United Environmental Services Ltd
1 Booths Park,
Chelford Road,
Knutsford,
Cheshire
WA16 8QZ

www.ues.org.uk
enquiries@ues.org.uk
01565 757788

BAT SCOPING SURVEY

At

The Oaks
Wrexham Industrial Estate
Wrexham
LL13 9RG

NGR: SJ 38806 49238

Prepared for:	Boris Byrne, FI Facilities Management Ltd
Written by:	Ysobella Cox, UES Graduate Ecologist
Approved by:	Tom Kenwright, UES Senior Ecologist

Tom Kenwright

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EXECUTIVE SUMMARY

This report is written by Ysobella Cox BSc MBiol, Graduate Ecologist at United Environmental Services Ltd (UES). It provides an assessment of the potential impacts on bats as a result of a proposed development at The Oaks, Wrexham Industrial Estate. No detailed proposals are available at this stage and as such, all buildings and structures on site have been included within the bat scoping survey.

A bat scoping survey of all buildings on site was undertaken by UES on 28th April 2023. The objective of the survey was to establish the suitability of the buildings to support roosting bats, based on a site-specific survey and habitat assessment. The buildings were searched externally and internally (where accessible) for bat presence and features associated with bat activity, as detailed in Bat Conservation Trust (BCT) guidance (2016).

The Oaks Site is located within Wrexham Industrial Estate, south-east of Wrexham. The surrounding area consists of commercial, office and warehouse buildings. In addition, there is an extensive area of arable land to the south of the site, with Redwither Brook and the River Clywedog demarcating the southern and part of the western site boundary. These habitats will likely support an abundance of invertebrates and provide foraging and commuting opportunities for bats.

All buildings and structures on site were assessed for their suitability to support roosting bats, the results of which are summarised in the table below:

Negligible bat roosting suitability	Low bat roosting suitability	Moderate bat roosting suitability	Confirmed to contain bat roost
Buildings 10, 11, 12, 17, 18, 19, 21, 28, 29, 33, 34, 35, 36, 37, 38, 39 and 40	Buildings 1, 2, 4, 5, 6, 7, 9, 15, 22, 23, 24, 25, 26, 27, 30, 31 and 32	Buildings 13, 16 and 20	Buildings 3 and 8

Building 14 could not be located during the survey but appears on site plans. It is recommended that an access route is created through the scrub to allow facilitate a survey to confirm the buildings existence. Following this, an external and internal assessment will be required to assess the potential of the building to support roosting bats and the to determine the requirement for further bat surveys.

Many of the buildings on site are considered to have the potential to be used by hibernating bats, as they are all unheated, likely have areas with cool and constant temperatures during the winter and contain either sheltered cavities that could be used by crevice-dwelling species or sheltered rooms / larger open spaces that could be used by hibernating horseshoe bats. In most cases, the hibernation potential is very limited to a single feature or area. The following buildings are considered to have some potential to be used by hibernating bats: 2, 3, 4, 5, 6, 7, 8, 9, 13, 15, 16, 20, 22, 23, 24, 25, 26, 27, 30, 31 and 32. All other buildings are considered to be unsuitable for use by roosting bats, due to a lack of suitable features and sheltered roosting locations, or due to the conditions within the building being unsuitable e.g. significant light ingress.

Buildings that have been assessed as having negligible suitability and are not considered to have hibernation potential require no further surveys or mitigation measures for roosting bats.

Buildings with confirmed roosts or either low, moderate or hibernation potential for roosting bats, will require further surveys to determine whether bats are using these buildings for

roosting purposes, and if so, characterise these roosts. The survey further requirements are detailed in Section 4.2.1 of this report.

Due to the potential presence of breeding birds within the building at the time of development, it is recommended that any vegetation clearance and demolition or destructive works to buildings take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible, a breeding bird nest check should be undertaken prior to the commencement of works by a suitably experienced ecologist and an ecological clerk of works appointed if considered necessary.

The report should be read in conjunction with appendices 1 to 4, which give visual representations of the survey results.

1 INTRODUCTION

1.1 Author, surveyors and qualifications

This report is compiled and written by Ysobella Cox BSc MBiol and UES Graduate Ecologist. Other surveyors included:

- Alasdair Grubb BSc ACIEEM, UES Sub-contractor. Alasdair is licensed by Natural Resources Wales to disturb, take and handle all species of bat other than greater or lesser horseshoe under licence number S091891/01

All surveyors have the knowledge, skills and experience identified within CIEEM's "Competencies for Species Survey: Bats" (2013), or were under the supervision of a surveyor with the required competencies.

1.2 Survey objectives

UES was commissioned in April 2023 to conduct site surveys which include the following activities:

- Conduct internal and external building inspections to look for field signs of bats
- Assess the suitability of the buildings for use by roosting bats
- Recommend further surveys, mitigation and compensation, where appropriate

1.3 Proposed development

At this stage, no detailed proposals have been submitted to UES.

1.4 Structure of the report

This report sets out the methodology, results, and recommendations in relation to a specific bat survey. Recommendations are in line with statutory legislation and planning policy objectives.

The report should be read in conjunction with appendices 1 to 4, which give visual representations of the survey results.

2 METHODOLOGY

2.1 General

All surveys were carried out to recognised guidelines, timings and weather conditions, with particular reference to Natural Resources Wales and BCT publications (see references for further information).

The habitats on site and in the surrounding area were assessed during a walkover survey and by studying aerial photographs, in order to gauge their suitability to support roosting, foraging and commuting bats.

2.2 Building survey

The buildings on site were searched both externally and internally for bat presence and features associated with bat activity, as detailed in BCT guidance (Collins, 2016). This was conducted on 28th April 2023 by Alasdair Grubb and Ysobella Cox.

2.2.1 External inspection

The external inspection of the buildings on site was carried out from ground level using binoculars, and also using ladders and an endoscope to investigate suitable gaps where present and accessible. The objective of the survey was to find and record any signs of bat use, for example:

- Bat droppings
- Feeding remains
- Grease staining / urine marks
- Corpses or skeletons

The bat signs listed above are visible from the outside of a building. The following areas were searched, where present:

- Roof and ridge tiles
- Lead flashing
- Eaves
- Boxed soffits
- Fascia and barge boards
- Window sills and panes
- Walls
- Gaps under felt
- Cracks / holes in woodwork or behind cladding
- Gaps in brickwork and mortar
- Air bricks
- Grills
- Vents

2.2.2 Internal inspection

The internal inspection covered all of the accessible rooms and roof spaces within the buildings.

Bats regularly utilise specific areas within roof spaces, which were searched for any field signs of bats using high-powered torches and an endoscope, where present and considered necessary by the licenced ecologist. The following features were searched, where present:

- Roof beams and junctions
- Gaps under felt
- Dividing walls
- Chimney breasts
- Gaps in brickwork and mortar
- Cracks / holes in woodwork
- Floor or other surfaces on which droppings could accumulate

2.3 Survey limitations

The survey was undertaken at an appropriate time of year, under suitable weather conditions.

Survey limitations associated with the specific buildings are as follows:

Buildings 2, 5, 7, 8, 25, 27, 30, 31 and 32 are surrounded by dense scrub, which limited the visibility of the buildings during the external inspections.

Building 13 could not be assessed internally during the survey as the entrance to the building has been blocked by earth.

Building 14 is mapped on site plans, however it could not be located / accessed during the survey due to the surrounding dense scrub. As such the building could not be subject to internal or external inspections.

The above limitations have been considered when making recommendations within this report.

3 RESULTS

3.1 Habitat assessment

The Oaks is located within Wrexham Industrial Estate, south-east of the city of Wrexham. The proposed development site is dominated by dense scrub with scattered trees, ponds and derelict buildings. Small stands of more mature scrub and broadleaved woodland are present within the southern section of the site. Small areas of disturbed ground and semi-improved grassland are also present across the site. Redwither Brook flows along part of the western site boundary and the Clywedog River demarcates the southern site boundary.

The surrounding area consists of commercial, office and warehouse buildings with well-lit roads which may cause noise and light pollution for commuting bats. However, there is an extensive area of arable land with hedge-lined fields and tree lines to the south of the proposed development site. These habitats provide low-moderate quality foraging and commuting opportunities for bats.

The wider surrounding areas consists of further industrial estate buildings to the north and arable fields bordered by hedgerows and tree lines to the south of the site. There are additional woodland habitats within the surrounding areas which may provide commuting, foraging and roosting opportunities for bats, all of which are connected to the site by hedgerows and tree lines.

3.2 Building survey

3.2.1 External inspection

There are forty buildings / structures at The Oaks, which have been numbered for the purposes of the report (see Appendix 1 – Site plan).

Building 1 has a complex structure and varies in height. It has a flat roof that is constructed from concrete with an external bitumen lining (see Appendix 3 – Photographs, Photograph 1). The bitumen has degraded but it is well-sealed to the roof. The building is constructed from redbrick which contains several cavities within the mortar on the eastern and southern aspects which may provide a potential roosting feature (PRF) for bats. In addition, there are holes within the brickwork which are associated with metal pipework and there is a small amount of lead flashing on the southern aspect of the building. The windows on the eastern and western aspects of the building have been boarded, which may provide a suitable PRF for bats if there is a gap between the boards. However, due to the height of these features, they could not be fully inspected during the survey.

There are two flat-roofed, redbrick extensions on the northern and southern aspects of the building. Several cracks were identified between the concrete and timber, which form the structure of the flat roof and may provide a PRF for bats. In addition, there is a flat-roofed concrete porch on the eastern aspect of the building that is supported by redbrick pillars. A crack was identified between the sections of concrete at the eaves of porch, and underneath the porch roof. No evidence of roosting bats was found during the external building inspection.

Building 2 is a building that varies in height. It has a flat roof that is constructed from concrete with an external bitumen lining. The building is constructed from redbrick which contains cavities and gaps within the mortar (Photograph 2). These features may be suitable for individual roosting bats. There is also superficial damage within the brickwork. A window on the northern aspect of the building has been partially boarded and may also provide a PRF for

bats if there is a gap between the wooden boards. However, due to the height of the feature it could not be fully inspected during the survey but the wooden frame surrounding the window appears well-sealed to the brick. The northern aspect of Building 2 is cluttered by the surrounding dense scrub. No evidence of roosting bats was found during the external building inspection.

Building 3 has been partially demolished and consists of the external redbrick walls, with no roof or internal structure. Several gaps and cracks were identified within the mortar which increased in width as they extended upwards, to a maximum width of 4cm. In addition, there is a gap around the concrete lintel. **A single *Myotis sp.* bat was identified, day roosting within a crack in the brickwork**, above the door frame on the north-eastern aspect of the building (Photographs 3 and 4). No droppings were found associated with the feature and as such, eDNA analysis was not carried out.

Building 4 is a building that varies in height. It has a flat roof that is constructed from concrete with a bitumen cover. Several gaps were identified between the concrete and timber on the flat roof. The building is constructed from redbrick which contains several superficial cavities and a large hole within the brickwork with no associated PRFs. However, there is a crack on the eastern aspect of the building and several holes associated with metal pipework which provide suitable PRFs for bats (Photograph 5). No evidence of roosting bats was found during the external building inspection.

Building 5 is a single storey building with a flat roof constructed from concrete (Photograph 6). The walls are constructed from redbrick and contain several superficial gaps, but no suitable external PRFs. The building has no door and there are small, narrow-slit concrete windows which provide internal access. The southern aspect of the building is heavily cluttered by scrub. No evidence of roosting bats was found during the external building inspection.

Building 6 is a single storey building with a flat roof constructed from concrete with a bitumen cover. The walls are constructed from redbrick which contains several gaps within the mortar on the southern aspect of the building. In addition, a gap was identified between the timber doorframe and the brick wall on the northern aspect of the building which may provide a suitable PRF for bats (Photograph 7). No evidence of roosting bats was found during the external building inspection.

Building 7 is a tower with a flat roof that is constructed from concrete and there is a metal chimney located on the southern aspect of the building (Photograph 8). The walls are constructed from redbrick which contains superficial gaps. There is a large amount of cluttered scrub around the building, which limited visibility during the external building inspection. No evidence of roosting bats was found during the external building inspection.

Building 8 is a single storey building with a flat roof that is constructed from concrete. The walls are constructed from double-skinned redbrick, which are intact apart from a partially demolished wall on the southern aspect of the building. Several cavities were identified within the brickwork and mortar, including a cavity within the double-skinned wall that extends the whole length of the wall. **A single *Pipistrellus sp.* bat was identified within a cavity between the double-skinned wall on the western aspect of the building**, to the west of the door frame (Photographs 9 and 10). **A second *Pipistrellus sp.* bat was identified within a gap between the concrete lintel and the brickwork on the western aspect of the building**, to the east of the door frame (Photograph 11). The eastern aspect of the building is surrounded by dense scrub.

Building 9 consists of two tunnels (which feature dense scrub above them) that are constructed from smooth concrete. The tunnels are located on the western and southern aspects of the building and measure approximately 2m height and 2m width. The tunnels lead

to an open area with concrete walls that measure approximately 5m high and a pit located at the centre which measures approximately 4m in depth (Photograph 12). The concrete walls are in good condition with mostly superficial gaps in the mortar, however, several gaps do provide low potential PRFs. In addition, the eastern aspect of the building is covered in dense ivy which provides a PRF. No evidence of roosting bats was found during the external building inspection.

Building 10 is a raised platform with a flat roof that is constructed from concrete, bitumen and covered in a layer of moss. The raised platform is supported by concrete pillars (Photograph 13), which are in excellent condition, featuring no PRFs for bats. No suitable PRFs or evidence of roosting bats was found during the external building inspection. However, 5 mammal holes were identified near the building which had an odour of fox *Vulpes vulpes*.

Building 11 consists of two flat-roofed entrance tunnels which are constructed from smooth concrete (Photograph 14). The tunnels measure approximately 2.5m height and 2.5m width, and lead into an open area which is dominated by scrub. There are tightly sealed, concrete walls around the edges of the building which measure approximately 1.5m in height. No PRFs or evidence of roosting bats was found during the external building inspection.

Building 12 consists of four flat-roofed entrance tunnels that are constructed from smooth concrete. The tunnels are located on the north-eastern, south-eastern, north-western and south-western aspects of the building and measure approximately 2.5m high and 2m wide. The tunnels lead into an open area with concrete walls and a pit located at the centre, which contains tall ruderal dominated by nettle *Urtica dioica* and Himalayan balsam *Impatiens glandulifera* (Photograph 15). The concrete structure of the building does not feature any PRFs for bats. No evidence of roosting bats was found during the external building inspection.

Building 13 is a building that varies in height. It has a flat roof that is constructed from concrete with a bitumen cover. There are wooden barge boards at the eaves of the building, on the south-eastern and north-western aspects (Photograph 16). A gap was identified underneath the barge boards on both aspects of the building, which may provide a suitable PRF for bats, however, no evidence of roosting bats was identified. The walls are constructed from redbrick and contain large holes which provides direct access into the internal area. There is a wall located directly adjacent to the southern aspect of the building which contains cavities within the brickwork and mortar. No evidence of roosting bats was found during the external building inspection.

Building 14 is a mapped building which appears on site plans, however it could not be located / accessed during the survey due to the surrounding dense scrub. As such the building was not assessed externally.

Building 15 is a single storey building with a flat roof that is constructed from concrete and external walls constructed from redbrick. The walls contain cluttered ivy which has extended from the roof of the building (Photograph 17). No external PRFs or evidence of roosting bats was found during the external building inspection.

Building 16 is a building that varies in height. It has a flat roof that is constructed from concrete with a bitumen cover. The walls are constructed from redbrick, with a dense ivy covering on the eastern aspect of the building which may provide a suitable PRF for bats. In addition, numerous gaps were identified within the brickwork and the mortar. There is a concrete wall surrounding the northern aspect of the building, which contains holes associated with pipework that extends approximately 5-10m northwards. In addition, there are deep cracks within the concrete wall which also provide a suitable PRF (Photograph 18). No evidence of roosting bats was found during the external building inspection.

Building 17 is a flat-roofed tunnel that is constructed from smooth concrete. The tunnel has been sealed with earth approximately 5m from the entrance and therefore, contains no suitable PRFs (Photograph 19).

Building 18 is a flat-roofed tunnel that is constructed from smooth concrete (Photograph 20). The tunnel measures approximately 2m high, 2m wide and 5m long. No PRFs or evidence of roosting bats were found during the external building inspection.

Building 19 consists of two flat-roofed tunnels constructed from smooth concrete. The tunnel located on the western aspect of the building measures approximately 2.5m high and 2.5m wide, and the tunnel located on the northern aspect of the building measures approximately 2m high, 2m wide and extends 5m. The tunnels lead into an open area surrounded by concrete walls. There is a pit located at the centre of the open area which contains dense scrub and scattered trees (Photograph 21). The southern wall contains several holes associated with pipework, which are unsuitable for roosting bats as they measure approximately 30cm in diameter, which are generally too exposed for roosting bats. In addition, there is a superficial crack in the concrete wall on the southern aspect of the building.

Building 20 is a building that varies in height. It has a flat roof that is constructed from concrete with a bitumen cover. Trees and scrub are growing from the eaves of the building, which may lead to the formation of cracks within the brickwork and concrete (Photograph 22). The walls are constructed from redbrick, with cluttered ivy on the southern aspect which is not considered mature enough to provide a PRF for bats. In addition, there are gaps within the mortar of the brickwork and doorframes. The northern aspect of the building is surrounded by a concrete wall which features a horizontal crack that provides a suiitble PRF for bats. No evidence of roosting bats was found during the external building inspection.

Building 21 is a single storey building with a flat roof that is constructed from concrete with a bitumen cover (Photograph 23). The walls are constructed from redbrick and contain superficial damage to the mortar and there is a large hole within the brickwork on the eastern aspect of the building, which is too exposed to be used by roosting bats. No external PRFs or evidence of roosting bats was found during the external building inspection.

Building 22 consists of three flat-roofed tunnels that are constructed from smooth concrete. The tunnel located on the northern aspect of the building measures approximately 2m high and 1m wide, and the tunnels located on the eastern and western aspects of the building measure approximately 2.5m high and 2.5 wide. The tunnels lead into an open area with concrete walls and a pit located at the centre, which contains scattered scrub. A crack was identified within the concrete wall on the northern and western aspects of the building, which provides a suitable PRF for bats (Photograph 24). No evidence of roosting bats was found during the external building inspection.

Building 23 is a single storey building with a flat roof that is constructed from concrete. The walls are constructed from redbrick with concrete lintels above the door and window frames. A gap was identified between the concrete lintel above the door frame and the redbrick wall on the northern aspect of the building (Photograph 25). In addition, several gaps were identified within the mortar and the brickwork which may provide suitable PRFs for bats. No evidence of roosting bats was found during the external building inspection.

Building 24 is a single storey building with a flat roof that is constructed from concrete with a bitumen cover. The walls are constructed from redbrick and contain suitable PRFs for bats, including a gap between the wooden window frame and the redbrick wall on the eastern aspect of the building. In addition, there are cavities within the mortar and degraded brickwork which may be suitable for a single roosting bat (Photograph 26). There is a porch located on the eastern aspect of the building which consists of a concrete roof and redbrick pillars. Several

cavities were identified between the concrete roof and pillars, and there is a crack within the concrete roof on the eastern aspect of the porch. No evidence of roosting bats was found during the external building inspection.

Building 25 is located within the north-western section of the site that is surrounded by scrub. It has a flat roof that is constructed from concrete with a bitumen cover. The walls are constructed from redbrick and contain multiple PRFs which are suitable for bats. This includes a crack within the wall on the eastern aspect of the building, gaps between the concrete roof and brickwork on the southern aspect of the building, and between the mortar and brickwork.

There is a wooden door on the northern aspect of the building, which was open at the time of the survey. A gap was identified between the wooden door frame and the brickwork on the northern aspect of the building; the feature contains cobwebs and there was no evidence of roosting bats, however, it does provide a suitable PRF. In addition, there are boarded windows on the eastern and western aspects of the building which contain gaps between the wooden boards, timber frames and the brick wall (Photograph 27). No evidence of roosting bats was found during the external building inspection.

Building 26 is single storey, with a flat roof that is constructed from concrete with a bitumen cover. Several gaps were identified between the sections of concrete which form the structure of the roof (Photograph 28). These features provide suitable PRFs for bats. The walls are constructed from redbrick with two entrances on the northern aspect of the building and cluttered ivy. Numerous gaps were identified within the mortar of the brickwork, and between the brickwork and concrete lintels. In addition, there is a crack within the external wall on the southern aspect of the building. No evidence of roosting bats was found during the external building inspection.

Building 27 is a single storey building with a flat roof that is constructed from concrete with a bitumen cover. The walls are constructed from redbrick and contain small, narrow-slit concrete windows. There is one external PRF on the building, which is a gap between the south-western corner of the building and an ash tree *Fraxinus excelsior* (Photograph 29). The feature was inspected with an endoscope and 10 suspected blue / great tit eggs were identified within the feature. The southern aspect of the building is surrounded by dense scrub and traveller's joy *Clematis vitalba* has climbed over the south facing wall, which is too fine to support roosting bats. No evidence of roosting bats was found during the external building inspection.

Building 28 is a single storey building with a flat roof that is constructed from concrete (Photograph 30). The walls are constructed from redbrick and contain small, narrow-slit concrete windows. There is a cluttered ivy covering on the building and a low number of superficial gaps and damage to the brickwork. However, there are no suitable external PRFs, and no evidence of roosting bats was found during the external building inspection.

Building 29 is a partially demolished redbrick wall, which reaches a maximum height of approximately 1m (Photograph 31), with a concrete rubble pile located within the centre of the building. No evidence of roosting bats was found during the external building inspection, and the building is considered to be unsuitable for roosting bats.

Building 30 is a building that varies in height and is surrounded by dense scrub. It has a flat roof that is constructed from concrete with a bitumen cover. The walls are constructed from redbrick, which contain several PRFS including gaps within the mortar (Photograph 32). In addition, there is a concrete wall surrounding the northern aspect of the building which contains a horizontal crack. No evidence of roosting bats was found during the external building inspection.

Building 31 is a partially demolished building which is surrounded by scrub on the eastern and south-western aspects. The building consists of the external redbrick walls with no roof, windows or doors (Photograph 33). Several PRFs were identified within the building, including cracks and gaps within the mortar. No evidence of roosting bats was found during the external building inspection.

Building 32 is a single storey building which is surrounded by dense scrub. The building has a flat roof that is constructed from concrete, with redbrick walls and small, narrow-slit concrete windows (Photograph 34). The brickwork is in relatively poor condition and contains PRFs including cracks within the mortar and a horizontal crack within the brickwork which extends along the whole length of the northern aspect. No evidence of roosting bats was found during the external building inspection.

Building 33 appears to be a former pit, which has been historically filled in with earth and only comprises a single external, concrete wall (Photograph 35).

Building 34 is a single, flat-roofed tunnel that has been constructed from smooth concrete (Photograph 36). The tunnel measures approximately 2.5m high, 2.5m wide and extends approximately 5m. The building contains no PRFs, and no evidence of roosting bats was identified during the external building inspection.

Building 35 consists of two flat-roofed tunnels that have been constructed from smooth concrete (Photograph 37). The tunnels are located on the eastern and western aspects of the building and measure approximately 3m high and 3m wide. The tunnels lead into an open area that is surrounded by concrete walls, with a pit located at the centre of the area which contains scrub. No PRFs or evidence of roosting bats were identified during the external building inspection.

Building 36 is a single storey building with a flat roof that is constructed from concrete with a bitumen cover (Photograph 38). The walls are constructed from redbrick and contain numerous superficial gaps and cracks within the mortar. No external PRFs or evidence of roosting bats was identified during the external building inspection.

Building 37 consists of two flat-roofed tunnels that have been constructed from smooth concrete. The tunnels are located on the eastern and western aspects of the building and measure approximately 3m high and 3m wide. The tunnels lead into an open area that is surrounded by concrete walls, with a pit located at the centre of the area which contains scrub (Photograph 39). No PRFs or evidence of roosting bats were identified during the external building inspection.

Building 38 is a single storey building with a flat roof that is constructed from concrete with a bitumen cover (Photograph 40). Superficial cracks were identified around the concrete and timber structures on the northern aspect of the roof. The walls are constructed from redbrick and no external PRFs were identified. In addition, no evidence of roosting bats was found during the external building inspection.

Building 39 consists of two flat-roofed tunnels that have been constructed from smooth concrete. The tunnels are located on the eastern and western aspects of the building and measure approximately 3m high and 3m wide (Photograph 41). The tunnels lead into an open area that is surrounded by concrete walls, with a pit located at the centre of the area which contains scrub. No PRFs or evidence of roosting bats were identified during the external building inspection.

Building 40 is a single storey building with a flat roof that is constructed from concrete (Photograph 42). The walls are constructed from redbrick and contain a superficial crack in

the mortar. No external PRFs or evidence of roosting bats was found during the external building inspection.

3.2.2 Internal inspection

Building 1 has no loft void and is open floor to ceiling. The building consists of a main internal area and two extensions on the northern and southern aspects. The roof is constructed from unlined concrete and there is evidence of leakage (Photograph 43). The internal walls are constructed from redbrick and there are boarded windows on the eastern and western aspects, which may provide a PRF for bats. There is open access into the building due to the presence of windows and doors. A feral pigeon *Columba livia* was identified within the main section of the building and an old bird's nest was identified in the southern extension. No evidence of roosting bats was found during the internal building inspection.

Building 2 has no loft void and is open floor to ceiling. The building has an unlined concrete roof which is supported by metal beams. The internal walls are constructed from a combination of redbrick and breezeblock, which contain several cavities (Photograph 44). There is open access into the building due to the presence of windows and doors, and a defunct bird's nest was identified within the building. The building has been assessed as having 'classic' hibernation potential due to the presence of suitable internal features, such as the internal breezeblock wall, with accessible cavities. No evidence of roosting bats was found during the internal building inspection.

Building 3 is a partially demolished building which consists of external walls with no roof or loft void.

Building 4 has no loft void and is open floor to ceiling. The building has an unlined concrete roof which is supported by metal beams. The internal walls are constructed from redbrick and contain minor gaps in the mortar and pipework. In addition, a crack was identified within the brickwork which is narrow at the base and extends to a maximum width of approximately 2cm. There is open access into the building due to the presence of windows and doors. It has also been assessed as having 'classic' hibernation potential due to the presence of internal features which are suitable for hibernating bats. No evidence of roosting bats was found during the internal building inspection.

Building 5 is a single storey building with no loft void. The roof is constructed from unlined concrete and the walls are constructed from redbrick. There is open access into the building due to the presence of windows and doors. The building contains no internal PRFs for crevice dwelling bat species.

Building 6 is a single storey building which contains a narrow roof void. Tubular cavities were identified within the roof void, which measure approximately 15cm x 7cm (Photograph 45). The features were fully inspected with an endoscope and contain no evidence of roosting bats. However, a blue tit *Cyanistes caeruleus*, and another, unidentified bird's nest were associated with the cavities. In addition, a wren's *Troglodytes troglodytes* nest was identified within the building. The redbrick walls contain several cavities within the mortar, and a gap was identified between a timber board located underneath the ceiling. There is open access into the building due to the presence of windows and doors. However, no evidence of roosting bats was found during the internal building inspection.

Building 7 has no loft void and is open floor to ceiling, measuring approximately 10m in height. The roof is lined with wooden panels and metal support beams. The internal walls are constructed from redbrick which contain several PRFs for bats. This includes a gap between the wall and the rigid steel joist on the northern and southern aspects of the building. There is

open access into the building due to the presence of windows and doors. Evidence of nesting birds was found during the internal building inspection, however, there was no evidence of roosting bats.

Building 8 is a single storey building with no loft void. The roof is constructed from unlined concrete and the walls are constructed from redbrick. Several cracks were identified within the redbrick walls on the eastern aspect of the building, which provide suitable PRF for bats. There is open access into the building due to the presence of windows and doors.

Building 9 consists of two smooth concrete tunnels and an open, central area. The internal areas are limited to the two tunnels which contain no loft voids. The smooth concrete is in good condition and no PRFs were identified. In addition, no evidence of roosting bats was found during the internal building inspection.

Building 10 consists of a raised platform and concrete pillars. The building has no internal area or loft void.

Building 11 consists of two smooth concrete tunnels and an open, central area. The internal areas are limited to the two tunnels which contain no loft voids. The smooth concrete is in good condition with no PRFs. In addition, no evidence of roosting bats was found during the internal building inspection.

Building 12 consists of four smooth concrete tunnels and an open, central area. The internal areas are limited to the four tunnels which contain no loft voids. The north-western tunnel contains a crack within the concrete which is approximately 1.5m long, 2cm wide and extends upwards approximately 15cm. The feature is highly cobwebbed with no evidence of roosting bats and was fully inspected during the survey. The south-western tunnel also contains a crack within the concrete; however, the feature is too narrow for use by roosting bats.. No evidence of roosting bats was found during the internal building inspection.

Building 13 could not be assessed internally during the survey as the entrance to the building had been sealed with earth. However, there are narrow access points into the building for bats between the earth and tops of the doors.

Building 14 is a mapped building which appears on site plans, however it could not be located / accessed during the survey due to the surrounding dense scrub. As such the building was not assessed internally.

Building 15 is a single storey building with no loft void. The roof is constructed from unlined concrete and the internal walls are constructed from redbrick. Numerous cracks were identified within the mortar and there is a dense ivy covering which provides a PRF for bats (Photograph 46). There is open access into the building due to the presence of windows and doors. A wren's nest was identified within the building. However, no evidence of roosting bats was found during the internal building inspection.

Building 16 consists of multiple internal rooms, which vary in height, and a sealed, concrete pit within the northern room. The roof is constructed from unlined concrete, which contains multiple PRFs including gaps between the concrete blocks (Photograph 47). The internal walls are constructed from redbrick and contain several PRFs. This includes numerous gaps within the mortar and cracks in the brickwork which extend from the ground to the ceiling. In addition, there are holes within the walls which lead into cavities that extend approximately 4cm downwards. There is open access into the building due to the presence of windows and doors. The building has been assessed as having 'classic' hibernation potential due to the cool, damp conditions and the presence of suitable internal PRFs. No evidence of roosting bats was found during the internal building inspection.

Building 17 consists of a single concrete tunnel that has been sealed with earth. Therefore, no internal PRFs were identified during the survey.

Building 18 is a flat-roofed tunnel with no loft void. The internal area measures approximately 2m high, 2m wide and it extends approximately 5m. No PRFs or evidence of roosting bats was found during the internal building inspection.

Building 19 consists of two smooth concrete tunnels and an open, central area. The internal areas are limited to the two tunnels which contain no loft voids. Both tunnels are in good condition, with no PRFs; no evidence of roosting bats was found during the internal building inspection.

Building 20 consists of multiple internal rooms, which vary in height, and a concrete lined pit within the northern room which contains standing water (Photograph 48). The roof is constructed from unlined concrete and the internal walls are constructed from redbrick. Numerous gaps were identified within the mortar, which are PRFs for bats. There is open access into the building due to the presence of windows and doors, and it was cold and damp at the time of the survey. No evidence of roosting bats was found during the internal building inspection.

Building 21 is single storey building with no loft void. The roof is constructed from unlined concrete and the internal walls are constructed from redbrick which are in excellent condition. There is open access into the building through open windows and door. No internal PRFs or evidence of roosting bats was found during the internal building inspection.

Building 22 consists of three smooth concrete tunnels and an open, central area. The internal areas are limited to the three tunnels which contain no loft voids. The tunnel located on the northern aspect of the building contains a crack within the concrete wall which extends upwards along the wall and across the ceiling. The feature measures approximately 2cm wide and extends beyond view, which is a suitable PRF for bats. The tunnels located on the eastern and western aspects of the building are in good condition with no PRFs visible. No evidence of roosting bats was found during the internal building inspection.

Building 23 is a single storey building with no loft void. The roof is constructed from unlined concrete and the walls are constructed from redbrick. The majority of the wall cavities are superficial, however, there are a small number of crevices that provide suitable PRFs. There is open access into the building due to the presence of windows and doors. No evidence of roosting bats was found during the internal building inspection.

Building 24 is a single storey building with no loft void. The roof is constructed from unlined concrete with metal support beams. The internal walls are constructed from redbrick and there is open access into the building due to the presence of windows and doors. No PRFs or evidence of roosting bats was found during the internal building inspection.

Building 25 is a single storey building with no loft void. The roof is constructed from unlined concrete, which contains narrows gaps between the concrete blocks. The internal walls are constructed from redbrick. A gap was identified between a piece of timber and the wall, which provides a PRF for bats. The building is shaded by the surrounding trees and the internal conditions were cool at the time of the survey. A wren's nest was identified within the building, however, there was no evidence of roosting bats.

Building 26 is a single storey building with no loft void. The roof is constructed from unlined concrete and the internal walls are constructed from redbrick. Numerous cracks were identified within the walls, including above the wall plate and at the point where the two walls connect.

There is open access into the building due to the presence of windows and doors. A robin nest and eggs, *Erithacus rubecula*, was identified within the building (Photograph 49). However, no evidence of roosting bats was found during the internal building inspection.

Building 27 is a single storey building with no loft void. The roof is constructed from unlined concrete and the internal walls are constructed from redbrick. There is open access into the building due to the presence of windows and doors. The building contains no internal PRFs for crevice dwelling bat species.

Building 28 is a single storey building with no loft void. The roof is constructed from unlined concrete and the internal walls are constructed from redbrick. There is open access into the building due to the presence of windows and doors. No internal PRFs or evidence of roosting bats was found during the internal building inspection.

Building 29 is a partially demolished building with no roof or loft void. Therefore, an internal building inspection was not carried out.

Building 30 consists of multiple internal rooms, which vary in height, and a pit within the northern room. The roof is constructed from unlined concrete and the internal walls are constructed from redbrick. Several internal PRFs were identified during the survey, including gaps within the mortar of the brickwork and cavities between the walls at the point where they connect. The brickwork also contains several holes which lead into the adjacent rooms. There is open access into the building due to the presence of open windows and doors. No evidence of roosting bats was found during the internal building inspection.

Building 31 is a partially demolished building with no roof or loft voids. The walls are constructed from redbrick, which contains numerous cracks and gaps within the mortar and the brickwork. In addition, there is an area of dense ivy within the building which may provide a suitable PRF for bats. No evidence of roosting bats was found during the internal building inspection.

Building 32 is a single storey building with no loft void. The roof is constructed from unlined concrete, which contains a crack that was fully inspected during the survey (Photograph 50). The internal walls are constructed from redbrick, which also contain cavities within the mortar and a crack within the brickwork. There is open access into the building due to the presence of windows and doors.

Building 33 has been filled in with earth and only contains a single external, concrete wall. Therefore, an internal building inspection was not carried out.

Building 34 consists of a single concrete tunnel which measures approximately 2.5m high, 2.5m wide and extends approximately 5m. The roof is constructed from unlined, sealed concrete and the building contains no loft void. No PRFs or evidence of roosting bats was found during the internal building inspection.

Building 35 consists of two smooth concrete tunnels and an open, central area which contains scrub. The internal areas are limited to the two tunnels which contain no loft voids. The tunnels are in good condition with no noticeable PRFs. No evidence of roosting bats was found during the internal building inspection.

Building 36 is a single storey building with no loft void. The roof is constructed from unlined concrete and the internal walls are constructed from redbrick. There is open access into the building due to the presence of windows and doors. No internal PRFs or evidence of roosting bats was found during the internal building inspection.

Building 37 consists of two smooth concrete tunnels and an open, central area which contains scrub. The internal areas are limited to the two tunnels which contain no loft voids. The tunnels are in good condition with no noticeable PRFs, and no evidence of roosting bats was found during the internal building inspection.

Building 38 is a single storey building with no loft void. The roof is constructed from unlined concrete and the internal walls are constructed from redbrick. There is open access into the building due to the presence of windows and doors. No internal PRFs or evidence of roosting bats was found during the internal building inspection.

Building 39 consists of two smooth concrete tunnels and an open, central area which contains scrub. The internal areas are limited to the two tunnels which contain no loft voids. The tunnels are in good condition with no noticeable PRFs, and no evidence of roosting bats was found during the internal building inspection.

Building 40 is a single storey building with no loft void. The roof is constructed from unlined concrete and the internal walls are constructed from redbrick. There is open access into the building due to the presence of windows and doors. No internal PRFs or evidence of roosting bats was found during the internal building inspection.

4 EVALUATION AND RECOMMENDATIONS

4.1 Evaluation of results

4.1.1 Assessment of foraging habitats

The Oaks Site is located within Wrexham Industrial Estate, south-east of the City of Wrexham. The proposed development site is dominated by dense scrub with scattered trees, ponds and derelict buildings. Small stands of more mature scrub and broadleaved woodland are present within the southern section of the site. Small areas of disturbed ground and semi-improved grassland are also present across the site. Redwither Brook flows along part of the western site boundary and the Clywedog River demarcates the southern site boundary. The habitats on site provide moderate to high quality foraging and commuting habitats, with the watercourses and associated riparian woodland at the site boundaries providing the highest quality features.

The surrounding area consists of commercial, office and warehouse buildings. In addition, there is an extensive area of arable land with hedge-lined fields and tree lines to the south of the site. These habitats will likely support an abundance of invertebrates and provide foraging and commuting opportunities for bats. There are additional woodland habitats within the surrounding areas which are connected to the site and will provide commuting, foraging and roosting opportunities for bats.

4.1.2 Qualitative assessment of roosting habitats

Building 14 is a mapped building which appears on site plans, however it could not be located / accessed during the survey due to the surrounding dense scrub. As such the building was not assessed.

No evidence of bat activity was observed within **Buildings 10, 11, 12, 17, 18, 19, 21, 28, 29, 33, 34, 35, 36, 37, 38, 39 and 40** during the scoping survey; furthermore, no observable PRFs for bats were identified within these buildings. As such, these buildings have been assessed as having negligible potential to support roosting bats.

Buildings 1, 2, 4, 5, 6, 7, 9, 15, 22, 23, 24, 25, 26, 27, 30, 31 and 32 have been assessed as having low potential to support roosting bats, due to the presence of number of low-quality PRFs for bats.

Buildings 13, 16 and 20 have been assessed as having moderate potential to support roosting bats, due to the presence of higher quality PRFs, with the potential to support a larger number of bats or a roost of higher conservation status. Building 13 could not be assessed internally during the scoping survey as the entrance has been sealed with earth. To mitigate for this limitation, the building has been precautionarily assessed as having moderate potential, despite only being observed to contain a small number of otherwise low quality PRFs.

Building 3 has been assessed as a confirmed roost as a single *Myotis sp.* bat was observed roosting within the building during the scoping survey.

Building 8 has also been assessed as a confirmed roost as two *Pipistrellus sp.* bats were observed roosting within the building during the scoping survey.

Many of the buildings on site are considered to have the potential to be used by hibernating bats, as they are all unheated, likely have areas with cool and constant temperatures during the winter and contain either sheltered cavities that could be used by crevice-dwelling species or sheltered rooms / larger open spaces that could be used by hibernating horseshoe bats. In most cases, the hibernation potential is very limited to a single feature or area. The following buildings are considered to have some potential to be used by hibernating bats: **Buildings 2, 3, 4, 5, 6, 7, 8, 9, 13, 15, 16, 20, 22, 23, 24, 25, 26, 27, 30, 31 and 32.**

All other buildings are considered to be unsuitable for use by roosting bats, due to a lack of suitable features and sheltered roosting locations, or due to the conditions within the building being unsuitable e.g. significant light ingress.

4.2 Mitigation and compensation measures

4.2.1 Bats

A summary of further requirements with regards to bat presence / absence surveys in the spring / summer bat survey season are detailed in the table below:

Bat roosting suitability	Building numbers	Recommendations
Negligible	10, 11, 12, 17, 18, 19, 21, 28, 29, 33, 34, 35, 36, 37, 38, 39 and 40	No further surveys or mitigation measures are required with regards to roosting bats.
Low	1, 2, 4, 5, 6, 7, 9, 15, 22, 23, 24, 25, 26, 27, 30, 31 and 32	One further bat presence / absence survey is required to determine whether bats are using the buildings for roosting purposes, and if so, to determine the number and species of bats present. These surveys should be undertaken by an appropriately licenced ecologist during the peak bat survey season of May to August inclusive.
Moderate	13, 16 and 20	Two further bat presence / absence surveys are required to determine whether bats are using the buildings for roosting purposes, and if so, to determine the number and species of bats present. These surveys should be undertaken by an appropriately licenced ecologist during the bat survey season of May to September. At least one of the surveys should be undertaken during the peak bat survey season of May to August inclusive.
Confirmed roost	3 and 8	In order to fully characterise these roosts, the buildings should be subjected to two further roost characterisation surveys; these will aid determination of the number and species of bats using the roosts, and inform further mitigation; due to the confirmed use of these buildings by roosting bats, works to these

		buildings will need to proceed under a European Protected Species (EPS) mitigation licence, issued by Natural Resources Wales, which can only be applied for once the roosts have been characterised, and planning permission has been granted. These surveys should be undertaken by an appropriately licenced ecologist during the bat survey season, May to September inclusive, with at least one undertaken during the peak bat survey season (May to August inclusive).
Unknown	14	Building 14 could not be located during the survey but appears on site plans. It is recommended that an access route is created through the scrub to allow facilitate a survey to confirm the buildings existence. Following this, an external and internal assessment will be required to assess the potential of the building to support roosting bats and the to determine the requirement for further bat surveys.

Buildings 2, 3, 4, 5, 6, 7, 8, 9, 13, 15, 16, 20, 22, 23, 24, 25, 26, 27, 30, 31 and 32 have been assessed as having potential to be used by hibernating bats. With the exception of buildings 2, 4, 16, 20 and 30, all buildings and their potential roosting features can be fully inspected from ground level through the use of a torch and endoscope. As such, all buildings should be subject to monthly hibernation inspections to search for hibernating bats during the peak hibernation season of December to February inclusive. Additionally, static detectors should be installed within Buildings 2, 4, 16, 20 and 30 during this period, set to record continuously for at least a week each month.

4.2.2 Breeding birds

Due to the potential presence of breeding birds within the building at the time of development, it is recommended that any vegetation clearance and demolition or destructive works to buildings take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible, a breeding bird nest check should be undertaken prior to the commencement of works by a suitably experienced ecologist and an ecological clerk of works appointed if considered necessary.

5 CONCLUSION

The Oaks Site is located within Wrexham Industrial Estate, south-east of the City of Wrexham. The proposed development site is dominated by dense scrub with scattered trees, ponds and derelict buildings. Small stands of more mature scrub and broadleaved woodland are present within the southern section of the site and small areas of disturbed ground and semi-improved grassland are present across the site. Redwither Brook flows along part of the western site boundary and the Clywedog River demarcates the southern site boundary. The habitats on site provide moderate to high quality foraging and commuting habitats, with the watercourses and associated riparian woodland at the site boundaries providing the highest quality features.

The surrounding area consists of commercial, office and warehouse buildings to the north, whilst an extensive area of arable land lies to the south of the site.

All buildings and structures on site were assessed for their suitability to support roosting bats, the results of which are summarised in the table below:

Negligible bat roosting suitability	Low bat roosting suitability	Moderate bat roosting suitability	Confirmed to contain bat roost
Buildings 10, 11, 12, 17, 18, 19, 21, 28, 29, 33, 34, 35, 36, 37, 38, 39 and 40	Buildings 1, 2, 4, 5, 6, 7, 9, 15, 22, 23, 24, 25, 26, 27, 30, 31 and 32	Buildings 13, 16 and 20	Buildings 3 and 8

Building 14 could not be located during the survey but appears on site plans. It is recommended that an access route is created through the scrub to allow facilitate a survey to confirm the buildings existence. Following this, an external and internal assessment will be required to assess the potential of the building to support roosting bats and the to determine the requirement for further bat surveys.

Many of the buildings on site are considered to have the potential to be used by hibernating bats, as they are all unheated, likely have areas with cool and constant temperatures during the winter and contain either sheltered cavities that could be used by crevice-dwelling species or sheltered rooms / larger open spaces that could be used by hibernating horseshoe bats. In most cases, the hibernation potential is very limited to a single feature or area. The following buildings are considered to have some potential to be used by hibernating bats: **Buildings 2, 3, 4, 5, 6, 7, 8, 9, 13, 15, 16, 20, 22, 23, 24, 25, 26, 27, 30, 31 and 32.**

Buildings that have been assessed as having negligible suitability and are not considered to have hibernation potential require no further surveys or mitigation measures for roosting bats.

Buildings with confirmed roosts or either low, moderate or hibernation potential for roosting bats, will require further surveys to determine whether bats are using these buildings for roosting purposes, and if so, characterise these roosts. The survey further requirements are detailed in Section 4.2.1 of this report.

Due to the potential presence of breeding birds within the building at the time of development, it is recommended that any vegetation clearance and demolition or destructive works to buildings take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible, a breeding bird nest check should be undertaken prior to the commencement of works by a suitably experienced ecologist and an ecological clerk of works appointed if considered necessary.

6 REFERENCES

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Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines.* (3rd ed.) The Bat Conservation Trust, London.

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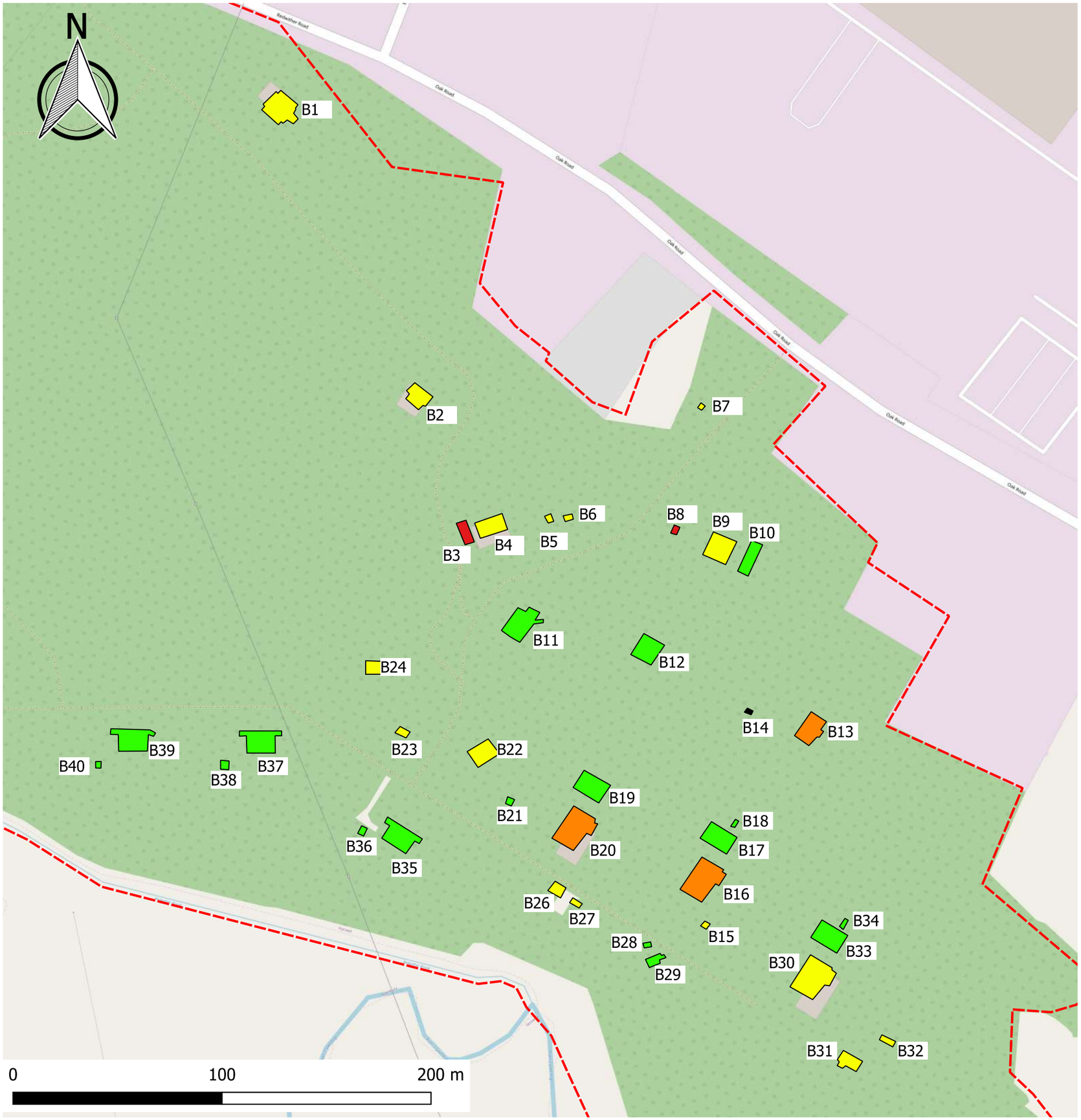
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APPENDICES

Appendix 1 – Site plan

Bat Scoping Survey

Site: The Oaks, Wrexham
NGR: SJ 38786 49263
Author: Ysobella Cox
Date: 30.05.2024





Key

- Negligible potential
- Low potential
- Moderate potential
- Confirmed roost
- Building 14 was not assessed during the scoping survey
- Survey Boundary

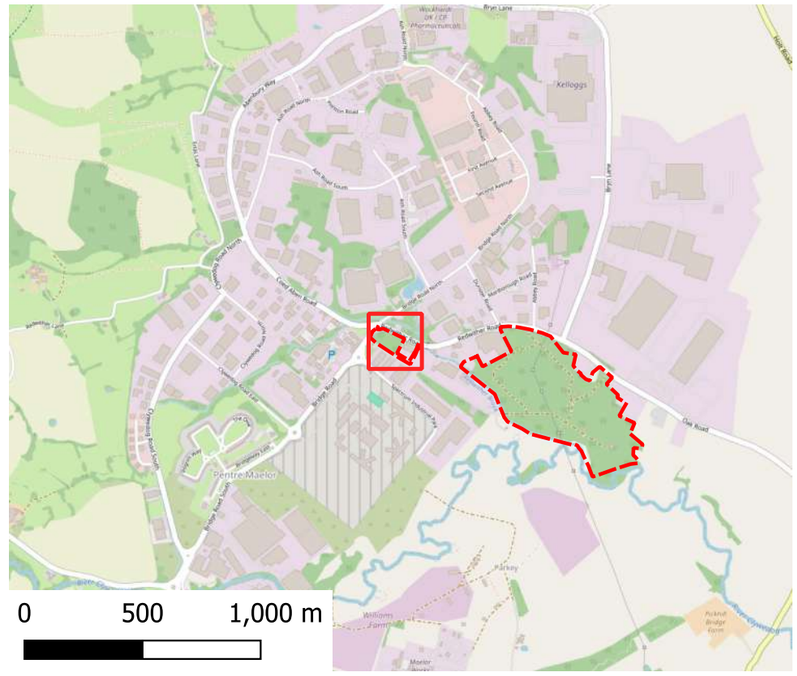
THIS PLAN IS BASED UPON OpenStreetMap® AND IS OPEN DATA, LICENSED UNDER THE OPEN DATA COMMONS OPEN DATABASE LICENCE (ODbl) BY THE OpenStreetMap FOUNDATION.

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Bat Scoping Survey

Site: The Oaks, Wrexham
NGR: SJ 38786 49263
Author: Ysobella Cox
Date: 30.05.2024





Key

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Appendix 2 – Aerial photographs


The Oaks, Wrexham Industrial Estate
Close aerial photograph
Survey boundary
Map data © 2023 Google, Imagery © 2023 Google


The Oaks, Wrexham Industrial Estate
Wide aerial photograph
Site location
Map data © 2023 Google, Imagery © 2023 Google

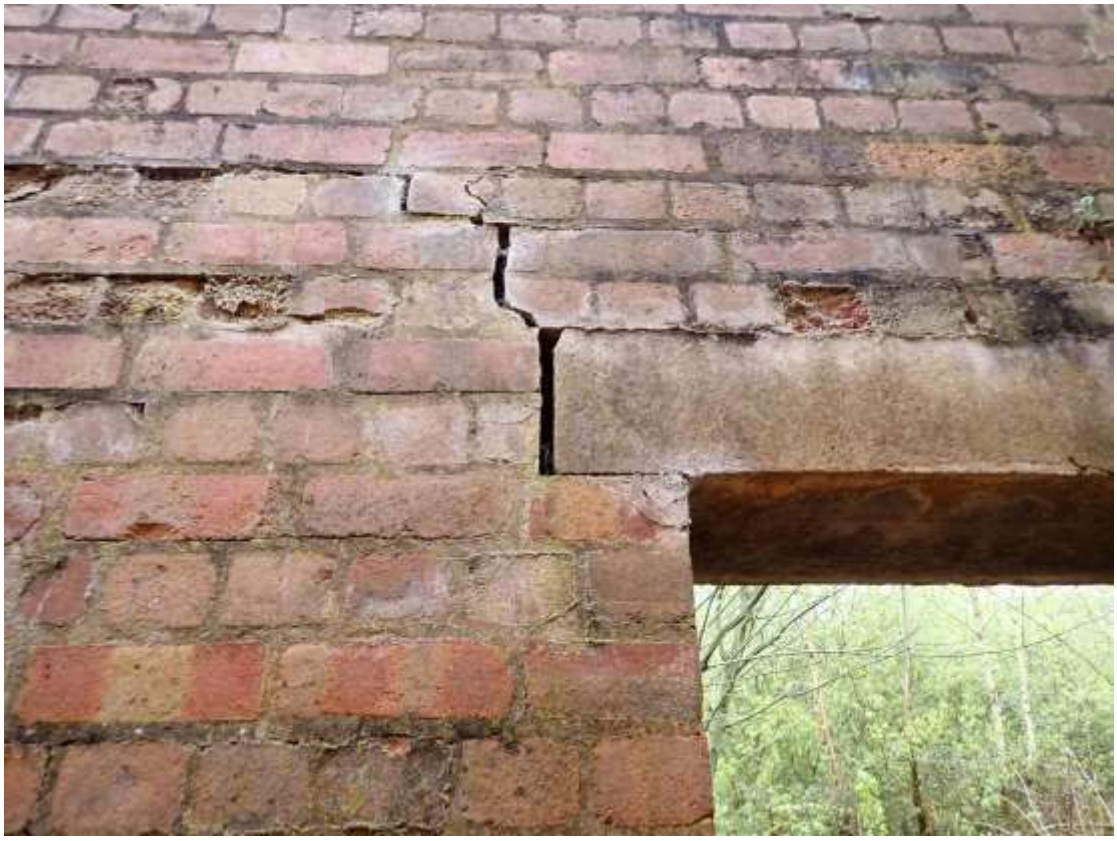
Appendix 3 – Photographs



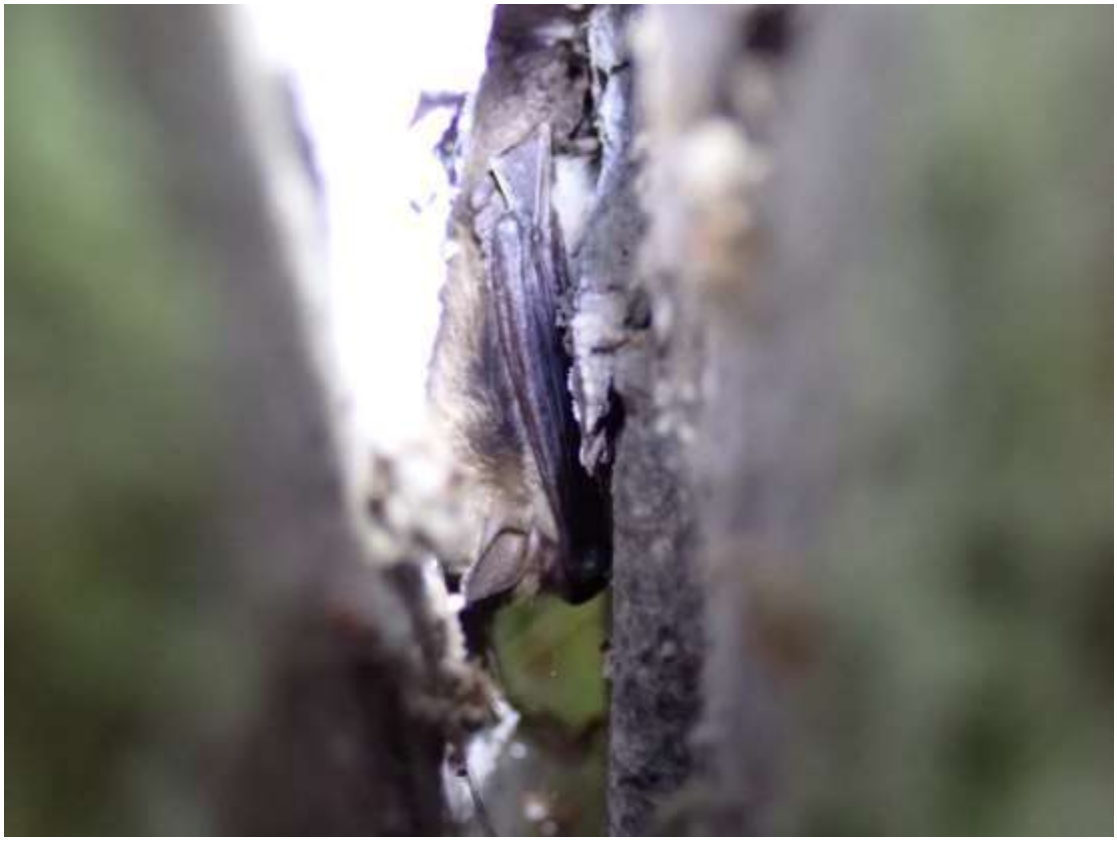
Photograph 1. Building 1.



Photograph 2. Gaps within the brickwork of Building 2.



Photograph 3. The location of the roost within Building 3. A crack within the brickwork, above the door frame on the north-eastern aspect of the building.



Photograph 4. A *Myotis sp.* bat located within Building 3.



Photograph 5. A hole associated with the metal pipework on Building 4.



Photograph 6. Building 5.



Photograph 7. A gap between the timber doorframe and the brick wall on Building 6.



Photograph 8. Building 7.



Photograph 9. The location of a roost within Building 8. A cavity between the double-skinned wall on the western aspect of the building.



Photograph 10. A *Pipistrellus sp.* bat located within Building 8.



Photograph 11. The location of the second roost within Building 8. A gap between the concrete lintel and the brickwork on the western aspect of the building.



Photograph 12. Building 9.



Photograph 13. Building 10.



Photograph 14. A concrete tunnel within Building 11.



Photograph 15. Building 12.



Photograph 16. A gap underneath the barge boards at the eaves of Building 13.



Photograph 17. Building 15.



Photograph 18. A crack within the concrete wall surrounding the northern aspect of Building 16.



Photograph 19. Building 17 has been sealed with earth.



Photograph 20. Building 18.



Photograph 21. Building 19.



Photograph 22. Trees and scrub growing from the eaves of Building 20.



Photograph 23. Building 21.



Photograph 24. A crack within the concrete wall on the northern and western aspects of Building 22.



Photograph 25. A crack between the stone lintel and the redbrick wall on the northern aspect of Building 23.



Photograph 26. Cavities within the mortar of Building 24.



Photograph 27. Gaps between the wooden boards, timber frames and a window on Building 25.



Photograph 28. A gap between the concrete sections of the roof on Building 26.



Photograph 29. A gap between the south-western corner of Building 27 and an ash tree which is growing into the corner of the brickwork.



Photograph 30. Building 28.



Photograph 31. Building 29.



Photograph 32. Gaps within the mortar of Building 30.



Photograph 33. The interior of Building 31.



Photograph 34. Building 32.



Photograph 35. The location of Building 33 which has been filled with earth historically, with only a concrete wall exposed.



Photograph 36. Building 34.



Photograph 37. A tunnel within Building 35.



Photograph 38. Building 36.



Photograph 39. A tunnel leading to the central area of Building 37.



Photograph 40. Building 38.



Photograph 41. A tunnel within Building 39.



Photograph 42. Building 40.



Photograph 43. The interior of Building 1.



Photograph 44. Gaps within the breezeblock wall in Building 2.



Photograph 45. Tubular cavities within the roof of Building 6.



Photograph 46. Dense ivy within Building 15.



Photograph 47. A gap between the concrete blocks which form the roof of Building 16.



Photograph 48. The standing water within Building 20.



Photograph 49. Evidence of nesting birds within Building 26.



Photograph 50. A crack within the roof and redbrick wall of Building 32.

Appendix 4 – Statutory and planning context

STATUTORY AND PLANNING CONTEXT

Ecological assessments

Ecological assessments play an important part within the planning context; they include an initial assessment which highlights any specific interests of a site. From the initial site assessment, the surveyor assesses the suitability of habitats within the site to support protected species and makes recommendations for further survey works if required. The following paragraphs provide a brief interpretation of the legislative protection that is relevant to the findings of this report.

Habitats

Section 7 of the Environment Act (Wales) places a duty on Welsh Ministers to publish, review and revise lists of types of habitats and species in Wales which they consider are of key significance to sustain and improve biodiversity. The Welsh Ministers must also take all reasonable steps to maintain and enhance the habitats published in these lists, and encourage others to take such steps.

Bats

In the United Kingdom, all species of bat and their roosts are afforded full protection under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (known as the "Habitats Regulations"). The Wildlife and Countryside Act is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) and was amended by the Countryside and Rights of Way Act 2000. This makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture a bat
- Deliberately, intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (even if the bat is not present at the time)
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead bat, any part of a bat or anything derived from a bat

Under UK law, a bat roost is *any structure or place which any wild [bat] … uses for shelter or protection*. As bats often reuse the same roosts, legal opinion is that a roost is protected whether or not the bats are present at the time of the activity taking place.

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

If an activity is likely to result in any of the above offences, a licence can be applied for to derogate from the protection afforded. These licences must provide appropriate mitigation and are issued by NRW.

The Environment (Wales) Act 2016 also lists the following bat species as species of principle importance under Section 7:

- Barbastelle *Barbastella barbastellus*
- Bechstein's bat *Myotis bechsteinii*
- Noctule *Nyctalus noctula*
- Common pipistrelle *Pipistrellus pipistrellus*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Brown long-eared bat *Plecotus auritus*
- Greater horseshoe *Rhinolophus ferrumequinum*
- Lesser horseshoe *Rhinolophus hipposideros*

Birds

All wild birds, their nests and young are protected throughout England and Wales by the Wildlife & Countryside Act 1981 (as amended). It is illegal to kill, injure or take any wild bird, or damage or destroy the nest or eggs of breeding birds. The legislation applies to all bird species, common and rare.

In addition to the protection afforded to all wild birds, more vulnerable species listed on Schedule 1 of the Act receive enhanced protection when breeding. Schedule 1 species, including their dependent young, are protected from intentional or reckless disturbance whilst at or near the nest, in addition to the protection afforded the more common species.

The Environment (Wales) Act 2016 offers further protection to the nests of some species that regularly re-use their nests, even when the nests are not in use.

The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status' of 244 UK bird species. "Birds of Conservation Concern 4: the Red List for Birds" is the most recent publication summarising their findings. Three lists, Red, Amber and Green, have been produced based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance. These lists are a valuable resource when considering conservation priorities.

Planning Policy

National planning guidance is issued in the form of Planning Policy Wales (PPW - 2018). The most relevant sections are included in Chapter 6: Distinctive and Natural Places. This chapter details the policies on issues such as the protection of trees, woodlands, species, and designated sites. The document is free and available to view online