Ecological Addendum Note

Land off Blackmoorfoot Road and Felks Stile Road, Huddersfield

Tyler Grange

3rd August 2020

Report No:	Date	Revision	Author	Checked
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Summary

S.1. This report has been prepared by Tyler Grange Group Ltd. on behalf of Empire Knight Group Limited and should be read in conjunction with the Ecological Assessment prepared by Tyler Grange in 2018 (10925_R03b_Ecological Assessment_SJC_MM_02032018) and a separate confidential survey and monitoring report.

S.2. Following consultation with Kirlklees Council's Biodiversity Officer, to agree the scope of required works to support a repeat outline planning application, this report sets out the findings of an updated desk study, updated phase 1 habitat survey and updated preliminary bat roost assessment.

S.3. The update to the desk study together with the updated phase 1 habitat survey and bat roost assessment demonstrated that there have been no changes to the baseline conditions at the site. The parameters plan and illustrative masterplan for the site have also not changed significantly and therefore the previous ecological assessment remains valid.

S.4. In addition to the above this report, as requested, also demonstrates the potential of the site to achieve a biodiversity net gain using the DEFRA 2.0 Biodiversity Metric.

Section 1: Introduction

Background

1.1. In 2018, Tyler Grange undertook an Ecological Assessment, on behalf of Empire Knight Group Limited, of a parcel of land known as “Land to the north of Blackmoorfoot Road and to the east of Felks Stile Road” in Huddersfield to accompany an outline planning application.

1.2. No objections in relation to nature conservation and biodiversity were raised as part of the outline planning application. Planning conditions were suggested to be discharged at the reserved matter stage that related to the production of a detailed ecological strategy and management plan and updated species surveys.

1.3. A new outline planning application will be submitted in August 2020 for the same parcel of land.

1.4. Following consultation with Amy Reddick, (Biodiversity Officer, Kirklees Council) in June 2020 it was agreed, under the assumption that no significant changes have occurred to the baseline conditions at the site, that results from further protected species surveys would not be required to accompany a new outline planning application but would be required at the reserved as part of a reserved matters application.

1.5. However, it was requested that in addition to the original Ecological Assessment that an assessment using the DEFRA 2.0 Biodiversity Metric should be undertaken to inform the ability of the site to deliver a 10% net gain.

Purpose and Scope

1.6. The purpose of this report is to re-examine the baseline conditions at the site by undertaking an updated Data Search, Phase 1 Habitat Survey and Preliminary Bat Roost Assessment.

1.7. If no significant changes have occurred at the site, then the new site designs will be used to determine any additional ecological impacts and to provide describe any required mitigation and highlight ecological enhancement opportunities.

1.8. In addition to the above an assessment of the ability of the site to deliver a 10% Biodiversity Net Gain will be undertaken.

Site Details

1.9. The site is a parcel of land to the north of Blackmoorfoot Road and to the east of Felks Stile Road, Huddersfield, HD4 7AD (OS Grid Reference SE 11333 14819).

1.10. The parcel of land will be referred to as “the site” within this report and its boundary is defined by the application red-line boundary shown in Plan 10925/P03. An adjacent plot of land within the same ownership is also shown by a blue line boundary.

1.11. The site is subject to a planning application which will seek outline planning permission with details of points of access (matters of access, scale, layout, landscaping and appearance are reserved) for the development of up to 770 residential dwellings (Use Class C3), including up to 70 care apartments (Use Classes C2/C3) with doctors surgery of up to 350 sq m (Use Class D1); up to 500 sq m of Use Class A1/A2/A3/A4/A5/D1 floorspace (dual use), vehicular and pedestrian access points off Blackmoorfoot Road and Felks Stile Road

Section 2: Methodology

Data Search Update

2.1 An update to the original desk-based study was undertaken to identify any changes to protected species records, site designation or changes to policy that would impact the previous ecological assessment of the site.

2.2 The following sources were used:

- Multi Agency Geographic Information for the Countryside website[1] for European statutory sites (10km), national statutory and non-statutory sites (2km)
- West Yorkshire Ecology Service and Kirklees Records of protected species, designated sites and other species of nature conservation importance (2km)
- West Yorkshire Bat Group for bat records (2km)
- Kirklees Unitary Development Plan and The Kirklees Biodiversity Strategy for local planning policies and designations.

Phase 1 Habitat Survey Update

2.3 An 'extended' Phase 1 habitat survey of the site was initially undertaken on 27th August 2017 by Dr Georgina Palmer and updated on 6th December 2017 by Kyle Mellish following an extension to the site boundary.

2.4 An update to this survey was undertaken on 1st July 2020 by Kyle Mellish, an experienced field ecologist and associate member of CIEEM. Weather conditions on the day of the survey were overcast with sunny spells, dry and 14°C with a light breeze.

Preliminary Bat Roost Appraisal Update

2.5 A preliminary bat roost assessment was initially undertaken on 27th April by Steven Coyne (Natural England CL18 bat survey licence) on all buildings within the site boundary to assess their potential to support roosting bats.

2.6 An update to this survey was undertaken on 6th July 2020 by Steven Coyne Steven Coyne (Natural England CL18 bat survey licence). Weather conditions on the day of the survey were overcast with occasional light rain showers and 16°C with a light breeze.

[1] www.magic.defra.gov.ukAccessed July 2020.

Section 3: Results

Data Search

3.1. No additional species records, site designations or policy changes that would change the ecological baseline of the site were identified within the updated desk study.

Updated Phase 1 Habitat Survey

3.2. The habitat features recorded within the site and within the ownership boundary are illustrated on **Plan 10925/P03**. A photographic record containing representative pictures of the habitats recorded during the Phase 1 habitat survey are provided in Appendix 5.

Habitats within the Site

Amenity Grassland (Photograph 1 - 2)

3.3. Areas of short mown amenity grassland are present to the east of the site around the buildings at the main site entrance and to the north west around the fireworks testing area. The grassland was very species poor and was dominated by Yorkshire fog and cock's foot.

Building, Hardstanding and Gravel (Photograph 3 -8)

3.4. The main industrial core of the site is dominated by buildings, tarmac roads and gravel areas which provide vehicle access to the buildings and parking within the factory boundary.

3.5. The site contains a wide variety of buildings, including a brick-built bungalow and house on the driveway into the fireworks factory, brick-built offices, brick/concrete shelters/buildings, fireworks storage sheds made of wood and corrugated metal and brick-built fireworks processing buildings and brick storage sheds.

3.6. Detailed descriptions of all buildings can be found in the Updated Preliminary Roost Assessment section.

Heathland (Photograph 9)

3.7. Areas of common heather dominated habitat with gorse are present around the fireworks testing area at the north-western side of the factory site and towards the south-east of the factory boundary. The heather within these areas were from a range of age classes and showed signs of minor grazing, likely from rabbits.

Improved Grassland (Photograph 10)

3.8. The land to the east and west of the of the fireworks factory is dominated by improved grassland, which is cattle and sheep grazed.

3.9. The grassland is dominated by perennial rye grass and cock's-foot with abundant common bent, meadow foxtail and white clover, occasional Yorkshire fog and rare false oat-grass, timothy and yarrow.

Quarry (Photograph 11)

3.10. There is a disused quarry located at the north-western edge of the factory boundary, which is currently used as an area where faulty fireworks are burned.

Scrub (Photograph 12)

3.11. Several small areas of bramble scrub are present which have colonised areas previously dominated by tall ruderal vegetation.

Semi-improved grassland (Photograph 13)

3.12. Areas of semi-improved grassland are present within the north east and north west of the factory boundary.

3.13. Species recorded include Yorkshire fog and cock's-foot, ribwort plantain and vetch species, as well as white clover, red fescue, heath woodrush, dandelion and buttercup.

Tall ruderal (Photograph 14)

3.14. Areas of tall ruderal are scattered across the site between the buildings and hardstanding of site.

3.15. These areas are dominated by rosebay willowherb and common nettle, with bramble, young self-seeded silver birch and willow.

Vegetated Garden (Photograph 15-16)

3.16. Gardens with lawn and shrub planting is present around the bungalow and detached house at the entrance to the site.

Broadleaved Woodland (Photograph 15-21)

3.17. Five woodland areas were present within the site boundary. These were located to the south east outside of the industrial core of the site (W1), a strip along the western edge of the industrial core (W2), to the east of the quarry (W3), to the north of the fireworks testing area (W4) and to the north east of the industrial core (W5).

3.18. Woodland W1 is located towards the south east of the site and contained mainly young to mature silver birch, goat willow and holly with occasional, sycamore, elder, pedunculate oak and alder

3.19. Woodland W2 is a woodland strip on a soil bund extending north west from W1 towards W3 and contained young to early mature cherry, rowan, ash alder and silver birch.

3.20. Woodland W3 is located to the north west of the site near the quarry and was dominated by sycamore with goat willow, silver birch and hawthorn.

3.21. Woodland W4 is located to the north west corner of the site and contained young to mature aspen, oak, ash, silver birch, sycamore, goat willow, alder and rowan

3.22. Woodland W5 is an area of regenerative growth containing goat willow, silver birch and poplar.

Invasive Non-native Plants

3.23. Both Japanese knotweed and Himalayan balsam are present within the site boundary. See target notes on Plan 0925/P03 for locations.

Habitats within the ownership boundary **(Photograph 22-24)**

3.24. The habitats outside of the application boundary and inside the ownership boundary are dominated by cattle and sheep grazed improved and semi-improved grassland. Large areas of mixed woodland are also present to the north east of the ownership boundary. Several pockets of moderate to heavily grazed dwarf heath are present and to the east are the garden and hardstanding associated with a row of domestic properties.

Updated Preliminary Bat Roost Assessment

3.25. All buildings and structures at the site were re-inspected externally from the ground and no significant changes have occurred since the 2017 survey.

3.26. The habitat features recorded within the site and within the ownership boundary are illustrated on Plan 1. A photographic record containing representative pictures of the habitats recorded during the Phase 1 habitat survey in 2017 and 2020 is provided in Appendix 5.

Summary of updated surveys

3.27. No significant changes to the ecological baseline have been informed by the updated data search, Phase 1 Habitat Survey or Preliminary Bat Roost Assessment.

3.28. Some minor habitat boundaries changes were noted and some habitats have progressed from pioneer type habitats such as ruderal to more established habitats such as scrub, however these changes have remained minimal and are unlikely to have had a significant influence on previously observed protected species presence/absence or distribution.

3.29. Therefore, evaluation of ecological resources at the site has not changed and the likely impacts of the outline scheme and requirements for mitigation will be assessed from the existing data without the need to undertake further protected species surveys.

Review of new site designs

3.30. No significant changes to the parameters plan (see **Plan 10925/P04**) or the illustrative masterplan (see **Plan 10925/P05)** have been made and therefore the existing Mitigation and Enhancement Strategy and the Conclusions of the initial Ecological Assessment remain the same.

3.31. The remainder of this report will focus on the ability of the scheme to achieve a 10% Biodiversity Net Gain.

Biodiversity Net Gain

3.32. A completed copy of the Biodiversity Metric 2.0 Calculation Toll used for this assessment will be made available with this report, the following acts as a summary of the main results.

3.33. The online baseline habitat units for this site is 91.70 with a large proportion of these from grassland habitats (47.56 units).

3.34. The site plan indicates that the woodland, dwarf heath and grassland habitats within the habitat network area at the north of the site can be retained together with a small portion of the grassland habitat on the east edge of the site and part of woodland three that fall within the green link. As a result, 16.94 units will be retained. With enhancement of these habitats this unit count could be larger.

3.35. The remainder of the site will be lost resulting in a loss of 74.76 units.

3.36. Based on the parameters plan these areas lost will be replaced by a combination of urban mosaic (development plots of houses, garden and landscaping), a green link forming two diagonal corridors across the site, village greens, pocket parks, boundary planting and a natural play area.

3.37. Using the assumption that all areas other than the urban mosaic will be amenity grassland this will create 77.52 biodiversity units which would result in a 3% net gain.

3.38. Substituting these amenity grassland areas for a higher distinctiveness habitat type such as other neutral grassland would create 88.31 units and a 14.78% net gain.

3.39. Therefore, it is considered that there is scope for this development to produce a net gain of above 10% but is heavily dependent on the details of the final masterplan.

3.40. However, as part of the metric high distinctiveness habitats lost need to be replaced with the same habitat type and medium distinctiveness habitats lost need to be replaced with the same broad habitat type or a higher distinctiveness habitat.

3.41. High level habitats proposed for removal by this scheme include lowland heath from the south east part of the site, and medium level habitats proposed for removal include scrub and broadleaved woodland.

3.42. As stated in the original ecological assessment for the site, habitat creation could be incorporated within the green spaces within the development. However, as the Kirklees habitat network encompasses the land north of the site which falls under the same land ownership. Enhancing the habitats within this area is likely to have a greater benefit to nature conservation and biodiversity.

Section 4: Conclusion

4.1. No significant changes have occurred to either the known distribution of protected species, the designation of sites, planning policy or the baseline conditions at the site since the Ecological Assessment in 2017.

4.2. Therefore, with agreement from the Kirklees Council Biodiversity Officer no additional protected species surveys are required at this stage in the planning process.

4.3. In addition, as there have been no significant changes to the parameters plan and illustrative masterplan the previous ecological assessment remains valid.

4.4. A provisional biodiversity net gain assessment has indicated that with the lowest quality habitats used in green spaces at the site the design will achieve a low net gain but with higher value habitats incorporated into the design the design could achieve a 10% net gain within the site boundary.

4.5. However, as high and moderate distinctiveness habitats are proposed for removal, specific habitat types i.e. lowland heath, scrub and woodland will need to be included in the site design but could be included in land adjacent under the same ownership but within the Kirklees habitat network.

Appendix 1: Site Photographs

Appendix 1: Site Photographs

Photograph 1: Amenity grassland in the entrance to the site

Photograph 2: Amenity grassland around the fireworks testing area to the north of the quarry

Photograph 3: Tarmac access road and garage buildings

Photograph 4: Semi detached bungalow at site entrance

Photograph 5: Detached house at site entrance

Photograph 6: Office Building

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Photograph 7: Small storage shed

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Photograph 10: Improved grassland fields to the west of the site

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Photograph 20: Woodland W4

Photograph 21: Woodland W5

Photograph 22: Offsite semi-improved grassland

Photograph 22: Offsite improved grassland

Photograph 23: Offsite mixed woodland

Photograph 24: Offsite mixed woodland

Appendix 2: Species Glossary

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Alder	*Alnus glutinosa*
Ash	*Fraxinus excelsior*
Aspen	*Populus tremula*
Bramble	*Rubus fruticosus agg*
Buttercup species	*Ranunculus sp*
Cherry species	*Prunus sp.*
Cock's-foot	*Dactylis glomerata*
Common bent	*Agrostis capillaris*
Common heather	*Caluna vulgaris*
Common nettle	*Urtica dioica*
Dandelion	*Taraxacum officinale agg*
Elder	*Sambucus nigra*
False oat-grass	*Arrhenatherum elatius*
Goat willow	*Salix caprea*
Gorse	*Ulex europaeus*
Hawthorn	*Crataegus monogyna*
Heath woodrush	*Luzula multiflora*
Himalayan balsam	*Impatiens glandulifera*
Holly	*Ilex aquifolium*
Japanese knotweed	*Fallopia japonica*
Meadow foxtail	*Alopecurus pratensis*
Pedunculate oak	*Quercus robur*
Poplar species	*Populus sp.*
Red fescue	*Festuca rubra*
Ribwort plantain	*Plantago lanceolata*
Rosebay willowherb	*Chamaenerion angustifolium*
Rowan	*Sorbus aucuparia*
Silver birch	*Betula pendula*
Sycamore	*Acer pseudoplatanus*
Timothy	*Phleum pratense*
Vetch species	*Vicia sp.*
White clover	*Trifolium repens*
Willow species	*Salix sp.*
Yarrow	*Achillea millefolium*
Yorkshire fog	*Holcus lanatus*

Appendix 3: Land off Blackmoorfoot Road and Felks Stile Road, Huddersfield- Ecological Assessment (10925/R03b)

2nd March 2018

Land off Blackmoorfoot Road and Felks Stile Road, Huddersfield

Ecological Assessment

Report Number:	10925_R03b_SJC_MM
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Summary

S1. This report has been prepared to inform an outline planning application for a residential development at Land off Blackmoorfoot Road and Felks Stile Road, Huddersfield, hereafter referred to as the 'site'.

S2. The site is a mix of industrial (fireworks factory) and pastoral agriculture and it supports the following habitats; buildings, hardstanding, quarries, dry stone walls and bare ground (negligible ecological importance), amenity grassland, semi-improved grassland, improved grassland, tall ruderal, mixed semi-natural woodland, scattered trees (site ecological importance), dwarf shrub heath and semi natural broadleaved woodland (local ecological importance).

S3. The site is not covered by or adjacent to any sites that are the subject of statutory or non-statutory protection and no such sites would be affected.

S4. The site falls partially within the Kirklees Wildlife Habitat Network although this part of the site will not be developed but instead be managed as public open space (POS), therefore, the ecological functionality of the network can be maintained.

S5. Detailed fauna surveys conducted in 2017 indicate the presence of:

- One active outlier badger sett and two partially used setts;
- A locally important assemblage of bats including one common pipistrelle non-maternity summer roost (peak count 1 bat) and a low/moderate level of commuting and foraging activity; and
- A locally important assemblage of breeding birds.

S6. The most significant protected species issue with respect to development of the site is the loss a common pipistrelle non-maternity roost and three outlier badger setts. The loss of both of these will require a licence from Natural England and an appropriate mitigation strategy.

S7. The loss of habitats of importance at the site can be mitigated and compensated for through appropriate landscape design, including bat and bird box scheme and a Landscape and Ecology Management Plan (LEMP) to allow retained, enhanced and newly created habitat areas to be managed long term to maintain ecological functionality.

S8. With the implementation of the mitigation and enhancement strategy described, the proposed development would be in conformity with relevant planning policy and legislation, as set out at **Appendix 1**. The strategy could be controlled by appropriately worded planning conditions and obligations.

Section 1: Introduction

1.1. This ecological assessment has been prepared by Tyler Grange LLP on behalf of Empire Knight Group. It sets out the findings of an ecological assessment of Land off Blackmoorfoot Road and Felks Stile Road, Huddersfield (hereafter referred to as the 'site'). The site is centred on National Grid Reference SE 113 147.

1.2. An outline application with details of points of access (matters of access, scale, layout, landscaping and appearance are reserved) for the development of up to 630 residential dwellings (Use Class C3), up to 70 care apartments (Use Class C2/C3), up to 500sq m of Use Class A1/A2/A3/A4/A5/D1 floorspace (dual use), vehicular access points off Blackmoorfoot Road and Felks Stile Road and associated works. is to be submitted to Kirklees Council.

1.3. The purpose of this report is to:

- Using available background data and results of field surveys, describe and evaluate the ecological features present within the likely 'zone of influence' (ZoI)(CIEEM 2016) of the proposed development;
- Assess ecological issues and opportunities as a result of development in relation to the current site design; and
- Where appropriate, describe mitigation and enhancement proposals, together with planning controls to ensure their delivery, to ensure conformity with policy and legislation.

1.4. This assessment and the terminology used are consistent with the 'Guidelines for Ecological Impact Assessment' (CIEEM 2016).

Section 2: Methodology

Definitions

2.1. The 'site' is defined by the application red-line boundary; see Plan 10925/P03. The ownership of the adjacent land is also shown by a blue-line boundary.

2.2. The 'study area' extends to a 1km radius for protected and priority species records, 2km for non-statutory site designations and nationally designated statutory sites and a 10km radius for European statutory site designations. The study area was extended to 2km for bat records.

Scoping

2.3. The scope of the ecological assessment was determined by undertaking a desk-based assessment of available records and published sources, together with an initial site survey. With this information, the ZoI of the proposed development was established, together with any further detailed work - such as detailed surveys - that might be necessary to inform the assessment.

2.4. The scope of the bat surveys was discussed and agreed in principle with Tom Stephenson, (Biodiversity Officer, Kirklees Council) in May 2017.

Data Search

2.5. The aim of the data search is to collate existing ecological records for the site and adjacent areas. Obtaining existing records is an important part of the assessment process as it provides information on issues that may not be apparent during a single survey, which by its nature provides only a 'snapshot' of the ecology of a given site.

2.6. The data search covered the study area using the distances defined in paragraph 2.2. It was conducted in May 2017. The following organisations and resources were contacted and consulted:

- West Yorkshire Ecology Service, for protected and priority[1] species and habitats, and locations of non-statutory sites;
- Multi-Agency Geographic Information for the Countryside (MAGIC) Interactive Maps (www.magic.gov.uk/magicmap.aspx), for locations of statutory sites;
- Natural England's website (https://designatedsites.naturalengland.org.uk/) for citations of nationally designated sites;
- Joint Nature Conservation Committee website for citations of internationally designated sites (http://jncc.defra.gov.uk/page-4);
- UK Biodiversity Action Plan (UKBAP) (http://jncc.defra.gov.uk/page-5717) and Kirklees BAP (LBAP) (http://www.kirklees.gov.uk/beta/delivering-services/policies-and-strategies.aspx) for

[2] UK priority species and habitats are those subject to conservation action and referred to as Species of Principal Importance (SoPIs) or Habitats of Principal Importance (HoPIs). They are listed at Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act states that local planning authorities must have regard for the conservation of both SoPIs and HoPIs.

priority habitats and species subject to conservation action, to assist with the evaluation of ecological features and to inform site enhancement strategies; and

- Kirklees Council website (http://www.kirklees.gov.uk) for details of relevant local planning policies and supplementary planning guidance;

2.7. Information supplied by these organisations has, where relevant, been incorporated into the following account with due acknowledgement.

Extended Phase I Survey

2.8. An extended Phase I habitat survey of the site was undertaken on 27th August 2017 by Dr Georgina Palmer and updated on 6th December 2017 by Kyle Mellish.

2.9. The habitat survey methodology was based on guidance set out in the 'Handbook for Phase I habitat survey' (JNCC 2010). This entailed recording the main plant species and classifying and mapping broad habitat types present.

2.10. Note was taken of the more conspicuous fauna, and any evidence of, or potential for the presence of protected/notable flora and fauna.

2.11. A basic inventory of the habitats and a representative species list was produced. Where access allowed, adjacent habitats were also considered, in order to assess the site within the wider landscape and to provide information with which to assess possible impacts within the context of the site boundary.

2.12. The weather conditions during the August 2017 survey visit was occasional light rain showers, light breeze and 8°C and during the December 2017 visit dry, moderate breeze and 4°C.

Detailed Phase II Surveys

2.13. Table 2.1 below lists the surveys conducted, together with dates. The respective Appendix should be referred to for further information concerning survey methods, surveyors and rationale. All surveys were conducted in accordance with best practice.

Survey	Date	Appendix	Notes
Badger	October 2017 December 2017	2	The site plus an area 30m from the boundary was assessed, where access permitted
Bats	May – September 2017	3	Preliminary roost assessment Backtracking survey – Statics Backtracking survey – Transects Roost surveys Activity survey – Statics Activity surveys - Transects
Breeding birds	May-July 2017	4	Three visits
Reptiles	May-July 2017	5	Seven visits

Table 2.1. Detailed surveys undertaken to inform the assessment

Evaluation

2.14. The evaluation of habitats and species is defined in accordance with published guidance (CIEEM 2016). The level of importance of specific ecological features is assigned using a geographic frame of reference, with international being most important, then national, regional, county, local and lastly, within the site boundary only.

2.15. Evaluation is based on various characteristics that can be used to identify ecological features likely to be important in terms of biodiversity. These include site designations (such as SSSIs), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological feature. In terms of the latter, 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.

Impact Assessment

2.16. Prediction of the likely significant effects takes into account the different stages and activities within the development process, and the inherent mitigation built into the development.

2.17. In accordance with the CIEEM published guidance and terminology (CIEEM 2016), a significant effect, in ecological terms, is defined as an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific, broad, or more wide-ranging, and can be considered at a range of geographical scales, including cumulative effects. Insignificant effects are those that would not result in such changes.

2.18. In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitat and species (including extent, abundance and distribution).

2.19. The importance of any feature that would be significantly affected is then used to identify geographical scales at which the effect is significant, from international to local. This importance relates directly to the consequences, in terms of legislation, policy and/or development control at the appropriate level. So, a significant negative effect on a feature of importance at one level would be likely to trigger related planning policies and, if permissible, generate the need for development control mechanisms as described in those policies.

2.20. If an effect is found not to be significant at the level at which the feature has been evaluated to be, it may be significant at a more local level. For instance, an effect resulting in loss of 5% of a habitat at a county level, but 80% at a more local level is more likely to be significant locally, even if it was not considered significant at a county level. It should be noted that effects may be significant at the local scale, particularly in view of policies for no net loss of biodiversity.

2.21. When seeking mitigation or compensation solutions, efforts should be consistent with the geographical scale at which an effect is significant. The relative geographical scale at which the effect is significant will have a bearing on the required outcome which must be achieved.

2.22. The following factors are considered in determining whether ecological effects are significant:

- Extent - the spatial or geographical area over which an effect occurs;

- Magnitude - the size, amount, intensity or volume of an effect, determined on a quantitative basis where possible;

- Duration - the time for which an effect is expected to last prior to recovery or replacement of the feature;

- Frequency and timing – the number of times an activity occurs will influence the resulting effect. The timing of an activity may result in an effect if it coincides with critical life-stages or seasons;

- Reversibility - an irreversible (permanent) effect is one from which recovery is not possible within a reasonable timescale or for which there is no reasonable chance of action being taken to reverse it. A reversible (temporary) effect is one from which spontaneous recovery is possible or which may be counteracted by mitigation; and

- Cumulative effects - where consideration is given to any other developments within the ZoI that, together with the proposed development, may result in significant effects.

Limitations

2.23. Limitation regarding individual species specific or species group surveys are reported within the relevant appendices.

2.24. The species data collated during the data search are only those records submitted to West Yorkshire Ecology Service and therefore should not be taken as a definitive list of the protected and priority fauna to occur within the study area.

Quality Control

2.25. All ecologists at Tyler Grange LLP are members of CIEEM and abide by the Institute's Code of Professional Conduct.

Section 3: Ecological Features

Site Context

3.1 The site is a mixture of industrial and pastoral agriculture. The core of the site is occupied by the Standard/Blackcat Fireworks factory, storage and distribution site which is then surrounded by pastoral farmland. The site rises gently from south to north then past the northern boundary drops sharply into the valley. The core site contains a large number of building and hardstanding related to the fireworks business. Pockets of woodland, scattered trees, ruderal vegetation and grassland are also present. Outside of the industrial core, the pastoral areas are dominated by improved grassland with drystone walls along the field boundaries, with some areas of woodland.

3.2 The site is located on the south western edge of Crosland Moor (a district of Huddersfield). The surrounding area from north-west to south-east is dominated by urban and residential areas, to the south and west of the site the landscape is dominated by upland pastoral agriculture.

Protected Sites

3.3 The site is not covered by or adjacent to any site which is designated on account of its nature conservation importance. However, several such sites, which are either statutorily or non-statutorily protected, are present within the study area.

Statutory sites

3.4 No RAMSAR sites were present within the 10km search area from the site boundary.

3.5 One Special Area of Conservation (SAC) South Pennine Moors (6.7km west, designated for its blanket bog, dry heath, wet heath, oak woodlands and transition mires/quaking bogs) and one Special Protection Area (SPA) Peak District Moors (5.4km south-west, designated for its assemblage of breeding birds) were present within 10km of the site.

3.6 No National Nature Reserves (NNR) or Sites of Special Scientific Interest (SSSI) were present within the 2km search area from the site boundary.

3.7 One Local Nature Reserves (LNR) was present within the within the 2km search area from the site boundary. Gledholt Woods LNR is located 1.8km to the north-east of the site boundary. The site contains a mix of mature woodland and rough meadow. The woodland supports a diverse range of fungi and white claw crayfish have been recorded in the pond onsite.

Non-statutory sites

3.8 Non-statutory sites, known in Yorkshire as Local Wildlife Sites (LWS) and Sites of Wildlife Significance (SWS), within 2km of the site are listed in Table 3.1 below.

Site Name	Designation	Distance and Direction from Site (km - N/S/W/E)	Description/Summary of reason for designation
Huddersfield Narrow Canal	LWS	0.8km N	Open water with a diverse range of aquatic and emergent flora and fauna including kingfisher and otter
Delves Wood	LWS + SWS	1.1km SE	Species rich acid woodland
Dean Wood	LWS + SWS	1.2km SE	Species rich acid woodland and ancient semi-natural woodland
Lowe Westwood Pond	LWS	1.2km W	Species rich standing water including a range of dragonflies and damselflies
Gledholt Woods	LWS	1.8km NE	Local nature reserve with mature woodland and rough meadow
Bank Wood	LWS + SWS	1.9km S	Species rich acid woodland

Table 3.1: Non-statutory sites within the study area

Other designations

3.9 Part of the site boundary at the north of the site and the land within the ownership boundary both fall within The Kirklees Wildlife Habitat Network (a Kirklees Local Plan policy designation).

Habitats and Flora

3.10 The habitats recorded at the site were:

- Bare ground and hardstanding;
- Buildings;
- Dry stone walls;
- Dwarf shrub heath – dry;
- Grassland – amenity;
- Grassland – improved;
- Grassland – semi-improved;
- Invasive species;
- Quarry;
- Scattered trees
- Tall ruderal;
- Woodland – broadleaved semi-natural; and
- Woodland – mixed semi-natural.

3.11 For ease of reference, habitat types have been described alphabetically, below. All the features described are shown on **Plan 10925/P04.**

Bare ground and Hardstanding

3.12 The site is criss-crossed with tarmac roads and gravelled areas which provide vehicle access to the buildings within the factory boundary. (**Photograph 1a and 1b**).


(1a)

(1b)

Photograph 1a and 1b. View of the hardstanding and bare ground on site.

Buildings

3.13 There are a variety of buildings on site, including:

- Brick-built bungalows and houses on the driveway into the fireworks factory (**Photograph 2a**);
- Brick-built factory offices (**Photograph 2b**);
- A stone farmhouse at the north-west of the site (**Photograph 2c**);
- Brick/concrete shelters/buildings (**Photograph 2d**);
- Fireworks storage sheds made of wood and corrugated metal (**Photograph 2e);** and
- Brick-built fireworks processing buildings and brick storage sheds (**Photograph 2f and 2g**).


(2a)

(2b)


(2c)

(2d)

(2e)

(2f)

(2g)

Photograph 2a-2g. Examples of buildings on site.

Dwarf shrub heath - Dry

3.14 There are areas of heather-dominated habitat with gorse (*Ulex europaeus*) around the fireworks testing area at the north-western side of the factory site (**Photograph 3a**), towards the south-east of the factory boundary (**Photograph 3b**) and to the north-west of the factory boundary (**Photograph 3c**) – some of which has been burned (**Photograph 3d**), see plan **10925/P04**.


(3a)

(3b)

(3c)

(3d)

Photograph 3a-3d. Dry dwarf shrub heath on site.

Grassland - Amenity

3.15 There are areas of amenity grassland on site, around the buildings at the south-east of the site (**Photograph 3a**) and in the fireworks testing area at the north-western corner of the fireworks factory (**Photograph 3b**), see plan **10925/P04**. Species recorded include Yorkshire fog (*Holcus lanatus*) and cock's foot (*Dactylis glomerata*).


(3a)

(3b)

Photograph 3a and 3b. Views of amenity grassland at (a) the driveway to the factory and (b) the fireworks testing area at the north-western corner of the fireworks site.

Grassland - Improved

3.16 The land outside of the fireworks factory, both within the site and within the land ownership boundary to the north of the site, is dominated by improved grassland, which is cattle and sheep grazed, as shown on **Photograph 4a-4c**.


(4a)

(4b)

(4c)

Photograph 4a-4c. View of the improved grassland on site.

Grassland - Semi-improved grassland

3.17 There are areas of semi-improved grassland scattered within the factory boundary, within the site boundary and within the ownership boundary to the north (**Photograph 5a-5c**). Species recorded include Yorkshire fog (*Holcus lanatus*) and cock's foot (*Dactylis glomerata*), ribwort plantain (*Plantago lanceolata*) and vetch (*Vicia sp*.), as well as white clover (*Trifolium repens*), red fescue (*Festuca rubra*), heath woodrush (*Luzula multiflora*), dandelion (*Taraxacum officinale*) and buttercup (*Ranunculus* sp.).


(5a)

(5b)

 (5c)

Photograph 5a-5c. View of semi-improved grassland on site.

Quarry

3.18 There is a disused quarry located at the north-western edge of the factory boundary, which is currently used as an area where faulty fireworks are burned (**Photograph 6a**). There are small areas of exposed rock towards the south-east of the factory boundary (**Photograph 6b**) and to the north-east withinthe ownership boundary which are the result of past quarrying activity (**Photograph 6c**).

 (6a)
 (6a)
 (6ac)

Photograph 6. View of the quarry and artificial rock exposures on site.

Tall ruderal

3.19 There are areas of tall ruderal vegetation across the fireworks factory site, which is dominated by rosebay willowherb (*Chamaenerion angustifolium*) and nettle (*Urtica dioica*) (**Photograph 7a and 7b**), with some bramble (*Rubus fruticosus)*, young silver birch and willow.

(7a)

(7b)

Photograph 7a and 7b. View of the tall ruderal vegetation on site.

Woodland - Broadleaved Semi-natural

3.20 There are areas of semi-natural broadleaved woodland on site and within the land ownership boundary, which comprise of species such as silver birch, sycamore (*Acer pseudoplatanus*), willow (*Salix* sp.), oak (*Quercus* sp.), alder (*Alnus glutinosa*), hazel, elder, ash, horse chestnut (*Aesculus hippocastanum*), and hawthorn (**Photograph 8a and 8b**).

(8a)

(8b)

Photograph 8a and 8b. Views of the mixed semi-natural woodland within the ownership boundary.

Woodland - Mixed semi-natural (within ownership boundary only)

3.21 There are areas of mixed semi-natural woodland outside of the site but within the land ownership boundary to the north of the site, with species including silver birch, rowan, and oak, and larch (*Larix decidua*) (see **Photograph 9a and 9b**).

(9a)

(9b)

Photograph 9a and 9b. Views of the mixed semi-natural woodland on site.

Drystone walls

3.22 There are drystone walls surrounding the boundary of the factory boundary (**Photograph 10a**), along field boundaries outside of the factory boundary within the site boundary (**Photograph 10b**), and in the north-east outside of the factory boundary(**Photograph 10c**).


(10a)

(10b)

(10c)

Photograph 10a-10c. Examples of drystone walls on site.

Scattered trees

3.23 There are scattered trees across site, as shown in **Photograph 11a-c**. Species recorded include hawthorn (*Crataegus monogyna*), ash (*Fraxinus excelsior*), elder (*Sambucus nigra*), hazel (*Corylus avellana*), silver birch (*Betula pendula*), rowan (*Sorbus aucuparia*), holly (*Ilex aquifolium*), and cherry (*Prunus avium*).


(11a)

(11b)

 (11c)

Photograph 11a-11c. Views of scattered trees across the site.

Invasive species

3.24 There are areas of treated Japanese knotweed (*Fallopia japonica*) around the south of the factory boundary (e.g. **Photograph 12a**), as well as other discrete stands of alive knotweed within the site boundary (e.g. **Photograph 12b**) and within the ownership boundary (e.g. **Photograph 12c**).

3.25 Himalayan balsam (*Impatiens glandulifera)* was also recorded to the north-west of the site boundary within the tall ruderal to the south of the quarry area.

 (a)

 (b)

 (c)

Photograph 12a-12c. View of the stands of Japanese knotweed on site.

Protected and Priority Fauna

3.26 Details of protected and priority species using the site, including a summary of the results of detailed surveys, are described below and should be read in conjunction with **Plan 10925/P04**.

Badgers

3.27 One record of badger was reported in the 1km data search. This record (from 1986) was for a main sett located within the site boundary to the south of the site, to the west of Standard Drive.

3.28 Suitable habitat for badger was recorded onsite in the form of woodland, grassland boundaries and ruderal. Therefore, further surveys to determine the presence/likely absence were undertaken.

3.29 Full details of the survey methodology and detailed results are presented in **Appendix 2**

3.30 Three badger setts were recorded at the site.

3.31 One outlier sett with a single entrance and a well-used latrine immediately adjacent was present towards the south east of the site and two partially used single entrance outliers setts were present towards the north west of the site.

Bats

3.32 A total of 130 records for bat species were reported within 2km data search. None of these records were reported within the site boundary.

3.33 These records were from six species which were Daubenton's bat *Myotis daubentoni,* whiskered wat *Myotis mystacinus,* Natterer's bat *Myotis nattereri,* noctule *Nyctalus noctule,* common pipistrelle *Pipistrellus pipistrellus* and brown long-eared bat *Plecotus auratus.* Additional records were reported for bats that were not identified to the species level and were for pipistrellus species bats and vespertilionidae family bats.

3.34 The records included 45 roost records, including 6 confirmed pipistrelle species maternity roosts.

3.35 These roosts were found distributed in the residential areas all directions from the site with a notable cluster to the west in Clough.

3.36 Suitable habitat for bat commuting, foraging and roosting was recorded onsite and therefore a suite of bat surveys were undertaken to investigate the presence or likely absence of bats at the site.

3.37 Full details of the survey methodology and detailed results are presented in **Appendix 3**.

Preliminary roost assessment

3.38 A total of 42 buildings at the site had features that would support roosting bats or direct evidence showing previous bat usage (three high potential/confirmed past use, three moderate potential and 36 low potential buildings).

Roost surveys

3.39 Due to the large number of buildings at the site a combination of static detector surveys, back tracking transects and emergence/re-entry surveys were undertaken to determine if bats were roosting within the buildings onsite.

3.40 A single non-maternity summer roost of common pipistrelle (peak count 1 bat) was recorded in building 42 (see Plan 10925/P06).

3.41 Three buildings (Building B5, B9 and B21) contained very low numbers of old bat droppings but no emergence or re-entry activity was recorded at these buildings during the surveys and therefore are not considered roost sites.

Activity surveys

3.42 Once monthly activity surveys were undertaken between May and September (inclusive) with two static detectors deployed during each month along the route of the transect.

3.43 Bat calls were recorded from common pipistrelle, noctule and brown-long eared bats together with calls from bats that could not be identified to the species level from myotis species bats, big bats (nyctalus/eptesicus species) and myotis/plecotus species.

3.44 Activity patterns were strongly associated with the boundary features such as dry-stone walls and wooded areas.

3.45 Activity levels were at their lowest in the core industrial areas of the site.

Breeding Birds

3.46 A total of 22 records for bird species were reported within 1km data search.

3.47 These records included species listed as Birds of Conservation Concern (Eaton *et al.* 2015);

3.48 These species were mistle thrush *Turdus viscivorus*, song thrush *Turdus philomelos* and tree sparrow *Passer montanus* which are red listed and bullfinch *Pyrrhula pyrrhula*, dunnock *Prunella modularis*, grey Wagtail *Motacilla cinereal*, kestrel *Falco tinnunculus*, mallard *Anas platyrhynchos*, swift *Apus apus* and willow warbler *Phylloscopus trochilus* which are amber listed.

3.49 A variety of onsite habitats were present that would be suitable for nesting and foraging birds, including the woodland, grassland, heath, ruderal and scattered trees. The buildings and dry-stone walls also could offer nesting opportunities.

3.50 Further surveys were therefore recommended to determine the presence/likely absence of bird species and to ascertain the likely importance of the overall bird assemblage using the site.

3.51 Full details of the survey methodology and detailed results are presented in **Appendix 4**.

3.52 The results of the surveys indicate that the site is being used by a number of species for breeding.

3.53 Those species with breeding territories confirmed by the surveys include common and widespread species namely clackbird *Turdus merula* (9 territories), clackcap *Sylvia atricapilla* (1 territory), clue tit *Parus caeruleus* (3 territories), carrion crow *Corvus corone (*1 territory), chaffinch *Fringilla coelebs* (3 territories, chiffchaff *Phylloscopus collybita* (1 territory), collared dove *Streptopelia decaocto* (1 territory), goldfinch *Carduelis carduelis* (1 territory), great tit *parus major* (2 territories), green woodpecker *Picus viridis* (1 territory), jackdaw *Corvus monedula* (1 territory) magpie *Pica pica* (3 territories), pied wagtail *Motacilla alba* (1 territory), robin *Erithacus rubecula* (9 territories), swallow *Hirundo rustica* (3 territories), whitethroat *Sylvia communis* (1 territory), woodpigeon *Columba palumbus* (4 territories) and wren *Troglodytes troglodytes* 7 (territories).

3.54 Red listed species that are also SoPI's recorded breeding were song thrush (2 territories) and starling *Sturnus vulgaris* (2 territories) and amber listed species breeding included bullfinch *Pyrrhula pyrrhula* (1 territory), dunnock *Prunella modularis* (2 territories), house martin *Delichon urbicum* (1 territory), Tawny owl *Strix aluco* (1 territory) and willow warbler *Phylloscopus trochilus* (2 territories).

3.55 The site is also considered likely to be of importance to other notable red/amber listed species, such as house sparrow *Passer domesticus* and kestrel *Falco tinnunculus* which were present in the data search and recorded during the site visit but not confirmed breeders.

Great Crested Newts

3.56 No GCN records were reported in the 1km data search.

3.57 No ponds or suitable aquatic bodies were present within the site boundary. A review of OS maps and aerial photographs showed that no ponds or suitable aquatic bodies are present within 250m of the site

3.58 Suitable terrestrial habitat was recorded on the site for GCN in the form of woodland, grassland and ruderal vegetation.

3.59 Due to the absence of historical records and suitable aquatic habitat, further surveys were not undertaken and GCN are not considered further in this report.

Invertebrates

3.60 No protected, nationally important or locally important invertebrate species were reported in the 1km data search.

3.61 The habitats found onsite are common and widespread in the local area and are unlikely to support any protected or notable species or assemblages of invertebrates.

3.62 Further surveys were not undertaken and invertebrate species are not considered further in this report.

Dormice

3.63 No dormice records were reported in the 1km data search.

3.64 Dormice are considered absent from the majority of Yorkshire with exception of several sites where re-introductions have occurred in Middle Derwent Valley and the Chatsworth Estate (www.derbyshiremammalgroup.org.uk/species_status/dormouse.html)

3.65 No suitable habitat for dormice was recorded onsite.

3.66 Further surveys were not undertaken and dormice are not considered further in this report.

Reptiles

3.67 A single result for common lizard was reported in the 1km data search.

3.68 Suitable terrestrial habitat was recorded on the site for reptiles in the form of woodland edge, grassland and ruderal vegetation.

3.69 Further surveys were undertaken and full details of methodology and results are shown in **Appendix 5**.

3.70 No reptile species were recorded onsite during these surveys and therefore reptile species are anticipated to be absent from the site and are not considered further in this report.

Water Vole

3.71 No water vole records were reported in the 1km data search.

3.72 No suitable habitat for water vole was recorded onsite.

3.73 Further surveys were not undertaken, and water vole are not considered further in this report.

Section 4: Evaluation

Designated Sites

4.1 SAC, South Pennine Moors and SPA Peak District Moors. As European designated sites these are considered of **European ecological importance.**

4.2 One Local Nature Reserve (Gledholt Woods) and five additional Local Wildlife Sites were present within the data search area. As locally designated sites, these are considered of **county ecological importance.**

4.3 Land designated as part of the Kirlklees Wildlife Habitat Network (a local plan designation, see Appendix 1) runs within the ownership boundary to the north of the site and partly within the site boundary itself (see Plan 03). The habitat network is considered to be of **county ecological importance.**

Habitats and Flora

4.4 Habitats are discussed below with regard to their ecological importance. The importance of a habitat type to a protected or notable species is discussed in the section related to that species or species group.

4.5 Habitats are judged on their value based on their inclusion within HoPI, UKBAP, LBAP lists. Habitats not included in these lists are considered of negligible ecological importance.

4.6 Dwarf shrub heath is a Habitat of Principal Importance. This habitat at the site covers a small area and is not extensively connected to other larger areas of similar habitat within the wider area and is therefore considered to be of **site ecological importance only.**

4.7 Broadleaved semi-natural woodland is also a Habitat of Principal Importance. Small areas of this woodland type are present in a patch to the north west of the site and to the south east. A thin strip of woodland/scattered trees also runs along the western factory boundary linking these patches of woodland together. Areas of similar sized woodland in the wider area are not uncommon but as the layout of these habitats at the site are likely to form a wildlife corridor, this habitat is therefore considered to be of **local ecological importance.**

Protected and Priority Species

Badger

4.8 Badger is not a species of conservation concern and their legal status is primarily to protect them from persecution. As such the badger population likely to utilise the site is of **negligible ecological importance**. However, compliance with legislation is considered further in Section 5.

Bats

4.9 A single common pipistrelle roost with a peak count of one bat was recorded at the site. Common pipistrelle is considered a common species and roosts of individual bats of non-breeding common pipistrelle are considered to be of local importance (Wray et al 2010).

4.10 Three species of bat were recorded on the site and identified to species level. These were common pipistrelle, noctule and brown long-eared bat. In addition, myotis species bats were recorded and identified but could not be separated to the species level.

4.11 Table 4.1 below illustrates the categorisation of bat species identified on the site by distribution and rarity (Wray et al. 2010).

Rarity within range	Bat species (in England)
Rarest	-
Rarer	Myotis species* and noctule
Common	Common pipistrelle and brown long-eared bat

Table 4.1: Categorisation by rarity of bat species identified on the site. *Most UK myotis species are considered rarer species with the exception of Bechstein's bat and alcathoe. The site is outside of the known range for Bechstein's and the full range of alcathoe is unknown. Therefore, the myotis species at the site are considered of the rarer group.

4.12 Results of the National Bat Monitoring Programme 2016 at the UK level show significant positive trends for common pipistrelle, soprano pipistrelle, greater horseshoe, lesser horseshoe and one species of Myotis bat (Natterer's). Stable populations were recorded for noctule, serotine, brown long-eared and at least two further species of Myotis bat (Daubenton's and whiskered/Brandt's) (BCT, 2017).

4.13 Guided by the methodology for valuing commuting routes and foraging areas taken from 'Valuing Bats in Ecological Impact Assessment' (Wray et al., 2010) along with professional judgement, each bat species recorded on the site is determined to be of ecological importance at the following geographic frames of reference, as shown in Table 4.2.

Geographic frame of reference	Bat species
Regional	-
Local	Common pipistrelle, brown long-eared, noctule and myotis species
Site	-

Table 4.2: Ecological value of bat species identified on the site

4.14 The assemblage of bats utilising the site including any roosts present is therefore considered to be of **local ecological importance**.

Breeding Birds

4.15 The habitats on the site offer opportunities for nesting and foraging bird species. A small number of SoPI, red listed and amber listed species (7 species) held up to 2 territories at the site. The assemblage of birds utilising the site's habitats is considered to be of local ecological importance.

Section 5: Potential Impacts and Requirement for Mitigation

Site Proposals

5.1 An outline application with details of points of access (matters of access, scale, layout, landscaping and appearance are reserved) for the development of up to 630 residential dwellings (Use Class C3), up to 70 care apartments (Use Class C2/C3), up to 500 sq m of Use Class A1/A2/A3/A4/A5/D1 floorspace (dual use), vehicular access points off Blackmoorfoot Road and Felks Stile Road and associated works is to be submitted to Kirklees Council.

Potential Impacts and Requirement for Mitigation

5.2 Both the Countryside and Rights of Way (CRoW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006 give the importance of conserving biodiversity a statutory basis, requiring government departments (which includes Local Planning Authorities) to have regard for biodiversity in carrying out their obligations (which includes determination of planning applications) and to take positive steps to further the conservation of listed species and habitats. These articles of legislation require Kirklees Council to take measures to protect species or habitats from the adverse effects of development, where appropriate, by using planning conditions or obligations. Planning authorities should refuse permission where harm to the species or their habitats would result, unless the need for, and benefits of, the development clearly outweigh the harm.

5.3 The masterplan has been designed to, where possible maintain and protect those features of highest ecological importance. Where there are potential impacts in the construction and operational phases of the development to the ecological features described and evaluated in Sections 3 and 4, these are described below. Where impacts would trigger legislation or planning policy (as set out in **Appendix 1**), the requirement for mitigation is noted.

Designated Sites

5.4 Due to the nature of the development and the distance to the SAC, SPA, LNR and LWS's it is unlikely that development would result in any direct or indirect adverse effects to the features for which these sites are designated. Therefore, the development is not considered to have a significant impact on these designated sites.

5.5 Part of the site boundary falls within land designated as part of the Kirklees Wildlife Habitat Network. The areas outside the site boundary will not be directly impacted by the development as no habitat removal to facilitate development will occur.

5.6 The area within the site boundary that overlaps with the habitat network area will be directly impacted by the development activities as this area will be developed to form part of the sites POS. Including this as POS will result in negative impacts from development including habitat loss, disturbance and degradation caused by recreational use, and also predation of wildlife from domestic pets such as cats.

5.7 Mitigation will be required in the form of habitat enhancement and management of all areas that fall within the wildlife habitat network.

5.8 The parameters plan, and illustrative masterplan indicate that green corridors will be provided running north-east to south-west and south-east to north-west, and landscape buffers would be provided along the north and west sides of the site. If these are designed as ecological features and managed appropriately they will have a beneficial effect on biodiversity at the site and will contribute to local policies by extending and creating new links to the wildlife habitat network.

Habitats

5.9 As a result of the development the existing habitats at the site will be impacted. Proposals will result in the loss of up to:

- 2.7ha semi-natural broadleaved woodland of local importance (2.2ha in woodland blocks and 0.5ha in thin woodland strips/scattered trees); and
- 0.2ha dwarf shrub heath of site importance.

5.10 The parameters plan shows a loss of these habitats to the development however, the illustrative masterplan shows a potential retention of the woodland habitat towards the north west area.

5.11 The existing parameters plan indicates a 10m (minimum) landscape buffer along the north and west boundaries.

5.12 Suggested locations for green links are also shown in the parameters plan linking the north-west POS to the south-east POS and the north-east and south-west areas of the site.

5.13 The buffer areas and green links will offer potential areas for ecological enhancements if planted and managed appropriately. However, these areas will be subject to post development impacts from degradation and disturbance as a result of trampling, littering, dogs (from fouling and disturbance) and general disturbance by members of the public. Therefore, these areas in their current arrangement will not be sufficient to compensate for the loss of habitats within the site and further compensation will be required within the ownership boundary as residual impacts will be present.

Protected and Priority Fauna

Badgers

5.14 One active outlier and two partially active outliers would be affected by the proposed development.

5.15 A loss of badger foraging habitat will occur as a result of the development. However, large areas of suitable habitat within the local area will still remain to maintain any badger populations present.

5.16 Any groundworks within 30m of these setts (or any additional setts created before works at the site begin) will likely cause impacts through disturbance or sett destruction and trigger the legislation protecting badgers (see **Appendix 1**).

5.17 Where badger setts will be impacted a license from Natural England will be required before works can be undertaken.

Bats

5.18 A non-maternity summer roost for common pipistrelle was present within building 42 and will be lost as a result of the proposals.

5.19 In the absence of mitigation, the demolition of these buildings would trigger the Wildlife and Countryside Act (WCA) 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 (as amended), which afford stringent protection to bats and their roosts.

5.20 In order to demolish these buildings a European Protected Species (EPS) development licence would be required from Natural England, once full planning consent is achieved. A mitigation strategy in the form of a method statement will be required to inform the licence application and set out how bat roosts can be maintained on the site in the long term.

5.21 Levels of bat activity at the site were generally low and evenly spread but were significantly less within the main industrial area of the site. The western boundary was an exception which hosted moderate levels of bat activity.

5.22 The unlit boundary features and wooded areas at the site were most important to bat species for foraging and commuting. The current proposed site layout includes POSs areas along the external boundaries and two crossing habitat corridors running north-east to south-west and north-west to south-east, which should provide suitable habitat for bats through the site.

5.23 No adverse impacts to foraging or commuting bats are therefore anticipated. Some bat species, such as common pipistrelle and possibly brown long-eared bats may also forage over new gardens and could roost in new houses.

5.24 There is a risk that those species of bat that are more sensitive to lighting (namely brown long-eared and Myotis bats) could be affected by an increase in ambient lighting at the site. However, the retention of dark, unlit corridors through the POS along the southern drainage channel and along hedgerows within the paddock area will allow these bats to continue to use and move through the site and impacts are unlikely to be significant. Common and soprano pipistrelle, are relatively tolerant of increased ambient lighting, noctule are known to swarm around street lights to feed on the insects attracted to the light, which was recorded during the transect surveys at the site.

Birds

5.25 The development will result in the temporary loss of many of the habitats that have been shown to be in use by breeding birds, which includes some BoCC. However, with additional tree planting, the inclusion of new hedgerows and POSs together with the new garden habitats, the proposed development will more than compensate for the losses involved.

5.26 Loss of the buildings on the site will result in the loss of nesting habitat for species including house martin and swallow and hence appropriate compensation is required within the new development.

5.27 All wild birds, their nests and eggs are afforded protection under the WCA 1981 (as amended). As such the removal of woody vegetation and demolition of the buildings could trigger this legislation, which protects birds while actively nesting.

Section 6: Mitigation and Enhancement Strategy

6.1 Central to the mitigation and enhancement strategy is the provision of high quality multi-functional green infrastructure and provision of:

- Species specific mitigation strategies; and
- The implementation of a LEMP, the principles of which are described below, to maximise the biodiversity potential of retained and new habitats. Also included would be a programme of monitoring and a mechanism to modify the management prescriptions, if required.

Habitats

6.2 As described in Section 5, based on the current arrangement of the masterplan and parameters plan the inherent mitigation will not compensate for the losses of habitats proposed and further compensation will be required.

6.3 Two possible mitigation/compensation strategies exist, and these are:

- Dedicate the structural open space to the north-west of the site exclusively to nature conservation and manage this area to limit public access. Together with the landscape buffers and green links/linear parks across the site this would allow similar total areas of habitat to be retained and re-created. Managing of this area for nature conservation will also help strengthen the habitat network with the addition of a solid block of good quality habitat rather than the distributed and unmanaged patches that are currently spread over the site.
- Retain the woodland habitat within the north west POS area and compensate for the remaining habitat that will be lost from the site boundary within the ownership boundary. New areas of priority habitats such as woodland, scrub and heath will be created in the ownership boundary to enhance the functionality of the habitat network;

6.4 In both instances the following actions should also be undertaken;

- The grassland habitats within the ownership boundary will be managed to maximise species richness, increase their ecological importance and contribute to the functionality of the habitat network;
- A network of formal footpaths should be created within the site and ownership boundary to guide recreational use around and away from the habitats of greatest importance and not run directly through them; and
- Planting of native tree and species-rich hedgerows on the site within the POS and around the boundaries will create linear habitat corridors through the site;
- Where possible, native species or those with known wildlife benefit will also be used within more formal landscaped areas to also maximise the importance of areas of built development to wildlife; and

A LEMP will be required to ensure that the retained, newly created and enhanced areas of habitat within the site are managed appropriately to maximise their benefit to biodiversity and offset increased levels of disturbance from the public once the site is operational.

Protected and Priority Fauna

Badgers

6.5 In advance of the commencement of development an update badger survey will be conducted to check for the presence of any newly dug setts.

6.6 For known setts and newly excavated setts discovered during this update survey, that will be affected by the development, a mitigation strategy and licence from NE will be required.

Bats

6.7 To allow the development to proceed a development licence from NE will be required once planning consent is granted. When considering a planning application where a species protected under the Habitat Regulations (a European Protected Species or EPS) is present, and would be affected by development proposals, the Local Planning Authority (LPA) must have regard of the three derogation tests set out in the Habitats Regulations, which are considered by NE when deciding whether a licence should be granted. Where the LPA considers that the three tests are not met (and therefore that NE are unlikely to grant a licence), they should refuse planning permission. In respect of development, the three tests are that:

- There are 'imperative reasons of over-riding public interest' for the development;
- There are 'no satisfactory alternatives'; and
- The 'favourable conservation status' of the species would be maintained.

Compensation for Roost Loss

6.8 A common pipistrelle non-maternity summer roost will be lost as a result of the proposed development. NE guidance (Mitchell-Jones 2004) states that where a non-maternity roost of a common species (such as common pipistrelle) is lost, no timing constraints are imposed and roost replacement is not required.

6.9 National and local planning policy requires no net loss of biodiversity, therefore, a bat box scheme should be created to compensate for the loss of this roost and to provide additional bat roosting resources around the site to provide an overall biodiversity gain in terms of roosting bats. Suitable bat boxes (e.g. Schwegler 1FF) should be positioned within retained mature trees or pole mounted where suitable trees are not present, in unlit locations around the site within the POS, and not in areas surrounded and isolated by lit areas.

Avoidance of Killing and Injury and Timing of Works

6.10 Building 42 which supports a minor bat roost (which do not have the same timing constraints as maternity roosts) can be demolished at any time, preferably outside of the hibernation season.

6.11 A strategy will need to be employed to minimise the risk of injury to or fatality of bats during the demolition of buildings supporting bat roosts. This will include:

- Before any demolition works are undertaken a review should be undertaken to determine if any additional surveys should be undertaken or if ecological supervision of the demolition and soft

strip methods should be undertaken. This will be decided based on time since original survey effort and considering any changes to conditions on the site.

- Installation of bat boxes prior to demolition to establish an alternative roost location for any bats discovered during the demolition and to act as long-term roost replacement;
- A 'tool box talk' to be given by a licensed bat worker to the demolition contractors immediately prior to demolition to inform them of the legislative protection of bats and the methods for demolitions;
- An inspection of building B42 by the licensed bat worker immediately prior to demolition and, where possible, capture by hand of any bats remaining;
- Soft stripping by hand of the features of building B42 that could be used by bats including removal of ridge and roof tiles, soffits, fascias, barge boards and corrugated sheeting to be overseen by a licensed bat worker; and
- Any bats found to be removed by gloved hand (by the licensed bat worker) and released into the new roost.

6.12 In line with the current Bat Mitigation Guidelines no monitoring for a non-maternity roost is required.

Disturbance

6.13 Lighting will be designed to avoid the areas immediately surrounding the roosts and elsewhere on the site within POS and retained and enhanced habitats. Where it is required it will be designed to minimise disturbance to bats (e.g. low bollard lighting where possible, use of hoods and cowls on lamps and use of low pressure sodium or, where glass glazing is preferred, use of high pressure sodium instead of metal halide lamps (BCT 2009).

6.14 The newly created and enhanced habitats for bats described above will provide an overall improvement in the quality of foraging habitat available to bats on the site. The proposed compensation will lead to enhancements of roosting opportunities available. Prescriptions for management and maintenance of the site habitats will need to be included in the LEMP for the site.

Post-development Management and Mechanism for Delivery of the Bat Mitigation Strategy

6.15 It will be necessary to secure the retention of the replacement roosting provisions in the long term. This could be secured through planning controls and will be required for the NE licence. All features intended to provide habitat for foraging and commuting bats will be subject of a LEMP.

The 'Three Tests'

6.16 It is considered that the above strategy provides sufficient information for the LPA to be satisfied that the favourable conservation status test within the Habitat Regulations could be met. The other two tests (no satisfactory alternative and reasons of over-riding public interest) will be detailed within the Planning Statement to be submitted with the outline planning application.

Birds

6.17 To avoid triggering the legislation protecting nesting birds, removal of woody vegetation and demolition of buildings should be timed for outside the nesting bird season (March to August inclusive) or be preceded by a check for active nests by an ecologist. If a nest is found it an appropriate buffer will need to be left undisturbed until the chicks have fledged, as confirmed by an ecologist.

6.18 The habitat creation and enhancement described will provide enhanced foraging and potentially nesting habitat for birds. This could be enhanced further through the provision of general bird boxes (e.g. Schwegler 1B) on trees within the POS.

6.19 Compensation for the loss of available nesting habitat for inquiline birds such as swallow and house sparrow will be provided in the form of species specific nest boxes such as the sparrow terrace Schwegler box 1SP and artificial swallow nests box Schwegler nest box number 10.

Section 7: Conclusions

7.1 With the implementation of the mitigation and enhancement strategy described above, the proposed development would be in conformity with relevant planning policy and legislation (see **Appendix 1**).

7.2 The mitigation and enhancement strategy could be controlled by appropriately worded planning controls devised to:

- Secure and appropriate landscape design to provide sufficient mitigation and compensation for the loss of habitats and for the enhancement of retained ecological features;
- Secure a LEMP for the long-term management of the existing, enhanced and newly created ecological features at the site;
- Secure the design of a detailed mitigation strategy for bats based on the principles outlined in this report that would be submitted in due course with an EPS licence application;
- Secure a bird box scheme for the loss of nesting bird habitat and to enhance the site for nesting birds;

7.3 With respect to bats, it is concluded that the council has sufficient information before it to be satisfied that the three tests defined in Regulation 53 of the Habitats Regulations will be met and that licences to destroy a resting place for bats could be granted.

References

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Appendix 1: Legislation and Planning Policy Context

Appendix 1: Legislation and Planning Policy Context

Legislative Context

A1.1. Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:

- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2010 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Hedgerows Regulations 1997;
- The Protection of Badgers Act 1992;
- The Natural Environment and Rural Communities Act (NERC) 2006; and
- The Wild Mammals (Protection) Act 1996.

A1.2. The European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, 1992, often referred to as the 'Habitats Directive', provides for the protection of key habitats and species considered of European importance. Annexes II and IV of the Directive list all species considered of community interest. The legal framework to protect the species covered by the Habitats Directive has been enacted under UK law through The Conservation of Habitats and Species Regulations 2010 (as amended).

A1.3. In Britain, the WCA 1981 (as amended) is the primary legislation protecting habitats and species. SSSIs, representing the best examples of our natural heritage, are notified under the WCA 1981 (as amended) by reason of their flora, fauna, geology or other features. All breeding birds, their nests, eggs and young are protected under the Act, which makes it illegal to knowingly destroy or disturb the nest site during nesting season. Schedules 1, 5 and 8 afford protection to individual birds, other animals and plants.

A1.4. The CRoW Act 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' disturb a protected animal whilst it is using a place of rest or shelter or breeding/nest site.

Species and Habitats of Principal Importance and the UK Biodiversity Action Plan

A1.5. The UK Post-2010 Biodiversity Framework succeeded the UK BAP partnership in 2011 and covers the period 2011 to 2020. However, the lists of Priority Species and Habitats agreed under the UKBAP still form the basis of much biodiversity work in the UK. The current strategy for England is 'Biodiversity 2020: A Strategy for England's wildlife and ecosystem services' published under the UK Post-2010 UK Biodiversity Framework. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed for the UK BAP remain valuable resources for background information on priority species under the UK Post-2010 Biodiversity Framework.

A1.6. Priority Species and Habitats identified under the UKBAP are also referred to as Species and Habitats of Principal Importance for the conservation of biodiversity in England and Wales within Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

National Planning Policy

National Planning Policy Framework (NPPF), March 2012

A1.7. The National Planning Policy Framework (NPPF) was published on 27th March 2012 and sets out the Government's planning policies for England and how these are expected to be applied. It replaces all the Planning Policy Statements and Guidance (PPSs and PPGs) (of relevance PPS9: Biodiversity and Geological Conservation).

A1.8. Paragraph 14 states that:

"At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking."

A1.9. Under the 12 'Core Planning Principles' within the NPPF, those of relevance to nature conservation state that planning should:

"contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this Framework;

encourage the effective use of land by reusing land that has been previously developed (brownfield land), provided that it is not of high environmental value; and

promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production)"

A1.10. Section 11 of the NPPF (paragraphs 109 to 125) considers the conservation and enhancement of the natural environment.

A1.11. Paragraph 109 states that the planning system should contribute to and enhance the natural and local environment through inter alia recognising the wider benefits of ecosystem services; minimising impacts on biodiversity; and providing net gains in biodiversity (including provision of coherent ecological networks that are more resilient to current and future pressures).

A1.12. Paragraph 113 states that Local Plans should set criteria based policies against which proposals for development on or affecting wildlife sites should be judged and that distinctions should be made between the hierarchy of international, national and local sites and the weight of their importance.

A1.13. Paragraph 114 states that Local Authorities should plan positively for creation, protection, enhancement and management of networks of biodiversity and green infrastructure.

A1.14. To minimise impacts on biodiversity and geodiversity, Paragraph 117 states that planning policies should:

"plan for biodiversity at a landscape-scale across local authority boundaries;

identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;

promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan;

aim to prevent harm to geological conservation interests; and

where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas"

A1.15. When determining planning applications, Paragraph 118 states that local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

"if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;

development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;

opportunities to incorporate biodiversity in and around developments should be encouraged;

planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and

the following wildlife sites should be given the same protection as European sites:

potential Special Protection Areas and possible Special Areas of Conservation;

listed or proposed Ramsar sites; and

sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites."

A1.16. Paragraph 119 states that the presumption in favour of sustainable development in Paragraph 14 does not apply in relation development requiring appropriate assessment under the Birds or Habitats Directives.

A1.17. Paragraph 125 states that planning policies and decisions should limit the impact of light pollution from artificial light on nature conservation by encouraging good design.

Office of the Deputy Prime Minister (ODPM) Circular 06/2005: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System

A1.18. ODPM Circular 06/05 was prepared to accompany PPS9, however continues to be valid, and material in the consideration of planning applications since PPS9's replacement by the NPPF.

A1.19. ODPM Circular 06/05 provides guidance on applying legislation in relation to nature conservation and planning in England. Part I considers the legal protection and conservation of internationally

designated sites (namely candidate Special Areas of Conservation (cSACs), SACs, potential Special Protection Areas (pSPAs), SPAs and Ramsar sites) and Part II considers the legal protection and conservation of nationally designated sites, namely Sites of Special Scientific Interest (SSSIs).

A1.20. Part III considers the protection of habitats and species outside of designated areas (particularly UK Biodiversity Action Plan species and habitats, which it states are capable of being a material consideration in the preparation of local development documents and the making of planning decisions.

A1.21. Part IV considers species protected by law and states that the presence of a protected species is a material consideration in the consideration of a development proposal that, if carried out, would be likely to result in harm to the species or its habitat and that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

Local Planning Policy

Kirklees Local Plan

A1.22. The Kirklees Local Plan was submitted to the Secretary of State for Communities and Local Government on 25 April 2017.

A1.23. Saved polices from the Unitary Development Plan (UDP) contains policies relating to ecology, nature conservation and green infrastructure. These policies are:

- NE3 - Development proposals within or in the vicinity of a site of scientific interest will not normally be permitted unless there is an exceptional requirement for the development and measures will be taken to minimise any detriment to the site.
- NE4 - Development proposals which would affect a site of wildlife significance will not normally be permitted unless provision can be made to maintain the site's role for nature conservation.
- NE5 Development proposals involving land identified on the proposals map as part of a wildlife corridor should make provision for the retention of the corridor and the protection of the wildlife value of the land.
- NE6 - Where it is proposed to develop a site containing a water area planning permission will normally be subject to a condition or legal agreement to retain the water area.
- EP11 - Applications for planning permission should incorporate an integral landscaping scheme which protects or enhances the ecology of the site.

Biodiversity Action Plans

A1.24. The UK Post-2010 Biodiversity Framework succeeded the UK BAP partnership in 2011 and covers the period 2011 to 2020. However, the lists of Priority Species and Habitats agreed under the UKBAP still form the basis of much biodiversity work in the UK. The current strategy for England is

'Biodiversity 2020: A Strategy for England's wildlife and ecosystem services' published under the UK Post-2010 UK Biodiversity Framework. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed for the UK BAP remain valuable resources for background information on priority species under the UK Post-2010 Biodiversity Framework.

A1.25. Priority Species and Habitats identified under the UKBAP are also referred to as Species and Habitats of Principal Importance for the conservation of biodiversity in England and Wales within Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Local Biodiversity Action Plan

A1.26. The Biodiversity Action Plan for Kirklees species and habitat action plans are provided in Table A1.1 below and are available on the Leeds city council website.

Table A1.1 Biodiversity Action Plan for Kirklees Species and Habitat Action Plans

Habitats	
Arable field margins	Blanket bog
Hedgerows	Inland rock outcrops and scree
Lowland dry acid grassland	Lowland heathland
Hay meadows	Lowland mixed deciduous woodland
Open mosaic habitats on previously developed land	Ponds
Reedbeds	Rivers
Traditional orchards	Upland flushes, fens and swamps
Upland heath	Upland mixed ashwoods
Upland oak woodland	Wet woodland
Wood pasture and parkland	Scrub
Other semi-natural grassland (wet/rush pasture and rough grassland)	Riverine

Species	
Black Grouse Tetrao tetrix subsp. britannicus	*Pyrrhula pyrrhula subsp. pileata* *Common Bullfinch*
Common Cuckoo *Cuculus canorus*	Grasshopper Warbler *Locustella naevia*
Linnet *Carduelis cannabina*	Common Starling *Sturnus vulgaris*
Corn Bunting *Miliaria calandra*	Corn Crake *Crex crex*
Curlew *Numenius arquata*	Tree Sparrow *Passer montanus*
European Nightjar *Caprimulgus europaeus*	European Turtle Dove *Streptopelia turtur*
Bittern *Botaurus stellaris*	Grey Partridge *Perdix perdix*
Hawfinch *Coccothraustes coccothraustes*	Dunnock *Prunella modularis*
House Sparrow *Passer domesticus*	Lesser Redpoll *Carduelis cabaret*
Northern Lapwing *Vanellus vanellus*	Red Grouse *Lagopus lagopus*
Reed Bunting *Emberiza schoeniclus*	Ring Ouzel *Turdus torquatus*
Skylark *Alauda arvensis*	Song Thrush *Turdus philomelos*
Spotted Flycatcher *Muscicapa striata*	Tree Pipit *Anthus trivialis*
Twite *Carduelis flavirostris*	Willow Tit *Parus montanus*
Wood Warbler *Phylloscopus sibilatrix*	Yellow Wagtail *Motacilla flava*
Yellowhammer *Emberiza citrinella*	Northern Wood Ant *Formica lugubris*
Small Heath *Coenonympha pamphilus*	Wall Brown *Lasiommata megera*
White-letter Hairstreak *Satyrium w-album*	Adder *Vipera berus*
Common Lizard *Lacerta vivipara*	Common Toad *Bufo bufo*

Grass Snake *Natrix natrix*	Great Crested Newt *Triturus cristatus*
Slow-worm *Anguis fragilis*	Brown Hare *Lepus europaeus*
Brown long-eared bat *Plecotus auritus*	Mountain Hare *Lepus timidus*
Noctule *Nyctalus noctula*	Otter *Lutra lutra*
Polecat *Mustela putorius*	Soprano Pipistrelle *Pipistrellus pygmaeus*
Water Vole *Arvicola terrestris*	Hedgehog *Erinaceus europaeus*
House Martin Delichon urbicum	*Kestrel Falco tinnunculus*
Snipe Gallinago gallinago	*Swallow Hirundo rustica*
Swift Apus apus	*Water Rail Rallus aquaticus*
Woodcock Scolopax rusticola	*Weasel Mustela nivalis*

Appendix 2: Badger Survey REDACTED

Appendix 3: Bat Survey

Appendix 3: Bat Survey

Legislation and Conservation Status

A3.1 As European protected species, all UK bats receive legal protection in England under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). In addition, planning policy set out in the National Planning Policy Framework 2012 requires planning authorities to consider bats when determining planning applications and to ensure that development proposals do not lead to an adverse effect on the conservation status of bats.

A3.2 Several species of bats (barbastelle *Barbastella barbastellus,* Bechstein's *Myotis bechsteinii,* brown long-eared *Plecotus auritus*, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *R. hipposideros*, noctule *Nyctalus noctula* and soprano pipistrelle *Pipistrellus pygmaeus*) are listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. These are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.

A3.3 All British species of bat are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 as a European protected species (EPS) of animal. Regulation 41 (1) makes it an offence to:

- Deliberately capture, injure an EPS;
- Deliberately disturb an EPS; or
- Damage or destroy a breeding site or resting place of an EPS.

A3.4 All British bats are listed in Schedule 5 of the WCA and in England and Wales are protected under Section 9 subsections 4b, 4c and 5 which makes it an offence to:

- Disturb any bat while it is occupying a structure or place which it uses for shelter or protection; or
- Obstruct access to any structure or place which any such animal uses for shelter or protection.
- Sell, offer or expose for sale, or have in possession or transport for the purpose of sale (any live or dead wild Schedule 5 animal or any part or anything derived from such an animal); or
- Publish or cause to be published any advertisement likely to be understood as conveying that they buy or sell, or intends to buy or sell, any of those things.

A3.5 All British bats are also listed at Schedule 6. Section 11 of the WCA states that bats cannot be killed or taken by certain methods, such as traps and nets, poisons, automatic weapons, electrical devices, smoke / gases etc.

A3.6 Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, which states that decision-makers such as Local Planning Authorities must have regard to Species of Primary Importance (SoPI) in all their activities, including when making decisions on planning applications.

A3.7 The following bat species are SoPIs: Barbastelle; Bechstein's bat; noctule; soprano pipistrelle; brown long-eared; greater horseshoe bat; and lesser horseshoe bat. These are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.

A3.8 Common Pipistrelle *Pipistrellus pipistrellus,* Soprano Pipistrelle *Pipistrellus pygmaeus*, Noctule *Nyctalus noctule,* Brown Long Eared *Plecotus auritus,* Whiskered *Myotis mystacinus*, Daubentons

Myotis daubentoni, Leislers *Nyctalus leisleri,* Natterers *Myotis nattereri,* are all listed on the Kirklees region Biodiversity Action Plan (LBAP).

Methodology

Scope of bat surveys

A3.9 The surveys followed standard methodologies set out in the Bat Mitigation Guidelines (Mitchell-Jones, A.J., 2004), the Bat Workers Manual (Mitchell-Jones, A.J. and McLeish, A.P., 2004) and Bat Surveys - Good Practice Guidelines (Collins, 2016) and comprise:

- Building Preliminary Roost Assessment (Building PRA) - Internal and external building inspection survey to assess potential of buildings on site to support roosting bats;
- Backtracking surveys using static bat detectors to identify hotspots of activity around the buildings at the site the walked transects guided by bat activity towards and away from the hotspot areas to determine presence or likely absence or roosting bats;
- Emergence/re-entry presence/absence surveys - to determine presence or likely absence or roosting bats; and
- Bat activity transect and static survey – to assess the species assemblage present at the site and to identify significant commuting routes and foraging locations.

A3.10 The scope of these surveys was discussed and agreed with Tom Stephenson, Biodiversity Officer at Kirklees Council on 30th May 2017.

Building Preliminary Roost Assessment (PRA)

A3.11 A PRA was undertaken on all buildings within the site boundary to assess their potential to support roosting bats.

A3.12 The assessment was undertaken on 27th April 2017 by Steven Coyne MCIEEM, Consultant Ecologist (Natural England CL18 bat survey licence).

A3.13 The location of the buildings at the site are shown on Plan 10925/P06.

A3.14 The surveys followed standard methodologies described in Mitchell-Jones (2004), Mitchell-Jones and McLeish (2004) and Collins (2016).

A3.15 All buildings at the site were examined internally and externally where access permitted.

A3.16 The internal inspection examined all accessible roof spaces and basement areas to determine the presence of suitable roosting locations and the presence of evidence of use, including live/dead bats, droppings, feeding remains and staining from fur-oil and urine.

A3.17 The external inspection carefully examined the building for architectural features that would provide access points and rooting opportunities.

A3.18 The potential of the building to support roosting bats was assessed using the criteria shown in **Table A3.1** below.

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions 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 or hibernation).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only).
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.

Table A3.1: Building assessment criteria - adapted from Collins, 2016.

Backtracking surveys - Static

A3.19 Following the PRA forty-two buildings were considered to have high, moderate or low roosting potential, for each categorisation see Plan **10925/P06**.

A3.20 Due to the large number of buildings with bat potential, a backtracking methodology was used to collect activity data around as many buildings as possible.

A3.21 An array of twenty static bat detector locations were chosen to provide maximum coverage of the site and buildings with bat potential. Data from the activity transect static detectors was also used (see these locations are shown in **Plan 10952/P07**.

A3.22 These detectors were deployed between 13th July 2017 and 3rd August 2017 for a minimum of 5 nights for each position (see **Table A3.2** below for deployment dates and weather conditions).

A3.23 The detectors recorded from 30 minutes before sunset to 30 minutes after sunrise.

A3.24 The sound files collected were analysed from 30 minutes before sunset to 1.5 hours after sunset and 1.5 hours before sunrise to 0.5 hours after sunrise for bat activity recorded during the emergence periods for the various species and these bat records were mapped to show the emergence period hotspots **Plan 10952/P08**.

A3.25 Activity around buildings near to the appropriate emergence period informed the initial starting positions for a series of backtracking transects.

Static Location	Start Date	End Date	Weather conditions (Temp, Wind, Precipitation*)
1,2,3,4,5	13/07/17	19/07/17	10-22°C 13-22km/h Dry - Light Rain

Static Location	Start Date	End Date	Weather conditions (Temp, Wind, Precipitation*)
7,10,12,15,18	19/07/17	24/07/17	9-22°C 9-18km/h Dry - Rain
11,16,17,19,20	24/07/17	28/07/17	9-20°C 9-22km/h Dry – Light Rain
6,9,13	28/07/17	03/08/17	10-18°C 12-21km/h Dry - Rain
8,14	01/08/17	03/08/17	11-18°C 14-21km/h Dry – Light Rain

Table A3.2: Backtracking static detector deployment details

**Data taken from wunderground.com for nearest weather station. Rain reported as daily event and details of time duration and volume not available.*

Backtracking surveys - Transect

A3.26 A series of walked transects initially starting at these hotspots, as identified from the backtracking static surveys, were undertaken.

A3.27 Subsequent transect starting points were informed by the activity and flight lines from previous back tracking surveys and using professional judgement.

A3.28 Each transect visit was undertaken by 5 surveyors starting at different locations.

A3.29 During dusk surveys, surveyors would walk in the opposite direction to any bat passes and during pre-dawn surveys surveyors would follow the flights of any passing bats back to potential roost sites.

A3.30 Flight direction was communicated between surveyors and when a bat of the same species was subsequently detected by a second surveyor heading from a similar direction, this bat was considered the same individual.

A3.31 These transects were undertaken between 9th August 2017 and 31st August 2017 (see **Table A3.3** below for survey dates and weather conditions).

Survey	Date	Survey times	Weather conditions	Surveyors
1	09/08/17	Start: 20:29 Sunset: 20:49 End: 22:12	Wind (Beaufort): 2 - 2 Temp (°C) 16 - 14 Precipitation: None Cloud (Octas): 2 - 2	Rachel Whitaker Sophie Kirk Jeff Clarke Lisa Davies Georgina Palmer

Survey	Date	Survey times	Weather conditions	Surveyors
2	10/08/17	Start: 20:21 Sunset: 20:47 End: 22:12	Wind (Beaufort) 3 - 3 Temp (°C) 15 - 15 Precipitation: None Cloud (Octas): 1 - 1	Rachel Whitaker Sophie Kirk Jeff Clarke Kyle Mellish Georgina Palmer
3	15/08/17	Start: 20:32 Sunset: 20:37 End: 21:55	Wind (Beaufort) 3 - 2 Temp (°C) 16 - 15 Precipitation: None Cloud (Octas): 0 - 0	Rachel Whitaker Sophie Kirk Hayley Care Georgina Palmer Laura Dennis
4	17/08/17	Start: 20:30 Sunset: 20:33 End: 21:40	Wind (Beaufort) 3 - 2 Temp (°C) 17 - 16 Precipitation: Dry - Occasional light rain shower Cloud (Octas): 6 - 7	Hayley Care Jeff Clarke Kyle Mellish Sophie Kirk Lisa Davies
5	31/08/17	Start: 04:58 Sunrise: 06:15 End: 06:15	Wind (Beaufort) 3 - 2 13-9 Temp (°C) 10 - 11 Precipitation: None Cloud (Octas): 0 - 0	Steven Coyne Hayley Care Jeff Clarke Rachel Whitaker Sophie Kirk

Table A3.3: Back tracking survey details

Roost surveys

A3.32 Roost surveys were undertaken on all buildings with moderate or high potential to support roosting bats.

A3.33 Several buildings with low potential were also included where they were isolated from the main block of buildings making backtracking methods inappropriate.

A3.34 Any buildings identified as roost during the back-tracking surveys were to be subject to roost emergence/re-entry survey, however, no buildings were identified from the back-tracking surveys as confirmed or potential roosts.

A3.35 Roost surveys were undertaken between July 2017 and August 2017 (see **Table A3.4** below for survey dates and weather conditions).

A3.36 The surveyors were positioned around the buildings to provide adequate coverage of all suitable features. The location of these positions are indicated on **Plan 10925/P06**.

A3.37 Surveyors used a combination of visual observation and echolocation detection to identify any bats emerging from, or re-entering the buildings.

Survey	**Date**	**Survey times**	Weather conditions	Surveyors and detector*
Building B1 Dusk Emergence 1	17/07/17	Start: 21:12 Sunset: 21:27 End: 22:57	Wind (Beaufort): 3 - 2 Temp (°C) 19 - 18 Precipitation: None Cloud (Octas): 2 - 2	Steven Coyne (PS) Lisa Davies (BD/Z1) Georgina Palmer (BD/Z1)
Building B1 Dawn Re-entry 1	04/08/17	Start: 03:57 Sunrise: 05:27 End: 05:32	Wind (Beaufort): 3 - 5 Temp (°C) 14 - 14 Precipitation: Light rain shower after 05:00 Cloud (Octas): 8 - 8	Laura Dennis (AE/BD) John Moorcroft (AE/BD) Kyle Mellish (AE/BD)
Building B2 Dusk Emergence 1	17/07/17	Start: 21:12 Sunset: 21:27 End: 22:57	Wind (Beaufort): 4 - 4 Temp (°C) 17 - 16 Precipitation: None Cloud (Octas): 3 - 2	Laura Dennis (AE/BD) Kyle Mellish (AE/BD)
Building B5 Dusk Emergence 1	24/07/17	Start: 21:02 Sunset: 21:17 End: 22:47	Wind (Beaufort): 1 - 1 Temp (°C) 16 - 15 Precipitation: none Cloud (Octas): 1 - 1	Georgina Palmer (BD/Z1) Hayley Care (BD/Z1)

Survey	Date	Survey times	Weather conditions	Surveyors and detector*
Building B5 Dawn Re-entry 1	11/08/17	Start: 04:09 Sunrise: 05:39 End: 05:54	Wind (Beaufort): 1 - 2 Temp (°C) 9 - 10 Precipitation: none Cloud (Octas): 2 - 5	Laura Dennis (AE/BD) Nathan Jenkinson (AE/BD)
Building B5 Dusk Emergence 2	29/08/17	Start: 19:49 Sunset: 20:04 End: 21:34	Wind (Beaufort): 1 - 2 Temp (°C) 14 - 15 Precipitation: None Cloud (Octas): 8 - 8	Jeff Clarke (AW) Georgina Palmer (AE/BD)
Building B9 Dusk Emergence 1	11/07/17	Start: 21:13 Sunset: 21:33 End: 23:03	Wind (Beaufort): 1 - 1 Temp (°C) 13 - 13 Precipitation: None Cloud (Octas): 7 - 7	Steven Coyne (PS) Georgina Palmer (AE/BD)
Building B9 Dawn Re-entry 1	02/08/17	Start: 03:53 Sunrise: 05:23 End: 05:38	Wind (Beaufort): 1 - 1 Temp (°C) 13 - 13 Precipitation: None Cloud (Octas): 8 - 7	Steven Coyne (PS) Lisa Davies (AE/BD)
Building B9 Dusk Emergence 2	29/08/17	Start: 18:45 Sunset: 20:04 End: 21:34	Wind (Beaufort): 1 - 2 Temp (°C) 14 - 15 Precipitation: None Cloud (Octas): 8 - 8	Sophie Kirk (AE/BD) Rachel Whitaker (AE/BD)

Survey	Date	Survey times	Weather conditions	Surveyors and detector*
Building B21 Dusk Emergence 1	11/07/17	Start: 21:16 Sunset: 21:31 End: 23:01	Wind (Beaufort): 1 - 1 Temp (°C) 12 - 12 Precipitation: Very light rain at start of survey Cloud (Octas): 8 - 8	Laura Dennis (AE/BD) Kyle Mellish (BD/Z1)
Building B21 Dawn Re-entry 1	04/08/17	Start: 03:57 Sunrise: 05:27 End: 05:42	Wind (Beaufort): 4 - 4 Temp (°C) 14 - 14 Precipitation: None Cloud (Octas): 6 - 6	Steven Coyne (PS) Georgina Palmer (AE/BD)
Building B21 Dusk Emergence 2	29/08/17	Start: 19:49 Sunset: 20:04 End: 21:34	Wind (Beaufort): 3 - 3 Temp (°C) 12 - 11 Precipitation: None Cloud (Octas): 6 - 6	Steven Coyne (AE/PS) Arno Brandieth (EMT)
Building B40 Dusk Emergence 1	24/07/17	Start: 21:02 Sunset: 21:17 End: 22:47	Wind (Beaufort): 1 - 1 Temp (°C) 15 - 13 Precipitation: None Cloud (Octas): 0 - 0	Laura Peters (AE/BD) Lisa Davies (AE/BD) Steven Coyne (PS/AE)
Building B40 Dusk Emergence 2	07/08/17	Start: 21:21 Sunset: 21:36 End: 23:02	Wind (Beaufort): Temp (°C) Precipitation: Cloud (Octas):	John Moorcroft (AE/BD) Lisa Davies (AE/BD) Rosie Gunter (AE/BD)

Survey	Date	Survey times	Weather conditions	Surveyors and detector*
Building B42 Dawn Re-entry 1	02/08/17	Start: 03:53 Sunrise: 05:23 End: 05:38	Wind (Beaufort): 0 - 1 Temp (°C) 13 - 14 Precipitation: None Cloud (Octas): 8 - 8	Laura Dennis (AE/BD) Georgina Palmer (AE/BD) Hayley Care (AE/BD)
Building B42 Dusk Emergence 1	07/08/17	Start: 21:21 Sunset: 21:36 End: 23:02	Wind (Beaufort): Temp (°C) Precipitation: Cloud (Octas):	Jeff Clarke (AW) Kyle Mellish (AE/BD) Georgine Palmer (AE/BD)

Table A3.4: Roost survey details

*AE = AnaBat Express, BD = Batbox Duet, PS = Peersonic RPA, Z1 = Zoom H1 digital recorder, AW = AnaBat Walkabout, EMT = Echo Meter Touch

Activity survey - Transect

A3.38 To determine the species present and general activity across the whole site, dusk activity surveys were undertaken.

A3.39 Five site visits were undertaken between June 2017 and September 2017.

A3.40 Surveyors used a combination of direct visual observation and echolocation detection techniques to identify any bat activity on the site. The surveys started approximately at sunset and ended up to two hours after sunset.

A3.41 The route covered all field boundaries and potential features of interest on the site such as hedgerows, areas of scrub and tree lines (see **Plan 10925/P09** for transect routes).

A3.42 Anabat Express and Batbox Duet detectors were used throughout each survey; the Duet detector was used for active monitoring and Anabat detectors for recording in zero crossing format. AnalookW software was used to confirm the identification of bat calls recorded in the field.

A3.43 Details of the timings and the weather conditions for the activity surveys are shown in Table A3.5.

Survey	Date	Survey times	Weather conditions	Surveyors
1	07/06/17	Start: 21:35 Sunset: 21:33 End: 23:55	Wind (Beaufort): 1-2 Temp (°C) 12-12 Precipitation: Light rain showers Cloud (Octas): 8-8	Laura Dennis John Moorcroft
2	20/06/17	Start: 21:40 Sunset: 21:40 End: 23:50	Wind (Beaufort): 3-3 Temp (°C) 15 - 15 Precipitation: None Cloud (Octas): 8 - 8	Steven Coyne Kyle Mellish
3	13/07/17	Start: 21:51 Sunset: 21:41 End: 23:30	Wind (Beaufort): 1 - 1 Temp (°C) 15 - 15 Precipitation: None Cloud (Octas): 6 - 6	Steven Coyne Hayley Care

Table A3.5: Bat activity surveys details

Activity Survey - Static

A3.44 Further activity data was obtained from the deployment of two static bat detectors per activity transect visit.

A3.45 The detectors were placed in unique locations at each deployment (see **Plan 10952/P10**) and were set to record for a minimum of five consecutive nights.

A3.46 The static detectors were programmed to begin recording 30 minutes before sunset and continue to record until 30 minutes after sunrise.

A3.47 The dates and weather conditions for the automated survey are shown in table A3.6 below.

Static Location	Start Date	End Date	Weather conditions (Temp, Wind, Precipitation*)
V1A, V1B	07/06/17	15/06/17	8-22°C 9-37 km/h Dry – Light Rain
V2A, V2B	20/06/17	4/07/17	7-24°C 10-23 km/h Dry – Rain
V3A, V3B	13/07/17	18/07/17	11-22°C 12-22 km/h Dry - Light Rain
V4A, V4B	29/08/17	06/09/17	8-20°C 8-17 km/h Dry – Light Rain
V5A, V5B	20/09/17	28/09/17	7-18°C 8-18 km/h Dry - Rain

Table A3.6: Activity survey static survey details

**Data taken from wunderground.com for nearest weather station.*

Survey Limitations

General

A3.48 Bat surveys are subject to numerous variables. The echolocation calls of species such as brown long-eared bats Plecotus auritus are of low amplitude and may not always be picked up on bat detectors. Survey results represent a sample of bat activity during the surveys. It is possible that bats may use the site at other times.

A3.49 Bat calls cannot always be identified to species level, either due to distant contacts or the similarity between some types of bats. Where this occurs it is recorded as 'unidentified bat species' (Unid), or will show which bat species it is likely to be (e.g. Pipistrelle sp. / Myotis sp.).

A3.50 The weather was optimal during all surveys and a high level of confidence is placed on the results.

Building Preliminary Roost Asessment (PRA) and Roost surveys

A3.51 Direct evidence of use by bats such as deposition of droppings in attic spaces is typically only conspicuous when void dwelling species are present. Cavity dwelling species are often found under roof tiles and in gaps and cavities in walls and potential for these species to be present is assessed by the presence of these features.

A3.52 Bats use a variety of roosts, ranging from maternity, mating or swarming and hibernation roosts, containing many individuals, to mating or night-time feeding roosts containing few individuals or single animals. Bats also tend to be nomadic (although are faithful to certain favoured roosting sites), spending variable lengths of time in a variety of roosts. Thus, even with considerable survey effort it is possible that small transient roosts of bats may have been missed, although these tend to be less important to bats and so this should not affect the evaluation and recommendations made.

Activity survey – Transect and static

A3.53 The site was considered to be of low quality but with moderate areas of habitat suitability outside of the site boundary but inside of the ownership boundary which will not be developed. The survey

was therefore designed with monthly visit until September which falls between the recommendations for low and moderate site which was considered sufficient.

A3.54 A spring period (April-May) survey visit was not undertaken until early June. However, this is not considered a significant limitation due to the overall bat survey effort undertaken at the site.

Results

Building PRA

A3.55 Forty-two buildings at the site were considered to have potential to support roosting bats. Three were classified as high potential, three moderate potential and 36 low potential.

A3.56 These buildings are shown numbered and colour coded based on their roosting potential in **Plan 10925/P06.**

A3.57 A description of the building together with detail of access points/roosting features, bat roosting category and a photo of each building is shown in Table A3.7 below.

Building	Description	Category	Photo
1	Disused farmhouse (Outside of site boundary but within ownership boundary). Brick built with a corrugated pitched roof. No internal access possible as unsafe structure. Gaps under edge of roof above wall and missing windows.	Moderate	
2	Brick build storage building with rendered walls and sloped metal roof (Outside of site boundary but within ownership boundary). A small cavity was present in the roof space between the concrete cap and the metal roof. Gaps between the walls and roof would allow bat access	Low	
3	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
4	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
5	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes. Internal wooden structure formed an open roof space which would offer suitable roosting conditions. A small number (<5) of Brown long-eared type droppings were recorded in the roof space confirming past use.	High	

Building	Description	Category	Photo
6	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
7	A brick-built warehouse/factory with multiple corrugated metal roofs. Gaps were present under and at the edges of drip edging, in vertical gaps in the brickwork and under bargeboards.	Low	
8	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
9	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes. Internal wooden structure formed an open roof space which would offer suitable roosting conditions. A small number (<5) of Brown long-eared type droppings were recorded in the roof space confirming past use.	High	
10	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
11	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
12	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
13	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
14	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	

Building	Description	Category	Photo
15	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
16	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
17	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
18	Brick build storage building with a corrugated pitched roof. Gaps were present between the top of the walls and the barge boards. A large vertical gap between brickwork was also present leading into a cavity in the wall.	Low	
19	A brick-built warehouse/distribution building with multiple height pitched roofs. Gaps were present under barge boards, between the edge of the roof and top of the walls and vertical gaps were present in the brickwork.	Low	
20	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
21	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes. Internal wooden structure formed an open roof space which would offer suitable roosting conditions. A small number (<5) of pipistrelle type droppings were recorded in the roof space confirming past use.	High	
22	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
23	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	

Building	Description	Category	Photo
24	A brick-built storage building with a corrugated pitched roof. Gaps were present between the top of the walls and bottom edge of the roof and gaps between brick work	Low	
25	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
26	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
27	A terrace of storage buildings/workshops. Each unit had a enclosed roof space that was not accessible. Postmedial access included between the corrugated roof covering and above roofing boards, through gaps in the roof capping and gaps in the brick work.	Low	
28	A brick-built workshop with a corrugated pitched roof. Gaps were present between corrugated roof sheet, roof capping and at the apex at the gable ends.	Low	
29	A brick-built workshop with a corrugated pitched roof. Gaps were present between corrugated roof sheet, roof capping, at the apex at the gable ends and holes in the brick work.	Low	
30	Storage building. Metal outer skin forming single storey pitched roof structure. Inner wooden cladding creates cavity between wood and metal layer. Gaps present between wall and roof edge, roof and roof capping and various rust holes.	Low	
31	A fibreboard workshop with a corrugated pitched roof. A false ceiling formed an inaccessible internal roof space. Gaps were present between the fibreboard panels and between the panels and the edge of the roof.	Low	
32	A mix of brick built and fibreboard workshop/stores with a corrugated pitched/sloped roof. Gaps were present where roof coverings were missing, under lead flashing, under bargeboards and holes in the fibreboard walls.	Low	
33	A fibreboard workshop with a corrugated pitched roof. A false ceiling formed an inaccessible internal roof space. Gaps were present at the apex of the gable ends, under bargeboards and between the panels and the edge of the roof.	Low	

Building	Description	Category	Photo
34	Brick built workshops/stores with sloped and pitched roofs. Gaps were present in cracks in the brickwork and gaps in the roof covering.	Low	
35	Brick built workshops/stores with sloped and pitched roofs. Gaps were present through vent holes, exposed holes in the brickwork, cracks in the brickwork.	Low	
36	Brick built security office. With a mix of flat and pitched corrugated roofs. Gaps were present under barge boards and drip edges, between corrugated roof sections and at the apex of the gable ends.	Low	
37	Brick built office block with flat roofs. Gaps were present in the brickwork from construction scaffold supports and other mortar gaps.	Low	
38	Rendered board prefab building with a flat metal roof. Gaps are present under the bargeboards/drip edges.	Low	
39	Brick built building with shallow sloped metal roof. Gaps are present along the sides of the building where the roof overhangs the walls.	Low	
40	Two storey detached house with a hipped tiled roof. An internal loft space is present and was lined with bitumen felt and insulted with fibre wool. Gaps are present under displaced tiles, gaps in the soffit box and under lead flashing.	Moderate	
41	Brick and metal warehouse with a sloped corrugated metal roof. Vertical gaps are present in the walls which may lead to internal cavities	Low	
42	Brick built bungalow with a steep hipped roof. Gaps were present under displaced tiles and under missing hip tiles. An internal loft space is present and was lined with bitumen felt and insulted with fibre wool.	Moderate	

Table A3.7: Buildings with bat roosting potential

Backtracking surveys - Static

A3.58 The analysis of activity was grouped into three groups which were earlier emerging big bats (noctule), pipistrelle species bats (common, soprano and Nathusius') and later emerging Myotis species and long-eared species.

A3.59 Activity was classified into two periods. The emergence period was classified as 0.5 hours before sunset and up to 1.5 hours after sunset. The re-entry period was classified as 1.5 hours before sunrise and up to 0.5 hours after sunrise.

A3.60 A summary of the number of calls for each species group in each period is shown in Table A3.8 below.

Survey period	Big bats	Pipistrelle bats	Myotis/Long-eared
Emergence	103	1463	7
Re-entry	209	1173	1

Table A3.8: Bat passes recorded for each species group in each activity period

A3.61 The spatial distribution of this activity is shown in **Plan 10952/P08**.

A3.62 Based on the location of the activity hotspots, ten transect starting points were chosen. These starting points are shown in **Plan 10925/P08.**

Backtracking surveys – Activity

A3.63 Noctule and common pipistrelle bats were detected during the back-tracking surveys.

A3.64 The activity during these surveys was low, with only a small number of passes from small numbers of bats detected.

A3.65 All flight lines recorded during the surveys are shown on **Plan 10952/P08**.

A3.66 All bat activity appears to originate off site then enters parts of the site for commuting purposes with opportunistic foraging.

A3.67 No bat activity originated from or led back to any of the onsite buildings to indicate the presence or potential presence of any roosts.

Roost surveys

A3.68 Four species of bat were recorded during the survey. These were common pipistrelle, noctule, a Myotis sp. and brown long-eared bat. Only common pipistrelle was recorded emerging or re-entering a building.

A3.69 A single roost was confirmed in building 42 by a re-entry and an emergence on different days. A common pipistrelle re-entered into a gap between the roof tiles on the north east hip at 05:05 hrs on 2nd August 2017. A common pipistrelle emerged at 21:47 hrs on 7th August 2017 from the same location.

A3.70 The roost access point is shown in **Plan 10952/P06**.

A3.71 This roost is considered to be a non-maternity summer roost.

A3.72 No bats were recorded emerging from or re-entering back into any of the other buildings at the site.

Activity survey – Transect

A3.73 A total of 435 bat passes were recorded during the transect survey visits.

A3.74 These passes were from two species including noctule (129 passes) and common pipistrelle (306 passes).

A3.75 Chart A3.1 shows the number of passes recorded for each species on each visit and **Plan 10952/P09**. shows the spatial distribution of these bat records.

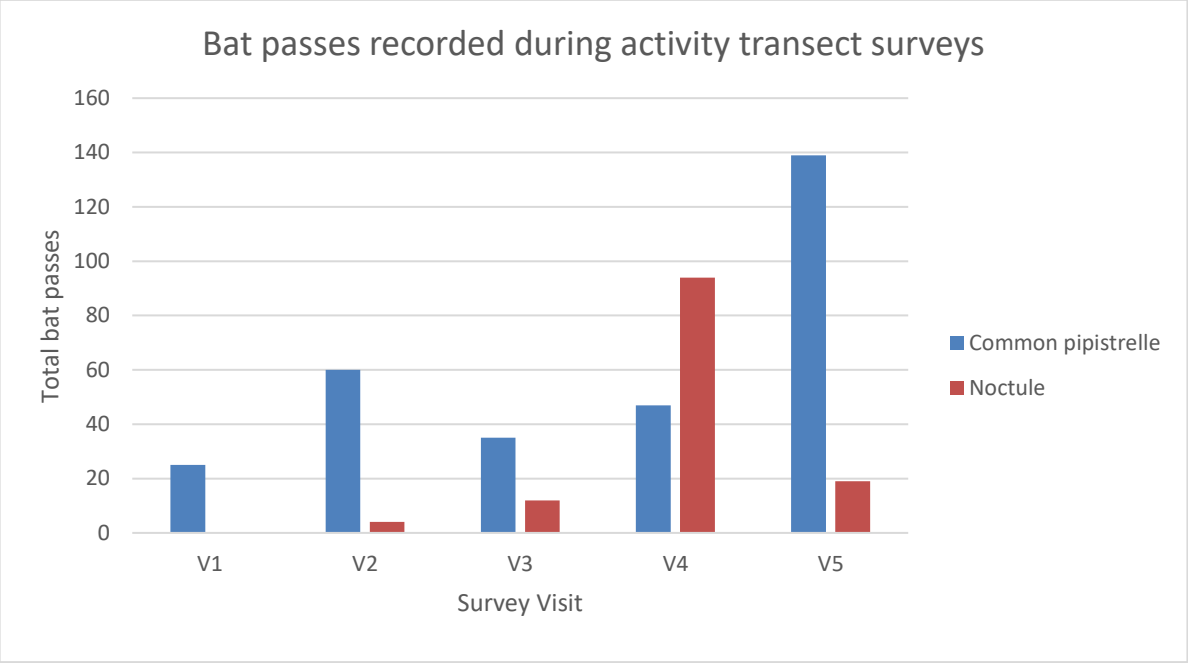


Chart A3.1 Summary of bat passes and species during bat activity surveys

A3.76 Noctule activity was strongly clustered around the main site entrance to the south east corner of the site near to buildings 36 and 37 and radiating north and west from this location.

A3.77 A total of 88 passes (68% of all noctule activity) were recorded clustered in this location around these two buildings.

A3.78 Noctule bats were seen foraging around the security lighting at this location which explains the level of activity.

A3.79 A second small cluster of noctule passes were recorded to the north west of the ownership boundary. These 10 records were recorded during the same visit and represent a single foraging bat.

A3.80 Common pipistrelle activity was distributed across the whole site and ownership boundary.

A3.81 Activity levels appear to be lower around the farmland to the east and the main industrial core of the site.

A3.82 Common pipistrelle activity appears highest to the north of the site but within the ownership boundary and within the western side of the site boundary.

Activity survey – Static

A3.83 In total 5,555 bat passes were recorded from common pipistrelle, brown long-eared bat and noctule (see Chart A3.2).

A3.84 Passes were also recorded from bats that could not be identified to the species level due to overkeeping call parameters and these were myotis species bats and big bat species (either noctule, serotine and Leisler's bat).

A3.85 Common pipistrelle bats were most frequently recorded and accounted for 83.7% of all bat activity, followed by noctule at 13.6% and myotis species at 1.8%. The remaining 0.9% was made up from big bats, brown long-eared and myotis/long-eared activity.

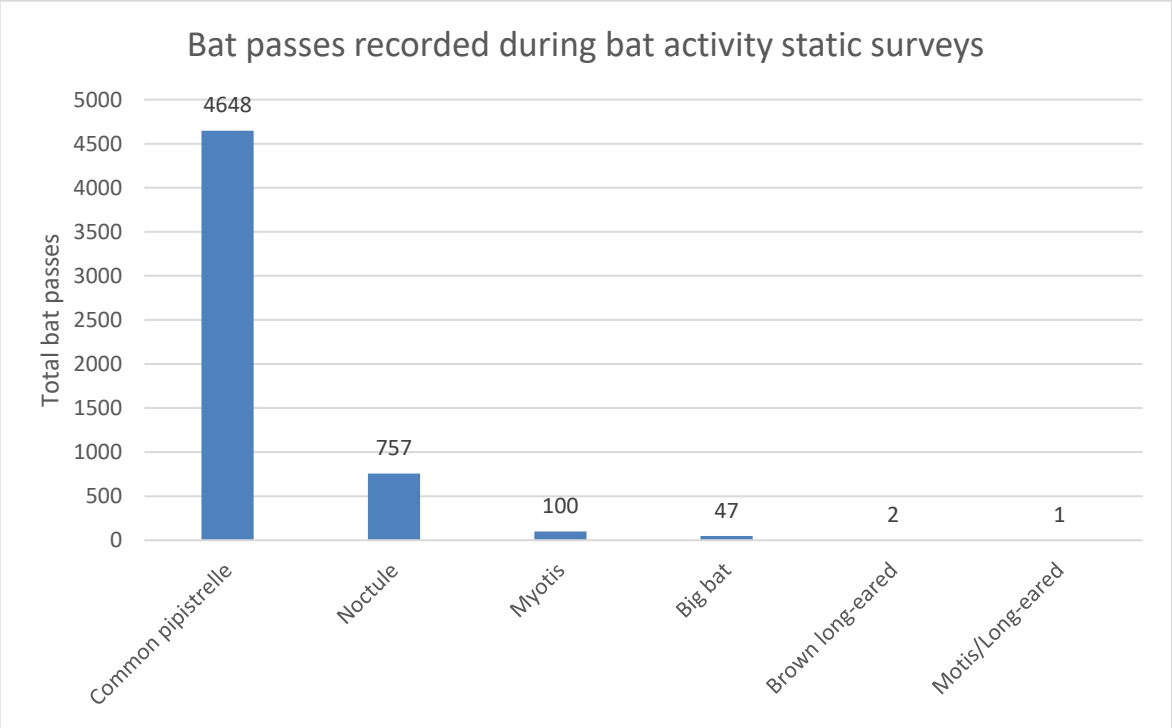


Chart A3.2: Bat passes recorded by static detectors during bat activity surveys

A3.86 Most bat activity was recorded from location V3B with an average of 500.5 bat passes per night. The lowest activity levels were recorded in location V2B with 7.1 bat passes per night.

A3.87 Table A3.9 and **Plan 10952/P10**.shows the average bat passes per night for all of the static detector locations.

Location	Average bat passes per night
V3B	500.5
V4A	65.7
V5A	46.1
V1A	45.1
V3A	28.3
V2A	28.1
V4B	24.7
V1B	24.4
V2B	7.1

A3.88 A3.9 Average passes per night for each detector location

A3.89 Table A3.10 shows the average bat passes per night for each species in each location together with the relative contribution of that species to the total of all activity at each location.

A3.90 Common pipistrelle bats and noctule (combined with records of big bats) were recorded at all static detector locations.

A3.91 Brown long-eared bats were only confirmed within the wooded area to the north west of the site and in the wooded area to the south east of the site (V2A and V5A).

A3.92 Although myotis activity was recorded in several areas, the majority of these calls (93%) were recorded along the western boundary (V3B).

Location	Common pipistrelle	Noctule	Myotis	Big bat	Brown long-eared	Myotis/ Long-eared	Total
V1A	44.67 (99.01)		0.33 (0.74)	0.11 (0.25)			45.11
V1B	24.11 (98.64)	0.33 (1.36)					24.44
V2A	15.20 (54.16)	11.33 (40.38)		1.47 (5.23)	0.07 (0.24)		28.07
V2B	6.07 (85.05)			1.00 (14.02)		0.07 (0.93)	7.13
V3A	16.50 (58.24)	10.83 (38.24)		1.00 (3.53)			28.33
V3B	484.50 (96.80)	0.33 (0.07)	15.17 (3.03)	0.50 (0.10)			500.50
V4A	18.11 (27.58)	47.33 (72.08)	0.22 (0.34)				65.67
V4B	23.11 (93.69)	1.33 (5.41)	0.22 (0.90)				24.67
V5A	37.00 (80.24)	8.78 (19.04)	0.22 (0.48)		0.11 (0.24)		46.11

TableA3.10: Average bat passes per species at each location. The figures in parentheses are the relative proportion of activity for the individual species for all activity at that location.

References

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

Hundt, L. (2012). *Bat Surveys: Good Practice Guidelines*. Second Edition. Bat Conservation Trust, London.

Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Mitchell-Jones, A.J. and McLeish, A.P. (2004). Bat Workers' Manual. 3rd Edition. JNCC, Peterborough.

Appendix 4: Breeding Bird Survey

Appendix 4: Breeding Bird Survey

Legislation and conservation status

A4.1 All birds are protected under the provisions of the Wildlife and Countryside Act (WCA) 1981 (as amended). Some receive additional species protection under Schedule 1 of the Act.

A4.2 Some species are also listed as Species of Principal Importance (SoPI) under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

A4.3 Reference is made to Birds of Conservation Concern (BOCC) compiled by RSPB[1]/BTO[2]. All breeding and wintering bird species in the UK, Channel Islands and the Isle of Man have been assigned to one of three groups (Red, Amber or Green) based on their conservation status. Each group is defined as follows:

- RED List species are those that are globally threatened according to the International Union for Conservation of Nature (IUCN) criteria; those whose population or range has declined rapidly (≥ 50%) in recent years; and those that have declined historically and not shown a substantial recent recovery;

- AMBER List species are those with an unfavourable conservation status in Europe, those whose population or range has declined moderately (25%-49%) in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations; and

- The remaining species are placed on the GREEN List, indicating that they are of low conservation priority, although population sizes should be monitored.

Methodology

A4.4 The areas of the site subject to potential development were surveyed for breeding birds. Surveys were undertaken by one or two experienced ecologists on three occasions during spring using a territory mapping method based on standard methodology (Bibby 2000, Gilbert et al 1998). The survey dates, times and weather conditions are presented in Table A4.1.

Survey Visit	Date	Time	Weather
1	08/05/2017	07:05 – 11:25	Dry, 100% cloud cover, Beaufort scale 3, 7°C
2	01/06/2017	06:25 – 09:25	Dry, 90% cloud cover, Beaufort scale 2, 15°C
3	05/07/2017	06:30 – 09:30	Dry (light right from 07:30), 100% cloud cover, Beaufort scale 2, 16°C

Table A4.1: Date, time and weather of survey visits

A4.5 The survey visits were conducted during the early morning as this is considered to be the best time to record bird breeding activity. The identity and activity of all birds, either seen or heard, was recorded on maps of a suitable scale.

[1] Royal Society for the Protection of Birds

[2] British Trust for Ornithology

A4.6 Although the same survey route was used during all visits, the survey direction was alternated so that areas were covered at varied times to ensure even coverage during the peak period of bird activity.

A4.7 On each survey, bird activity likely to indicate breeding was recorded on a map. Species were noted using the standard (BTO) codes. Behaviour considered likely to indicate breeding included singing, display flights, mating and courtship displays, nesting, carrying of nesting material and birds showing fidelity to a particular patch of ground or vegetation.

A4.8 Over-flying birds such as corvids, woodpigeons and black-headed gulls were not recorded. The results of each visit were then transcribed onto a summary map shown in order to identify species showing fidelity to areas of habitat over several site visits. An aggregation of two or more sightings of a species was taken to be an indication that breeding was likely. Also if specific behaviours (such as the gathering of nest material, copulations or carrying food) were observed, this was also taken to indicate breeding.

A4.9 The conservation status of the birds recorded was ascertained through consultation of national, regional and local bird reports.

Results and Summary

A4.10 Based on the surveys undertaken 25 species are likely to be breeding either on or immediately adjacent to the site, as shown in Table A4.2, which also provides information on the conservation status of each species.

Species	Likely number of territories	BTO Conservation Status (red / amber / green)	NERC Act 2006 SoPI
Blackbird *Turdus merula*	9	Green	No
Blackcap *Sylvia atricapilla*	1	Green	No
Blue tit *Parus caeruleus*	3	Green	No
Bullfinch *Pyrrhula pyrrhula*	1	Amber	Yes
Carrion crow *Corvus corone*	1	Green	No
Chaffinch *Fringilla coelebs*	3	Green	No
Chiffchaff *Phylloscopus collybita*	1	Green	No
Collared dove *Streptopelia decaocto*	1	Green	No
Dunnock *Prunella modularis*	2	Amber	Yes
Goldfinch *Carduelis carduelis*	1	Green	No
Great tit *Parus major*	2	Green	No
Green woodpecker *Picus viridis*	1	Green	No
House martin *Delichon urbicum*	1	Amber	No
Jackdaw *Corvus monedula*	1	Green	No
Magpie *Pica pica*	3	Green	No
Pied wagtail *Motacilla alba*	1	Green	No
Robin *Erithacus rubecula*	9	Green	No

Song thrush *Turdus philomelos*	2	Red	Yes
Starling *Sturnus vulgaris*	2	Red	Yes
Swallow *Hirundo rustica*	3	Green	No
Tawny owl *Strix aluco*	1	Amber	No
Whitethroat *Sylvia communis*	1	Green	No
Willow warbler *Phylloscopus trochilus*	2	Amber	No
Woodpigeon *Columba palumbus*	4	Green	No
Wren *Troglodytes troglodytes*	7	Green	No

Table A4.2: Inferred breeding bird territories within the survey area

A4.11 The distribution of territories recorded is shown on **Plan 10925/P11**. The habitats on the site including woodland, scrub, grassland and buildings support a range of species including both resident and summer migrant species. This comprises mostly common passerine species but also includes seven species of conservation concern, which are:

- Bullfinch *Pyrrhula pyrrhula;*
- Dunnock *Prunella modularis;*
- House martin *Delichon urbicum;*
- Song thrush *Turdus philomelos;*
- Starling *Sturnus vulgaris;*
- Tawny owl *Strix aluco; and*
- Willow warbler *Phylloscopus trochilus.*

A4.12 In addition to the species considered to be breeding, eight other species were recorded using the site on one or more of the three survey visits but failed to demonstrate sufficient fidelity to an area over subsequent surveys to infer breeding. These species are shown in Table A4.3.

Species	**BTO Conservation Status red /amber / green**	**NERC Act 2006 SoPI**
Coat tit *Periparus ater*	Green	No
Greenfinch *Carduelis chloris*	Green	No
House sparrow *Passer domesticus*	Red	Yes
Jay *Garrulus glandarius*	Green	No
Kestrel *Falco tinnunculus*	Amber	No
Linnet *Carduelis cannabina*	Red	Yes
Meadow pipit *Anthus pratensis*	Amber	No
Swift *Apus apus*	Green	No

Table A4.3: Other bird species recorded during the survey

References

Bibby, C.J., Burgess, N.D., Hill, D.A. and Mustoe, S.H. (2000). *Bird Census Techniques*. Academic Press.

Gilbert, G., Gibbons, D.W. and Evans, J. (1998). *Bird Monitoring Methods: A Manual of Techniques for Key UK Species*. RSPB.

Appendix 5: Reptile Survey

Appendix 5: Reptile Survey Methodology and Results

Legislation and Conservation Status

A5.1 All of Britain's native reptiles are protected under the Wildlife and Countryside Act 1981 (as amended) (WCA). The four common species of reptile: adder *Vipera berus*, grass snake *Natrix helvetica*, slow worm *Anguis fragilis* and common lizard *Zootoca vivipara* are listed on Schedule 5, Section 9, Parts 1 and 5, of the WCA and as such, it is an offence to:

- Intentionally kill, injure or take reptiles; and
- Sell, offer or advertise for sale any live or dead specimen or anything derived from reptiles.

Previous Records

A5.2 The desk study returned 6 records for reptiles, all of which were recorded at least 30 years previously, of which 5 were recorded more than a century ago. While providing little information in contribution to their current distribution, the records do show historic use of the area by reptiles, with grass snake (*Natrix helvetica*), viviparous lizard (*zootoca vivipara*) and slow worm (*anguis fragilis*) all recorded within 2km of site. Habitats on site were also considered as suitable for reptiles.

Survey Methodology

A5.3 The reptile survey concentrated on areas of the site with potential to support common reptile species, which include areas of rough grassland and scrub. The locations of the reptile survey mats are denoted on Plan 10925/P12.

A5.4 The survey was conducted in line with Froglife's Advice Sheet 10 and the Herpetofauna Workers' Manual. This involved laying refuges (squares of roofing felt 1 m x 0.5 m) where potential for reptiles was noted. A total of 125 refuges were set out on 12th May 2017 (see Plan 10925/P12).

Following a 'bedding in' period of 14 days, seven subsequent checks of the artificial refuges and natural refuges were conducted during suitable weather conditions. The dates and weather conditions of the surveys are shown in Table A5.1. Natural basking areas were also observed for the presence of reptiles during the survey checks.

Visit Number	Date	Weather Conditions	Air Temp	Lead surveyor
1	26.05.17	0% cloud, dry, light air, dry.	17°C	Georgina Palmer
2	30.05.17	100% cloud, dry, light breeze, warm.	17°C	Kyle Mellish

Visit Number	Date	Weather Conditions	Air Temp	Lead surveyor
3	01.06.17	20% cloud, dry, light air, sunny.	17°C	Hayley Care
4	09.06.17	80% cloud, mostly dry with occasional drops of rain, light to moderate breeze.	15°C	Georgina Palmer
5	16.06.17	90% cloud, dry, overcast, patchy sun, light breeze.	15°C	Kyle Mellish
6	26.06.17	40% cloud, dry, light air.	15°C	Steven Coyne
7	10.07.17	80% cloud, light air, rainfall just before survey, then dry, bright and warm.	16°C	Kyle Mellish

Table A5.1: Dates and weather conditions of the reptile survey checks

Survey Limitations

A5.5 Survey 1 – mats N9 – N12 buried in spoil, unable to retrieve for following surveys.

A5.6 Surveys 5 – mat L2 missing and for following surveys.

Survey Results

A5.7 No reptile species were found during any of the surveys nor were any seen on natural basking areas.

A5.8 A female common toad, *Bufo bufo* (a UK BAP species) was found on the final 7th survey visit. No other animals, including amphibians or mammals were found on or under the mats during any of the survey visits.

References

Froglife Advice Sheet 10 (1999) *Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*.. http://www.froglife.org/documents/FroglifeAdviceSheet10.pdf

herpetofauna Workers' Manual (2003) Gent, T & Gibson, S. http://jncc.defra.gov.uk/page-3325

Plan(s)

10925_P03_Site Boundaries_29012018_SJC

10925_P04_Habitat Features_29012018_SJC

10925_P05_Badger Survey Results_29012018_SJC

10925_P06_Bat Roost Survey Results_29012018_SJC

10925_P07_Static Bat Detector Locations and Transect Route_29012018_SJC

10925_P08_Bat Back Tracking Survey Results_29012018_SJC

10925_P09_Bat Activity Survey Results - Transect_29012018_SJC

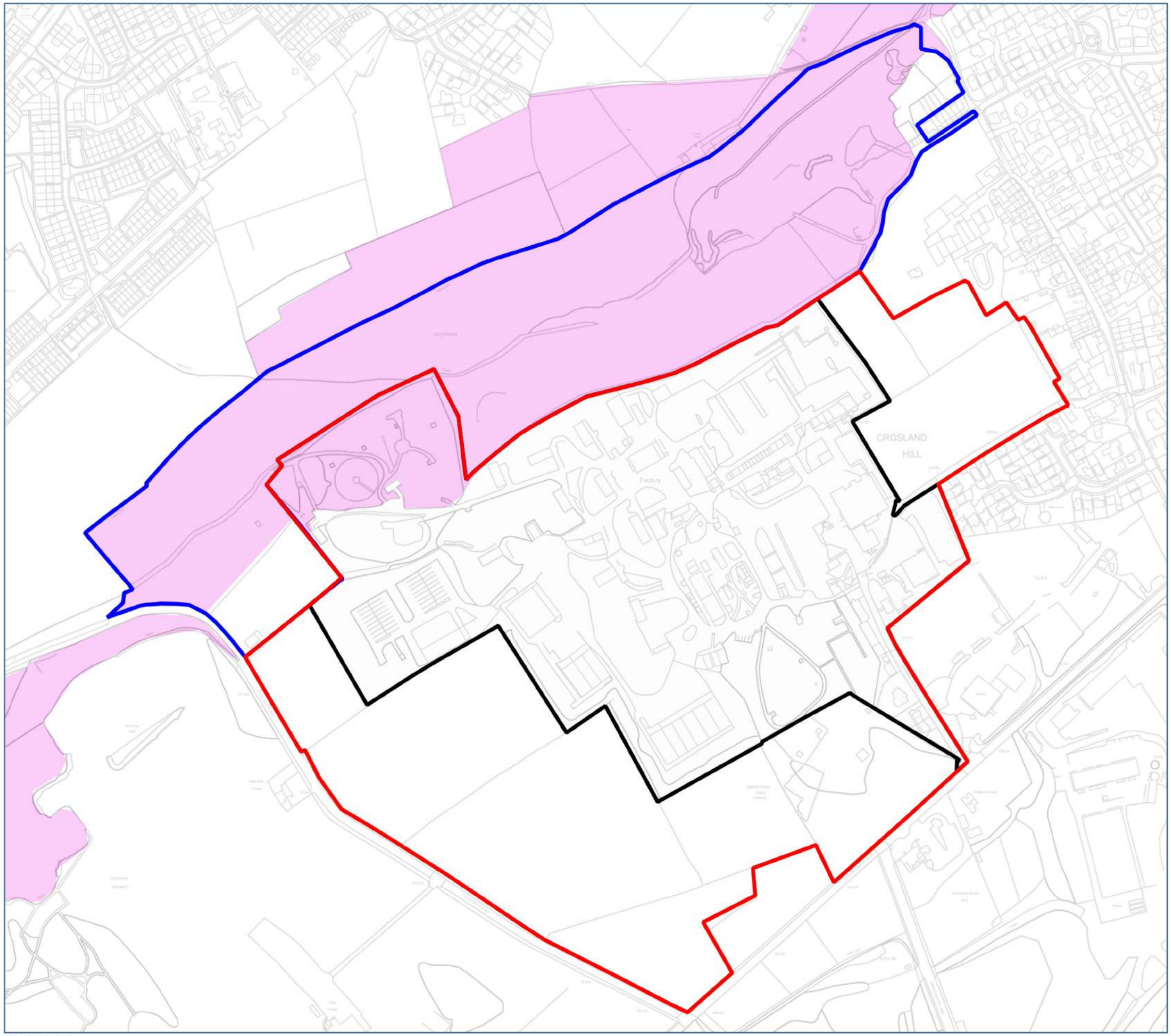
10925_P10_Bat Activity Survey Results - Static_29012018_SJC

10925_P11_Breeding Bird Survey Results_29012018_SJC

10925_P12_Reptile Mat Locations_29012018_SJC

10925_P13_Illustrative asterplan_29012018_SJC

10925_P14_Parameters Plan_29012018_SJC



Ownership Boundary
Site Boundary
Factory Site Boundary
Kirklees Wildlife Habitat Network

N

0 150 m

Project	Land off Blackmoorfoot Road and Felks Stile Road
Drawing Title	Site Boundaries
Scale	As Shown (Approximate)
Drawing No.	10925/P03
Date	January 2018
Checked	SJC/LJD

Tyler Grange
Ladyfield House, Station Road, Wilmslow, Cheshire, SK9 1BB
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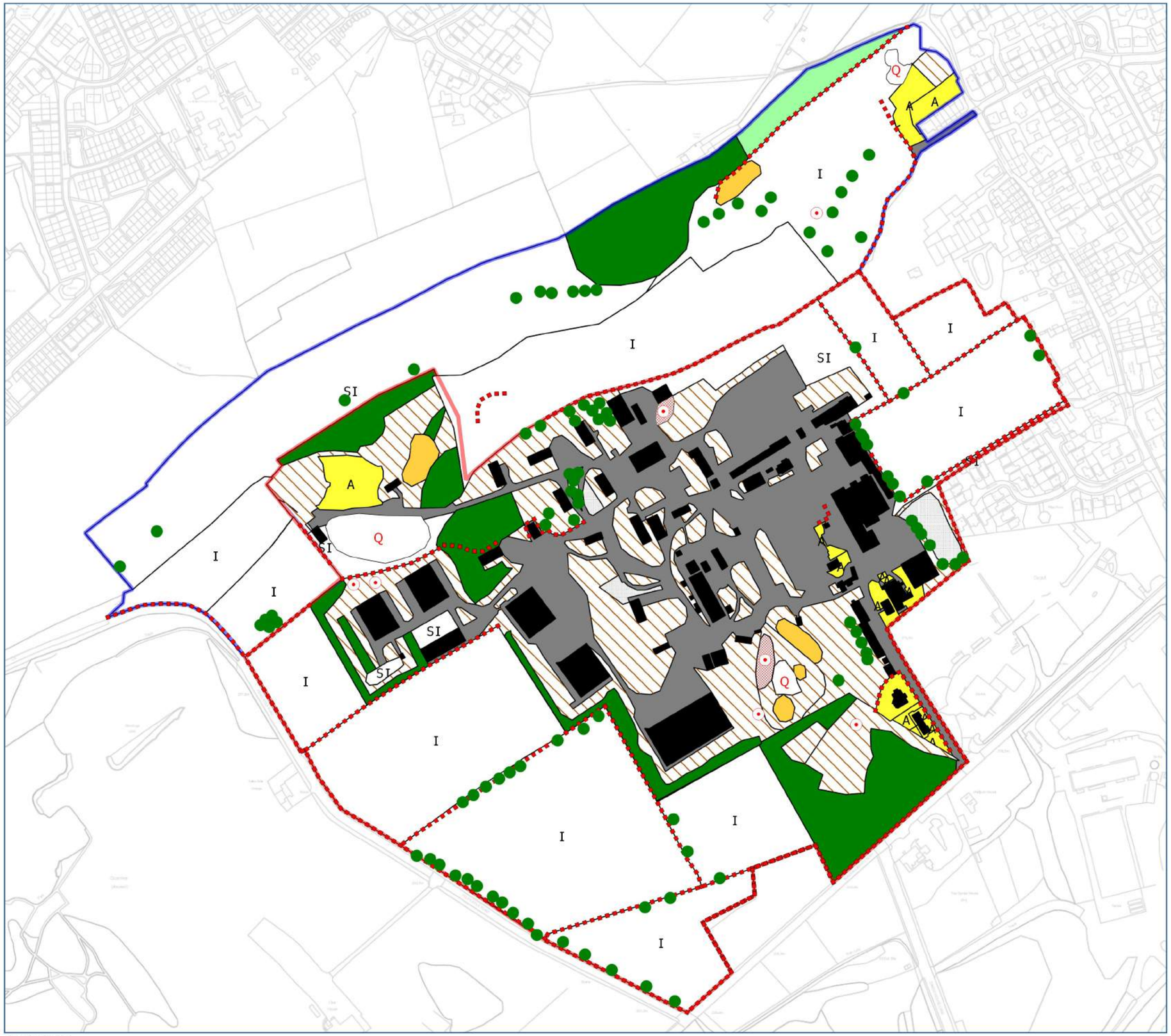

- Development Boundary
- Site Boundary
- Bare ground
- Building
- Dwarf shrub heath - dryHeath
- A — Grassland - amenity
- I — Grassland - improved
- SI — Grassland - semi-Improved
- Hardstanding
- Invasive species
- Q — Quarry
- Tall Ruderal
- Woodland - semi-natral mixed
- Woodland - semi-natural broadleaved
- Dry Stone Walls
- Scattered Trees
- Invasive species

N

0 — 150 m

Project	Land off Blackmoorfoot Road and Felks Stile Road
Drawing Title	Habitat Features
Scale	As Shown (Approximate)
Drawing No.	10925/P04
Date	January 2018
Checked	SJC/LJD

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Ownership Boundary
Site Boundary
High roost potential
Moderate roost potential
Low roost potential
Bat Survey Surveyor Locations
Bat roost location

N

0 100 m

Project	Land off Blackmoorfoot Road and Felks Stile Road
Drawing Title	Roost Survey Results
Scale	As Shown (Approximate)
Drawing No.	10925/P06
Date	January 2018
Checked	SJC/LJD

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Ownership Boundary

Site Boundary

Transect route

Static Bat Detector Location

N

0 150 m

Project	Land off Blackmoorfoot Road and Felks Stile Road
Drawing Title	Static Locations and Transect Route
Scale	As Shown (Approximate)
Drawing No.	10925/P07
Date	January 2018
Checked	SJC/LJD

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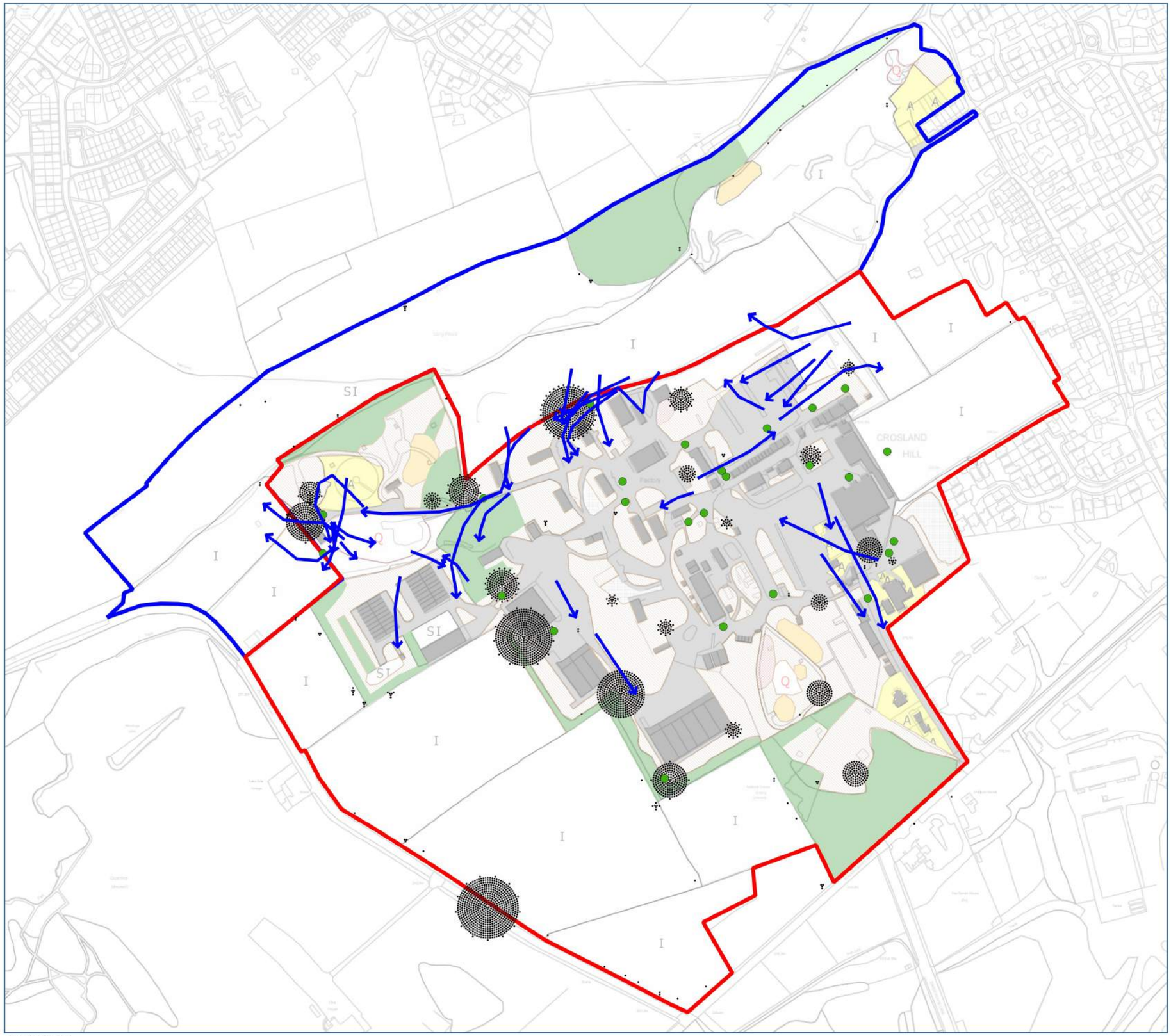

Project	Land off Blackmoorfoot Road and Felks Stile Road
Drawing Title	Backtracking Survey Results
Scale	As Shown (Approximate)
Drawing No.	10925/P08
Date	January 2018
Checked	SJC/LJD

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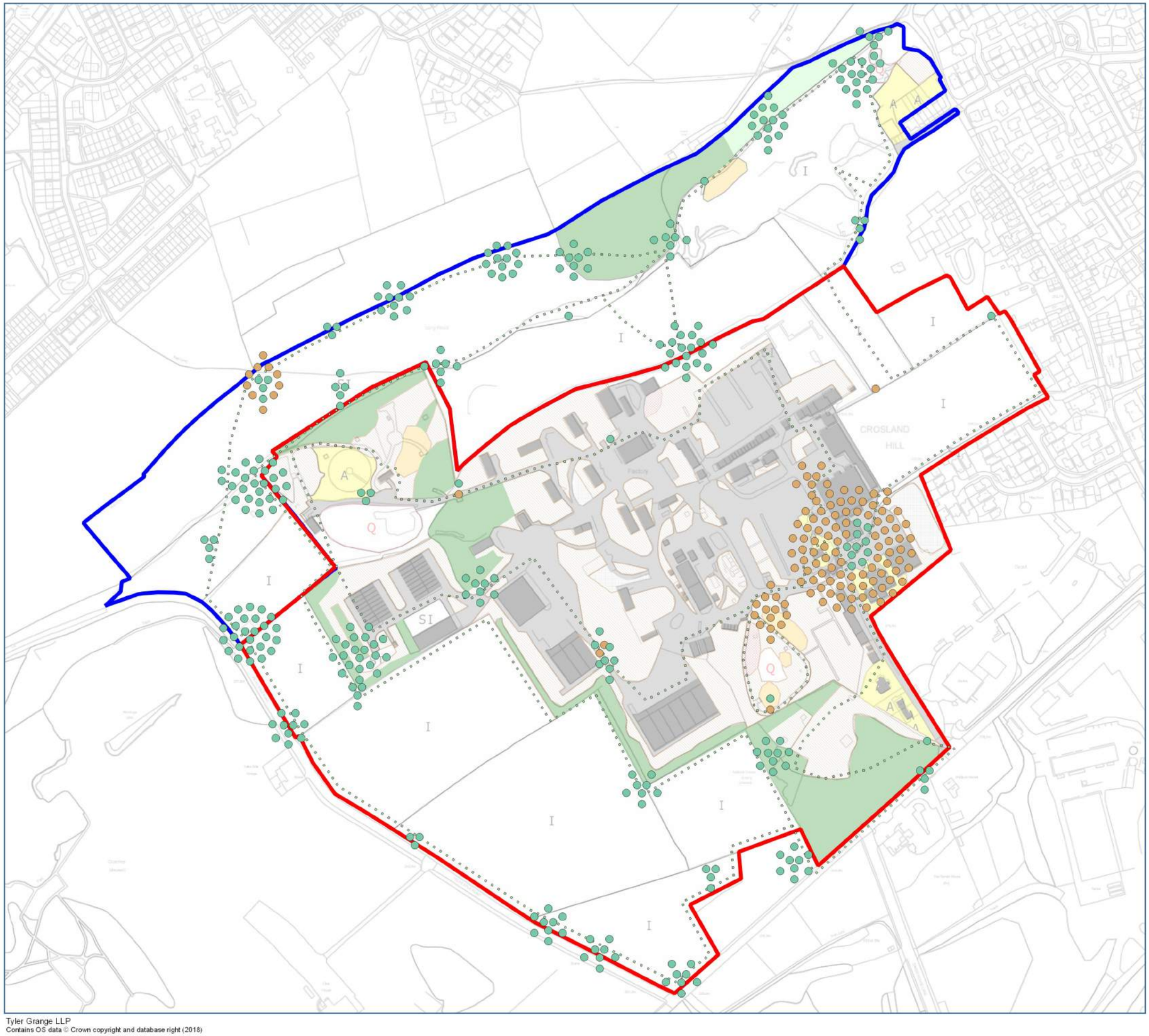

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Drawing Title	Bat Activity Survey Results - Transect
Scale	As Shown (Approximate)
Drawing No.	10925/P09
Date	January 2018
Checked	SJC/LJD

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Static Detector Location
Single Bat Pass
Ownership Boundary
Site Boundary

N

0 150 m

Project	Land off Blackmoorfoot Road and Felks Stile Road
Drawing Title	Activity Survey Results - Static
Scale	As Shown (Approximate)
Drawing No.	10925/P10
Date	January 2018
Checked	SJC/LJD

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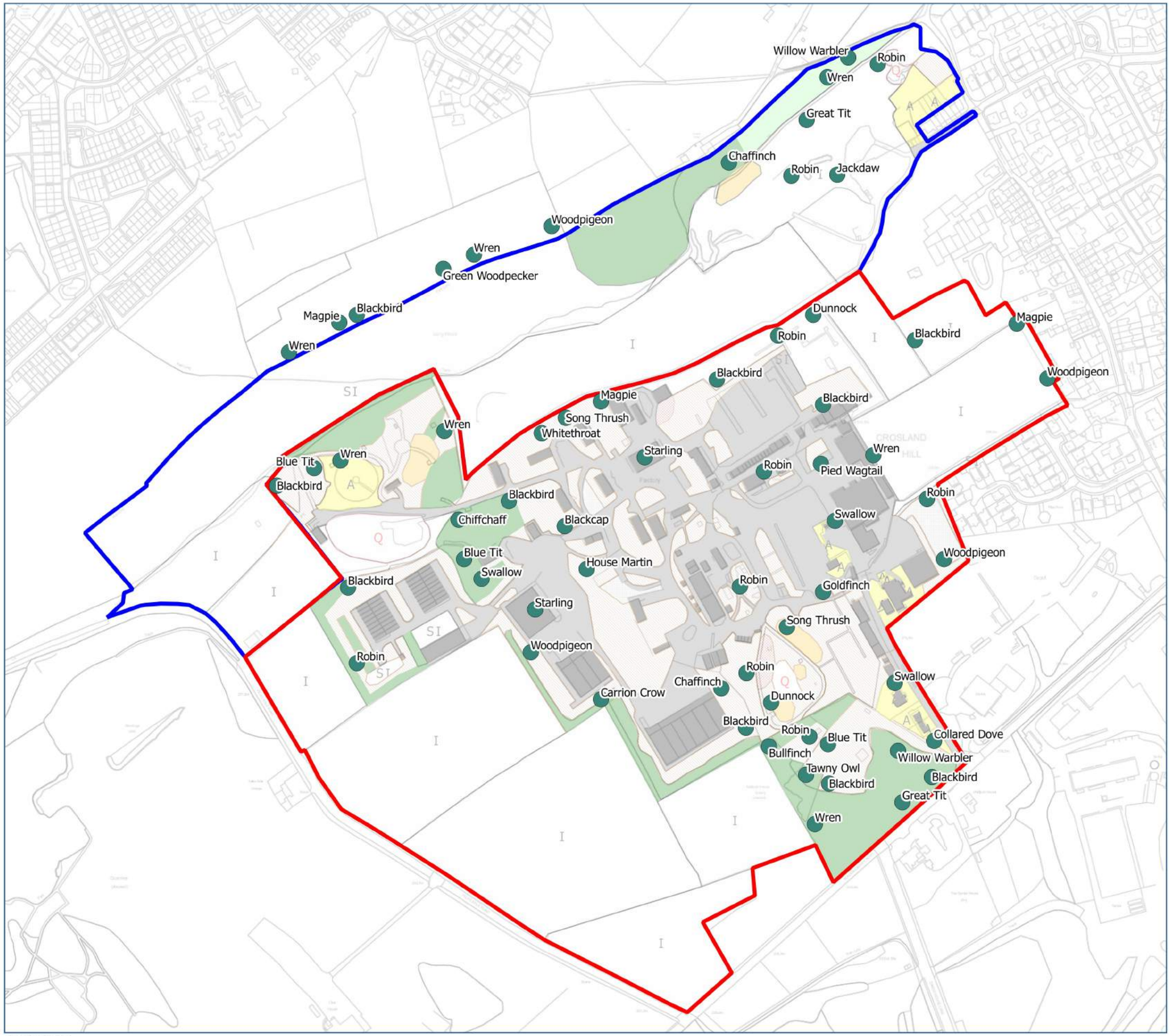

Tyler Grange LLP

Ownership Boundary

Site Boundary

Approximate Territory Locations

N

0 150 m

Project	Land off Blackmoorfoot Road and Felks Stile Road
Drawing Title	Breeding Bird Survey Results
Scale	As Shown (Approximate)
Drawing No.	10925/P11
Date	January 2018
Checked	SJC/LJD

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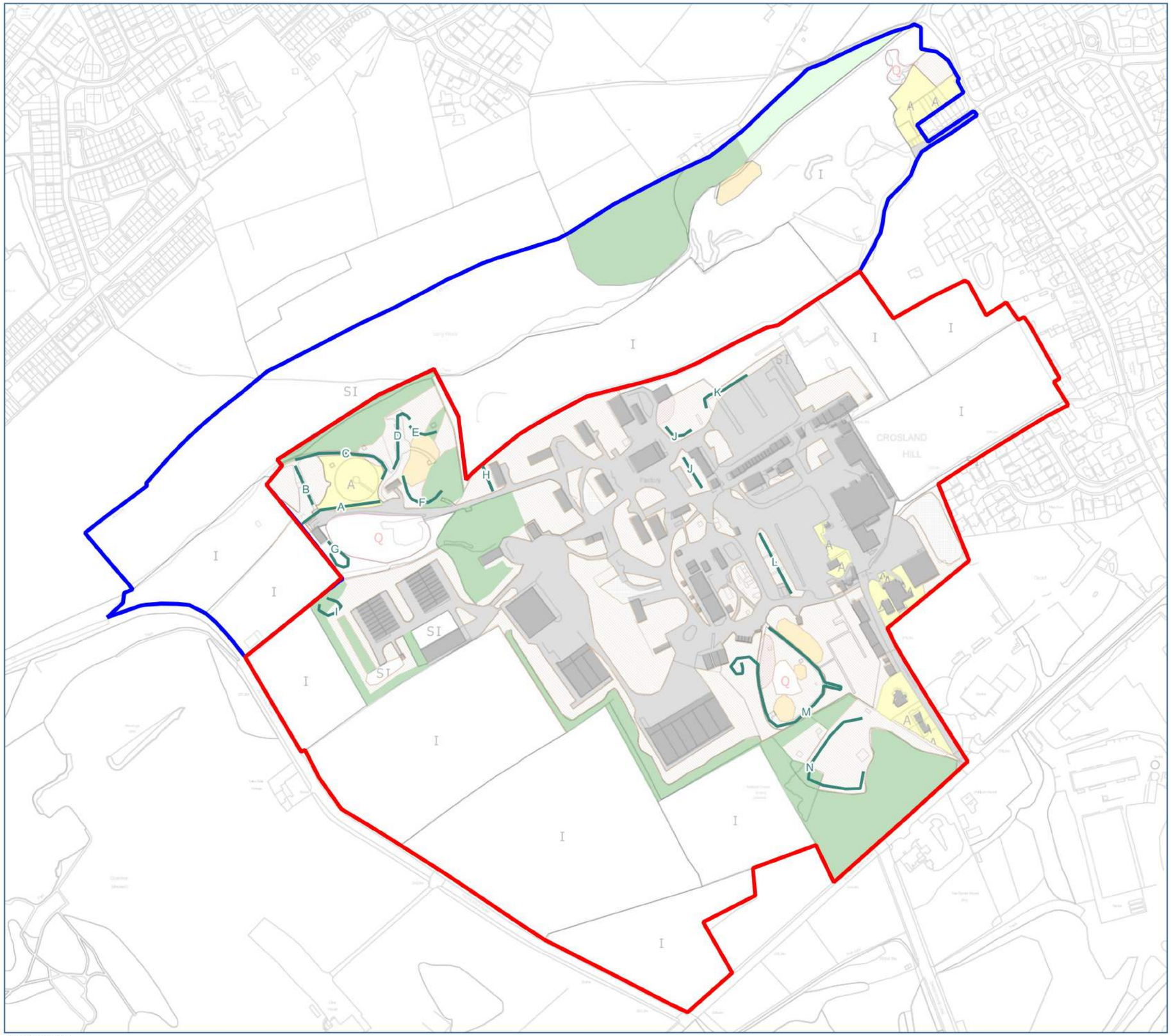

Reptile Mat Locations

Ownership Boundary

Site Boundary

N

0 150 m

Project	Land off Blackmoorfoot Road and Felks Stile Road
Drawing Title	Reptile Mat Locations
Scale	As Shown (Approximate)
Drawing No.	10925/P12
Date	January 2018
Checked	SJC/LJD

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Project	Land off Blackmoorfoot Road and Felks Stile Road
Drawing Title	Illustrative Masterplan
Scale	As Shown (Approximate)
Drawing No.	10925/P13
Date	January 2018
Checked	SJC/LJD

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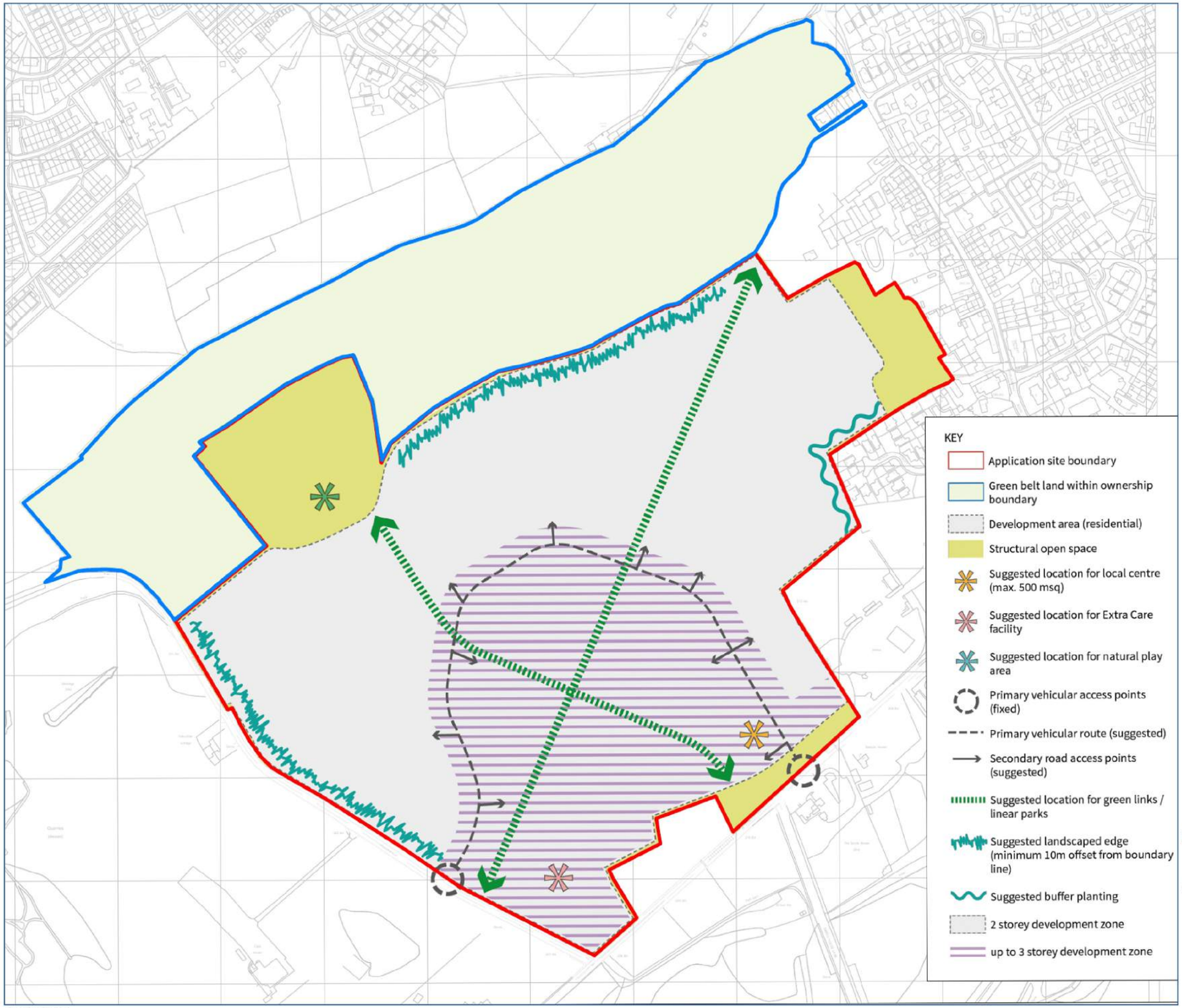

N

0 150 m

Project	Land off Blackmoorfoot Road and Felks Stile Road
Drawing Title	Parameters Plan
Scale	As Shown (Approximate)
Drawing No.	10925/P14
Date	January 2018
Checked	SJC/LJD

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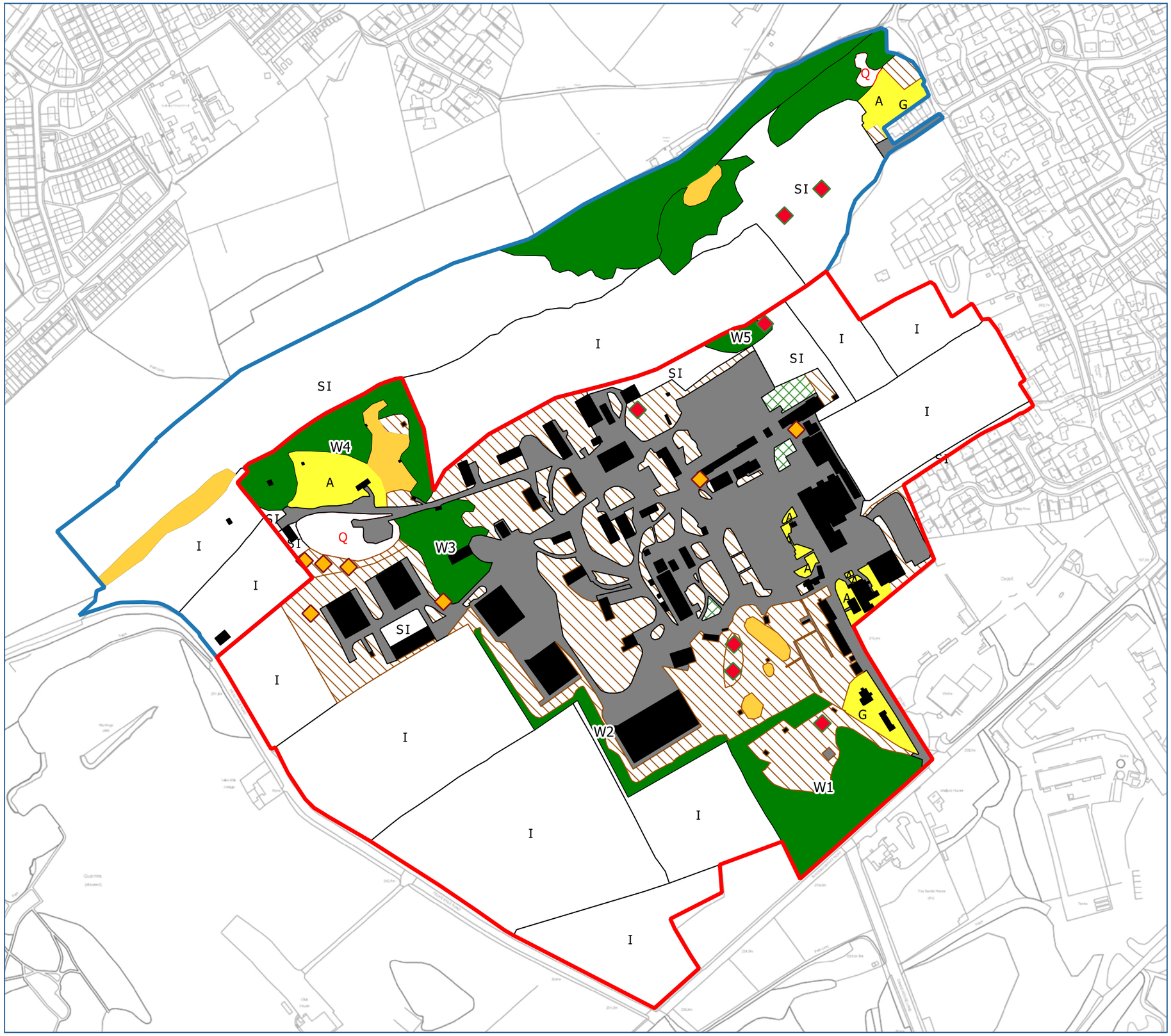
Plans

Habitat Features (10925/P03)

Parameters Plan (10925/P04)

Illustrative Masterplan (10925/P05)



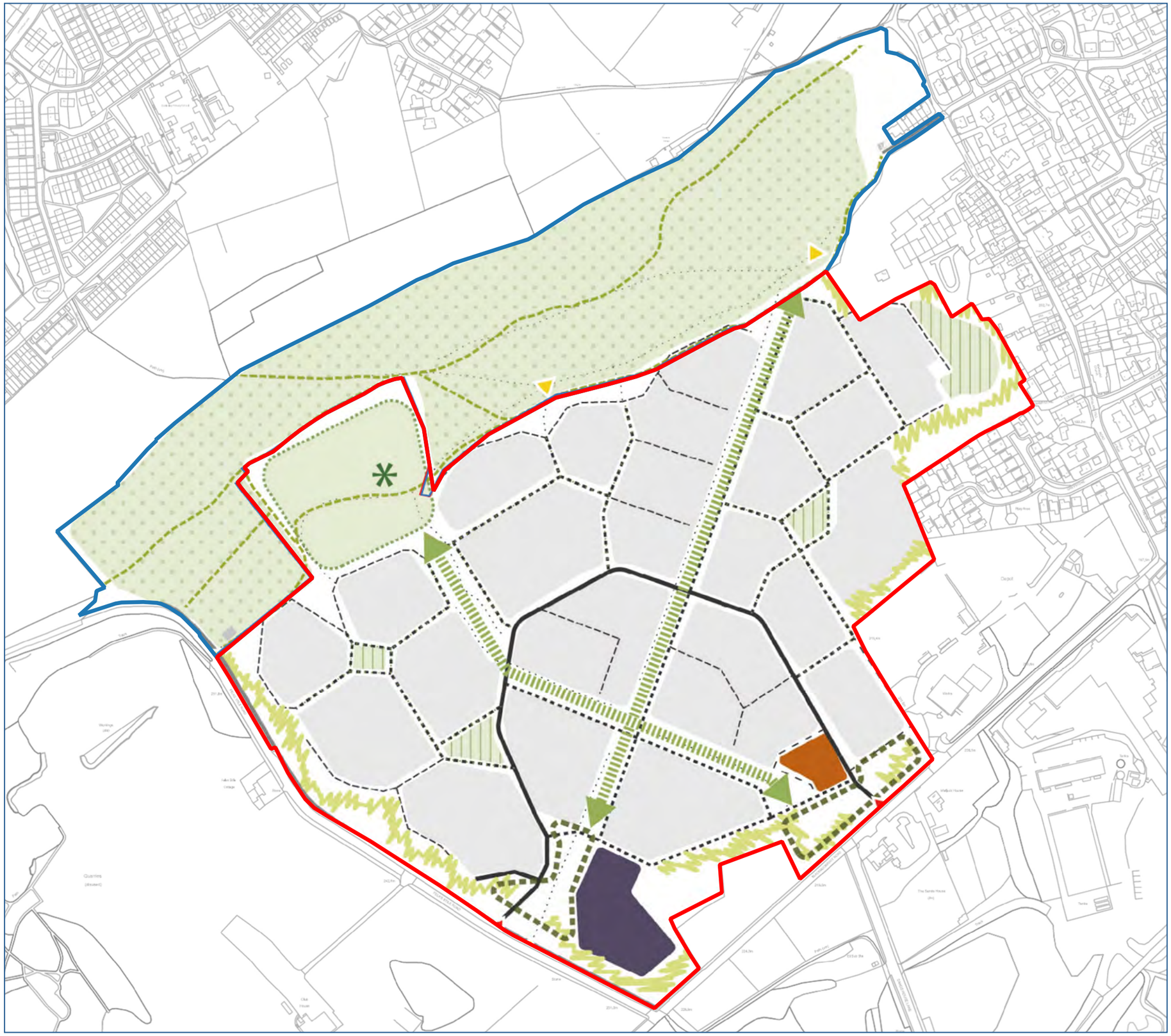
- Redline application boundary
- Ownership boundary
- A Amenity grassland
- Building
- Hardstanding and Gravel
- Heathland
- I Improved grassland
- Q Quarry
- Scrub
- SI Semi-improved grassland
- Tall ruderal
- G Vegetated Garden
- Woodland
- Himalayan balsam
- Japanese knotweed

N

0 50 100 150 200 m

Project	Land off Blackmoorfoot Road and Felks Stile Road, Huddersfield
Drawing Title	Habitat Features Plan
Scale	As Shown (Approximate)
Drawing No.	10925/P03
Date	August 2020
Checked	SJC/JM

Tyler Grange
3 Jordan St, Deansgate, Manchester M15 4PY
T: 0161 236 8367 E: info@tylergrange.co.uk W: www.tylergrange.co.uk



- Application site boundary
- Green belt land within ownership boundary
- Development plots
- Local centre facility
- Extra care facility
- Spine road
- Secondary streets
- Tertiary lanes
- Footpaths
- Vehicular access
- Pedestrian access
- Green links
- Pocket Parks
- Green belt land with potential to become country park
- Arrival spaces
- Boundary planting
- Natural Play Area
- PRoW

N

0 50 100 150 200 m

Project	Land off Blackmoorfoot Road and Felks Stile Road, Huddersfield
Drawing Title	Parameters Plan
Scale	As Shown (Approximate)
Drawing No.	10925/P04
Date	August 2020
Checked	SJC/JM

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1. Main vehicular entrance
2. Spine road
3. Village green
4. Existing pub
5. Retail unit
6. Arrival space
7. Community parkland area provides recreational resource and ecological mitigation
8. Natural play area
9. Linear park providing enhanced connectivity to wider landscape
10. Linear park providing enhanced connectivity between village green and natural play area
11. Pedestrian connection to surrounding area
12. Existing stone walls retained
13. Existing field retained as buffer between Crosland Hill Road and new development
14. Community Square
15. Pocket park
16. Extra care facility

Redline
Blueline
Kirklees Habitat Network

N

0 50 100 150 200 m

Project	Land off Blackmoorfoot Road and Felks Stile Road, Huddersfield
Drawing Title	Illustrative Masterplan
Scale	As Shown (Approximate)
Drawing No.	10925/P05
Date	August 2020
Checked	SJC/JM

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