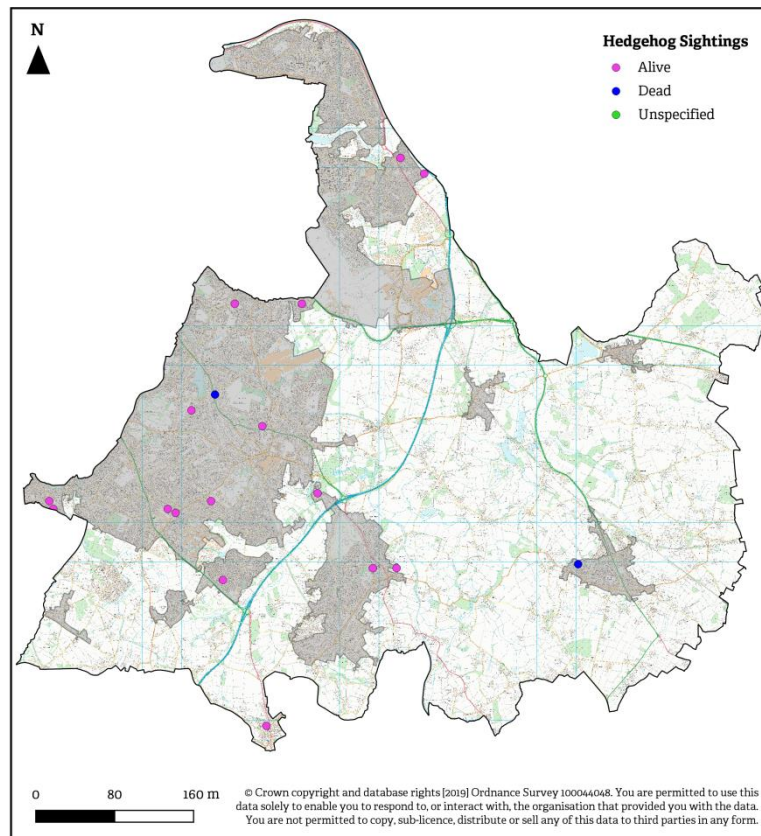


Figure 5. Distribution of dead and live hedgehog sightings within Solihull metropolitan borough (above) and Rugby borough (below) in 2019, with urban areas shown in grey.

Once again, sightings reports for Rugby were disproportionately high, representing 61% of vice county sightings. This could reflect high levels of engagement throughout the HIA project, combined with partnership work encouraging reports with RBC. However, since on-the-ground broad scale engagement across the borough decreased further in 2019, it may indicate high numbers of hedgehogs in Rugby, particularly since it is a recurring pattern over several years. The opposite is true for Solihull, with consistently low numbers of hedgehogs reported since 2015, despite constant engagement, suggesting potentially low numbers across the borough.

## 2.2. Footprint Tunnel Surveys

With a full four years of surveys conducted, and both the project engagement work and Hedgehog Officer contract coming to an end in Solihull in 2019, it was decided to only survey Rugby. The Rugby HIA began over one year later than the Solihull HIA, and further surveys in Rugby in 2019 would allow for four complete years of results across both.

Hedgehogs were only recorded in 2 out of 18 RBC green spaces during 2019 (see Table 2), similar to in 2017 and 2018. The successful sites, such as Bilton Pavilions, tended to be highly (sub)urban, surrounded by roads and nearby residential gardens, and often near to allotments, such as Addison Road. Boughton Road also had recorded hedgehog droppings in 2019, although the tunnel survey had to be stopped due to flooding onsite. It remains surprising that other well-connected sites with seemingly 'better' habitat have not indicated hedgehog presence. However, this appears to reflect a national pattern of hedgehogs preferring garden habitat and being found more and more in urbanised spaces.

RBC Greenspace	Hedgehog Presence			
	2016	2017	2018	2019
Ashlawn Cutting	x	x	x	x
Dewar Grove	✓	x	x	x
Linnell Road LNR	N/A	x	x	x
Whinfield Cemetery extension	x	x	x	x
Burnside	x	✓	x	x
Rokeby Open Space	✓	x	✓	x
Centenary Park	N/A	x	x	x
Newbold Paddock	N/A	x	x	x
Boughton Road	N/A	x	x	x
Pantolf Place	N/A	✓	✓	x
Avon Mill Recreation Ground	N/A	x	x	x
Yates Avenue	N/A	x	x	x
Bilton Pavilions	N/A	x	✓	✓
Addison Road Recreation Ground	N/A	x	x	✓
Cornwallis Road Open Space	N/A	✓	x	x
Shakespeare Gardens	N/A	N/A	x	x
Apple Grove	x	N/A	x	x
Hillmorton Recreation Ground	N/A	x	x	x

Table 2. Hedgehog presence in RBC managed green spaces, established using footprint tunnel surveys from 2016-2019.

As recorded in previous years, it is likely that high levels of disturbance by people and animals decreased the effectiveness of the footprint tunnel method. Sites, for example Burnside, had frequently disturbed tunnels. The fragmented nature of some of the urban habitats may also have impeded access for hedgehogs. The method also only captures a 'snapshot' in time:

hedgehogs may have been using the space at other times, and indeed, 20% of hedgehogs are thought to be nomadic.

### 2.3. Torchlight Surveys

Torchlight surveys were undertaken in 2019 with the help of volunteers. Surveys took place in May and September, particularly active and numerous times of year for hedgehogs. Surveys began at 11pm in the evening and ended at 4am in the morning. Transects were walked, illuminating open and marginal areas using MT14 Led Lenser 1000 lumen handheld torches, 1 million candle power Cluson Clubman lamps and a handheld Seek Thermal RevealXR FastFrame camera.

Focal areas of the two “hedgehog hub” sites in the HIAs, Castle Bromwich Hall Gardens in Solihull and Coombe Country Park in Rugby, were surveyed. These focal areas were the same as those chosen in 2018 for their high levels of hedgehog activity. They comprised a 197, 079 m<sup>2</sup> area in Castle Bromwich, including a formal garden and adjacent local authority scrubby grassland, an area of 281, 701 m<sup>2</sup> in Coombe Country Park, including a formal driveway lined with veteran trees, scrubby car park areas and amenity grassland

In May and September, the sites were each surveyed for four nights. When hedgehogs were encountered, they were measured, weighed, sexed, given a health check and marked under licence using numbered heat shrink plastic tubes before being released back to where they were found. The tubes were carefully superglued over 5 spines on the crown of the head.



Figure 6. A hedgehog being weighed and measured before marking. Copyright Paula Irish.

In May, 14 hedgehogs were encountered across the two sites, with similar numbers at each site to that encountered in September 2018. Four hedgehogs were found at Castle Bromwich and 10 at Coombe Country Park (9 were encountered in September). At Coombe, 5 of the 9 hedgehogs that were tagged the previous September were reencountered in May, but only 1 in 4 at Castle Bromwich. One of the hedgehogs reencountered was a subadult in September, and one was a 290g juvenile male, both of which had survived the winter. It was encouraging that 12 of the 14 hedgehogs were encountered courting at some stage.

Eight of the hedgehogs had some kind of ectoparasite loading (ticks or fleas were noted). However, this was largely very minimal and within “normal” bounds. One hedgehog had multiple



infected wounds that appeared to have been caused by a strimmer. Another hedgehog had a very large number of small ticks and was slumping slightly to one side. Both hedgehogs were taken to a hedgehog rehabilitator and later rereleased.

In September, 21 hedgehogs were encountered across the two sites, which was considerably more than the 13 encountered in September 2018. Only 4 hedgehogs were found at Castle Bromwich, 2 of which were encountered for the first time. One of these was a juvenile at just 215g. Seventeen hedgehogs were found at Coombe Country Park (almost double that found in September 2018), with 10 of these encountered for the first time. Eight of these newly encountered hedgehogs were young. Seven out of 14 hedgehogs previously tagged were reencountered.



Figure 7. The main strimmer wound (left) on hedgehog #W18 healed well (right). Copyright WWT.

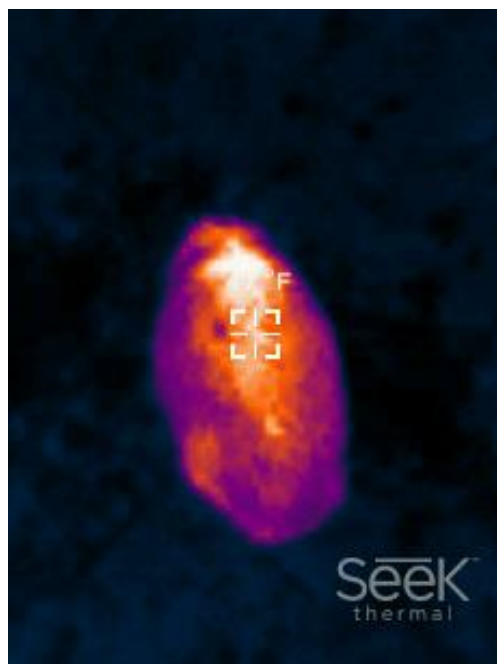


Figure 8. The missing rear right leg of hedgehog #W10 can be seen using the thermal image camera. Copyright WWT.

The hedgehog with the strimmer wound in May was reencountered in September, with a good weight of 1182g and only minor superficial evidence of the injury. One of the previously tagged hedgehogs encountered was now missing a rear leg that had appeared to have healed well and not impede movement. The adult hedgehogs found at Coombe were all over 950g (mostly over



1000g) but were generally smaller at Castle Bromwich at 700g or above, but still sufficient weights to hibernate. Eight hedgehogs were noted to have some ticks and/or fleas, and some ticks were removed in-situ, but there was nothing significant to note, and no hedgehogs were taken in for rehabilitation.

The results across both sites suggest the populations have remained fairly stable since 2018 and the hedgehogs encountered seemed relatively healthy, mostly with reasonable adult weights for the time of year. It was encouraging that the numbers were so much higher at Coombe in September 2019 compared to September 2018, and may reflect the continuing efforts of the park to manage the grounds sympathetically. Since becoming a hedgehog hub, the park has erected signage along the driveway to minimise roadkill, reduced chemical spraying, left longer grass around the base of veteran trees throughout the summer, created hibernation areas and trained staff in checking for hedgehogs before cutting as well as ordering strimmer stickers to be on machines as reminders.

However, the number of hedgehogs encountered at Castle Bromwich remains small the hedgehogs themselves seem to be smaller in size. It is likely that hedgehogs are being missed on the Council land because of the dense and high vegetation, and the total area surveyed at this site is smaller than that at Coombe. However, it is also possible that the population was impacted by the prolonged summer drought in 2018, or potentially an unknown disease or poisoning outbreak when 3 hedgehogs were found dead within a single fortnight. Only one female was found in May and only one young in September, suggesting low breeding and recruitment rates in the population. The gardens have improved habitat for hedgehogs onsite and garden organically, and are keen to continue helping hedgehogs as much as possible.

Two *Warwickshire Hedgehog Handler* volunteers were trained in handling and marking the hedgehogs over the survey periods and have now been added to the licence. These volunteers can continue monitoring the hedgehog populations into the future, beyond the end of the project in December 2019.



Figure 9. A WWH volunteer learning to mark hedgehogs during September 2019. Copyright WWT.

No.		Date	Time	Distance seen (m)	Circum- ference (cm)	Weight (g)	Age	Sex	Habitat	Behaviour
<b>Castle Bromwich</b>										
8	Tagged	13/09/18	22:54	2	50	723	Adult	Female	PSM	ST
	Capture #1	18/09/18	23:23	6		764			PSM; RP	ST
	Capture #2	28/09/18	22:25	10		808			PSM	ST
	Capture #3	05/05/19	23:20	15	48	671			GRS	ST
	Capture #4	08/05/19	00:20	3		655			GRT/PSM	CH
	Capture #5	09/05/19	23:40	4		710			PSM	CH
	Capture #6	13/05/19	23:27	5		789			GRS	FO
	Capture #7	10/09/19	00:56	15	51	777			BS; PSM	FO
	Capture #8	11/09/19	00:05	8		750			GRS; PSM	FO
	Capture #9	12/09/19	23:55	4		758			GRS	ST
	Tagged	18/09/18	21:39	8	52	781	Adult	Male	PSM	FO
	Capture #1	28/09/18	22:00	5		803			PSM	ST
	Capture #2	07/09/19	23:50	3	51	702			GRS	ST
	Capture #3	10/09/19	00:15	7		700			PSM	FO
	Capture #4	11/09/19	00:35	10		716			BS; PSM	ST
	Capture #5	13/09/19	03:15	4		733			PSM	SL
	Tagged	07/05/19	23:20	2	55	896	Adult	Male	BS	ST
	Capture #1	09/05/19	23:40	4		889			PSM	CH
20	Tagged	08/05/19	00:20	3	52	795	Adult	Male	GRT/PSM	CH
21	Tagged	08/05/19	03:40	5	56	940	Adult	Male	GRT	FO
	Capture #1	14/05/19	02:15	6		959			GRS	FO
	Released	30/05/19			56	1014				
26	Tagged	08/09/19	00:15	4	52	762	Adult	Female	GRS	FO
	Capture #1	10/09/19	03:53	12		842			GRS	SL
	Capture #2	12/09/19	23:55	5		741			GRS	ST
28	Tagged	09/09/19	23:23	2	34	215	Juvenile	Female	BS	FO
<b>Coombe Country Park</b>										
1	Tagged	12/09/18	22:45	5	53	798	Adult	Female	GRS	FO
	Capture #1	18/09/18	01:45	5		862			WO	ST
	Capture #2	03/05/19	23:45	7		1072			GRS	SL
	Capture #3	05/05/19	02:30	5		1117			GRS	ST
	Capture #4	06/05/19	23:23	10		1098			GRS	FL
	Capture #5	09/05/19	03:45	7		1140			GRS	CH
	Capture #6	07/09/19	02:05	5	55	1062			BS; GRS	FO
	Capture #7	08/09/19	01:52	10		1082			BS	ST
	Capture #8	11/09/19	23:47	10		1034			GRS	ST
	Capture #9	16/09/19	23:33	6		1151			GRS	FO
	Tagged	13/09/18	00:11	10	45	554	Subadult	Female	GRS;BS;WO	ST
	Capture #1	17/09/18	23:50	15		574			GRS	ST
	Capture #2	19/09/18	22:37	10		568			BS	FO
	Capture #3	24/09/18	23:47	12		573	Adult		GRS	FO
	Capture #4	05/05/19	00:20	15	47	538			GRS	FO
	Capture #5	07/05/19	02:55	8		505			GRS	FO
	Capture #6	17/09/19	00:47	5	49	979			BS; GRS	FO
5	Tagged	13/09/18	01:30	0	46	587			GRS	ST
	Capture #1	19/09/18	23:20	8		620			WO	FO
	Capture #2	07/05/19	01:20	2	51.5	880	Adult		TH	CH
	Capture #5	09/05/19	03:45	7		851			GRS	CH
	Tagged	13/09/18	03:57	6	49	781	Adult	Female	GRT	ST
	Capture #1	04/05/19	01:00	1	51	772			GRT	ST
	Capture #2	05/05/19	03:05	3		759			GRT	ST

	Capture #3	07/05/19	01:20	2		737			TH	CH
	Capture #4	08/05/19	22:20	10		743			GRS	CH
	Capture #5	07/09/19	01:15	5	50	959			BS; GRS	ST
	Capture #6	09/09/19	02:45	10		988			GRS	FO
	Capture #7	12/09/19	01:10	8		971			BS; GRS	FO
	Capture #8	17/09/19	01:10	10		1021			GRT	FL
9	Tagged	18/09/18	02:14	2	37	290	Juvenile	Male	RP; GRT	FO
	Capture #1	25/09/18	01:37	5		318			WO	FO
	Capture #2	04/05/19	03:55	2	51	840	Adult		GRS	ST
	Capture #3	05/05/19	02:53	6		819			GRT	ST
	Capture #4	08/05/19	22:20	10		771			GRS	CH
	Capture #5	06/09/19	23:18	10	54	1010			BS; GRS	SL
	Capture #6	17/09/19	00:25	4		1061			BS; GRS	ST
12	Tagged	04/05/19	00:20	2.5	50	854	Adult	Female	GRS	ST
	Capture #1	07/05/19	00:30	20		833			GRS	CH
14	Tagged	04/05/19	01:30	5	55	950	Adult	Male	GRS	FO
	Capture #1	05/05/19	00:40	5		917			WO/BS	CH
	Capture #2	09/05/19	00:45	20		978			BS	FO
	Capture #3	12/09/19	02:25	10	52	1035			GRS	ST
16	Tagged	04/05/19	04:15	1	51	913	Adult	Male	GRS	CH
	Capture #1	07/05/19	00:30	20		769			GRS	CH
17	Tagged	04/05/19	23:35	10	53	783	Adult	Female	GRS	CH
	Capture #1	09/05/19	01:50	20		948			GRS	FO
	Capture #2	06/09/19	23:33	10	50	955			BS; GRS	ST
	Capture #3	09/09/19	03:08	6		1057			GRS	FO
	Capture #4	12/09/19	00:25	15		964			GRS	SL
	Capture #5	17/09/19	01:10	5		1085			BS; GRS	ST
18	Tagged	04/05/19	23:35	10		803	Adult	Male	GRS	CH
	Released	20/05/19			51	885				
	Capture #1	17/09/19	01:32	7	54	1182			BS; GRS	ST
22	Tagged	07/09/19	00:23	6	38	351	Juvenile	Female	GRS	ST
	Capture #1	12/09/19	04:07	15		446			GRS	ST
23	Tagged	07/09/19	00:55	10	52	1192	Adult	Male	GRS	ST
24	Tagged	07/09/19	03:16	10	36	304	Juvenile	Male	GRS	ST
	Capture #1	09/09/19	03:22	8		312			GRS	ST
	Capture #2	12/09/19	02:45	10		364			GRT	FO
25	Tagged	07/09/19	03:30	10	39	361	Juvenile	Male	GRS	FO
	Capture #1	08/09/19	23:26	7		365			GRS	FO
	Capture #2	12/09/19	02:43	8		427			GRS	FO
	Capture #3	17/09/19	02:40	8		485	Subadult		GRS	FO
27	Tagged	09/09/19	03:38	20	38	355	Juvenile	Male	BS; GRS	FO
29	Tagged	12/09/19	00:10	4	42	504	Subadult	Female	GRS	FO
30	Tagged	12/09/19	00:42	15	46	692	Adult	Male	BS; GRS	ST
	Capture #1	16/09/19	23:50	2		745			BS; GRS	ST
31	Tagged	12/09/19	03:07	10	38	306	Juvenile	Male	GRS	ST
32	Tagged	12/09/19	03:45	10	44	642	Subadult	Female	BS; GRS	ST
	Capture #1	17/09/19	03:17	15		677			BS	FO
33	Tagged	17/09/19	00:10	5	42	522	Subadult	Female	BS; GRS	ST

Table 3. Hedgehogs captured in 2019 Torchlight Surveys (Orange – Sept 2018; Green– May 2019; Blue – Sept 2019). Habitat codes: GRS Grass < 10cm tall; GRT Grass - cut > 10 cm tall; PSM Planted shrubberies/flower beds; RP Recent plant-colonised disturbed site; WO Woodland floor; BS Bare soil; OR Other. Behaviour codes: FO foraging; SL Slow locomotion; ST Stationary.

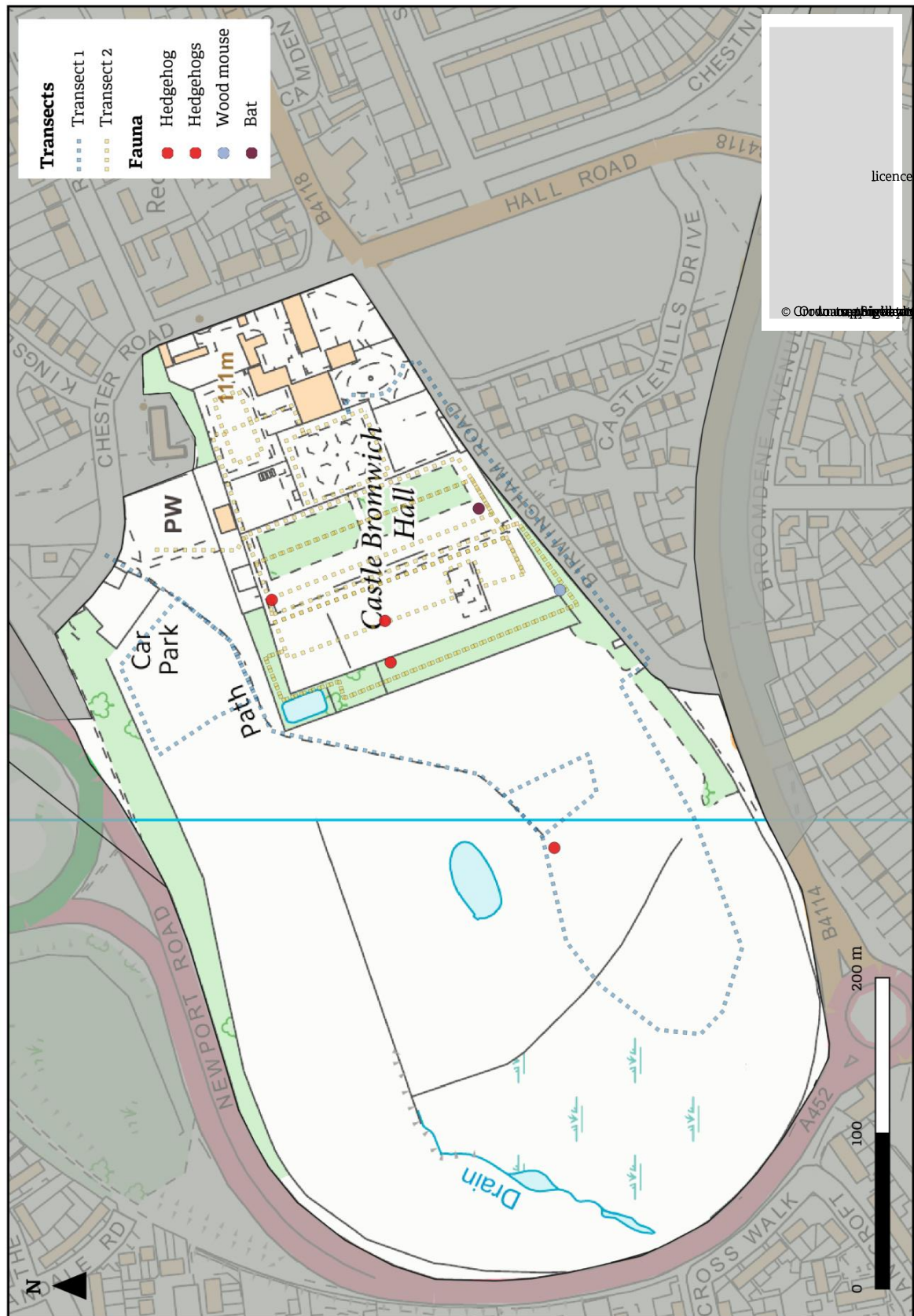


Figure 10. Torchlight survey results for Castle Bromwich, May 2019. Hedgehogs are only shown when encountered for the first time. Copyright WWT.



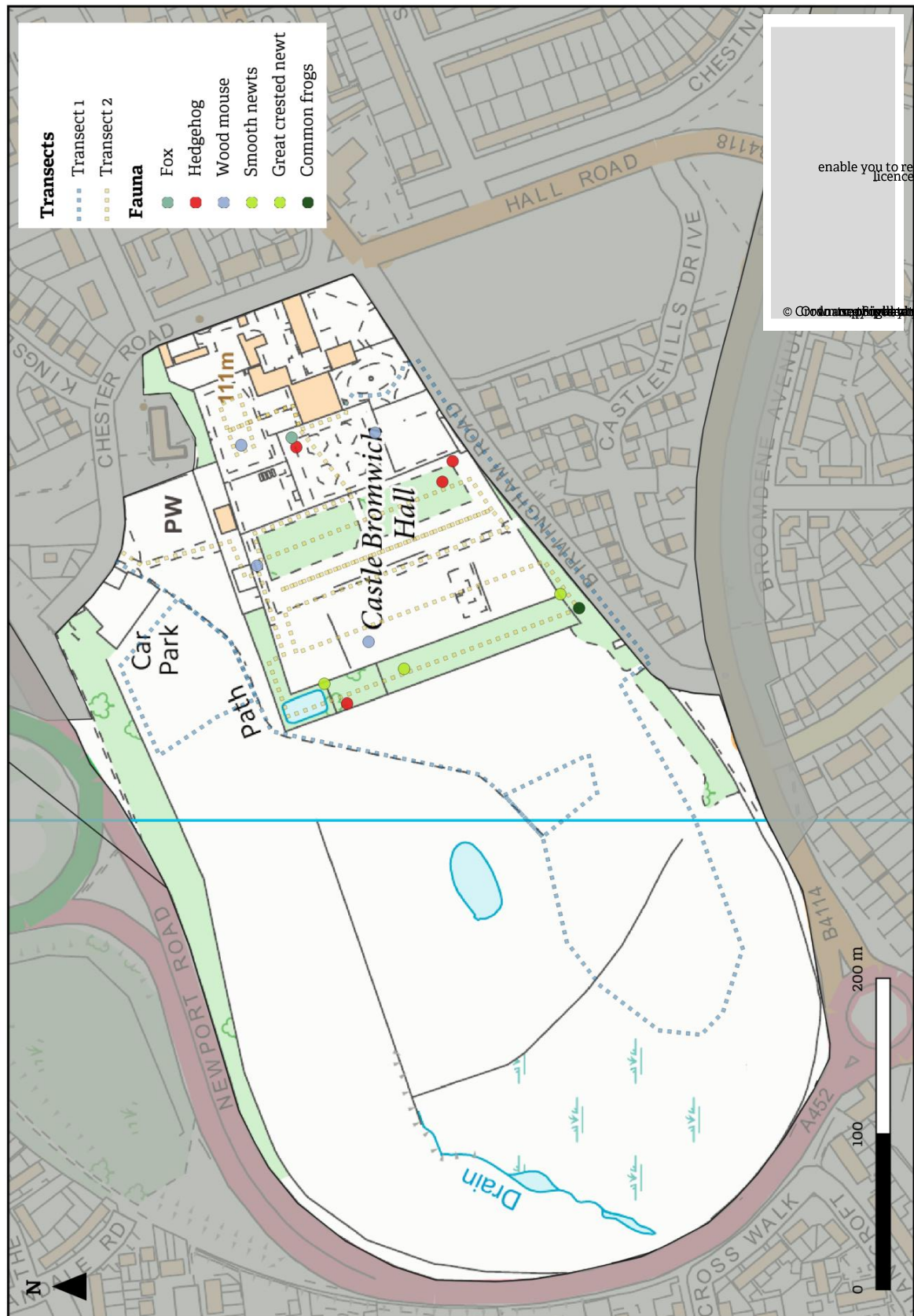


Figure 11. Torchlight survey results for Castle Bromwich, September 2019. Hedgehogs are only shown when encountered for the first time. Copyright WWT.

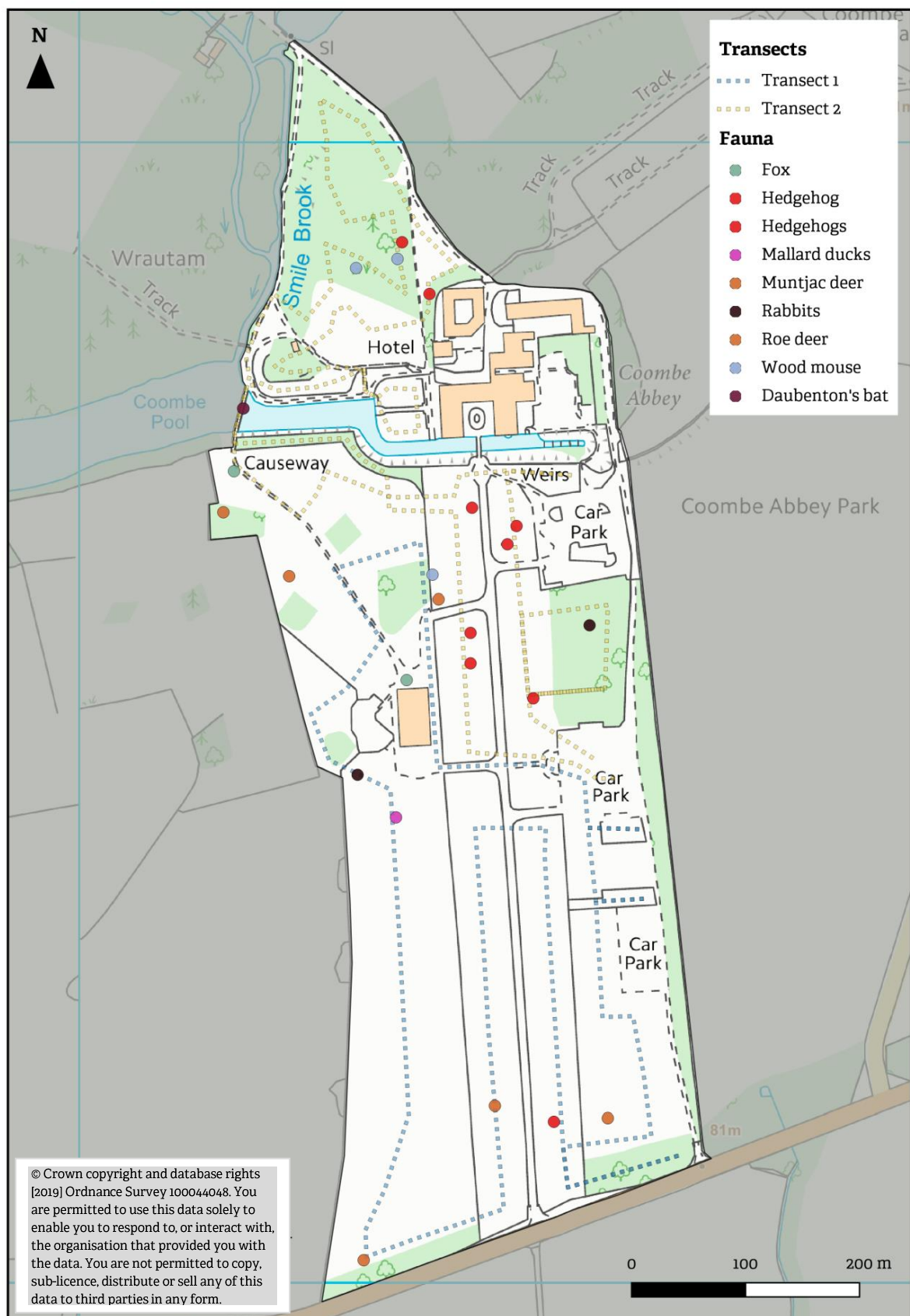


Figure 12. Torchlight survey results for Coombe Country Park, May 2019. Hedgehogs are only shown when encountered for the first time. Copyright WWT.

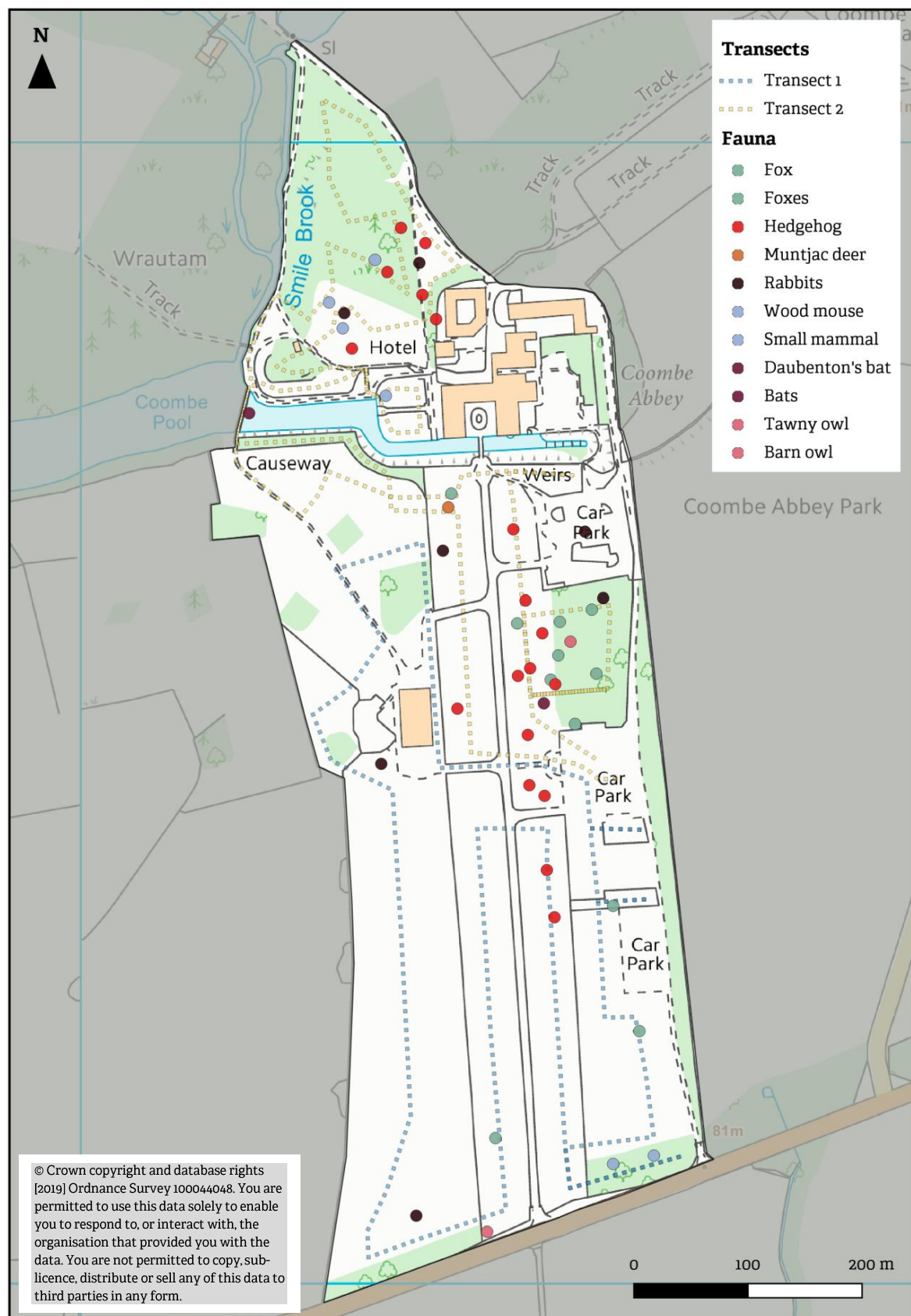


Figure 13. Torchlight survey results for Coombe Country Park, September 2019. Hedgehogs are only shown when encountered for the first time. Copyright WWT.



## 2.4. Garden Survey

During 2019, residents of Olton were asked at events, door-to-door and online to complete a short survey regarding having a hedgehog-friendly garden. The large Victorian and Edwardian properties with associated established gardens are a dominant feature of Olton and the ward had previously been selected as a focal area of the Solihull HIA. This was largely due to the potential to create a substantial habitat corridor through the heart of the urban West Midlands, connecting residential greenspace with parkland, a golf course, school grounds, allotments, a cemetery, a cricket club, sports pitches and a historic oak woodland.

37 residents completed the survey, of which 54% had seen hedgehogs in their gardens. Hedgehogs were deemed to have access to 81% of these gardens due to hedgehog holes in fences being present. 71% of those without hedgehog holes had not considered hedgehogs would need access and only 5% of people would not be opening up their gardens to hedgehogs. As a snapshot of the attitudes towards hedgehogs in the area, this suggests that it is general ignorance towards the issues that hedgehogs face that impedes access to gardens, rather than a dislike of the animal or other intervening factors.

## 3. Habitat Improvement

### 3.1. Public Green Space

As with community engagement events, there was also a focus on getting volunteers involved and trained in practical habitat management, to facilitate the improvement of green space into the future. Hedgelaying sessions to regenerate growth of overgrown hedges took place in Rugby at two sites, one a rural farm where a training session had been held for volunteers in 2018, and the other, a recreation ground, working in partnership with RBC. Hedge planting sessions took place in a Solihull park in partnership with *Solihull Metropolitan Borough Council (SMBC)*, in a focal area of green space in Olton to increase connectivity of varied green spaces within the landscape. Creation of a dead hedge also took place on a nature reserve in Solihull to increase nesting habitat, as well as a hedgehog sculpture to attract invertebrate prey created from plants in a Solihull park.



Figure 14. Volunteers by a newly planted hedge in Langley Hall Park, Solihull. Copyright WWT.





Figure 15. Volunteers having created a dead hedge in Priory Fields nature reserve (left) and planting a wildflower hedgehog in a park, Solihull (right). Copyright WWT.

The trial to change the management of green spaces in Rugby by RBC was further expanded in 2019 across more sites. For the previous two years, RBC had planted trees and reduced the regularity of cutting grass in certain areas, to create more varied habitats across sites. These changes have increased nesting habitat for hedgehogs across the borough with minimal complaint, and created a landscape legacy for the project, publicised in local press and raising awareness in local communities.



Figure 16. Increased areas of longer grass at Rokeby Open Space, Rugby, in summer 2019 (right) compared to when it was mowed 13 times per year in 2016 (left). Copyright WWT.

Partnership work also began scoping focal sections of the canal network across Solihull with the Canal and River Trust, with the aim of installing ramps in places where hedgehogs and other wildlife may accidentally fall in but have difficulty getting back out.

A *Hedgehog Ecology and Management for Practitioners (HEMP)* course was held in December 2019, with attendees learning about hedgehog requirements and how to manage land more effectively for them.

### 3.2. Policy

Rugby's *Local Plan* was adopted in June 2019 and includes a statement encouraging maintenance and/or enhancement of connectivity and biodiversity of residential and non-designated green space. This in itself is a legacy created from the project, with a *Local Plan* determining the type and location of development in the future, which *Neighbourhood Area Plans (NAPs)* must adhere to. Solihull's *Local Plan* is still under review following a legal challenge and changes due to HS2. Recommendations for mitigation relating to *Local Biodiversity Action Plan* species, such as hedgehogs, are currently included and the importance of a green infrastructure network emphasised.

Within Solihull borough there are eight designated *Neighbourhood Areas (NAs)*: Cheswick Green, Meriden, Dickens Heath, Knowle, Dorridge and Bentley Heath, Hampton-in-Arden, Hockley Heath, Balsall and Berkswell. Three NAPs, which give communities a say over the type, location, size, pace and design of development in the area, have been adopted, one of which was before the hedgehog work on NAPs began. Following involvement from the HIA project, the remaining two NAPs to be adopted include statements regarding hedgehogs and permeable barriers, safeguarding connectivity across the NAs into the future.

Within Rugby, there are nine designated NAs: Coton Forward, Wolston, Brandon and Bretford, Wolvey, Brinklow, Ryton-on-Dunsmore, Willoughby, Dunchurch and Grandborough. Coton Forward's NAP was adopted before the hedgehog work began. Only one other NAP has been adopted by Brandon and Bretford, which includes a statement regarding the importance of hedgehogs, permeable barriers and native species hedgerows. All other NAs for both Solihull and Rugby have been contacted with advice and guidance for their upcoming draft plans.

### 3.3. Development

Through tailored comments on planning applications and partnership work with local authorities, ecologists and developers, five further development sites in 2019 became set to include hedgehog holes, all of which are in Rugby borough.

Development Site	Planned inclusions
Ashlawn Road	Decision notice condition stipulates plans for fences showing hedgehog hole mitigation measures for 10 dwellings; <i>Construction Environmental Management Plan (CEMP)</i> stipulates ramps, covered holes & checks of spoil heaps
Houlton	Hedgehog holes stipulated in Ecological Statement every 50m along school boundary; locations discussed with <i>Warwickshire County Council (WCC)</i>
Ryton-on-Dunsmore	Informative note in decision notice regarding caution & hedgehog holes for 29 dwellings
Bilton Road	Informative note in decision notice regarding caution & hedgehog holes for 7 dwellings
Houlton	Hedgehog holes mapped for 39 dwellings

Table 4. Developments planning hedgehog-friendly inclusions in 2019.

The Senior Hedgehog Officer also wrote the material for the publication "Hedgehogs and Development" in 2019 with the *People's Trust for Endangered Species (PTES)* and *British Hedgehog Preservation Society (BHPS)*. This now provides guidance that can be used and referred to nationwide into the future, without the need for time-consuming tailored comments on planning applications. The guidance was disseminated widely to key audiences, including members of the *Chartered Institute of Ecology and Environmental Management*.



Figure 17. Cover of the new national planning guidance for developers.

#### 4. Conclusions

In 2019, the HIA project focussed on drawing earlier aspects to a close and finalising legacy elements. A core team of *Warwickshire Hedgehog Helper* volunteers finished training to continue hedgehog conservation beyond the length of the project, a monitoring programme across hedgehog hub sites was fully established, habitat improvements were built on and expanded, and development advice and guidance was written and published. There was an emphasis on sharing information with others to help contribute to future hedgehog conservation projects, with a new microsite developed and a learning document written and disseminated.