ASCERTA
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Glovers Brow Development, Kirkby, Liverpool

Preliminary Ecological Appraisal

RJG Architecture Ltd.

P.2251.25
July 2025

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Reference	Site	Client	Date
P.2251.25	Glovers Brow Development, Kirkby, Liverpool, L32 2AE	RJG Architecture Ltd.	10 July 2025

Field work	Document author	Technical review	Quality & approval
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Revision	Date	Details	Name

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Executive Summary

Ascerta has been instructed by **RJG architecture Ltd.** to carry out a Preliminary Ecological Appraisal at Glovers Brow Development, Kirkby, Liverpool, L32 2AE (hereafter referred to as **the site**).

The Preliminary Ecological Appraisal comprised of a desk study and biological records search, as well as a site walkover survey in order to map habitat types. The survey was extended to assess the potential for protected species to use the site. The assessment provides baseline data regarding the current site conditions and, where appropriate, allows recommendations to be made in respect of further potential work in order to satisfy current UK wildlife legislation.

Assessed against the *Guidelines for Ecological Impact Assessment in the UK and Ireland 2nd Edition* (2018), the site's habitats range in ecological value from negligible to within the zone of influence.

The on-site habitats comprise predominantly areas of ephemeral and tall ruderal vegetation. An area of scrub runs along the southern site boundary. An area of hardstanding is present in the west of the site with a substation building (B1) present here.

The site provides a habitat for nesting birds and hedgehogs. All habitats assessed are likely to be lost to the proposals. However, as the habitats to be lost to the proposals are small in area and not of high ecological value, it is considered that their loss can be mitigated for, and the proposals will not adversely affect the ecological value of the wider area, provided the recommendations detailed below are followed.

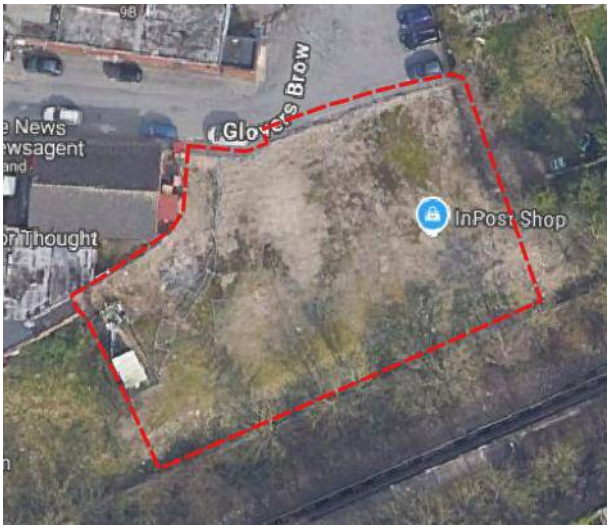
Bat surveys are conducted in accordance with the *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, published 2024 (the Guidelines). Strict adherence to these is not necessary, but where practice deviates from them, clear reasons and rationale are required.

The site was subject to an extended phase one habitat survey and a preliminary bat roost assessment of all buildings. During the survey and following a review of historical species records, it is considered that an impact on birds and hedgehogs is likely to occur in relation to the proposals for the site. The following recommendations have been made to avoid an impact on these species:

- If works have not begun by July 2027, an updated site visit will be required to assess the habitats within the site
- Production and implementation of a Hedgehog Reasonable Avoidance Measures (RAMS) to avoid any harm to this species during the proposed works
- Production and implementation of a Construction Environment Management Plan (CEMP) (see Section 5.1)
- Precautionary check for invasive species prior to works commencing
- Enhancing the site for species through appropriate landscape planting that includes native, species-rich hedgerows, trees and areas of wildflowers plus provision of integrated bat and bird features within newly constructed buildings
- Production of the DEFRA Metric Biodiversity Net Gain Calculations to minimise impacts on biodiversity and provide net gains in biodiversity
- Production of a management plan to ensure the long-term commitments to manage the planting, protection and enhancement of biodiversity in and around a new development site
- Vegetation clearance or pruning should be undertaken outside of the nesting bird season (1 March to 31 August inclusive) to avoid any impact on breeding birds, or a nesting bird check by a suitably experienced ecologist should be undertaken immediately prior to works commencing

1. Introduction

Ascerta has been instructed by **RJG architecture Ltd.** to carry out a Preliminary Ecological Appraisal at the site. The site OS grid reference is SJ 40332 99326 and the What3Words reference is logs.doors.tunnel. The extent of the site is displayed in photograph 1.1 below.



Photograph 1.1: Extent of the site

This report presents the results of the survey including evaluation of habitats on-site and potential for protected species to be using the site. The report includes recommendations for further actions where applicable, in order to satisfy current UK wildlife legislation and to achieve our client's objectives. Relevant legislation is detailed within Appendix 4.

2. Objectives

Our client's objectives are to assess the potential ecological constraints of the proposed development site.

Our objectives are as follows:

- Identify and evaluate any features of ecological value and the potential of the site to support protected species based on the walkover survey and biological records search
- Identify designated sites within 2km of the site
- Review protected species records within 2km of the site
- Map the habitats within the site using Joint Nature Conservation Committee (JNCC) (2010) methods
- Provide recommendations for further species–specific surveys and mitigation measures where current legislation requires
- Provide recommendations that seek to enhance the ecological value of the site
- Provide recommendations to assist our clients in achieving their objectives whilst satisfying current UK wildlife legislation

3. Survey Methods

The Preliminary Ecological Appraisal involved the collection and review of data from a desk study and field survey, along with an assessment of the value of the habitats following the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines.

3.1 Desk Study

A desk study was undertaken in June 2025 to identify protected and notable habitats and species, and nature conservation designations potentially relevant to the proposed development. The desk study was carried out using the sources detailed in Table 3.1 below. For the purposes of this report, protected and notable species records have been restricted to the last 15 years.

Table 3.1: Desk study data information

Source	Date obtained	Data obtained
Multi-Agency Geographic Information for the Countryside (MAGIC)	17 June 2025	• Statutory designated sites within 2km of the site • Protected and notable habitats within 2km of the site • European Protected Species Licenses (EPSLs) within 2km of the site
Merseyside Biobank	24 June 2025	• Non-statutory designated sites within 2km of the site • Protected and notable species records within 2km of the site
North Merseyside Biodiversity action plan	17 June 2025	• Additional protections afforded to species/habitat

3.2 Field Survey

A walkover survey of the site was conducted on 3 July 2025 by Jack Kay. The habitat types and features of ecological interest were identified and mapped in compliance with *the Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit* (JNCC, 2010). During the survey, weather conditions were recorded to ensure optimal surveying conditions according to guidelines. Any sub-optimal conditions will be discussed in the limitations.

This includes the identification of the main species present and examination of the potential for any protected species. Habitats were mapped (Appendix 1) and target notes (Appendix 2) made for any interesting features.

The surveys particularly focused on the following species and habitat features:

- Mammals (badgers and bats)
- Birds (including species potentially associated with 'European Sites')
- Amphibians and reptiles
- Invertebrates
- Hedgerows and boundaries
- Invasive plant species
- Plant communities and trees

3.3 Bat Survey Methods

The survey methods followed the guidelines set out by the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines – 4th Edition* (2024). Habitats, buildings and trees were assessed for suitability for use by bats and categorised independently using Table 4.1 page 44 within the Bat Conservation Trust Guidelines (Collins, 2024).

Preliminary Ecological Appraisal for bats
Habitats on site were assessed for their suitability for bats to use them for roosting, commuting and foraging, both on the site and surrounding area. Commuting and foraging habitat suitability was categorised **low** to **high**. Any commuting and foraging habitat valued as **moderate** or above may need further survey effort if lost to the proposals.

External inspection of the building
A daytime external inspection of the building was carried out during the survey by a suitably experienced ecologist. The building was searched externally looking for signs of bats, including staining on barge boards, soffits, and more commonly, droppings on flat surfaces i.e., window ledges that would indicate potential roosting sites. Possible bat access points such as loose tiles, cracks and crevices or crawl spaces beneath and/or behind roofing materials such as roofing felt, panelling, soffits and tiles were identified and were also checked for signs of use by bats.

The building on site was categorised as per Table 3.2 (overleaf). Buildings assigned a suitability of **Low** or above may require further inspection if they are to be lost to the developments.

Table 3.2: Guidelines for assessing potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement. Guidelines taken from Table 4.2, page 45 of the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines – 4th Edition* (2024).

Potential suitability	Description	
	Roosting habitats in structures	Potential flight paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices / suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight lines or generate/shelter insect populations available to foraging bats).
Negligible[a]	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains, as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions[b] and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats[c]).	Habitats that could be used by small numbers of bats as flight paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitats. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions[b] and surrounding habitat, but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity or hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions[b] and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation sites.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

[a] Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).

[b] For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

[c] Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2016 and Jansen et al., 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.

3.4 Badger Survey Methods

The site was searched for setts and badger field signs including foraging areas, latrines and tracks. Attention was paid to the presence of the following field signs:

- Setts: Single holes or a series of holes likely to be interconnected underground
- Latrines: Badgers usually deposit faeces in excavated pits
- Paths and footprints
- Scratching posts: At the base of trees
- Snuffle holes: Areas where badgers have searched for insects
- Day nest: Bundles of vegetation where badgers may sleep above ground
- Traces of hair

3.5 Evaluation

Habitats and species on the site were evaluated following the *Guidelines for Ecological Impact Assessment in the UK and Ireland* (2018). A geographical frame of reference is assigned to each habitat and species, with **International Value** being most important, then **National**, **Regional**, **County**, **District**, **Local** and lastly, within the immediate **Zone of Influence** (ZoI) of the proposals only.

Value judgements are based on characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations such as Sites of Special Scientific Interest (SSSIs). For undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological resource are considered. Ecological resource quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

The recommendations detailed within this report aim to meet requirements of the Environment Act and Statutory Biodiversity Metric as far as possible at this stage.

3.6 Limitations

The site visit was undertaken in July, which is within the optimal time of year for Phase 1 Habitat Surveys, and the site was fully accessible, with sufficient vegetation present to enable habitat identification.

Access to carry out an internal inspection of the building was not available. These access restrictions are considered within the report conclusions.

Access to view this building externally was limited due to Heras fencing and dense vegetation. This access limitation has been considered within the report conclusions.

The absence of biological records does not necessarily mean the absence of species. This has been considered within the report conclusions.

The site was visited on only one occasion. This produces a snapshot of habitats and species on the site and others may be present at different times of the day or year. This limitation has been considered within this report.

4. Survey Results

4.1 Desk Study

Statutory sites

No statutory designated sites were identified within a 2km radius of the proposed development site.

Non-statutory sites

Twelve non-statutory designated sites were identified within a 2km radius of the proposed development site. These are listed in Table 4.2 below.

Table 4.1: Non-statutory designated sites

Non-statutory designated site	Reason for designation	Distance from proposed development
Kirkby Brook, including Mill Brook Site of Biological Interest (SBI)	Priority BAP habitat and regionally important plant species.	450m east
Simonswood Brook SBI	Good water vole habitat and Priority BAP habitats.	530m northeast
Mill Brook, Westvale SBI	Good-quality water vole habitat.	540m northeast
Meadow, Kirkby Brook, South of old hall lane SBI	Priority BAP habitats and regionally important plant species. Good habitat for water vole.	620m southeast
Kirkby Brook SBI	Good-quality water vole habitat.	640m southeast
Fazakerley Sidings, Aintree SBI	Priority BAP habitats and regionally important plant species.	1km southwest
Land east of canal, North of Wango Lane, Waddicar SBI	Priority BAP habitats and regionally important plant species. Good habitat for red squirrels.	1km southwest
Wango Lane Wetland SBI	Priority BAP habitats and a plant species of conservation concern and regional importance.	1km southwest
River Alt, Kirkby SBI	Good-quality water vole habitat.	1.5km southwest
Northwood Forest Hills Local Wildlife site	Developed to include pond and swamp.	1.8km east
River Alt & adjacent sites through Gillmoss including Fazackerley LWS	Regular breeding of water rail and little ringed plover.	2km south
Knowsley Brook SBI	Good-quality water vole habitat.	2km south

The full designations for each site are listed within Appendix 5.
The site does not lie within a relevant Natural England SSSI Impact Risk Zone.

Priority Habitats

Woodland

Numerous areas of Priority Habitat Deciduous Woodland were returned within 2km of the site within the closest area located approximately 460m east of the site within Millbrook park.

The site lies within a Conservation Target Area for the following Priority Species:

- Lapwing
- Corn Bunting

The site also falls within a breeding area for the following Grassland Assemblage Farmland Birds:

- Corn bunting
- Lapwing
- Grey partridge
- Tree sparrow

Priority Species

Following a review of records held by Merseyside Biobank, several Priority Species that have the potential to occur within the vicinity of the proposed development have been identified. These include birds, bats, water vole, hedgehogs, red squirrel, and amphibians. The species records are summarised below, and the detailed records held by Merseyside Biobank within 2km of the site are displayed within Appendix 5. Protected species legislation can be found within Appendix 4.

Birds

865 records were returned for bird species within 2km of the site. Species returned include swift, house martin, kingfisher, lapwing, linnet, house sparrow, and dunnock. All species recorded within 2km are displayed within Appendix 5. The most recent of which was a 2022 record of a Canada goose and house sparrow located 470m northeast of the site. The closest of which was a 2010 record of dunnock, song thrush, starling and house sparrow located 440m southwest of the site.

Bats

Merseyside Biobank returned 19 records for bats within the search area. Bat species include common pipistrelle, soprano pipistrelle, Daubenton's bat, noctule, and brown long-eared, the closest of which was a 2021 record of common pipistrelle and Daubenton's bat located 230m west of the site. The most recent of which was a 2022 record of common pipistrelle located 540m north of the site.

Amphibians

Two records for great crested newt were returned within 2km of the site. The closest of which was a 2019 record located 440m southwest of the site.

A further 18 amphibians were returned within 2km of the site. Species present include common frog and common toad. The closest of which was a 2016 record of common frog located 450m northeast of the site. The most recent of which was a 2021 record of common frog located 2km south of the site.

Water voles

42 records for water voles were returned within 2km of the site. The closest of which was a 2022 record located 500m north of the site. The most recent of which was a 2022 record located 1.8km north of the site.

Other mammals

108 records for other mammals were returned within 2km of the site. Species include brown hare, red squirrel, and hedgehog. The closest of which was a 2010 record of red squirrel located 330m west of the site. The most recent of which was a 2022 record of hedgehog located 1.7km east of the site.

European Protected Species Licences

There were no EPSL applications within 2km of the site since 2020.

4.2 Habitat Survey

Weather

Weather conditions during the survey were mild (15°C), dry and clear (2/8 cloud cover) with a F1 (Beaufort Scale) light breeze, therefore appropriate for this type of survey.

The site is bound to the north, east and west by residential dwellings. A railway line runs along adjacent to the southern site boundary with residential dwellings beyond.

Table 4.2: Habitats present on site including habitat alphanumeric code references from JNCC (2010)

Habitat description and JNCC codes	Site description
Hardstanding (J4)	An area of gravel hardstanding was present in the western section of the site (drawing P.2251.25.E01, Appendix 1). Ephemeral species such as broadleaved dock and mugwort have begun to colonise the margins of this habitat. This habitat is displayed in photograph 1 within Appendix 3.
Building (J3.6)	One building is present within the site. This is a small single storey substation located within the hardstanding in the western section of the site (see drawing P.2251.25.E01, Appendix 1). The building is displayed within photograph 2 within Appendix 3.
Dense/continuous scrub (A2.1)	An area of dense bramble scrub is present along the entire length of the southern site boundary (drawing P.2251.25.E01, Appendix 1). This habitat is displayed in photograph 3 within Appendix 3.
Tall ruderal vegetation (C3.1)	An area of tall ruderal vegetation stretches from the western site boundary to the centre of the site (drawing P.2251.25.E01, Appendix 1). Species present include ragwort, buddleja and greater willowherb. This habitat is displayed in photographs 4–5 within Appendix 3.
Ephemeral/short perennial J1.3)	A large area of ephemeral/short perennial is present in the centre and east of the site (drawing P.2251.25.E01, Appendix 1). Species present include black medick, common bent, sow thistle, white clover and ragwort. This habitat is displayed in photographs 6–7 within Appendix 3.

4.3 Preliminary Bat Roost Assessment of Buildings and Trees

Table 4.3. Preliminary bat roost assessment of buildings within the site

	Building Description
Building B1	Building B1 is a single-storey substation used to power the telecommunication mast (TN2) present within the western section of the site (drawing P.2251.25.E01, Appendix 1). The building is constructed from sheet metal with a flat roof constructed from the same material. UPVC flashing and fixing are present and is in good decorative order with no gaps or lifts present. Building B1 is displayed within photograph 2 within Appendix 3.
	Assessment of B1
	The building was assessed to have **negligible** hibernation potential for crevice- and void-dwelling bats and **negligible** potential for day and maternity roosts for crevice-dwelling bats and **negligible** potential for void-dwelling bats. Overall, the building is classified as having **negligible** bat roosting potential.

4.4 Protected and Notable Species

Table 4.4: Habitat suitability for protected and notable species

Birds

Habitat suitability

The scrub, tall ruderal vegetation, ephemeral/short perennial and building within the site provide suitable foraging and nesting opportunities for bird species.

Species seen / evidence of presence / features identified

During the survey magpie, wood pigeon and passerine species were identified within the site.

Further survey required

For any vegetation removal, a nesting bird survey will be required (Section 5.2).

Bats

Habitat suitability

The building on site offers **negligible** potential to support bat roosts as detailed above in Section 4.3. The scrub and tall ruderal vegetation within the site provide limited suitability for commuting and foraging bats, with poor connectivity to the surrounding land use.

Species seen / evidence of presence / features identified

Evidence of bats was not identified within the site during the survey.

Further survey required

Bats will not be impacted by the proposals within the site, therefore do not require consideration within this planning application.

Badgers

Habitat suitability

The scrub and tall ruderal vegetation habitats within the site provide limited foraging and shelter habitat for badgers.

Species seen / evidence of presence / features identified

No evidence of badger was identified within the site during the survey.

Further survey required

Badgers will not be impacted by the proposals within the site; therefore, badgers do not require further consideration within this planning application and will not be discussed further within this report.

Water voles

Habitat suitability

The site provides no suitable habitat for water vole. No suitable waterbodies are present within the immediate area surrounding the site.

Species seen / evidence of presence / features identified

No evidence of water vole was identified during the site visit.

Further survey required

Water vole will not be impacted by the proposals within the site; therefore, water vole do not require further consideration within this planning application and will not be discussed further within this report.

Otters

Habitat suitability

The site provides no suitable habitat for otters. There are no suitable waterbodies or terrestrial habitat for otters within the vicinity of the site.

Species seen / evidence of presence / features identified

No evidence of otter was identified during the site visit.

Further survey required

Otters will not be impacted by the proposals within the site; therefore, otters do not require further consideration within this planning application and will not be discussed further within this report.

Amphibians

Habitat suitability

No suitable waterbodies were present within the site and no ponds/waterbodies were identified within 500m of the site via MAGIC maps. The bramble scrub and tall ruderal vegetation provides limited terrestrial habitats for amphibians.

Species seen / evidence of presence / features identified

No evidence of amphibians was identified within the site during the survey.

Further survey required

Amphibians will not be impacted by the proposals within the site; therefore, amphibians do not require further consideration within this planning application and will not be discussed further within this report.

Reptiles

Habitat suitability

The habitats within the site do not offer suitability to support reptiles. Ecotones are not present within the site and the habitats are scattered across the site with no suitable connectivity. The habitats within the site are prone to high human disturbance.

Species seen / evidence of presence / features identified

No evidence of reptiles was identified within the site during the survey.

Further survey required

No further survey for reptile will be required. Reptiles do not require consideration within this planning application and will not be discussed further.

Invertebrates

Habitat suitability

The scrub and tall ruderal vegetation provide some limited habitat for invertebrates; however, the area is prone to human disturbance.

Species seen / evidence of presence / features identified

No evidence of invertebrates was identified within the site during the survey.

Further survey required

No further survey for invertebrates will be required. Invertebrates do not require consideration within this planning application and will not be discussed further.

Small mammals

Habitat suitability

The tall ruderal vegetation and scrub habitats within the site provide limited foraging and shelter habitat for small mammal species such as hedgehog.

Species seen / evidence of presence / features identified

No evidence of small mammals was identified within the site during the survey.

Further survey required

No further survey effort of other small mammals will be required; however, RAMS should be implemented (see Section 5.2).

Invasive species

No non-native invasive species were identified within the site during the survey.

5. Evaluation and Recommendations

5.1 Designated Sites and Habitats

There are no statutory protected sites within the vicinity of the proposals that are likely to be influenced by the proposals. It is considered that there will be no impact on any statutory sites in the vicinity as a result of the proposals.

The closest non-statutory site, Kirkby Brook including Mill Brook SBI, lies approximately 450m east of the site. Due to the likelihood of increased footfall in the area and increase from recreational activity, it is recommended a CEMP be implemented to reduce these impacts on this non-statutory site.

Mitigation
The habitats on site comprise hardstanding, scrub, tall ruderal vegetation, ephemeral/short perennial and a building. These habitats are considered to have an ecological value of **within the zone of influence** of the site or lower. The site contains no designated or priority habitats. Overall, the proposals are unlikely to adversely affect the ecological value of the area.

5.2 Protected and Notable Species Recommendations

Birds
The scrub, tall ruderal vegetation, building and ephemeral/short perennial provide suitable habitat for nesting and foraging bird species. It is recommended that vegetation clearance should be undertaken outside of the nesting bird season (**1 March to 31 August inclusive**) to avoid any impact on breeding birds. If vegetation clearance cannot be carried out outside of the breeding bird season, a nesting bird check by a suitably experienced ecologist should be undertaken immediately prior to works commencing. If an active birds' nest is identified, a suitable buffer zone should be implemented where no works are to occur within until the young have fledged the nest.

Bats
The habitats on site provide **low** suitability for commuting and foraging bats. The building on site was assessed to provide **negligible** potential for bats. The building was assessed as followed:

- **Negligible** potential – B1

The buildings will be demolished to accommodate the proposals within the site, but will not require further survey effort for bats.

Invasive species
Horsetail (TN1) was identified within the site (drawing P.2251.25.E01, Appendix 1). To avoid the spread (complying with the Wildlife and Countryside Act 1981, see Appendix 4) of these species within the site during site clearance, it is recommended that an **Invasive Species Management Plan** is produced and adhered to during the works. It is recommended that the management plan details suitable management of these species, biosecurity measures and avoidance measures where possible.

Small mammals
The site provides limited habitat for small mammals within the scrub and tall ruderal vegetation. These habitats are likely to be impacted by the proposals, and therefore it is recommended that a **Hedgehog RAMS Method Statement** is implemented during the works to avoid harm to this species.

To enable hedgehogs to continue the use of the site, it is advised that gaps of at least 13cm by 13cm are left under any new garden fences to enable hedgehogs to roam freely within the area following development. To mitigate for the loss of habitat that could be used by hibernating hedgehogs, it is recommended that a hedgehog hibernaculum is provided within the landscaping.

5.3 Enhancements

In order to meet requirements for biodiversity protection and enhancement outlined within the NPPF, it is recommended that ecological enhancements are included. These could include:

- Provision of one bird box (25mm, 28mm, 32mm entrance hole box, house sparrow terrace, swift box), attached to or integrated within new buildings on-site
- Provision of one bat feature (e.g. Vivara Pro WoodStone Bat box or similar) attached to a retained or new tree on site or provision of a bat box (e.g. Vivara bat bricks or '*bird brick houses*' bat boxes) integrated within new buildings
- Suitable landscaping incorporating species that provide a food or shelter resource to wildlife to include hawthorn, hazel, holly, blackthorn, field maple, dog rose and honeysuckle as hedgerow species and oak, alder, field maple, silver birch, crab apple, rowan and bird cherry as tree species together with implementing a relaxed mowing regime and establishing wildflowers in these areas

6. Conclusions

The site was subject to an extended Phase 1 Habitat Survey and a preliminary bat roost assessment of all buildings. During the survey and following a review of historical species records, it is considered that an impact on birds and hedgehogs is likely to occur in relation to the proposals for the site. The following recommendations have been made to avoid an impact on these species:

- If works have not begun by July 2027, an updated site visit will be required to assess the habitats within the site
- Production and implementation of a Hedgehog RAMS to avoid any harm to this species during the proposed works
- Production and implementation of a CEMP (see Section 5.1)
- Precautionary check for invasive species prior to works commencing
- Enhancing the site for species through appropriate landscape planting that includes native, species-rich hedgerows, trees and areas of wildflowers plus provision of integrated bat and bird features within newly constructed buildings
- Production of the DEFRA Metric Biodiversity Net Gain Calculations to minimise impacts on biodiversity and provide net gains in biodiversity
- Production of a management plan to ensure the long-term commitments to manage the planting, protection and enhancement of biodiversity in and around a new development site
- Vegetation clearance or pruning should be undertaken outside of the nesting bird season (1 March to 31 August inclusive) to avoid any impact on breeding birds, or a nesting bird check by a suitably experienced ecologist should be undertaken immediately prior to works commencing

It is considered that there would be very limited impacts on the local ecology as a result of the proposals, provided the recommendations detailed within Section 5.0 above are followed.

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Appendix 1

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Survey Area
Scrub
Tall ruderal vegetation
Ephemeral/short perennial
Building
Hardstanding
Target Notes

TN1 - Horsetail
TN2 - Telecommunication mast

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CLIENT:
RJG Architecture Ltd

PROJECT:
Glovers Brow Development

DRAWING TITLE:
Phase One Habitat Survey

SCALE:	DRAWN BY:	DRAWING No:
NTS@A3	JK	P.2251.25.E01
DATE:	CHKD BY:	REV:
03/07/2025	LK	-

Appendix 2

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Appendix 2: Species Lists and Target Notes

Table 1: Flora species

English name	Scientific name
Bindweed	*Convolvulus arvensis*
Black medick	*Medicago lupulina*
Bramble	*Rubus fruticosus agg.*
Broadleaved dock	*Rumex obtusifolius*
Buddleja	*Buddleja*
Common bent	*Agrostis capillaris*
Common nettle	*Urtica dioica*
Common poppy	*Papaver rhoeas*
Creeping thistle	*Cirsium arvense*
Dandelion	*Taraxacum agg.*
Greater plantain	*Plantago major*
Greater willowherb	*Epilobium hirsutum*
Herb robert	*Geranium robertianum*
Horsetail*	*Equisetum sp.*
Mugwort	*Artemisia vulgaris*
Perennial ryegrass	*Lolium perenne*
Ragwort	*Senecio jacobaea*
Ribwort plantain	*Plantago lanceolata*
Sow thistle	*Sonchus oleraceus*
Sycamore	*Acer pseudoplatanus*
Vetch	*Vicia sp.*
Weld	*Reseda luteola*
White clover	*Trifolium repens*

*** invasive species**

Table 2: Target notes

Target note number	Description
TN1	Horsetail
TN2	Telecommunication mast

Appendix 3

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Appendix 3: Photographs

Table 3: Photographs of the site

Photograph 1: Gravel hardstanding present in western section of the site.

Photograph 2: Substation building (B1) located in western section of the site.

Photograph 3: Bramble scrub present along southern site boundary.

Photograph 4: Tall ruderal vegetation present in western section of the site.

Photograph 5: Tall ruderal vegetation present at centre of the site.

Photograph 6: Ephemeral/short perennial present in eastern section of the site.

Photograph 7: Ephemeral/short perennial present at the centre of the site.

Appendix 4

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Appendix 4: Relevant Legislation

European Legislation

The following Directives have been adopted by the European Union and provide protection for fauna and flora species of European importance and the habitats which support them:

- Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive)
- Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive)

UK Legislation

The Habitats Directive has been transposed into national legislation through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (The Habitats Regulations). This provides for the designation and protection of 'European Sites' (SPAs, SACs and Ramsar Sites, including proposed or potential European Sites) and the protection of 'European Protected Species'.

The key UK legislation relating to nature conservation is the Wildlife and Countryside Act 1981 (as amended) (W&C Act). This Act is supplemented, *inter alia*, by provision in the Countryside and Rights of Way (CRoW) Act 2000, and the Natural Environment and Rural Communities Act 2006 (NERC Act). Additional species and habitat-specific UK legislation includes the Protection of Badgers Act 1992 and the Hedgerow Regulations 1997.

The Environment Act sets out how the UK will maintain environmental standards following leaving of the EU. The Bill builds on the vision of the 25 Year Environment Plan, with the ambition from the government to leave the environment in a better state than it was when inherited.

The NPPF 2024 has been published to provide further planning guidance. Wildlife, biodiversity and ecological networks are referred to in Section 15 *Conserving and enhancing the natural environment*. The NPPF states that the planning system should contribute to and enhance the natural and local environment by: protecting and enhancing valued landscapes and sites of biodiversity value, recognise the wider benefits from natural capital and ecosystem services and minimising impacts on and provide net gains for biodiversity. Further guidance is provided within Government Circular *06/05: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact Within the Planning System*.

Species and Habitats of Principal Importance

Species and Habitats of Principal Importance are listed under Section 41 of the NERC Act and are a material consideration in planning decisions. Planners require relevant, up-to-date information from ecological surveys in order to assess the effects of a proposed development on biodiversity as Councils have a statutory obligation under Section 40 of the NERC Act to consider biodiversity conservation in the determination of planning applications.

Background information about the lists of priority habitats and species (Species and Habitats of Principal Importance) can be found within the UK Biodiversity Action Plan (UK BAP). Although this has been succeeded by the *UK Post-2010 Biodiversity Framework*, many UK BAP tools are still relevant. BAPs identify habitats and species of nature conservation priority on a UK (UK BAP) and Local (LBAP) scale. Most BAP priority habitats and species have Habitat Action Plans (HAPs) and Species Action Plans (SAPs) and there are also 'grouped action plans' for groups of related species with similar conservation requirements. The LBAP relating to this site is the North Merseyside Biodiversity Action Plan.

Bats

In England, all bats and their roosts are protected under the Conservation of Habitats and Species Regulations 2017 and the W&C Act 1981 (as amended). Several species of bat are also highlighted as Priority Species under the UK Biodiversity Action Plan and within the Local BAP.

Under the current legislation, as summarised on pages 9 and 10 of the *Bat Surveys for Professional Ecologists: Good Practice Guidelines – 4th Edition* (2024), it is a criminal offence to:

'Kill, capture, injure or take a wild bat:

- *To damage or destroy a place used by a bat for breeding or resting. All offences of this nature are identified within the Habitats Regulations. This offence is unique in that it can be committed accidently. No element of intentional, reckless or deliberate action needs to be evidenced.*
- *To disturb bats anywhere (roosts, flight lines or foraging areas) if levels of disturbance can be shown to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate or to affect significantly local distribution or abundance*
- *To intentionally or recklessly disturb a bat, whilst it is occupying a place of shelter or protection*
- *To intentionally or recklessly obstruct access to any place used by a bat for shelter or protection*
- *To be in possession or control of a bat alive or dead (or any part of a bat or anything derived from a bat, although bat droppings are generally considered to be acceptable), or to transport a bat, to sell or exchange a bat or to offer to sell or exchange a bat taken from the wild.'*

Breeding birds

Breeding birds are protected under the W&C Act 1981, which makes it an offence to:

- *Intentionally kill, injure or take any wild bird or take, damage or destroy the nest of any wild bird whilst it is in use or being built*
- *Intentionally take or destroy the egg of any wild bird*
- *Have in one's possession or control any wild bird, dead or alive, or any part of a wild bird (including eggs), which has been taken in contravention of the Act or the Protection of Birds Act 1954*
- *Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird*

Invasive species

It is an offence under Section 14(2) of the W&C Act 1981 to '*plant or otherwise cause to grow*' in the wild any plant in Schedule 9 Part II.

It is a criminal offence to intentionally, wilfully kill, injure or take any of the aforementioned protected species or to destroy or disturb its habitat.

Local policy

The site lies within Kirkby and is covered by Knowsley Metropolitan Borough Council under the Knowsley Local Plan Core Strategy (adopted January 2016). Policies CS2 (Principal 4) and CS8 aim to ensure biodiversity is retained and enhanced during development and biodiversity protection is referenced in other policies including CS19, CS21, CS23 and CS24. These policies have been taken into account when preparing this report.

Appendix 5

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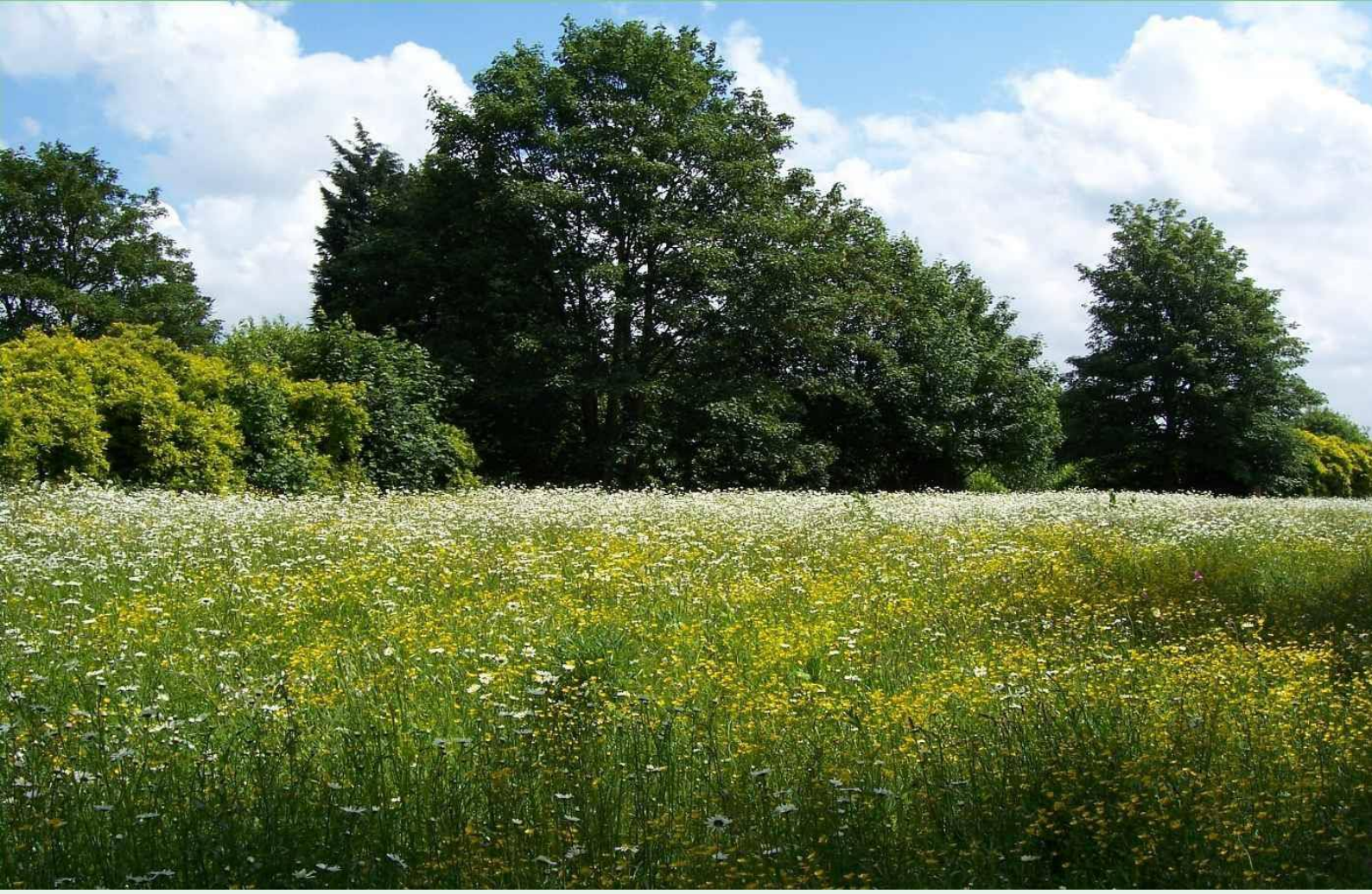

BIOBANK
Merseyside

Biodiversity Information Report 24/06/2025

MBB reference: 4330-Ascerta
Site: Glovers Brow Development

The Local Environmental Records Centre for North Merseyside

Merseyside BioBank,
Estate Barn, Court Hey Park
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Your Ref: None supplied	**MBB Ref: 4330-Ascerta**	**Date: 24/06/2025**
Your contact: Rebecca Donnan	**MBB Contact: Paul Round**	

Merseyside BioBank biodiversity information report

These are the results of your data request relating to **an area at Glovers Brow Development defined by a buffer of 2000 metres around the centre of grid reference SJ4033299326**.

You have been supplied with the following:

- records of **protected** taxa that intersect the search area
- records of **BAP** taxa that intersect the search area
- records of **Red Listed** taxa that intersect the search area
- records of other '**notable**' taxa that intersect the search area
- records of WCA schedule 9 taxa (including '**invasive plants**') that intersect the search area
- a map showing the location of monad and tetrad references that overlap the search area
- a list of all **designated sites** that intersect your search area
- citations, where available, for intersecting Local Wildlife Sites
- a list of **other sites of interest** (e.g. Ancient Woodlands) that intersect your search area
- a map showing such sites
- a list of all **BAP habitats** which intersect the search area
- a map showing BAP habitats
- a summary of the area for all available mapped **Phase 1 and/or NVC habitats** found within 500m of your site
- a map showing such habitats

Merseyside BioBank (MBB) is the Local Environmental Records Centre (LERC) for North Merseyside. We collect and collate biological and environmental information and make it available to people and organisations that have need to access such information in North Merseyside. We promote the North Merseyside Biodiversity Action Plan and wider participation in biological recording and conservation through education, community involvement and by supporting the biological recording community of North Merseyside.

Merseyside BioBank is an information node of the National Biodiversity Network (NBN) and integrate records from our own databases with those of the NBN Atlas.

The product charge for this data request is not a charge for the data themselves, but rather a fixed rate that enables us to cover a portion of our running costs. Our annual income from data requests is something less than 20% of our total running costs.

Species records

The biological records held by Merseyside BioBank come from a variety of sources; from large organisations to individual amateur naturalists. Merseyside BioBank operates as managers or custodians of these records but the individuals and groups, who provide their records free of charge, retain copyright on their data. Without their contribution, we would not be able to provide the records included in this report. Their efforts, expertise and goodwill make a substantial contribution to the protection of North Merseyside's biodiversity.

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You may only use the records in this document subject to our access terms and conditions which can be found in Appendix 1. Non-adherence to these terms and conditions will be viewed as a breach of contract, which may result in legal redress being sought.

This report also integrates records from the NBN Atlas. Some NBN data providers give us permission to download and integrate their records at a higher resolution than available through public access in order to contribute to the protection of North Merseyside's biodiversity.

Details of the biological records summarised in the following tables, and the sources from which they are derived, are supplied separately due to their size. Note that the date ranges in the summary tables (headed 'Dates') show the earliest and latest years for which records have been summarised for each taxon.

UK Protected Species

'UK Protected species' are those taxa specifically identified by UK legislation including: Wildlife & Countryside Act 1981 (as amended); Protection of Badgers Act 1992; Conservation of Habitats and Species Regulations 2017. The latter regulations enact the European Union's (EU) Habitats Directive (92/43/EEC) in the UK and supercede The Conservation Regulations 1994 and 2010. In our list of protected species, you may see designations that refer to schedules in the 1994 and 2010 regulations, but these remain unchanged under the 2017 regulations.

Some protected species may not be legally disturbed unless you are in possession of an appropriate license. If you are in any doubt as to whether or not a license is required, you should contact Natural England.

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The following tables detail the protected species that were recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
amphibian	Common Frog	*Rana temporaria*	12	1999-2021	WCA5/9.5a
	Common Toad	*Bufo bufo*	4	2008-2020	WCA5/9.5a
	Great Crested Newt	*Triturus cristatus*	4	1936-2011	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
bird	Barn Owl	*Tyto alba*	4	1997-2000	WCA1i
	Marsh Harrier	*Circus aeruginosus*	1	1998	WCA1i
	Peregrine	*Falco peregrinus*	1	2002	WCA1i
	Quail	*Coturnix coturnix*	1	1998	WCA1i
flowering plant	Bluebell	*Hyacinthoides non-scripta*	15	1995-2016	WCA8
	Strapwort	*Corrigiola litoralis*	1	1993	WCA8
terrestrial mammal	Badger	*Meles meles*	2	1965-2010	PBA
	Bat	*Chiroptera*	7	1987-2021	HabRegs2
	Common Pipistrelle	*Pipistrellus pipistrellus*	16	1987-2022	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Daubenton's Bat	*Myotis daubentonii*	2	2021-2022	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Noctule	*Nyctalus noctula*	3	1987-2022	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Otter	*Lutra lutra*	2	2020	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Pipistrelle	*Pipistrellus*	9	1988-2020	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Red Squirrel	*Sciurus vulgaris*	23	1967-2013	WCA5/9.1k/l,WCA5/9.1t,WCA5/9.2,WCA5/9.4.a,WCA5/9.4b
	Soprano Pipistrelle	*Pipistrellus pygmaeus*	3	2007-2022	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Water Vole	*Arvicola amphibius*	88	1980-2022	WCA5/9.4.a,WCA5/9.4b,WCA5/9.4c

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Desig. Code	Desig. Name	Designation Description
WCA5/9.5a	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.5a)	Section 9.5 Animals which are protected from being sold, offered for sale or being held or transported for sale either live or dead, whole or part.
HabRegs2	The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2)	Schedule 2- European protected species of animals.
WCA5/9.4b	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4b)	Section 9.4 Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.
WCA5/9.4c	Wildlife and Countryside Act 1981 (Schedule 5)	Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.
WCA1i	Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Birds and their young, for which it is an offence to intentionally or recklessly disturb at, on or near an active nest. They are protected by special penalties at all times.
WCA8	Wildlife and Countryside Act 1981 (Schedule 8)	Plants which are protected from intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
PBA	Protection of Badgers Act (1992)	The Protection of Badgers Act 1992 protects badgers from taking, injuring, killing, cruel treatment, selling, possessing, marking and having their setts interfered with, subject to exceptions.
WCA5/9.1k/l	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.1 (killing/injuring))	Section 9.1. Animals which are protected from intentional killing or injuring.
WCA5/9.1t	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.1 (taking))	Section 9.1 Animals which are protected from taking.
WCA5/9.2	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.2)	Section 9.2 Animals which are protected from being possessed or controlled (live or dead).
WCA5/9.4.a	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4, subdivision a)	Section 9.4 subdivision a - Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection.

North Merseyside BAP Species

The North Merseyside Biodiversity Action Plan (NM BAP) was published in September 2001 and last reviewed in 2008. Like other Local Biodiversity Action Plans (LBAPs) its purpose is to focus local conservation on national priority species and habitats. However, LBAPs also embrace the idea of 'local distinctiveness' and species which are not considered UK conservation priorities can be catered for by LBAPs if they are of particular local significance. Such is the case with the NM BAP which currently names 74 species of which 57 are not conservation priority species but are included because their conservation is considered to be a priority in North Merseyside.

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The following tables detail the North Merseyside BAP species that were recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
amphibian	Great Crested Newt	*Triturus cristatus*	4	1936-2011	LBAP
bird	Corn Bunting	*Emberiza calandra*	9	1997-2002	LBAP
	Grey Partridge	*Perdix perdix*	8	1997-2002	LBAP
	House Martin	*Delichon urbicum*	9	1997-2000	LBAP
	House Sparrow	*Passer domesticus*	14	1997-2001	LBAP
	Lapwing	*Vanellus vanellus*	11	1997-2002	LBAP
	Skylark	*Alauda arvensis*	15	1996-2002	LBAP
	Song Thrush	*Turdus philomelos*	9	1997-2000	LBAP
	Starling	*Sturnus vulgaris*	8	1997-1998	LBAP
	Swift	*Apus apus*	4	1997	LBAP
flowering plant	Bluebell	*Hyacinthoides non-scripta*	15	1995-2016	LBAP
	Purple Ramping-fumitory	*Fumaria purpurea*	1	2014	LBAP
insect - dragonfly (Odonata)	Azure Damselfly	*Coenagrion puella*	5	2017-2019	LBAP
	Banded Demoiselle	*Calopteryx splendens*	24	2012-2019	LBAP
	Blue-tailed Damselfly	*Ischnura elegans*	41	1924-2020	LBAP
	Broad-bodied Chaser	*Libellula depressa*	5	2017-2019	LBAP
	Brown Hawker	*Aeshna grandis*	43	1992-2019	LBAP
	Common Blue Damselfly	*Enallagma cyathigerum*	22	1924-2020	LBAP
	Common Darter	*Sympetrum striolatum*	16	1995-2019	LBAP
	Common Hawker	*Aeshna juncea*	2	1924-1932	LBAP
	Emperor Dragonfly	*Anax imperator*	22	2007-2021	LBAP
	Four-spotted Chaser	*Libellula quadrimaculata*	8	2016-2019	LBAP
	Large Red Damselfly	*Pyrrhosoma nymphula*	1	2019	LBAP
	Migrant Hawker	*Aeshna mixta*	10	2012-2019	LBAP
	Red-eyed Damselfly	*Erythromma najas*	25	2016-2020	LBAP
	Southern Hawker	*Aeshna cyanea*	12	1940-2019	LBAP
terrestrial mammal	Bat	*Chiroptera*	7	1987-2021	LBAP
	Brown Hare	*Lepus europaeus*	10	1970-2015	LBAP
	Common Pipistrelle	*Pipistrellus pipistrellus*	16	1987-2022	LBAP
	Daubenton's Bat	*Myotis daubentonii*	2	2021-2022	LBAP
	Noctule	*Nyctalus noctula*	3	1987-2022	LBAP
	Pipistrelle	*Pipistrellus*	9	1988-2020	LBAP
	Red Squirrel	*Sciurus vulgaris*	23	1967-2013	LBAP
	Soprano Pipistrelle	*Pipistrellus pygmaeus*	3	2007-2022	LBAP
	Water Vole	*Arvicola amphibius*	88	1980-2022	LBAP

Desig. Code	Desig. Name	Designation Description
LBAP	North Merseyside BAP	Species that are incorporated within the North Merseyside Biodiversity Action Plan. These species may or may not also be UK BAP species. Some species have their own action plans within the NM BAP, others are members of group species action plans.

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NM BAP species: Great Crested Newt (*Triturus cristatus*)
Great Crested Newt is thought to have been in decline since the 1940s. Over a period of five years in the 1980s 2% of all UK colonies were lost, and although Britain remains a stronghold for this species, it is now considered to be dependant on conservation and is afforded international protection.

There is no current North Merseyside population estimate, though recent surveys suggest that in the general North West area around 25% of ponds have Great Crested Newts. A study of the parts of the Sefton Coast showed that a number of populations were present.

This species is highly dependant on the quality of ponds and also the habitat in the surrounding area (where they forage and hibernate away from the water). Habitat loss is the greatest cause of decline with many ponds being drained or drying up as a result of natural succession. Removal of scrub and woodland in addition to over-grazing and intensive management of surrounding grassland is also detrimental. Other factors which may affect population levels include predation by fish and waterfowl, habitat fragmentation and pollution.

NM BAP species: Corn Bunting (*Emberiza calandra*)
Nationally this species has significantly declined with a loss of 90% of the UK population between 1970 and 2005 and large contractions in the species range.

Locally Corn Bunting is thought to have undergone severe declines with only an estimated 200 pairs remaining in 1997-99. Corn Buntings are sparsely distributed across much of North Merseyside's arable farmland.

Declines are thought to be caused by changes in agricultural practices. Sowing cereals later in the year, increasing use of herbicide and the removal of fallow fields have all greatly reduced winter seed sources. Increasing use of pesticides has reduced the availability of invertebrate food sources. Earlier crop harvesting may also result in the destruction of some nests, especially where there are limited un-cropped areas.

NM BAP species: Grey Partridge (*Perdix perdix*)
The UK population of Grey Partridge declined by 88% between 1970 and 2005 and though still widespread shows distinct variation according to agricultural practices. In North Merseyside there were an estimated 300 pairs in 1997-99 and they are present in all suitable habitat.

Loss of suitable habitat is the main cause of decline in this species, with changes in agricultural practices being particularly detrimental. The amalgamation of small fields into a larger ones and the removal of hedgerows, ditches and other field margins have destroyed potential nesting sites. Changes in sowing, harvesting and crop type have removed essential winter food sources.

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NM BAP species: Urban Birds (*Delichon urbicum; Passer domesticus; Sturnus vulgaris; Apus apus*)
The four species covered by the NM BAP Urban Birds Species Action Plan (House Martin, Swift, House Sparrow and Starling) are considered to be in significant decline across the UK. In North Merseyside House Sparrows and Starlings currently breed in all urban areas, while House Martins are restricted to areas nearer sources of mud for nest-building. Swifts occurred in only 55 tetrads during 1997-2000.

Urban bird numbers are thought to relate strongly to the availability of prey species, and nesting opportunities.

Declines are most likely caused by the reduction in the diversity and abundance of invertebrate prey species resulting from increased 'tidiness' in our parks and gardens, the use of pesticides and other changes in farm practices. The exclusion of urban birds from breeding in or around modern buildings reduces nesting opportunities for urban birds.

NM BAP species: Lapwing (*Vanellus vanellus*)
Between 1987 and 1998 Lapwing declined by 48% in England and Wales with Wales and the SW of England showing greatest loss. Two thirds of the population is now resident in the N and NW of England.

Locally this species continues to breed in all suitable habitats and the 2002-03 surveys indicated a population of around 1,500 pairs with arable farmland and pockets of grassland being particularly favoured.

Local threats are thought to include development in nesting areas, increasing recreation and disturbance, scrub encroachments on coastal grassland and changes in farm practice towards silage production, livestock and agricultural intensification.

NM BAP species: Skylark (*Alauda arvensis*)
Although Skylark is widespread throughout Europe and large numbers are thought to breed in the UK, it is in significant decline with a fall in the population of 75% between1972 and 1996 on lowland farms and an overall fall in the UK population of 53% between 1970 and 2005.

Locally Skylark breeds in all remaining suitable habitat and in 1997-2000 there were 750 breeding pairs but declines are thought to reflect the national trend.

This species relies heavily on traditional arable farming and so declines have largely been due to changes in farming practices in recent decades. Conversion to silage production, changes in sowing times and general agricultural intensification have all been particularly detrimental by reducing nesting habitat and sources of food.

Other causes of decline include overgrazing, disturbance during the breeding season and loss of grassland to development and tree planting.

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NM BAP species: Song Thrush (*Turdus philomelos*)
Although still widespread, Song Thrush declined sharply by around 73% in farmland (mid 1970s) and 49% in woodland (1968-1993), while overall UK numbers fell by 50% between 1970 and 2005. The North of the UK is thought to have been hit hardest.

In North Merseyside, though thinly distributed, Song Thrush still breed in most areas with an estimated 500 pairs during 1997-2000. Highest breeding concentrations were found to occur in suburban areas where abundant garden and parkland habitats were present.

Song Thrush are reliant on a variety of habitats to meet their needs at different times of the year and loss of these habitats is causes a reduction in numbers.

Local factors in the decline of the species include changes in farm practices that remove nesting habitat (hedgerows and dense scrub), limit the abundance of winter food (changes in sowing, cropping and use of herbicides/molluscicides) or cause the loss of feeding habitat (use of pesticides/herbicides and monocropping).

NM BAP species: Bluebell (*Hyacinthoides non-scripta*)
British Bluebells make up about 20% of the global population of *Hyacinthoides non-scripta* and are often found in humid woodland habitat, along hedgerows and on occasion along the coast. Locally there are a number of good colonies.

Local threats to the species include possible over-shading in un-managed woodlands, localised trampling by the public in popular areas and hybridisation with the Spanish Bluebell. On a national scale declines are cause by the loss of woodland habitat, grazing by introduced Muntjac, collection of plants and hybridisation with Spanish Bluebell.

NM BAP species: Purple Ramping-fumitory (*Fumaria purpurea*)
This species is endemic to Britain and here it is nationally scarce. Previously thought to be widespread throughout the arable farmland of the UK, the species has undergone a drastic decline in its numbers and range, with all recent records originating in the North-West and Cornwall.

Declines are thought to be linked to the increased use of weed-killers on farmland and the lack of available disturbed ground, on which the species depends for new seed germination (due to more intensive farming methods).

NM BAP species: Dragonflies (*Coenagrion puella; Calopteryx splendens; Ischnura elegans; Libellula depressa; Aeshna grandis; Enallagma cyathigerum; Sympetrum striolatum; Aeshna juncea; Anax imperator; Libellula quadrimaculata; Pyrrhosoma nymphula; Aeshna mixta; Erythromma najas; Aeshna cyanea*)
Twentyone species of dragonfly and damselfly are included in the NM BAP Dragonflies Species Action Plan. These include vagrant species and some which are thought to be undergoing range expansions in the UK. Eighteen of these species are known to breed in our local area, with significant breeding sites in St Helens and Sefton.

Local causes of decline in this include the destruction or damage of essential wetland habitat through development, waste-tipping and agricultural run-off. Removal of nearby feeding habitats such as woodlands, hedgerows and tall vegetation is also detrimental.

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NM BAP species: Brown Hare (*Lepus europaeus*)
Whilst still well distributed in North Merseyside it is thought that the local population of Brown Hare declined in-line with National trends which have shown severe declines in the western pastoral parts of the country to around 20% of the numbers present in Victorian times.

Reasons for local declines are thought to include loss and fragmentation of suitable habitat to development, illegal hunting and changes in farming practices and land use that cause increased disturbance (changes in cropping/sowing times, livestock trampling and recreation).

NM BAP species: Bats (*Pipistrellus pipistrellus; Myotis daubentonii; Nyctalus noctula; Pipistrellus pygmaeus*)
The NM BAP Bats Species Action Plan covers all species found in North Merseyside since all are considered to be locally threatened.

Bat Species are found throughout North Merseyside, with Pipistrelles (Common/Soprano) most often encountered and Brown Long-eared and Noctules less common. Daubenton's are also frequently encountered in suitable wetland habitat. Whiskered, Brandt's and Natterers are considered rare locally.

Bat species will roost in many locations that are warm, dark, sheltered and little undisturbed. Such places can include derelict buildings, barns, roof spaces and tree hollows.

Factors causing declines in these species include the loss of prey insects due to the increased use of pesticides and general park/garden 'tidiness', loss and fragmentation of habitat mosaics, loss of winter roosts in old trees and buildings and intentional exclusion from buildings by people.

NM BAP species: Red Squirrel (*Sciurus vulgaris*)
Over the last 100 years the UK range Red Squirrel has contracted massively. In most areas the species of Britain it has vanished and most populations are now restricted to areas of Scotland and North England. North Merseyside has a relatively stable population on the Sefton Coast with small numbers across Knowsley and St Helens.

Threats include the Grey Squirrel which carries the squirrel pox virus that appears to have been the main cause of the red squirrel decline in Britain. In addition the fragmentation of woodland has reduced suitable habitat and increased road mortality as individuals try to move between pockets of habitats. Locally, over-maturation of trees will soon greatly reduce the Red Squirrels food source.

NM BAP species: Water Vole (*Arvicola amphibius*)
This species is found throughout Britain but localised to areas of suitable habitat near water. Previously common this species has undergone severe range and population reductions, with a national survey showing a decline of around 89% since 1939, estimated to increased to a loss of 94% by 2000. Merseyside appears to be a stronghold for the species with 75% of sites surveyed having Water Voles present in 1989-90. Though they may still be in decline locally, it is thought to be at a lower level than nationally.

Local declines in the species are caused by inappropriate management of bank-side habitats and waterside developments as well as predation by invasive species such as mink. The use of rodenticides and loss of habitat connectivity may also be factors in population declines.

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NERC Act Section 41 Species

Known also as 'Species of Principle Importance in England' and the 'England Biodiversity List' this list was developed to meet the requirements of Section 40 of the Natural Environment and Rural Communities Act (2006). The list is derived, almost wholly, from the 2012 revised list of 'UK Post-2010 Biodiversity Framework' priority species. (So called 'research only' moth species have been excluded from the report.). The section 41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions. In particular:

- Regional Planning Bodies and Local Planning Authorities must use it to identify the species that should be afforded priority when applying the requirements of National Planning Policy Framework (NPPF) to maintain, restore and enhance species and habitats.
- Local Planning Authorities must use it to identify the species that require specific consideration in dealing with planning and development control, recognising that under NPPF the aim of planning decisions should be to minimise impacts on biodiversity and geodiversity.
- All Public Bodies must use it to identify species that should be given priority when implementing the NERC Section 40 duty.

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The following tables detail the NERC Section 41 species that were recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
amphibian	Common Toad	*Bufo bufo*	4	2008-2020	Sect.41
	Great Crested Newt	*Triturus cristatus*	4	1936-2011	Sect.41
bird	Bullfinch	*Pyrrhula pyrrhula*	2	1998-1999	Sect.41.suppl
	Corn Bunting	*Emberiza calandra*	9	1997-2002	Sect.41.suppl
	Cuckoo	*Cuculus canorus*	6	1997-1998	Sect.41
	Dunnock	*Prunella modularis*	8	1997-1998	Sect.41.suppl
	Grasshopper Warbler	*Locustella naevia*	5	1997-1998	Sect.41
	Grey Partridge	*Perdix perdix*	8	1997-2002	Sect.41
	House Sparrow	*Passer domesticus*	14	1997-2001	Sect.41
	Lapwing	*Vanellus vanellus*	11	1997-2002	Sect.41
	Lesser Redpoll	*Acanthis cabaret*	4	1997-2000	Sect.41
	Linnet	*Linaria cannabina*	10	1997-2002	Sect.41.suppl
	Reed Bunting	*Emberiza schoeniclus*	6	1997-2002	Sect.41
	Skylark	*Alauda arvensis*	15	1996-2002	Sect.41,Sect.41.suppl
	Song Thrush	*Turdus philomelos*	9	1997-2000	Sect.41.suppl
	Spotted Flycatcher	*Muscicapa striata*	3	1997-1998	Sect.41
	Starling	*Sturnus vulgaris*	8	1997-1998	Sect.41.suppl
	Tree Sparrow	*Passer montanus*	4	1998	Sect.41
	Turtle Dove	*Streptopelia turtur*	2	1998	Sect.41
	Willow Tit	*Poecile montanus*	3	1998-2000	Sect.41.suppl
	Yellow Wagtail	*Motacilla flava*	3	1998	Sect.41.suppl
	Yellowhammer	*Emberiza citrinella*	5	1997-1998	Sect.41
bony fish (Actinopterygii)	Brown/Sea Trout	*Salmo trutta*	3	2005	Sect.41
	European Eel	*Anguilla anguilla*	5	2001-2015	Sect.41
flowering plant	Annual Knawel	*Scleranthus annuus*	1	1936	Sect.41
	Coral-necklace	*Illecebrum verticillatum*	2	1989-1990	Sect.41
	Cornflower	*Centaurea cyanus*	6	1902-2016	Sect.41
	Purple Ramping-fumitory	*Fumaria purpurea*	1	2014	Sect.41
	Strapwort	*Corrigiola litoralis*	1	1993	Sect.41
	True Fox-sedge	*Carex vulpina*	1	2014	Sect.41
insect - butterfly	Small Heath	*Coenonympha pamphilus*	3	1977-2012	Sect.41
	Wall	*Lasiommata megera*	5	1992-1995	Sect.41
insect - hymenopteran	Shrill Carder Bee	*Bombus sylvarum*	2	1970	Sect.41
insect - moth	Buff Ermine	*Spilosoma lutea*	46	1968-2005	Sect.41
	Sallow	*Cirrhia icteritia*	1	2004	Sect.41
terrestrial mammal	Bat	*Chiroptera*	7	1987-2021	Sect.41
	Brown Hare	*Lepus europaeus*	10	1970-2015	Sect.41
	Hedgehog	*Erinaceus europaeus*	30	1970-2022	Sect.41
	Noctule	*Nyctalus noctula*	3	1987-2022	Sect.41
	Otter	*Lutra lutra*	2	2020	Sect.41
	Pipistrelle	*Pipistrellus*	9	1988-2020	Sect.41
	Red Squirrel	*Sciurus vulgaris*	23	1967-2013	Sect.41

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	Soprano Pipistrelle	*Pipistrellus pygmaeus*	3	2007-2022	Sect.41
	Water Vole	*Arvicola amphibius*	88	1980-2022	Sect.41

Desig. Code	Desig. Name	Designation Description
Sect.41	Natural Env. and Rural Communities Act 2006. Species of Principal Importance in England (section 41)	Species “of principal importance for the purpose of conserving biodiversity” covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.
Sect.41.suppl	Supplementary list to deal with S41 bird sub-sp problems	Bird species corresponding to British sub-species listed in section 41 (England) of the NERC Act (2006).

IUCN Red-listed Species

The IUCN Red List of Threatened Species (sometimes called 'Red Data Book' species) indicates the conservation status of plants and animals that have been globally evaluated using the IUCN Red List Categories and Criteria. The system is designed to determine the relative risk of extinction, and the main purpose of the IUCN Red List is to catalogue and highlight those plants and animals that are facing a higher risk of global extinction (i.e. those listed as Critically Endangered, Endangered and Vulnerable). The IUCN Red List also includes information on plants and animals that are categorized as 'Extinct' or 'Extinct in the Wild'; on taxa that cannot be evaluated because of insufficient information ('Data Deficient'); and on plants and animals that are either close to meeting the threatened thresholds or that would be threatened were it not for an ongoing taxon-specific conservation programme ('Near Threatened').

The following tables detail the IUCN Red-listed species that were recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
flowering plant	Annual Knawel	*Scleranthus annuus*	1	1936	RLGB.EN
	Coral-necklace	*Illecebrum verticillatum*	2	1989-1990	RLGB.EN
	Corn Marigold	*Glebionis segetum*	3	1902-2008	RLGB.VU
	Corn Spurrey	*Spergula arvensis*	1	1987	RLGB.VU
	Field Woundwort	*Stachys arvensis*	6	1930-2019	RLGB.Lr(NT)
	Large-flowered Hemp-nettle	*Galeopsis speciosa*	1	1902	RLGB.VU
	Lesser Water-plantain	*Baldellia ranunculoides*	1	1902	RLGB.Lr(NT)
	Strapwort	*Corrigiola litoralis*	1	1993	RLGB.EN
	True Fox-sedge	*Carex vulpina*	1	2014	RLGB.VU
	Wild Pansy	*Viola tricolor*	2	1894-1990	RLGB.Lr(NT)
insect - beetle (Coleoptera)	Alder Leaf Beetle	*Agelastica alni*	11	2016-2022	RLGB.DD
insect - butterfly	Small Heath	*Coenonympha pamphilus*	3	1977-2012	RLGB.Lr(NT)
	Wall	*Lasiommata megera*	5	1992-1995	RLGB.Lr(NT)
insect - dragonfly (Odonata)	Common Darter	*Sympetrum striolatum*	16	1995-2019	RLGB.DD
mollusc	Large Black Slug	*Arion (Arion) ater*	1	1995	RLGB.DD
terrestrial mammal	Bat	*Chiroptera*	7	1987-2021	RLGB.CR,RLGB.DD,RLGB.EN,RLGB.Lr(NT),RLGB.VU
	Hedgehog	*Erinaceus europaeus*	30	1970-2022	RLGB.VU
	Pipistrelle	*Pipistrellus*	9	1988-2020	RLGB.Lr(NT)
	Red Squirrel	*Sciurus vulgaris*	23	1967-2013	RLGB.EN
	Water Vole	*Arvicola amphibius*	88	1980-2022	RLGB.EN

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Desig. Code	Desig. Name	Designation Description
RLGB.EN	IUCN (2001) - Endangered	A taxon is Endangered when it is not Critically endangered but is facing a very high risk of extinction in the wild in the near future.
RLGB.VU	IUCN (2001) - Vulnerable	A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium term future.
RLGB.Lr(NT)	IUCN (2001) - Lower risk - near threatened	Taxa which do not qualify for Lower Risk (conservation dependent), but which are close to qualifying for Vulnerable. In Britain, this category includes species which occur in 15 or fewer hectads but do not qualify as Critically Endangered, Endangered or Vulnerable.
RLGB.DD	IUCN (2001) - Data Deficient	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat or Lower Risk. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that a threatened category is appropriate.
RLGB.CR	IUCN (2001) - Critically endangered	A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the criteria A to E.

Nationally Notable Species

These are plants and animals which do not fall within red-list categories but which are none-the-less uncommon in Great Britain.

The following tables detail the Nationally Notable species that were recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
flowering plant	Chives	*Allium schoenoprasum*	1	2019	NS-excludes
	Coral-necklace	*Illecebrum verticillatum*	2	1989-1990	NR-excludes
	Fringed Water-lily	*Nymphoides peltata*	7	1982-2018	NS-excludes
	Large-leaved Lime	*Tilia platyphyllos*	2	1999-2022	NS-excludes
	Northern Yellow-cress	*Rorippa islandica*	1	1919	NS-excludes
	Purple Ramping-fumitory	*Fumaria purpurea*	1	2014	NS-excludes
	Strapwort	*Corrigiola litoralis*	1	1993	NR-excludes
	Tall Hawkweed	*Hieracium acuminatum*	1	1933	NR-excludes
	Toothed Medick	*Medicago polymorpha*	1	1902	NS-excludes
	True Fox-sedge	*Carex vulpina*	1	2014	NR-excludes
	Welsh Poppy	*Meconopsis cambrica*	1	2019	NS-excludes
insect - hymenopteran	Shrill Carder Bee	*Bombus sylvarum*	2	1970	Nb
	Slave-making Ant	*Formica sanguinea*	1	1924-1932	Nb

Desig. Code	Desig. Name	Designation Description
NS-excludes	Nationally Scarce. Excludes Red Listed taxa	Nationally Scarce - Occurring in 16-100 hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria
NR-excludes	Nationally Rare. Excludes Red Listed taxa	Nationally Rare - Occurring in 15 or fewer hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.
Nb	Nationally Notable B	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups between eight and twenty vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.

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WCA schedule 9 species (including non-native invasive plants)

Schedule 9 of the Wildlife & Countryside Act (amended 2010) lists species of plants and animals for which it is a specific offence to plant or otherwise cause to grow in the wild (plants) or release or allow to escape into the wild (animals). Many of these are invasive non-native plants and animals, but there are also a number of native animals on the list (e.g. Barn Owl) which cannot be released into the wild in England without a license from Natural England.

The following tables detail the WCA Schedule 9 species recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
bird	Barn Owl	*Tyto alba*	4	1997-2000	MBB-WCA-S9
	Canada Goose	*Branta canadensis*	1	1997	MBB-WCA-S9
fern	Water Fern	*Azolla filiculoides*	2	2004-2006	MBB-WCA-S9
flowering plant	Canadian Waterweed	*Elodea canadensis*	4	1981-1983	MBB-WCA-S9
	Curly Waterweed	*Lagarosiphon major*	1	2014	MBB-WCA-S9
	Floating Pennywort	*Hydrocotyle ranunculoides*	1	2019	MBB-WCA-S9
	Himalayan Balsam	*Impatiens glandulifera*	106	1976-2022	MBB-WCA-S9
	Japanese Knotweed	*Fallopia japonica*	29	1982-2018	MBB-WCA-S9
	Japanese Rose	*Rosa rugosa*	3	2019-2022	MBB-WCA-S9
	Nuttall's Waterweed	*Elodea nuttallii*	3	1992-2014	MBB-WCA-S9
	Rhododendron ponticum	*Rhododendron ponticum*	2	2016-2022	MBB-WCA-S9
	Water-hyacinth	*Eichhornia crassipes*	1	2014	MBB-WCA-S9
	Water-lettuce	*Pistia stratiotes*	1	2014	MBB-WCA-S9
terrestrial mammal	American Mink	*Neovison vison*	2	2001	MBB-WCA-S9
	Grey Squirrel	*Sciurus carolinensis*	18	2002-2022	MBB-WCA-S9

Desig. Code	Desig. Name	Designation Description
MBB-WCA-S9	Wildlife and Countryside Act 1981 (Variation of Schedule 9) (England and Wales) Order 2010	Species on Schedule 9 (part 2) as revised 2010. Under section 14 of the Act it is illegal to release into the wild any animal or allow to grow in the wild any plant which is not ordinarily resident in GB or which is a known threat and is listed on Schedule 9 of the Act.

BAP priority habitats

In 2007 the Local Biodiversity Manager (responsible for the North Merseyside Biodiversity Action Plan) undertook a review of the extent of UK BAP priority habitats in North Merseyside and produced GIS layers to show their extents. In most cases these inventories were derived from two main sources: the latest Phase 1 habitat surveys which were conducted for the four North Merseyside local authorities between 1996 and 2007; and an NVC survey of the Sefton Coast carried out between 2003 and 2004. A separate NVC survey of the Ribble estuary carried out in 2002 (which also included saltmarsh at the Alt) was also useful as were one or two other sources. Because of the diverse nature of habitat classifications, it was not always possible to produce inventories with a one-to-one correspondence with UK BAP priority habitats. The table below shows the BAP habitat inventories for North Merseyside and their correspondence with UK BAP priority habitats.

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North Merseyside habitat inventory	Correspondence with UK BAP priority habitats
Lowland Acid Grassland	Lowland Dry Acid Grassland
Lowland Heathland	Lowland Heathland
Lowland Raised Bog	Lowland Raised Bog
Neutral Grassland	Incorporates the UK BAP habitat Lowland Meadows but also, in North Merseyside, includes a lot of amenity grassland, road verges etc.
Calcareous Grassland	Calcareous Grassland
Ponds	Ponds
Lakes	Eutrophic lakes
Reedbeds	Reedbeds
Hedgerows	Hedgerows
Saltmarsh	Coast Saltmarsh
Sand Dune	Coastal Sand Dune
All Woodland	It was not possible, from the available data, to produce separate inventories for different woodland types in North Merseyside, so this inventory incorporates elements of several UK BAP priority habitats such as Lowland Mixed Deciduous Woodland, Wet Woodland and Wood Pasture & Parkland.

Note that the 'Ponds' BAP inventory was derived locally using water bodies less than two hectares in extent from Ordnance Survey data. The 'Lakes' BAP inventory is a nationally supplied inventory, but the lakes are only represented in this as points. Therefore any water body over two hectares in extent will only be represented on our habitat maps by a point and will not show the extent of the lake. However, ponds will be indicated by polygons showing their extent. Occasionally a large pond – though still less than two hectares in extent – will be represented in both the 'Lake' and 'Pond' inventories.

Habitat	Amount	Units
Hedgerows	16.88	kilometres
Lowland Acid Grassland	0.87	hectares
All Woodland	38.41	hectares
Neutral Grassland	46.34	hectares
Ponds	1.05	hectares
Ponds	10	count

The table above indicates the extent of each of the BAP habitat inventories (see previous table) occuring within your search area (see appendix 3 for maps).

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Designated Areas

There are a number of types of 'designated areas' in North Merseyside. These types are shown in the table below together with the total number of North Merseyside sites for each.

Type of area	No. of sites
Site of Special Scientific Interest	6
Special Protection Area (Natura 2000)	3
Marine Special Protection Area	1
Special Area of Conservation (Natura 2000)	1
RAMSAR (wetland of international importance)	3
National Nature Reserve	3
Local Nature Reserve	57
Knowsley Local Wildlife Site	65
Sefton Local Wildlife Site	55
St Helens Local Wildlife Site	117
Liverpool Local Wildlife Site	29
Merseyside Ancient Woodland Inventory	11
RSPB/LWT Windfarm Alert Map	1
Red Squirrel Protection Area	1

The following table indicates the results of the intersection between the search area and designated areas detailed above (see appendix 2 for maps).

Name	Type
River Alt and M57 Corridor	Nature Improvement Area
Kirkby Brook Waterfall	Knowsley Local Geological Site
Little Brook, Kirkby	Knowsley Local Geological Site
Simonswood Brook	Knowsley Local Wildlife Site
Kirkby Brook, including Mill Brook	Knowsley Local Wildlife Site
River Alt, Kirkby	Knowsley Local Wildlife Site
Mill Brook, Westvale	Knowsley Local Wildlife Site
Meadow, Kirkby (Mill) Brook, s of Old Hall Lane	Knowsley Local Wildlife Site
Kirkby Brook	Knowsley Local Wildlife Site
Northwood Forest Hills	Knowsley Local Wildlife Site
River Alt & adjacent sites through Gilmoss including Fazackerley WwTw	Liverpool Local Wildlife Site
Knowsley Brook	Liverpool Local Wildlife Site
Fazakerley Sidings, Aintree	Sefton Local Wildlife Site
Knowsley Brook	Knowsley Local Wildlife Site
Land e of canal, n of Wango Lane, Waddicar	Sefton Local Wildlife Site
Wango Lane Wetland	Knowsley Local Wildlife Site

Citations[1] for Local Wildlife Sites are supplied separately.

[1] In Knowsley, some Local Wildlife Site citations do not include lists of species and habitats for which they are designated and where this is the case a separate list is supplied for the site. No citations for LNRs are available. Citations for national and internationally designated sites (SSSI, SPA etc) are publicly available.

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Interpretation and caveats

Merseyside BioBank records included

All relevant non-confidiential records managed by Merseyside BioBank which intersect the search area are included in this report, except where excluded by one or more of the conditions described in the rest of this section.

NBN Atlas records included

All relevant records available to Merseyside BioBank from the NBN Atlas are included in this report, except where excluded by one or more of the conditions described in the rest of this section. NBN Atlas records are accessed live *via* web-services at the time of report generation.

Merseyside BioBank often has access to NBN records at higher resolution than the standard 'public' access. These records have been downloaded and used with the permission of the data providers, but are subject to normal NBN Atlas terms and conditions. You must not use them beyond the specific purposes for which this report was provided to you and you must adhere, at all times, to the NBN Atlas terms and conditions.

Record location and dates

If a record can only be located to a relatively low precision (e.g. 1 km or 2 km square), then it is possible that the unrecorded precise location of the animal or plant might have been outside of the search area. Sometimes the location name column can be useful in deciding whether or not this was likely to have been the case. In records from our own database, we have replaced all digits with the '#' character in the location field to people's privacy where addresses have been used as location names.

Records which are only available to us at less than 2 km square (tetrad) precision are excluded from the report. We report dates at the highest precision available to us. Records for which no date is available are excluded from the report.

Sensitive taxa

For some sensitive taxa, the precision of grid references presented here may have been reduced. We do this for:

- all records of Badger; and
- records of breeding Otter.

In addition, we do not report on 'negative records' for Badger or Otter.

Absence of records and 'negative records'

The absence of biological records for an area, or the presence of 'negative records', is not proof that taxa are not present.

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Duplicate records
Although we do our very best to avoid reporting the same record more than once ('duplicate records') this is sometimes unavoidable for records that have entered the biological records network *via* more than one route. In particular, there may be some record duplication between records from Merseyside BioBank's database and records from the NBN Atlas datasets (though, of course, we do not report on NBN Atlas records which originate from Merseyside BioBank).

Validity of records
Whilst Merseyside BioBank continually strives to verify the records that we manage, we accept no responsibility for any errors subsequently discovered. Merseyside BioBank accepts no responsibility for errors in data derived from the NBN Atlas.

Verification status of records
Records used in this report include those considered verified and those as yet unchecked. This approach is taken on balance to ensure that all potential risks that we are aware of have been flagged.

Bird records
Only bird records with a recorded status of proven, probable and possible breeding have been included in this data search. Bird records with other statuses are not included. The most recent bird records for North Merseyside included, e.g. those generated for the ongoing breeding and wintering atlas projects, since these data have yet to undergo verification by the County Bird Recorder. It is possible for you to contact the County Bird Recorder independently for his interpretation of the most recent data with respect to your search area. The contact details are:

Steve White
stevewhite102@btinternet.com

Please note that if this is a commercial data request you will be invoiced by **Sefton Borough Council**, which is the hosting authority for Merseyside BioBank.

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Appendix 1: Terms and conditions of use

Merseyside BioBank receives data from a variety of sources, from large organisations to amateur naturalists. With Merseyside BioBank operating as custodians, these individuals and groups, who provide their records free of charge, retain copyright on their data.

All data passed to a third party (users) by Merseyside BioBank are subject to these access terms and conditions. Non-adherence to these terms and conditions will be viewed as a breach of contract, which may result in legal redress being sought.

1. Users agree that data released by Merseyside BioBank, in any format and on any media, will only be used for the purpose for which it was originally requested and for any time period originally agreed upon (See note 3 below).

2. Users agree that data released by Merseyside BioBank will not be added to any permanent database system (electronic or paper based) unless by written agreement with Merseyside BioBank.

3. Users understand that following the end of the agreed time period, or 12 months from the enquiry date, the received data must be deleted from any electronic system (See note 2 above). Use of the data beyond this period must be preceded by a further request to Merseyside BioBank.

4. Users agree that data retrieved from Merseyside BioBank will not be passed on to or communicated with third parties except as aggregated data within reports, or as anonymised data in the form of maps etc., which constitute a part of the agreed reason for the original enquiry.

5. Merseyside BioBank disclaims any responsibility for the accuracy of the information within its reports and accepts no liability for any result of using these data.

6. Any biological record is specific to the date of the recording and does not necessarily imply the continuance of the species at that site.

7. The lack of species and/or habitat information for a geographically defined area does not necessarily imply a low biodiversity value for that area. It may simply be unrecorded.

8. While the information from Merseyside BioBank in itself will remain free, Merseyside BioBank reserves the right to charge a reasonable fee to cover administration and a proportion of overheads as detailed in our charging policy.

9. A copy of any report, or other product, produced using the data from Merseyside BioBank would be gratefully received if provided without cost.

10. Merseyside BioBank must be acknowledged within any report, or other product produced, using data provided by Merseyside BioBank.

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Appendix 2: Maps

The following page(s) include maps to illustrate some of the results of your data request. They should be viewed in the context of the results supplied in the main body of the report.

The Ordnance Survey mapping included in the maps provided by Merseyside BioBank under Sefton Council's licence from Ordnance Survey. These maps are provided to assist decision-makers in the effective and sustainable management of land, species and habitats. Ordnance Survey should be contacted directly if any of these maps are to be used in another document.

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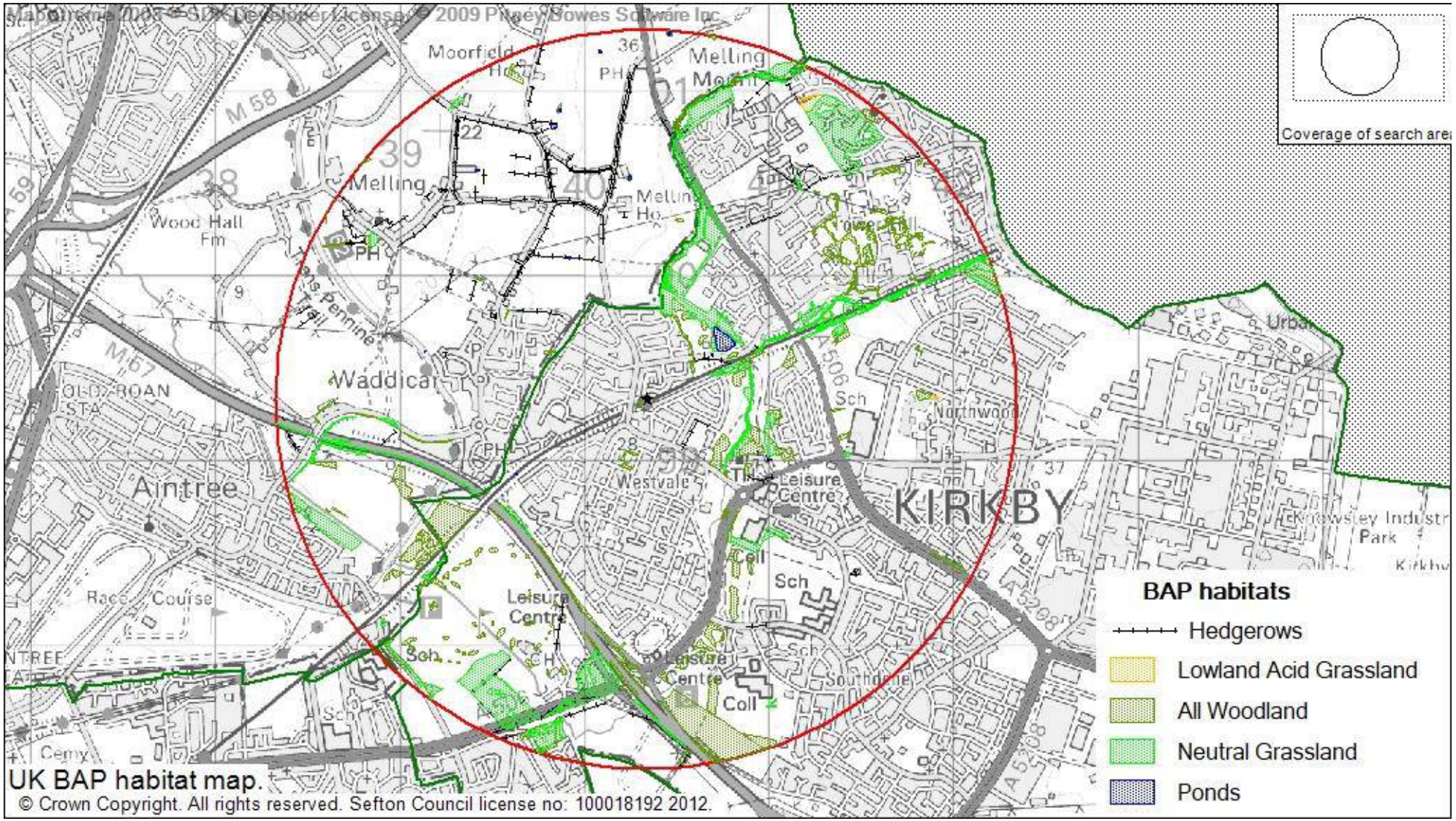

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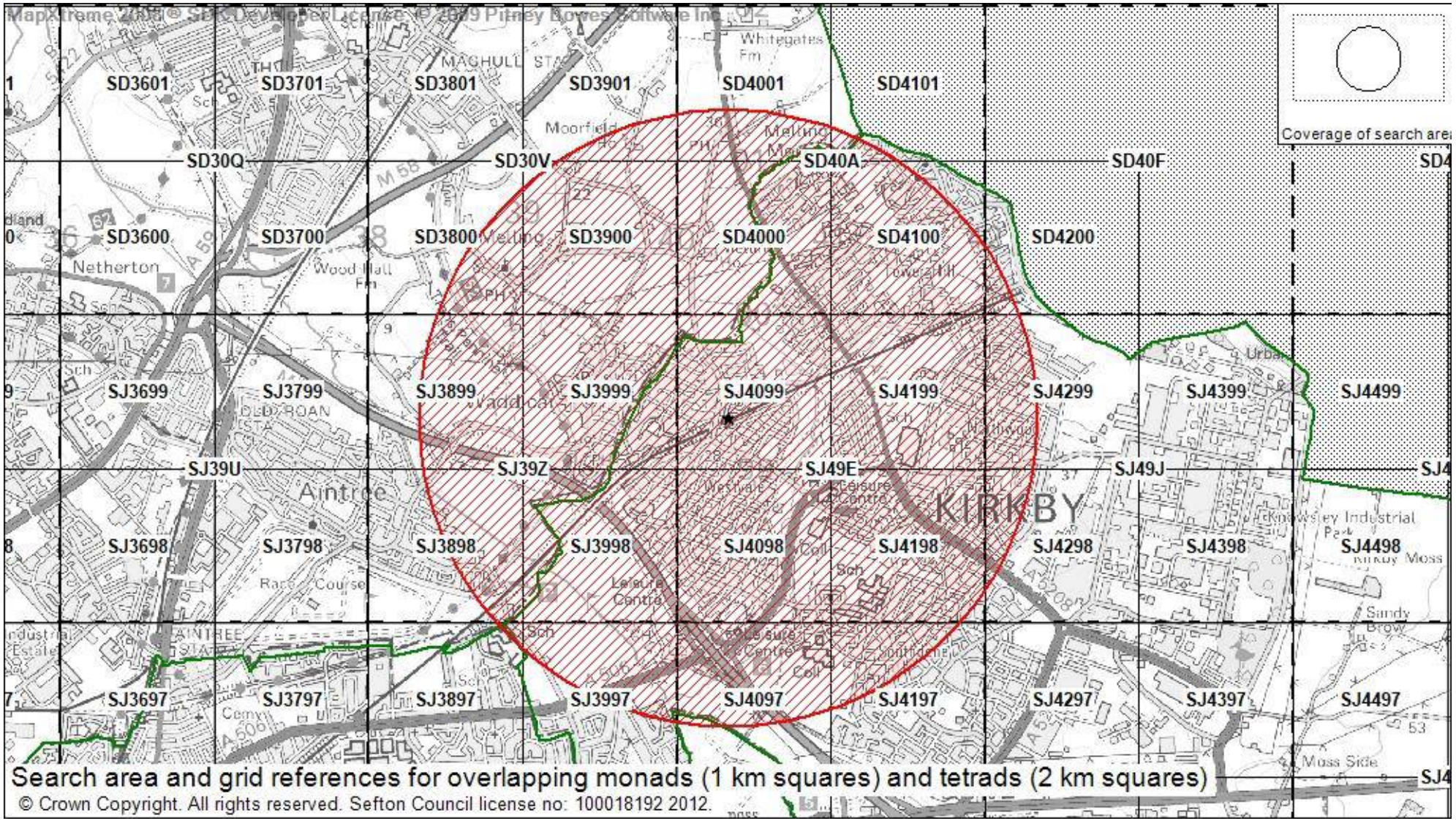

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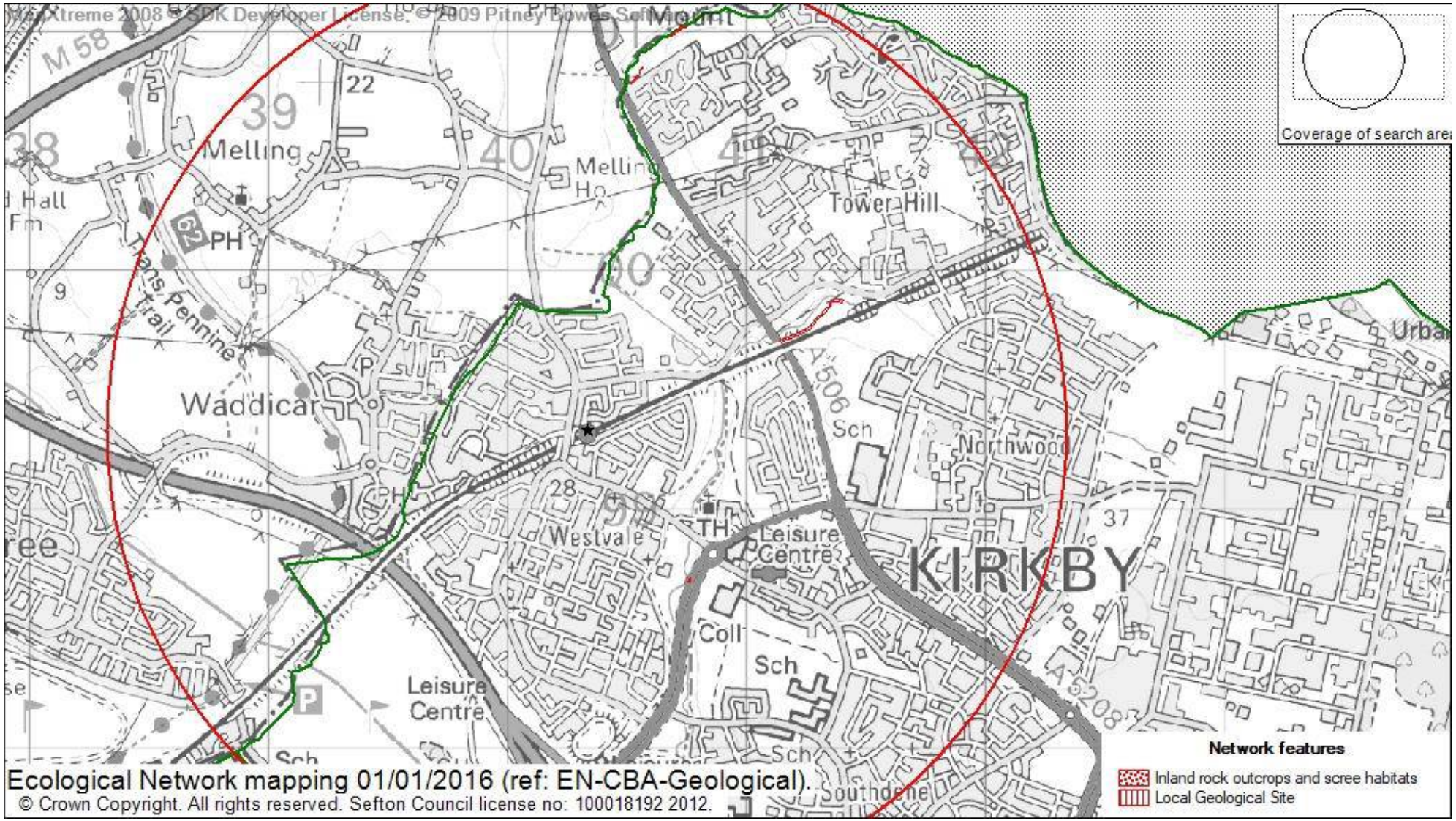

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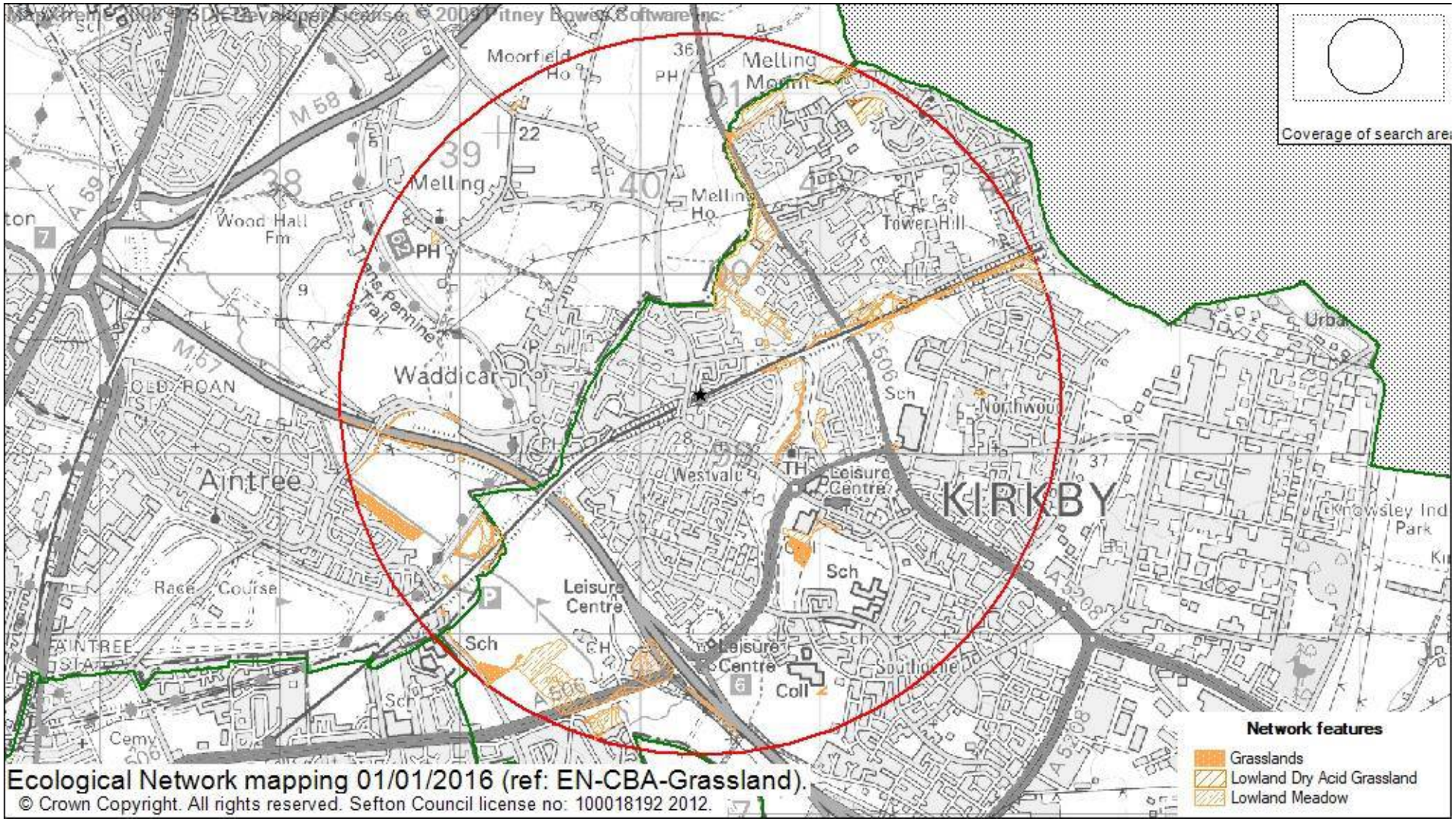

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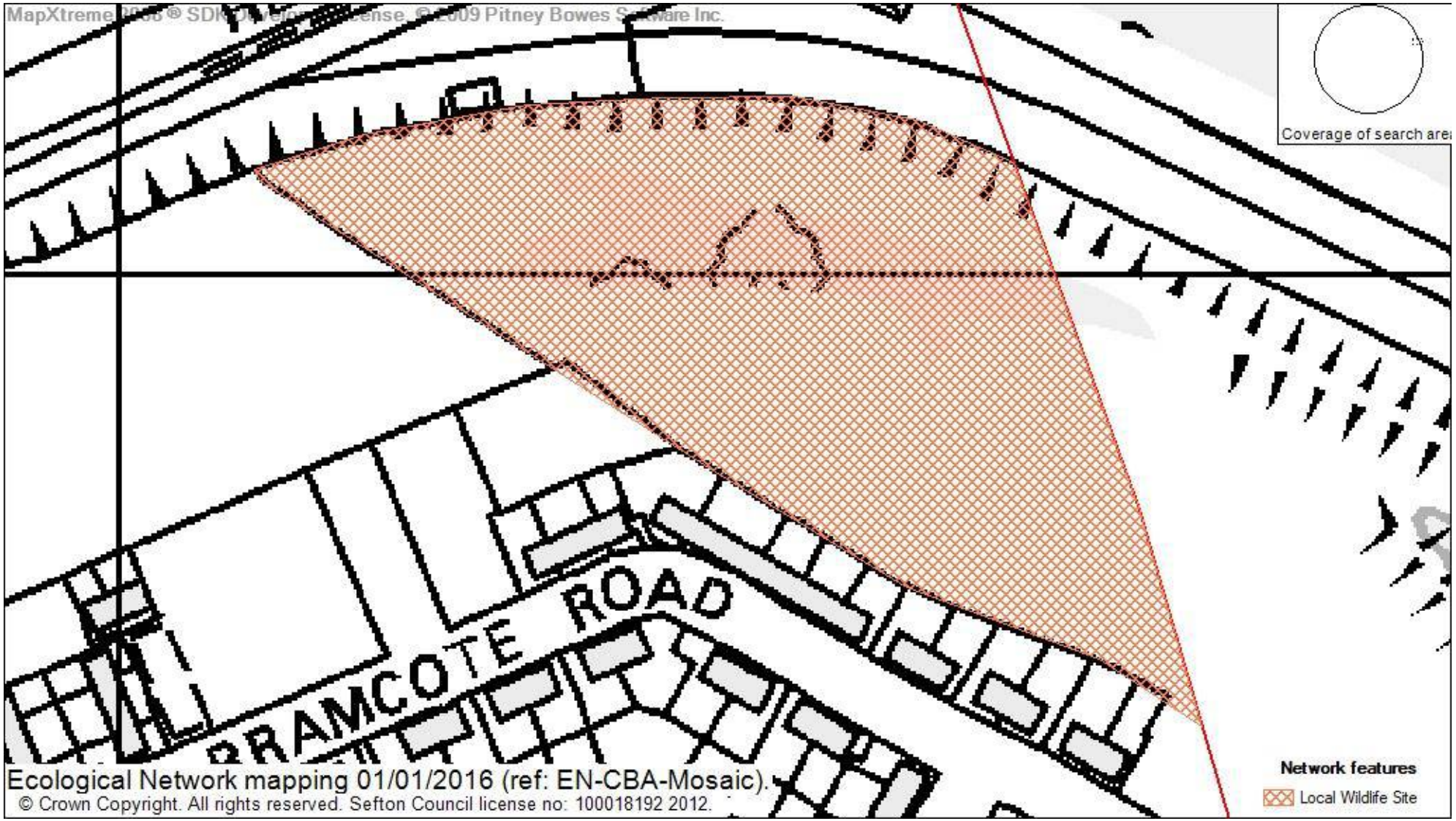

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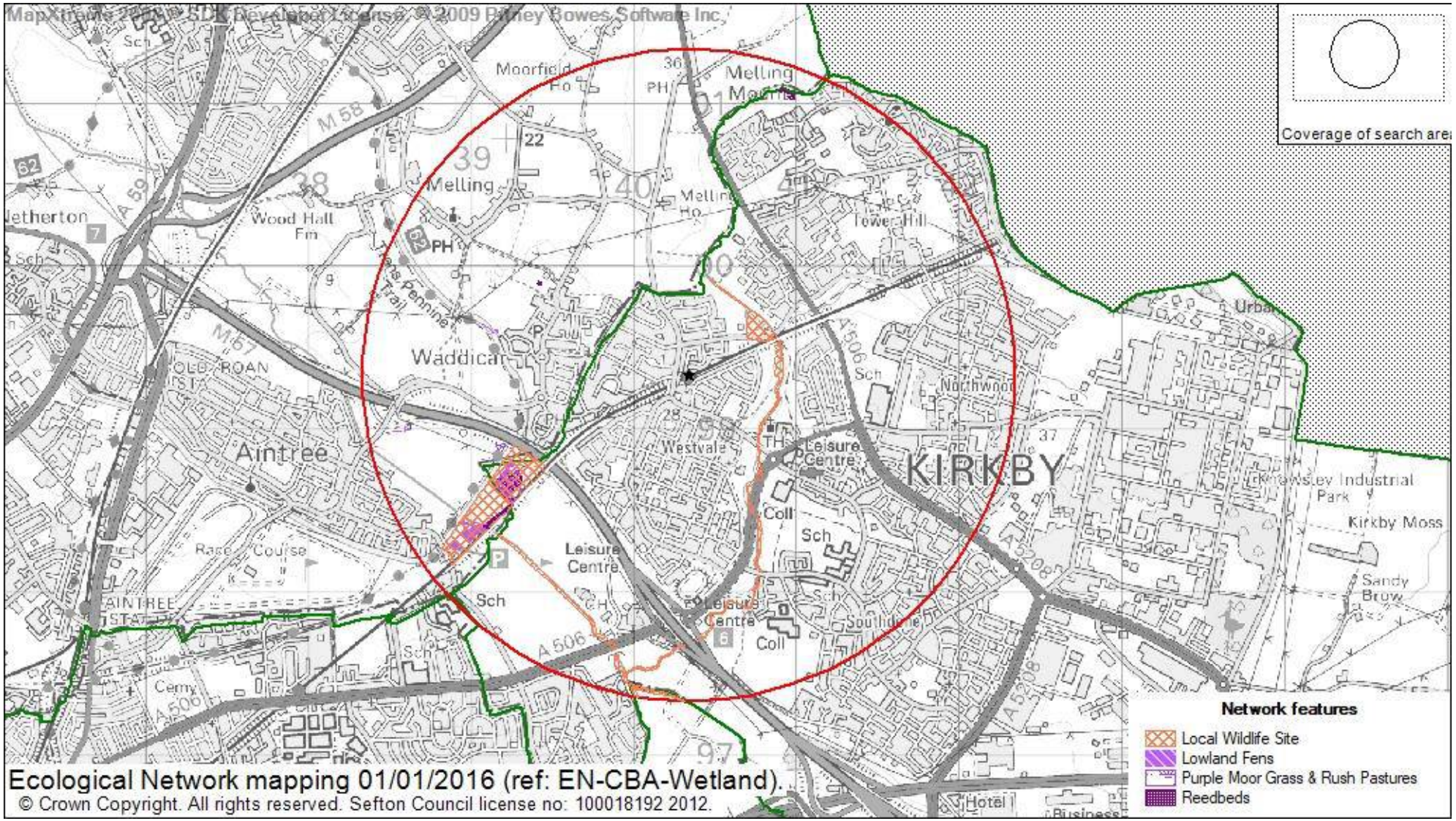

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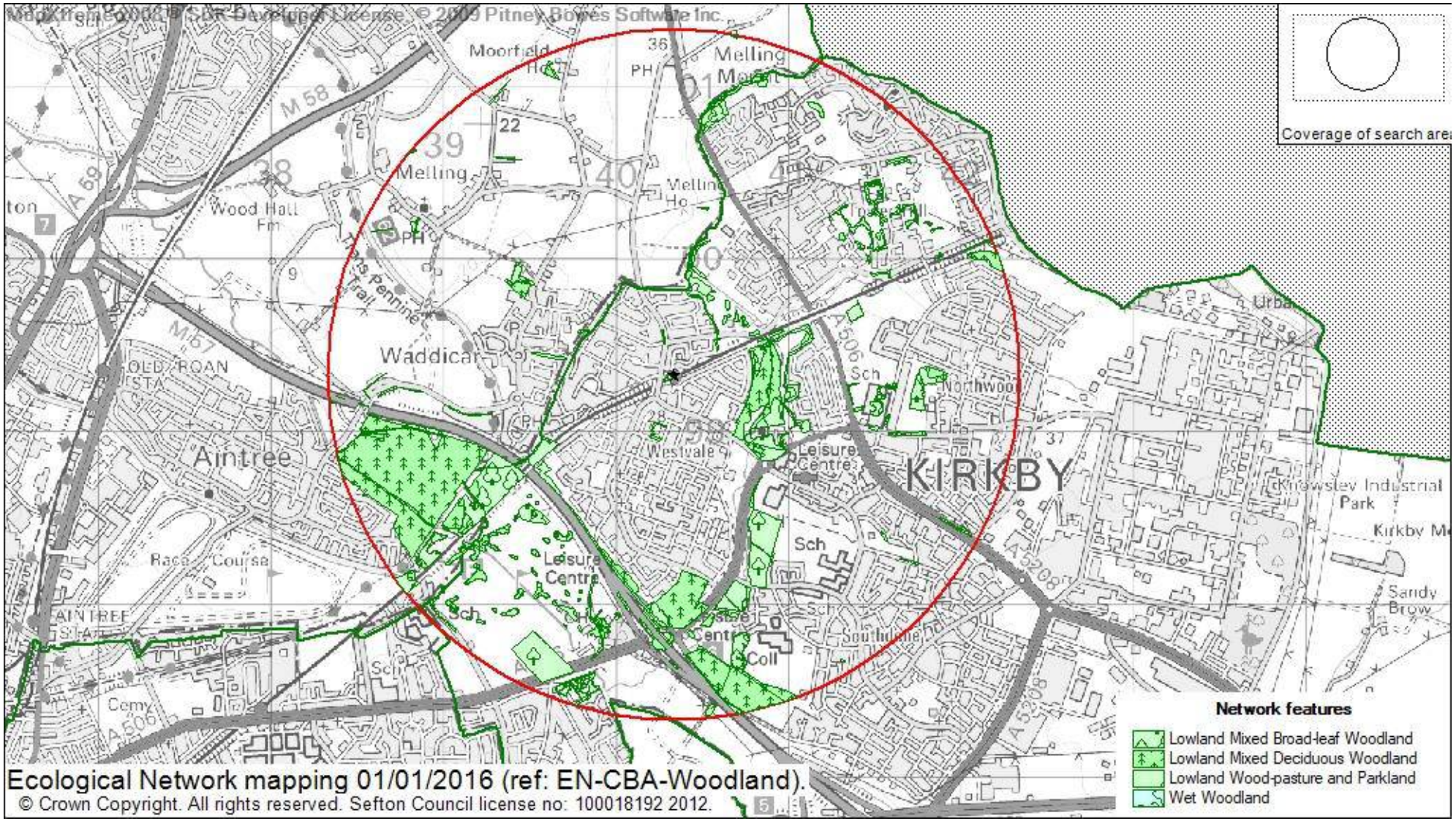

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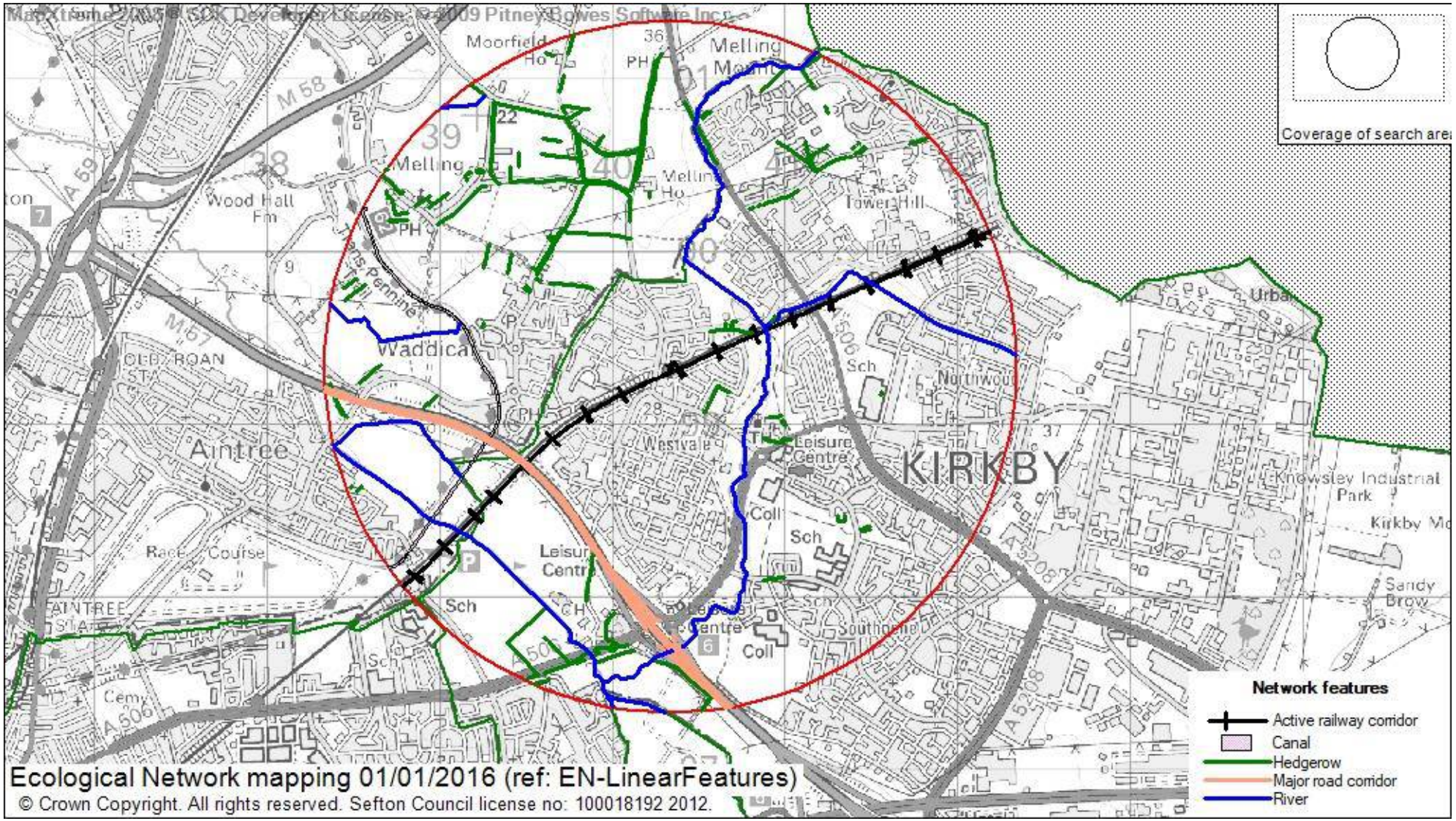

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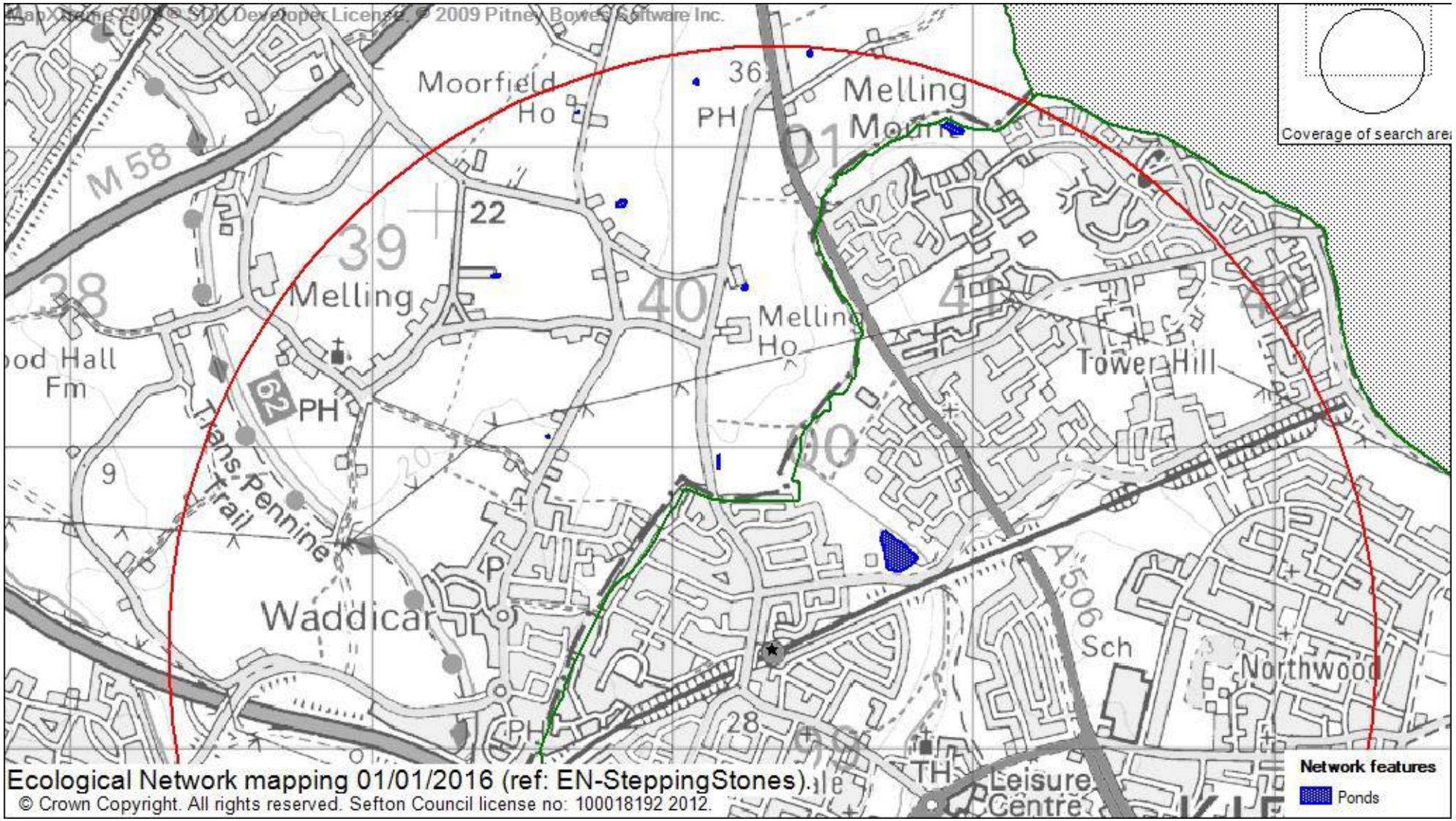

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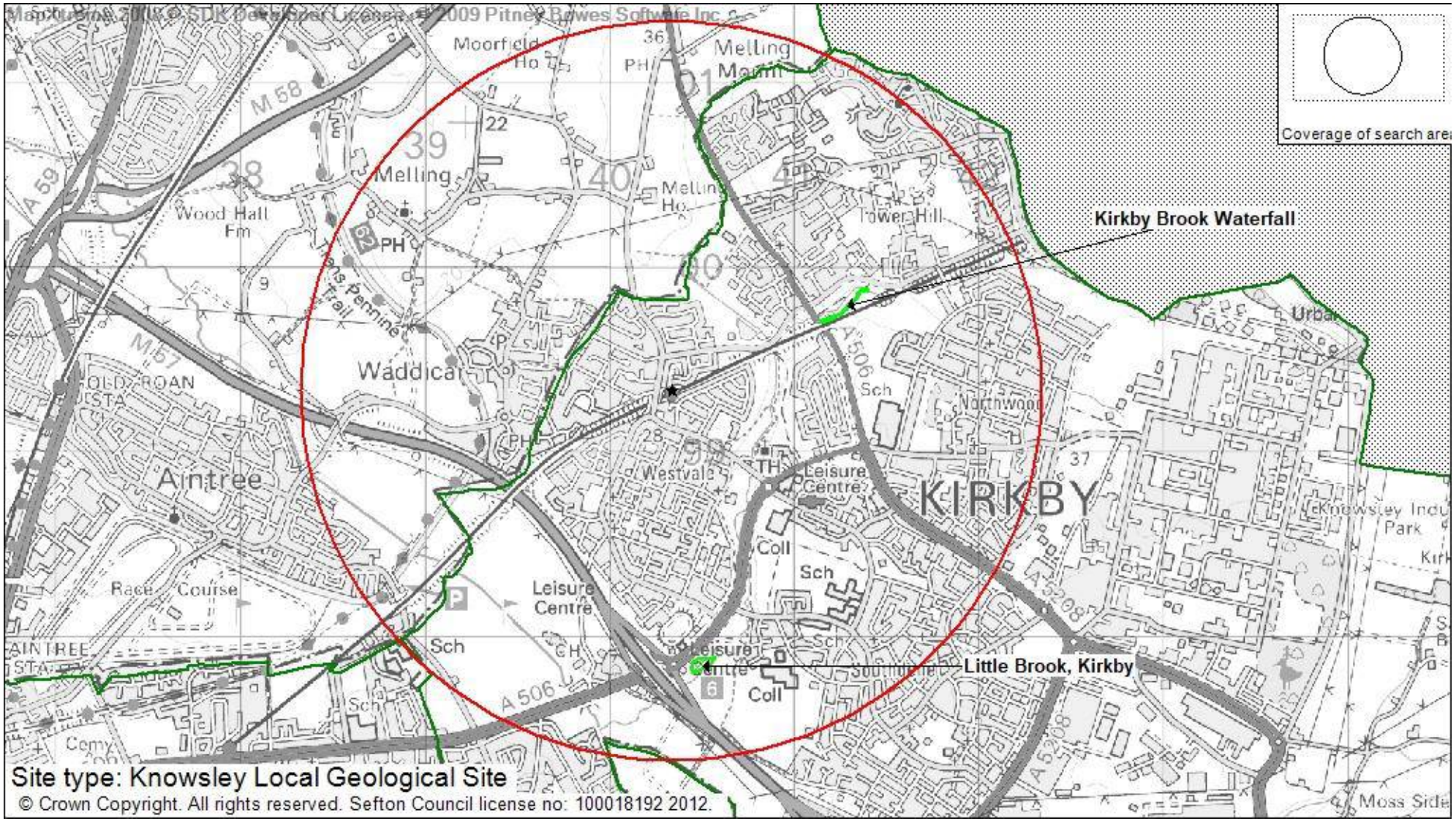

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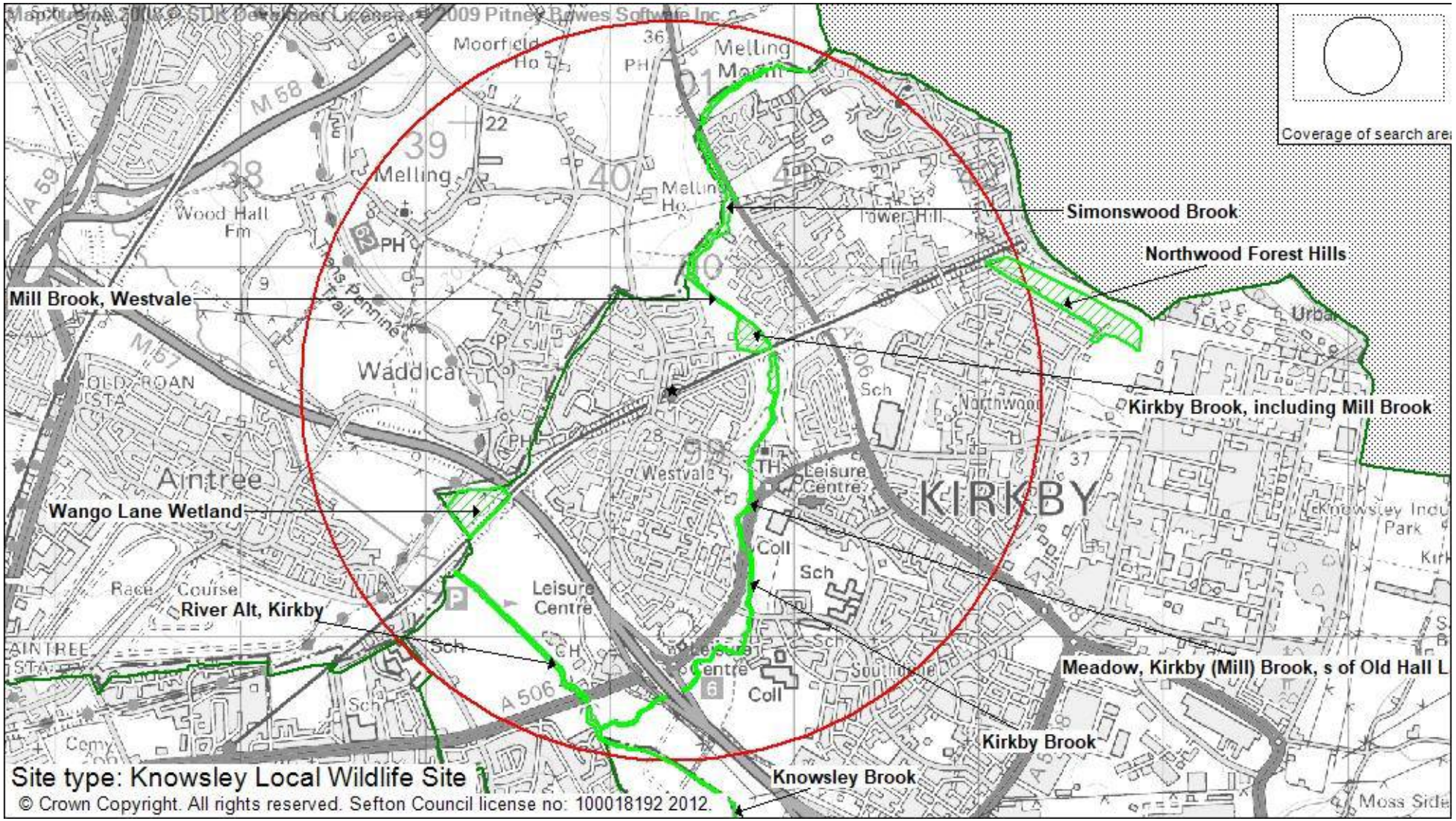

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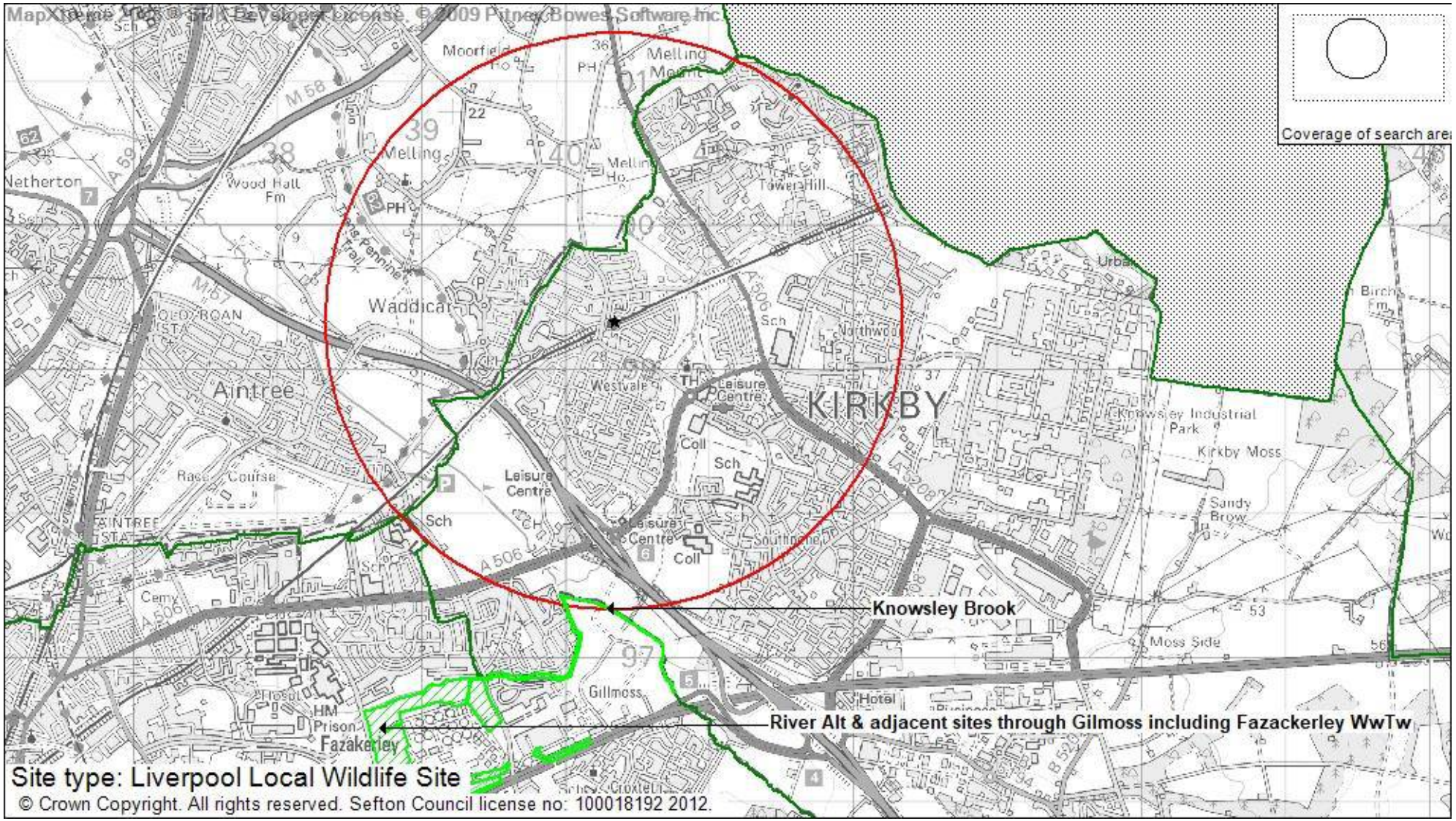

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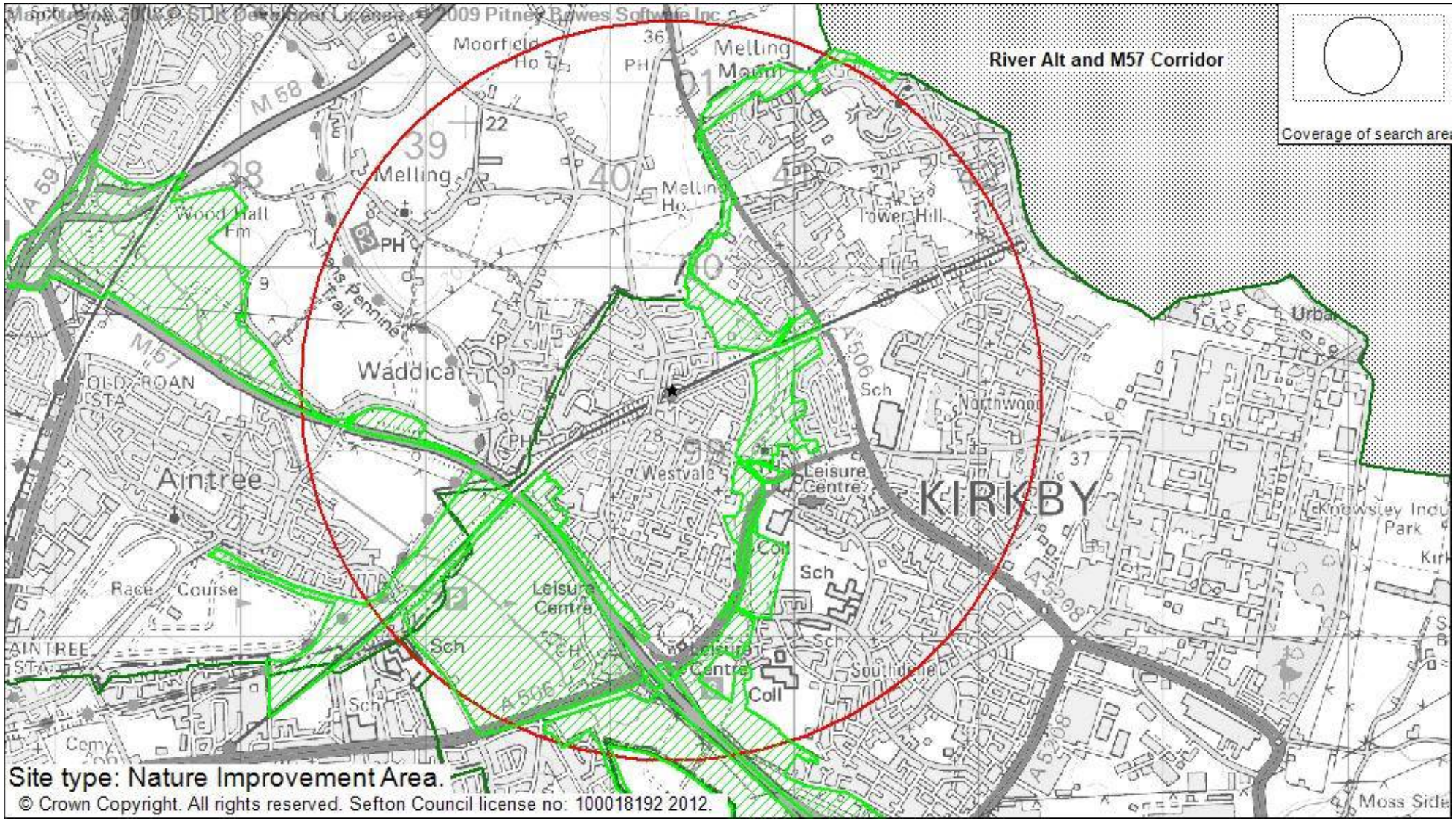

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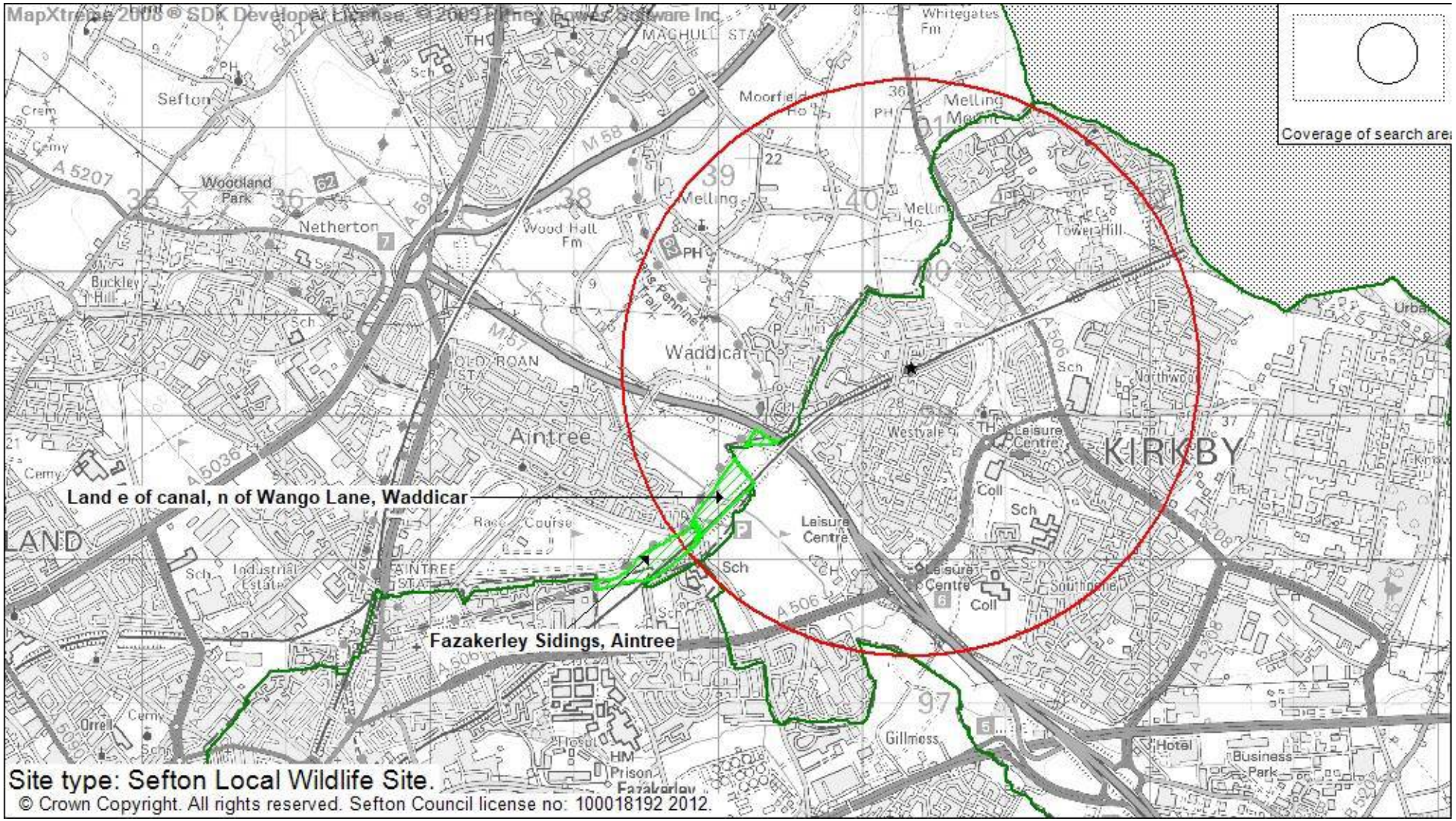

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