

mitigation direct harm or injury could be sustained to individuals during ground clearance posing an Unlikely Negative (Not Significant) effect.

Mitigation Measures

6.2.30 To mitigate the effect of the proposed works, a site-specific herptile method statement will be compiled and followed to reduce the likelihood of impacts upon herptiles to Neutral (Not Significant). Developers will implement the options (below):

- An ecological ‘toolbox talk’ for herptiles will be provided to all site personnel prior to development works commencing. A suitably qualified ecologist will deliver a toolbox talk to the contractors responsible for the works. The talk will cover herptile ecology and the law, and what to do if they are found during the works.
- Vegetation clearance of highly suitable habitats (including but not limited to tree stumps, hedgerow understorey and tussocky grassland) must be supervised by a suitably qualified Ecologist.

6.2.31 If during the works period any reptiles are found on site, works must cease in that area and a suitably qualified ecologist will be contacted for advice. A hibernaculum will be created in the retained areas of green space in the south of the site, increasing opportunities for this group of species. The hibernacula will act as a refugia in the unlikely event that herptiles are found within the site. A suitably qualified Ecologist will be responsible for overseeing the creation of the hibernacula, as well as being the responsible person for handling and relocating any herptiles found during the site clearance phase.

Mammal Species of Principle Importance

6.2.32 Impacts and mitigation relating to common pipistrelle, soprano pipistrelle, and noctule have been detailed within Section 6.2.16 of this report.

6.2.33 The application site is likely to support foraging Western European Hedgehog particularly along the woodland edges or the hedgerows and treelines defining the site boundaries as well as within the scrub located adjacent to the grassland. The ground clearance works necessary to prepare the site could result in injury or death of these species of principle importance, presenting a Negative (Not significant) effect on the local population. The development proposals suggest that the woodland edges, hedgerows and treelines are to be retained following the development

reducing the likelihood of a significant effect to this species, however further mitigation will be implemented to safeguard this species.

Mitigation Measures

6.2.34 Habitat considered suitable for supporting Western European hedgehogs will be retained around the periphery of the site (Appendix 9), and vegetative connectivity through the site will be maintained. Reasonable Avoidance Measures (RAMs) will be secured within a CEMP to minimise the risk to individuals that may be utilising the site. RAMs will include:

- Any temporary exposed open pipes are to be capped to prevent hedgehogs gaining access
- Undertake works during daylight hours
- Search areas of deadwood, brash, and discarded items by hand before removing
- If burning any cleared vegetation, carry out immediately after piling to prevent hedgehog moving in prior to burning
- Any exposed excavations to be left overnight are to be covered at the end of each working day, or include a means of escape for any fallen animals (e.g. a scaffolding plank).

6.2.35 Clearance of potential hedgehog hibernacula such as log piles, muck heaps and brash piles will be avoided between the months November - February where possible to minimise risk of harm to this priority species. If clearance is required, it will be done by hand only. If individuals are found during ground clearance works, works will cease until the individual has been moved into the open space within the south of the site. Once removed, the area will be searched, and works can recommence.

6.3 Residual effects of proposed development

6.3.1 The measures proposed within the above sections will mitigate all Negative effects to a level where the constraint is not considered significant or negative in terms of Ecological Impact Assessment. Upon completion there should be no adverse residual effects as a result of the development.

6.4 Cumulative effects

- 6.4.1 The mitigation and impact avoidance measures proposed for each ecological receptor will be secured through planning condition or obligation. At the time of writing there are no further consented developments within the local area, so a cumulative effect is not predicted, and upon successful implementation of these measures the site will increase the value of the site in terms of local biodiversity.

6.5 Biodiversity Impact Assessment to determine Net Gain

Baseline Assessment

- 6.5.1 The site is dominated by habitats ranging from very low – medium distinctiveness.
- 6.5.2 The site is dominated by neutral grassland; however, the quality of grassland present across the site varies in species diversity and condition. The southern extent of the site noted as being of a higher condition than the northern extent; the northern extent of the site, despite supporting a similar species assemblage to the southern area of grassland, had a higher abundance of grass species compared to forbs.
- 6.5.3 The grassland dominating the site is considered to be of elevated ecological value, The overall matrix of habitats offers value to local biodiversity and holds 8.94 'Habitat Units', 2.46 'Hedgerow Units' and 0.54 'River Units'.

Table 10: Baseline Habitats

Habitat Type	Distinctiveness	Condition
Other neutral grassland	Medium	Good
Other neutral grassland	Medium	Moderate
Mixed scrub	Medium	Poor
Developed land; sealed surface	V.Low	N/A - Other
Mixed scrub	Medium	Poor
Other neutral grassland	Medium	Moderate
Other neutral grassland	Medium	Poor
Rural tree	Medium	Moderate

Design Proposals

- 6.5.4 The design proposals will result in 6.68 'Habitat Units', 2.44 'Hedgerow Units', and 0.54 'River Units', which is a net loss of -2.27 'Habitat Units' (-25.34%), -0.3 'Hedgerow Units' (-1.02%), and no change in 'River Units' (0%).

Leicester Road, Markfield		Return to results menu		Errors flagged below - please investigate further ▲	
Headline Results					
Scroll down for final results ▲					
On-site baseline		Habitat units	8.94		
		Hedgerow units	2.46		
		Watercourse units	0.54		
On-site post-intervention (Including habitat retention, creation & enhancement)		Habitat units	6.68		
		Hedgerow units	2.44		
		Watercourse units	0.54		
On-site net change (units & percentage)		Habitat units	-2.27	-25.34%	On-site net gain is less than target set ▲
		Hedgerow units	-0.03	-1.02%	On-site net gain is less than target set ▲
		Watercourse units	0.00	0.00%	On-site net gain is less than target set ▲
Off-site baseline		Habitat units	0.00		
		Hedgerow units	0.00		
		Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)		Habitat units	0.00		
		Hedgerow units	0.00		
		Watercourse units	0.00		
Off-site net change (units & percentage)		Habitat units	0.00	0.00%	
		Hedgerow units	0.00	0.00%	
		Watercourse units	0.00	0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	-2.27		
		Hedgerow units	-0.03		
		Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions		Habitat units	0.00		
		Hedgerow units	0.00		
		Watercourse units	0.00		
FINAL RESULTS					
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	-2.27		
		Hedgerow units	-0.03		
		Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	-25.34%	Total net gain achieved is less than target set ▲	
		Hedgerow units	-1.02%	Total net gain achieved is less than target set ▲	
		Watercourse units	0.00%	Total net gain achieved is less than target set ▲	
Trading rules satisfied?		No - Check Trading Summaries ▲			
You must specify if irreplaceable habitats are on-site at baseline ▲					
Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	8.94	9.84	3.16	
Hedgerow units	10.00%	2.46	2.71	0.27	
Watercourse units	10.00%	0.54	0.59	0.05	

Figure 12: Headline Results from DEFRA metric

- 6.5.5 Whilst the high value habitats, such as pLWS quality neutral grassland in the southern extent of the site, will be retained and brought under long term management, 0.59ha of habitat will be lost to facilitate the development (Table 11).

Table 1.1: Habitats and Linear Features to be lost

Habitat Type	Area / Length to be Lost	Condition
Other neutral grassland	0.34ha	Moderate
Developed land; sealed surface	0.006ha	N/A
Mixed scrub	0.004ha	Poor
Other neutral grassland	0.12ha	Moderate
Other neutral grassland	0.116ha	Poor
Native Hedgerow with Trees	0.015km	Moderate
Total	0.586ha	
	0.015km	

Compensation

- 6.5.6 To mitigate the loss of a significant area of 'Moderate' condition neutral grassland in the northern extent of the site, off site offsetting options through the purchase of neutral grassland credits are currently being explored. The developer is currently engaged in discussions with the Habitat Bank, exploring local schemes with grassland credits available for purchase, in order to offset the loss of neutral grassland incurred, resulting from the development.

Enhancement

- 6.5.7 The area of retained 'other neutral grassland' in the southern extent of the site is to be retained. The area currently scores 'Good' condition when assessed against the Biodiversity Metric 4.0, Technical Annex 1, Condition Assessment Sheets. Therefore, it is not considered eligible for enhancement, however, it is considered that by bringing the area under a regularly reviewed management regime, the species diversity of the grassland will be preserved, if not enhanced, as the management will allow wildflowers to flourish and set seed prior to mowing. The area of grassland will be fenced off, excluded from areas accessible to the residents of the care home, thereby reducing pressures such as footfall and trampling of the grassland by walkers or wheelchair users. The area will be managed through a sensitively designed mowing regime and detailed within a Landscape and Ecological Management Plan (LEMP).
- 6.5.8 The northern area of grassland, adjacent to the offsite woodland bounding the north-eastern boundary, will be over sown with yellow rattle (*Rhinanthus minor*) to increase floristic diversity, as the existing area of grassland is grass species dominant. Yellow rattle has a semi-parasitic life cycle by feeding off the nutrients in grass roots, and is a successful species used for meadow management to increase floristic diversity. The management and selective seeding of this area

is considered to enhance this area of grassland, however not in a way that is captured or quantified within the DEFRA 4.0 Metric tool.

6.5.9 Mixed native scrub within the central extent of the site, adjacent to the wet ditch, will be enhanced through selective thinning and gap filling with native species, to increase species diversity and structure. Planted specimens will vary in age class, and must range from whips through to larger, more mature specimens. These enhancements will result in the increase of the conditions of this area from 'Poor' to 'Good'.

6.5.10 The existing site access from Leicester Road will be infilled, thereby enhancing the hedgerow along the site frontage. The area will be infilled with native species and will be brought under long term management in order to create a continuous linear feature, thereby increasing site wide connectivity.

Habitat Creation

6.5.11 The development will result in 0.59ha of habitat creation, comprising:

- 0.39ha of 'Developed land; sealed surface' pertaining to the new care home, car parks and access roads,
- 0.11ha of 'neutral grassland' in moderate condition in the northwest corner of the site,
- 0.176ha of 'modified grassland' in moderate condition which includes the amenity grassland along the road verges throughout the scheme,
- 0.018ha introduced shrub to be created within the areas of ornamental planting within the development footprint.

6.5.12 These areas of habitat creation, along with the areas marked for retention and enhancement must be managed following a strategy outlined in a supporting Landscape and Ecological Management Plan (LEMP) to prevent the encroachment of pernicious species and to benefit local wildlife. These actions will seek to reduce the residual effect on habitats as a result of the development, however, it is still anticipated that the scheme will result in a Certain Negative (Significant) impact.

Evaluation

6.5.13 Despite these enhancement prescriptions, the scheme results in a -2.27 'Habitat Unit' loss (-25.34%), and a -0.03 'Hedgerow Unit' loss (-1.02%). There will be no change in 'River Units' as no works are proposed to the onsite wet ditch. The shortfall in habitat and hedgerow units must be offset through an agreement with the local authority, through the purchase of offsite credits, through a land banking scheme, or similar. Discussions are currently underway with local organisations in order to secure the necessary units required for the scheme to achieve an overall net gain to biodiversity in the local area.

7 Compensation, Enhancement and Monitoring

7.1 Compensation

- 7.1.1 Compensatory measures, in the form of purchase of off-site grassland credits from a local Habitat Bank scheme, are required as part of the Biodiversity Net Gain Assessment, to compensate for the loss of habitat units incurs as a result of the proposed development. Providing sufficient local credits can be purchased and secured via a s106 agreement, a Neutral (Not Significant) impact is anticipated, with no significant residual or cumulative effects as a result of the development.

7.2 Enhancement

- 7.2.1 In light of the National Planning Policy Framework (NPPF) that seeks net biodiversity gain within developments and the Natural Environment and Rural Communities (NERC) act that stipulates an authority's duty to conserve and enhance biodiversity the following enhancements are suggested (All enhancements will be overseen by an appropriate experienced ecologist):

Habitats

- 7.2.2 The construction of a Landscape Ecological Management Plan (LEMP) for the site will secure enhancements and appropriate landscaping to enhance biodiversity within areas of open space. Landscaping carried out on site is to be undertaken using locally abundant, native species which can tolerate a range of climatic conditions. Open space will be managed to benefit local biodiversity following an appropriate management plan and seek to compensate for loss of habitats on site. Loss of vegetative features will be compensated for by planting native scrub, and the planting of native trees within an appropriate landscape and enhancement zone identified within the scheme. A management plan for the area of grassland in the southern extent of the site, an area of neutral grassland to be fully retained, will be compiled and a long-term maintenance scheme must be secured.

Bats

- 7.2.3 Post construction landscaping will be sympathetic to bat species and seek to enhance woodland edge and grassland for bat species.

- 7.2.4 Faunal enhancements will be incorporated into the design of the scheme, to increase roosting opportunities within the site. To provide additional roosting opportunities for common bat species and mammals of principle importance, 4 x Greenwood's Ecohabitats Crevice boxes will be installed on large, retained trees along commuting routes particularly within the southern extent of the application site, and along the north-eastern site boundary, adjacent to the off-site woodland belt, bounding the A50. The boxes will be placed in pairs, facing in a southerly, easterly or westerly direction, above 5 metres in height. The specific location of bat mitigation will be secured within the LEMP.

Birds

- 7.2.5 Five x 1B Schwegler bird boxes in the following sizes: 2 x 26mm Hole, 2 x 32mm Hole, 1 x Oval Hole will be positioned on suitable trees along the western, southern and eastern boundaries, with entrance holes directed towards the north and east to avoid strong sunlight and driving rain. The bird boxes will be positioned at a height of between 2 and 4 metres during the autumn.
- 7.2.6 The LEMP will secure the inclusion of soft landscape treatments in the form of native trees, hedgerows and shrubs, planted across the site to offset any loss of vegetation and to provide supplementary habitat for overwintering and breeding birds within the area (Appendix 9).

Reptiles

- 7.2.7 Construction of suitable hibernacula within the open space positioned within the south-western corner of the application site (Appendix 9). The hibernacula consist of an excavated hollow infilled with materials such as building rubble and/or tree roots. Small drainage pipes are placed around the edges of the hollow that lead from the surface into voids and spaces within the building rubble and/or tree roots. This allows access for reptiles into the voids within the material used. The hollow is then covered over with loose turfs of soil and allowed to revegetate naturally.

Mammal Species of Principal Importance

- 7.2.8 A single Schwegler Hedgehog dome will be incorporated into the design of the scheme, featuring in the open space in the southern extent of the application site (Appendix 9).
- 7.2.9 Hedgehog highways, comprising 20cm x 20cm gaps in proposed new fencing, will be incorporated in all new boundary fencing. The gaps will preserve the existing connectivity across the site post-development.

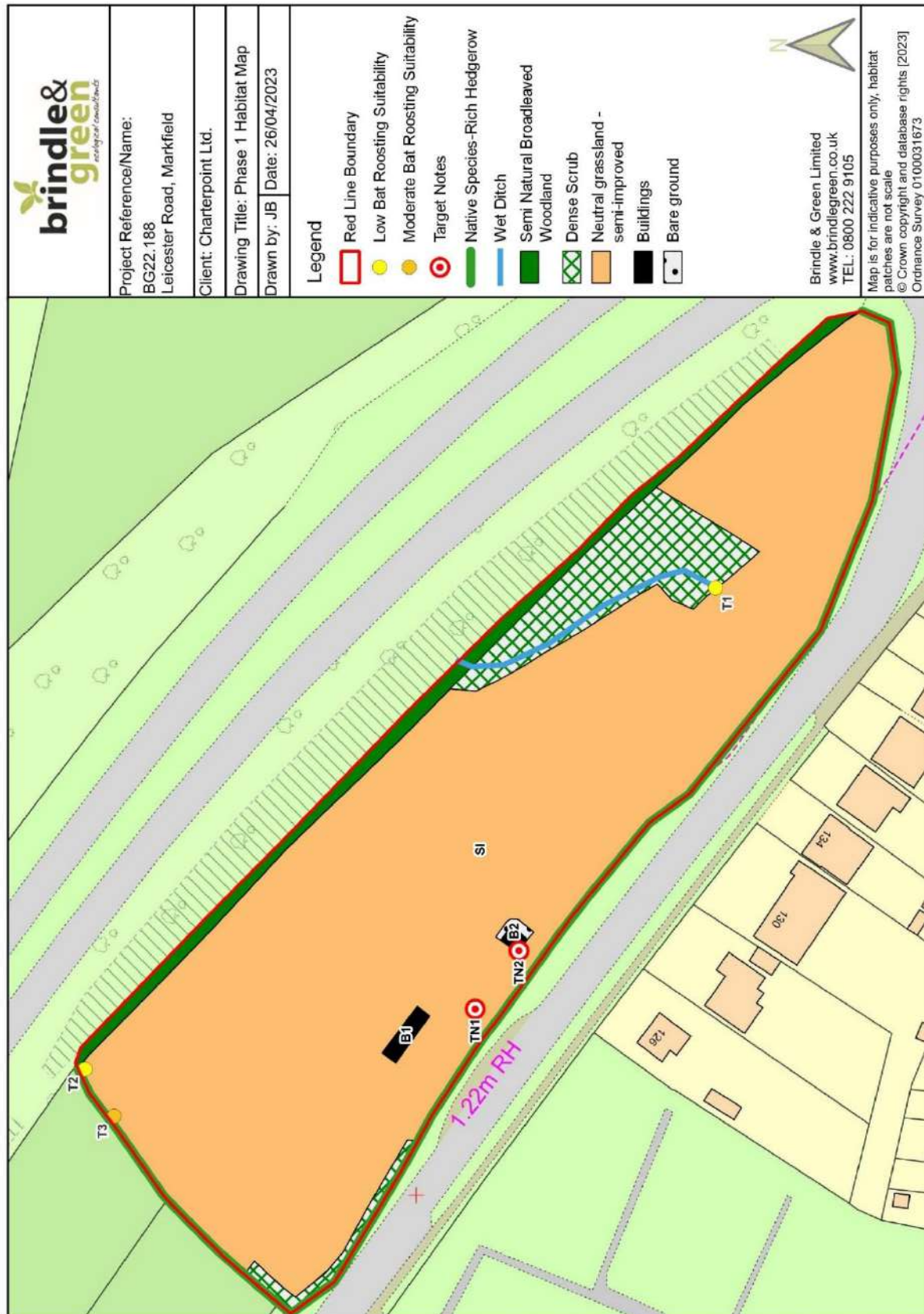
7.3 Monitoring

- 7.3.1 As a result of the impact of the proposed development, post construction monitoring is required on the retained grassland and areas of grassland creation in the north of the site. Monitoring will be undertaken annually until year 5, and then every five years for 30 years as part of the LEMP and safeguards of Biodiversity Net Gain.
- 7.3.2 If works do not commence within two years of the Phase 1 habitat survey, and 1 year of the phase 2 surveys the baseline conditions may need to be reassessed.

8 Conclusions

- 8.1.1 The application site on land to the north of Leicester Road, Markfield, Leicestershire has been the subject of a series of habitat and protected species surveys undertaken following best practice guidelines. The site was found to support habitats ranging between 'Site' and 'District' value at an ecological level (Table 3).
- 8.1.2 The Phase 1 habitat survey and Phase 2 surveys confirmed that neutral grassland, breeding birds, bats, badgers, reptiles, and hedgehog had the potential to be negatively affected by the proposed development and as such mitigation measures have been created to safeguard the status of these protected and notable species, reducing the effect to neutral or a positive effect.
- 8.1.3 The mitigation strategies outlined above will be secured through planning condition or obligation, to ensure that a negative effect for local wildlife populations and biodiversity is avoided and potentially enhanced through the landscape plan and prevent residual effects. While the quality of the neutral grassland dominating the site varied, overall, this habitat held elevated ecological value and as such the loss of this habitat is considered significant. The remaining habitats recorded during the baseline survey were locally frequent and of lower ecological value. The retention and enhancement of grassland and scrub habitats within the site post construction will improve the structural and botanical diversity on site enhancing the application site for a number of local species populations.
- 8.1.4 The implementation of enhancements listed within Section 7.2 would secure positive gains to local biodiversity when compared to the baseline ecological conditions of the application site.
- 8.1.5 The scheme incurs a net loss to biodiversity, therefore mitigation in the form of offsite compensation must be secured in order to minimise the residual impacts of the development to Neutral (Not Significant).

Appendix 1 Phase 1 Habitat Map



Appendix 2 Phase 1 Species List and Technical Notes

Target Note Number	Description
TN1	Swallow nest recorded in B2.
TN2	Muck heap.

Plant Species List with DAFOR Scale		
Scientific nomenclature follows Stace (2010) for vascular plant species and common names follow BSBI List of British & Irish Vascular Plants and Stoneworts.		
Please note that this plant species list was generated as part of a Phase 1 Habitat survey, and does not constitute a full botanical survey.		
Abundance was estimated using the DAFOR scale as follows: D = dominant, A = abundant, F = frequent, O = occasional, R = rare, LF = locally frequent		
Common Name	Scientific Name	Estimated Abundance (DAFOR)
Field maple	<i>Acer campestre</i>	F
Cow parsley	<i>Anthriscus sylvestris</i>	A
False oat grass	<i>Arrhenatherum elatius</i>	O
Sweet vernal grass	<i>Arrhenatherum odoratum</i>	O
Common Knapweed	<i>Centaurea nigra</i>	O
Creeping thistle	<i>Cirsium arvense</i>	F
Hazel	<i>Corylus avellana</i>	F
Hawthorn	<i>Crataegus monogyna</i>	A
Crested dog's tail	<i>Cynosurus cristatus</i>	A
Cock's-foot	<i>Dactylis glomerata</i>	D
Fescue sp.	<i>Festuca</i> sp.	A
Ash	<i>Fraxinus excelsior</i>	F
Hawkweed sp.	<i>Hieracium</i> sp.	O
Yorkshire Fog	<i>Holcus lanatus</i>	D
Holly	<i>Ilex aquifolium</i>	F
Soft rush	<i>Juncus effusus</i>	O
Perennial ryegrass	<i>Lolium perenne</i>	D
Bird's-foot Trefoil	<i>Lotus corniculatus</i>	O
Timothy	<i>Phleum pratense</i>	O
Ribwort Plantain	<i>Plantago lanceolata</i>	F
Broadleaved plantain	<i>Plantago major</i>	A
Silver weed	<i>Potentilla anserina</i>	O
Creeping cinquefoil	<i>Potentilla reptans</i>	O
Blackthorn	<i>Prunus spinosa</i>	A
Oak sp.	<i>Quercus</i> sp.	F
Creeping Buttercup	<i>Ranunculus repens</i>	A

Meadow Buttercup	<i>Ranunculus arcis</i>	A
Rose sp.	<i>Rosa</i> sp.	O
Blackberry	<i>Rubus fruticosus</i>	F
Sorrel	<i>Rumex acetosa</i>	O
Broadleaved dock	<i>Rumex obtusifolius</i>	F
Elder	<i>Sambucus nigra</i>	O
Burnet	<i>Sanguisorba</i> sp.	O
Dandelion	<i>Taraxacum</i> sp	A
White Clover	<i>Trifolium repens</i>	A
Common Nettle	<i>Urtica dioica</i>	A

Appendix 3 General References

Brindle and Green. (November 2022). *BG22.267 Preliminary Ecological Appraisal*. Derby: Brindle and Green.

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Appendix 4 Legislation, Policy and Guidance

Articles of British wildlife and countryside legislation, policy guidance and both Local and National

Biodiversity Action Plans (BAPs) are referred to. The articles of legislation are:

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Department for Communities and Local Government. National Planning Policy Framework. (2021)
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC
- The Protection of Badgers Act 1992
- The Natural Environment and Rural Communities Act 2006 (Including National and Local Biodiversity Action Plan (LBAP / HPI))
- Hedgerow Regulations 1997
- Add environment act

Appendix 5 Legislation, Guidance and Methodology in relation to the identified constraints

Legislation, Guidance and Methodology
Breeding Birds All nesting birds are protected under the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition, for species listed on Schedule 1 of the Wildlife and Countryside Act 1981 it is an offence to intentionally or recklessly cause disturbance at, on or near an 'active' nest. The bird breeding season is typically accepted to start in February/March and continue through until September/October, however breeding birds can be found all year round depending on the given species and climatic conditions. A sites habitat composition, locality, association to designated sites as well as current usage and management are all considered in the decision as to whether further bird related surveys are required. In addition, surveys may be recommended based on incidental bird records collected during a Preliminary Ecological Appraisal, species identified within an ecological data search or target species listed within a local biodiversity action plan. Bird surveys are carried out in accordance with: Gilbert G, Gibbons DW, Evans J. (1998) <i>Bird Monitoring Methods</i>. RSPB.
Bats <i>Roosting Bats</i> All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat. Areas of concern; can be encountered in many types of structure and care should therefore be taken when undertaking maintenance or demolition of suitable structures and trees. Site assessments of buildings, commuting and foraging habitat and trees are undertaken in accordance with: Collins, J (2016) <i>Bat Surveys for Professional Ecologists: Good Practice Guidelines</i>, (3rd edition), Bat Conservation Trust, London. (Table 1 & 2 Below). Preliminary Ecological Surveys look for evidence of bat presence such as feeding remains, bat droppings, roosting individuals and staining around potential access points. The suitability of site features are also assessed because absence of bat evidence, is not confirmation of a negative result.

Within trees, features searched for include; natural holes, woodpecker holes, cracks/splits in major limbs, loose bark, hollows, and dense cover of ivy over the tree. If evidence is found, or a building supports features conducive to supporting roosting bats then further presence / absence bat surveys and/or roost characterisation surveys will be recommended.

Foraging and Commuting bats

Habitat features on site are assessed for their suitability to support foraging and commuting bat populations. This assessment is independent from the suitability of the site to support roosting bats, and provides information on the likeliness of bat foraging activity within the local environment, and the dependence of individuals on these features for commuting to alternative roosting sites, foraging and migration.

Table 1: Guideline for assessing the suitability of a structure to support roosting habitat (Buildings and Trees), amended from Collins, J (2016)

Category	Description of roosting habitat	Number of additional presence / absence surveys required
Negligible Suitability	Suitable cavities may exist, but these are less than ideal.	None
Low Suitability	A structure with one or more potential roost sites that could be used by individual bats opportunistically. The feature and surrounding habitat do not provide enough shelter, conditions* space for larger roost types such as a maternity or hibernation roost. A tree of sufficient size and age to support roosting bats, but with no features observed from the ground, or the features only have a limited potential to support roosting bats.	One survey between May and August Trees – No further surveys required
Moderate Suitability	A structure or tree considered to have one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions* and surrounding habitat but are unlikely to support a roost of high conservation status (With regard to roost type only – assessments are made irrespective of species conservation status, which is established after presence is confirmed).	Two surveys between May and September (with at least one survey undertaken between May and August) One Dusk emergence and One Dawn re-entry survey to ideally be undertaken at least two weeks apart.
High Suitability	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions* and surrounding habitat.	Three surveys between May and September (with at least two surveys undertaken between May and August)

Confirmed	This category is where positive evidence of bats has been recorded. For example, bats are found; bat droppings may be present at a suitable location for roosting bats; existing bat records may be associated with the structure.	One Dusk emergence and One Dawn re-entry survey to be undertaken. The third survey can be either Dusk or Dawn, undertaken at least two weeks apart.
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(* in this context conditions refers to the level of disturbance, light, height above ground, temperature, and humidity etc)

Table 2: Potential suitability of foraging and commuting habitat within an application boundary. Features should be assessed following this guide and professional judgement. Adapted from Collins J (2016)

Category	Description of commuting and foraging habitat	Survey effort to establish the value of commuting and foraging habitat**
Negligible Suitability	Negligible habitat features on site likely to be used by commuting or foraging bats.	None
Low Suitability	Habitat which could be used by low numbers of commuting bats such as an isolated gappy hedgerow, or an unvegetated stream unconnected to suitable habitat in the wider environment. Suitable, yet isolated habitat that could be used by foraging bats such as individual trees, or a patch of scrub.	Transect /spot count/ timed search survey: One survey visit per active season AND Static automated surveys: One location per transect, over a five-night period, per season.
Moderate Suitability	Continuous habitat connected to the wider landscape that could be used by commuting bats, notably tree lines, hedgerows or linked back gardens. Habitat that is connected to the wider landscape which could be used by bats for foraging such as trees, open water, scrub or grassland.	Transect /spot count/ timed search survey One survey visit per month At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period. AND Static automated surveys: Two locations per transect, over a five-night period, per month (April to October)

High Suitability	Continuous, High-quality habitat that is well connected to the wider landscape which is considered to be highly conducive to commuting bats including river valleys, stream, hedgerows, and woodland edge High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses, and grazed parkland. Site is close to and connected to known roosts.	Transect /spot count/ timed search survey Up to two survey visit per month (April to October) At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period. AND Static automated surveys: Three locations per transect, over a five-night period, per month (April to October)
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(** This is only a guide for survey effort required, the complexity of the site and the proposed disturbance / loss of features will determine the extent of works required on a site by site basis).

Badgers (*Meles meles*)

Badgers are protected under the Protection of Badgers Act 1992. It is illegal to wilfully kill, injure, disturb or take any badger, or attempt to do so and it is an offence to intentionally or recklessly damage, destroy, or obstruct access to any part of a badger sett.

Site assessments are undertaken in accordance with:

Harris S, Cresswell P and Jefferies D (1989). *Surveying Badgers*.

During the PEA, the site and the 30 metre zone of Influence considered for this species are searched for evidence of badger activity. The surveyor will identify evidence of activity, or habitat suitability for this protected species. Even if no evidence of badger activity is found, if local conditions suggest that the habitat may be suitable for badger, further surveys will be recommended.

Amphibians

The great crested newt and natterjack toad are fully protected under Schedule 5 of the wildlife and countryside Act 1981. The legislation protects these amphibians and their place of shelter or protection which may extend 500m from the breeding pond.

Great Crested Newt (*Triturus cristatus*)

The great crested newt, is fully protected under the Conservation of Habitat Regulations 2017 (as amended), making it an offence to intentionally or recklessly kill, injure, disturb or take great crested newts, intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection.

The legislation protects these amphibians and their place of shelter or protection which may extend 500m from the breeding pond. Sites should be considered suitable to support great crested newts if distribution and

historical records suggest newts may be present, there is a pond within 500m of the development or the development site includes suitable terrestrial habitat refuges.

Great crested newt site assessments are undertaken in accordance with:

English Nature. (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough. and

Langton T, Beckett C and Foster J (2001) *Great Crested Newt Conservation Handbook*. Froglife, Halesworth.

Prior to a site visit, a desk study pond search is undertaken. When searching for ponds, Brindle & Green apply a total of 4 sources to establish their location. The following online sources are used:

OS MAPPING VIA PRO MAP, GOOGLE EARTH PRO, GOOGLE MAPS and MAGIC MAPS

Each identified pond (Access permitting) is subjected to a Habitat Suitability Index (HSI) assessment providing a score for each pond. This survey should be undertaken during the summer period to be fully accurate, however assumptions can be made out of season to guide survey recommendations.

Reptiles

Two species of reptile, the sand lizard and smooth snake, and their habitats are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. All other native British reptiles are protected against intentional killing and injury.

British reptiles are found in exposed, undisturbed areas, such as areas without cultivation with differing areas of grassland sward length. Suitable areas include abandoned sand quarries, fallow farmland land, heathland, post-industrial land, railway corridors etc. If these types of suitable features are found then further reptile surveys are recommended.

Edgar P, Foster J and Baker J (2010) *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.

Gent T and Gibson S (2003) *Herpetofauna Workers Manual*. JNCC, Peterborough.

Otter (*Lutra lutra*)

Otters are fully protected as a European Protected Species (EPS) under the Habitat Regulations 2017 (as amended) and are also listed under Schedule 5 and 6 of the Wildlife & Countryside Act 1981 (as amended). Their legal protections make it an offence to, recklessly or intentionally, capture, kill disturb or injure otters, to damage or destroy a breeding or resting place (holt), to obstruct access to a place of rest or shelter and to possess, sell, control or transport live or dead otters or parts thereof.

Habitat assessments for otters were informed by:

Chanin P (2003b) *Monitoring the Otter Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No 10

Otters have been recorded utilising almost every type of waterbody and watercourse in the UK including rivers, streams, canals, lakes and ponds and although most populations in England and Wales are usually restricted to freshwater, coastal populations are present in Scotland. They will also use small streams and ditches (including dry ditches) as regular commuting routes and are found in a range of situations from rural to heavily urban sites.

Surveys are recommended where the proposals have the potential to result in a breach of protective legislation listed above. Surveys can be undertaken at any time of year (however optimal timing in spring when water levels

fall and prints can be readily observed in soft mud). Surveys focus on searching for evidence of otter presence including spraints, prints, feeding remains and otter slides. They also include searching for resting places such as holts, couches and natal dens.

Water Vole (*Arvicola amphibius*)

The water vole receives full protection Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Legal protection makes it an offence to intentionally kill, injure or take (capture) a water vole. It is also an offence to intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or disturb water voles while they are using such a place.

Water vole site assessments were undertaken in accordance with:

Strachan R. Moorhouse T, and Gelling M (2011) *Water Vole Conservation Handbook*. (3rd Edition) Wildlife Conservation Research Unit.

Water vole are usually found along water bodies that have still or slow flowing deep water with an abundance of bankside herbaceous vegetation. Such areas include dykes, rivers, streams and drains, but they can also be found on isolated large ponds.

If these types of suitable features are found during a PEA, then water vole surveys are recommended.

Invasive non-native weeds

Plant species such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*) are examples of invasive non-native weeds classified under Part II of Schedule 9 of the Wildlife and Countryside Act 1981. Any person who causes these species to grow or spread in the wild by dumping or other means is guilty of an offence. The plant and the soil these species are found growing in are classified as waste material and should be treated as such.

A simple walk over survey of the site to determine if these species are present was carried out during the PEA. A full list of Schedule 9 species can be found at Plantlife.org

Botanical Value

There are 60 plant species listed under Schedule 8 of the Wildlife and Countryside Act 1981 where it is an offence to intentionally pick or uproot or destroy any of these plant species.

During the PEA, a phase one habitat survey was undertaken following JNCC guidance. Further assessments are made to determine whether habitats comprise those identified as Habitats of principle Importance under S42 of NERC Act 2006.

Surveys can be undertaken year-round, however, if species or site conditions suggest higher botanical interest a full botanical survey will be recommended.

Ecological Enhancement

In March 2021 the Department for Communities and Local Government published the National Planning Policy Framework. This sets out planning policies on protection of biodiversity through the planning system. The document states - *opportunities to incorporate biodiversity in and around developments should be encouraged.*

For new buildings guidance such as in the following will be used:

Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build*. Riba Publishing.

Designated Sites

Designated areas are Sites of Special Scientific Interest (SSSI) while others have been designated as having European protection status. Local authorities can also designate areas for nature conservation and in doing so may impose local authority byelaws to support local nature conservation objectives.

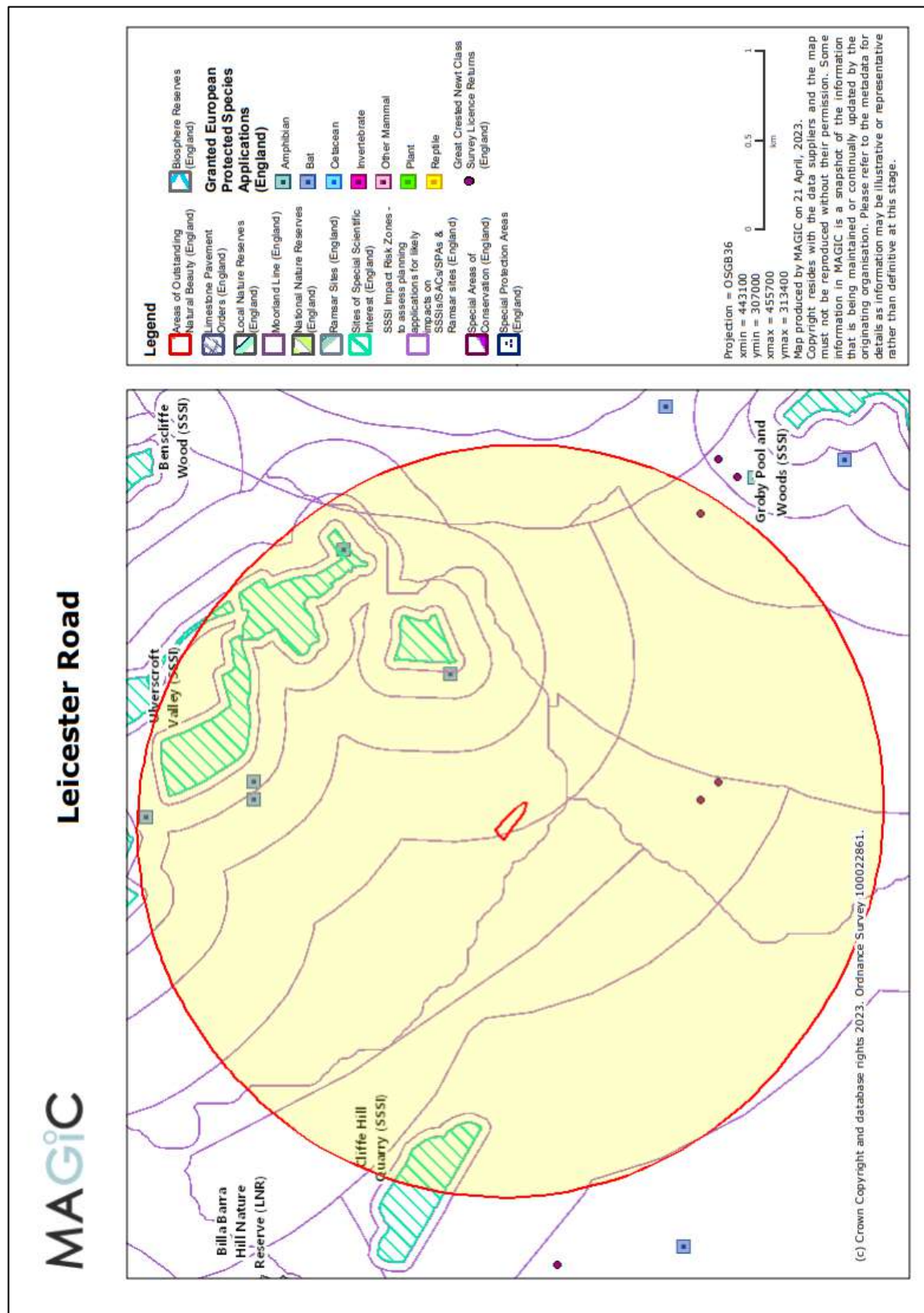
European designated status includes Special Protection Areas (SPAs) that preserve areas for birds and Special Areas of Conservation (SACs) which provides protection for habitats and the species which these habitats supports. Information of Designated Protected Areas is received through Ecological Data Searches and Magic Map searches.

Appendix 6 Illustrative Masterplan



Appendix 7 MAGIC Data

MAGIC Statutory sites Map (2km buffer).



Site Check Report Report generated on Fri Apr 21 2023
You selected the location: Centroid Grid Ref: SK49461027
The following features have been found in your search area:

SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF 2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT THE CATEGORIES BELOW?
NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

All Planning Applications

Infrastructure

Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.

Wind & Solar Energy

Minerals, Oil & Gas

Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.

Rural Non Residential

Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.

Residential

Residential development of 100 units or more.

Rural Residential

Any residential development of 50 or more houses outside existing settlements/urban areas.

Air Pollution

Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).

Combustion

General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

Waste

Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.

Composting

Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.

Discharges

Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.

Water Supply

Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .

Notes 1

Notes 2

GUIDANCE - How to use the Impact Risk Zones

[/Metadata for magic/SSSI IRZ User Guidance MAGIC.pdf](#)

Granted European Protected Species Applications (England)

Case reference of granted application 2015-15751-EPS-MIT-2
Species group to which licence relates Bat
Species on the licence BLE,C-PIP,NATT
Site county of licence Leicestershire
Licence Start Date 12/04/2017
Licence End Date 30/11/2020
Does licence impact on a breeding site Y
Does licence allow damage of breeding site N
Does licence allow damage of a resting place Y
Does licence allow destruction of breeding site Y
Does licence allow destruction of a resting place Y
Does licence impact on a hibernation site Unknown
NERC agreement reference Unknown

Case reference of granted application 2015-15751-EPS-MIT-3
Species group to which licence relates Bat
Species on the licence BLE,C-PIP,NATT
Site county of licence Leicestershire
Licence Start Date 29/10/2018
Licence End Date 30/11/2020
Does licence impact on a breeding site Y
Does licence allow damage of breeding site N
Does licence allow damage of a resting place Y
Does licence allow destruction of breeding site Y
Does licence allow destruction of a resting place Y
Does licence impact on a hibernation site Unknown
NERC agreement reference Unknown

Case reference of granted application 2015-15751-EPS-MIT-4
Species group to which licence relates Bat
Species on the licence BLE,C-PIP,NATT
Site county of licence Leicestershire
Licence Start Date 29/01/2019
Licence End Date 01/09/2021
Does licence impact on a breeding site Y
Does licence allow damage of breeding site N
Does licence allow damage of a resting place Y
Does licence allow destruction of breeding site Y
Does licence allow destruction of a resting place Y
Does licence impact on a hibernation site Unknown
NERC agreement reference Unknown

Case reference of granted application 2014-4859-EPS-MIT
Species group to which licence relates Bat
Species on the licence BLE,C-PIP
Site county of licence Leicestershire
Licence Start Date 25/03/2014
Licence End Date 30/09/2016
Does licence impact on a breeding site Y
Does licence allow damage of breeding site Y
Does licence allow damage of a resting place Y
Does licence allow destruction of breeding site Y
Does licence allow destruction of a resting place Y
Does licence impact on a hibernation site Unknown
NERC agreement reference Unknown

Case reference of granted application 2015-14867-EPS-MIT
Species group to which licence relates Bat
Species on the licence BLE,C-PIP,NATT
Site county of licence Leicestershire
Licence Start Date 09/10/2015
Licence End Date 31/03/2016
Does licence impact on a breeding site N
Does licence allow damage of breeding site N
Does licence allow damage of a resting place N
Does licence allow destruction of breeding site N
Does licence allow destruction of a resting place N
Does licence impact on a hibernation site Unknown
NERC agreement reference Unknown

Case reference of granted application	2015-15751-EPS-MIT
Species group to which licence relates	Bat
Species on the licence	BLE, C-PIP, NATT
Site county of licence	Leicestershire
Licence Start Date	06/11/2015
Licence End Date	05/11/2020
Does licence impact on a breeding site	Y
Does licence allow damage of breeding site	N
Does licence allow damage of a resting place	Y
Does licence allow destruction of breeding site	Y
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown
Case reference of granted application	2015-15751-EPS-MIT-1
Species group to which licence relates	Bat
Species on the licence	BLE, C-PIP, NATT
Site county of licence	Leicestershire
Licence Start Date	18/04/2016
Licence End Date	30/11/2020
Does licence impact on a breeding site	Y
Does licence allow damage of breeding site	N
Does licence allow damage of a resting place	Y
Does licence allow destruction of breeding site	Y
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown
Case reference of granted application	2015-7909-EPS-MIT
Species group to which licence relates	Bat
Species on the licence	C-PIP
Site county of licence	Leicestershire
Licence Start Date	13/03/2015
Licence End Date	10/03/2020
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	N
Does licence allow damage of a resting place	N
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown
Case reference of granted application	EPSM2012-5160
Species group to which licence relates	Bat
Species on the licence	C-PIP, BLE, WHISK
Site county of licence	Leicestershire
Licence Start Date	30/04/2013
Licence End Date	31/08/2018
Does licence impact on a breeding site	Y
Does licence allow damage of breeding site	
Does licence allow damage of a resting place	
Does licence allow destruction of breeding site	Y
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown
Great Crested Newt Class Survey Licence Returns (England)	
GCN Present	Y
Survey Date	16/04/2014
OS Grid Ref	SK496092
GCN Present	Y
Survey Date	15/05/2014
OS Grid Ref	SK496092
GCN Present	Y
Survey Date	29/04/2014
OS Grid Ref	SK496092
GCN Present	Y
Survey Date	08/04/2014
OS Grid Ref	SK496092
GCN Present	Y

Survey Date	07/05/2014
OS Grid Ref	SK497091
GCN Present	Y
Survey Date	09/06/2015
OS Grid Ref	SK512092
GCN Present	Y
Survey Date	22/04/2014
OS Grid Ref	SK498092
GCN Present	Y
Survey Date	03/06/2015
OS Grid Ref	SK512092
GCN Present	Y
Survey Date	11/05/2015
OS Grid Ref	SK512092
GCN Present	Y
Survey Date	16/04/2014
OS Grid Ref	SK497091
GCN Present	Y
Survey Date	22/04/2014
OS Grid Ref	SK497091
GCN Present	Y
Survey Date	19/05/2015
OS Grid Ref	SK512092
Sites of Special Scientific Interest (England)	
Name	Cliffe Hill Quarry SSSI
Reference	1003016
Natural England Contact	NEIL RUDGE
Natural England Phone Number	0845 600 3078
Hectares	19.21
Citation	1003647
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCodes=1003647
Name	Ulverscroft Valley SSSI
Reference	1003069
Natural England Contact	East Midlands Area Delivery
Natural England Phone Number	0845 600 3078
Hectares	110.75
Citation	1002060
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCodes=1002060
Areas of Outstanding Natural Beauty (England)	
No Features found	
Limestone Pavement Orders (England)	
No Features found	
Local Nature Reserves (England)	
No Features found	
Moorland Line (England)	
No Features found	
National Nature Reserves (England)	
No Features found	
Ramsar Sites (England)	
No Features found	
Special Areas of Conservation (England) - points	
No Features found	
Special Areas of Conservation (England)	
No Features found	
Special Protection Areas (England)	
No Features found	

Appendix 8 Phase 2 Survey Data

Appendix 8A – National Vegetation Classification Surveys

Table 12: NVC results from southern grassland field

Common Name	Scientific Name	DAFOR Scale	MG4 Indicator Species	LWS species
Common Bent	<i>Agrostis capillaris</i>	R		
Creeping Bent	<i>Agrostis stolonifera</i>	F		
Meadow Foxtail	<i>Alopecurus pratensis</i>	O	X	
Sweet Vernal Grass	<i>Anthoxanthum odoratum</i>	O		
Hairy Sedge	<i>Carex hirta</i>	R		
Knapweed	<i>Centaurea nigra</i>	O		X
Mouse Eared Chickweed	<i>Cerastium fontanum</i>	R		
Crested Dogs Tail	<i>Cynosurus cristatus</i>	R	X	
Cocks Foot	<i>Dactylis glomerata</i>	O		
Southern Marsh Orchid	<i>Dactylorhiza majalis praetermissa</i>	R		
Tufted Hair Grass	<i>Deschampsia cespitosa</i>	O		
Field Horse Tail	<i>Equisetum arvense</i>	R		
Red Fescue	<i>Festuca rubra</i>	F	X	
Meadow Sweet	<i>Filipendula ulmaria</i>	R	X	X
Yorkshire Fog	<i>Holcus lanatus</i>	F	X	
Compact Rush	<i>Juncus conglomeratus</i>	R		
Birds Foot Trefoil	<i>Lotus corniculatus</i>	F		X
Timothy	<i>Phleum pratense</i>	R		
Ribwort Plantain	<i>Plantago lanceolata</i>	R	X	
Rough Meadow Grass	<i>Poa trivialis</i>	R		
Silverweed	<i>Potentilla anserina</i>	R		
Tormentil	<i>Potentilla erecta</i>	O		X
Meadow Buttercup	<i>Ranunculus acris</i>	R	X	X
Creeping Buttercup	<i>Ranunculus repens</i>	R		
Sorrel	<i>Rumex acetosa</i>	O	X	X
Great Burnet	<i>Sanguisorba officinalis</i>	O	X	X
Groundsel	<i>Senecio vulgaris</i>	R		
Betony	<i>Betonica officinalis</i>	R		X
Lesser Stitchwort	<i>Stellaria graminea</i>	O		
Devil's-bit Scabious	<i>Succisa pratensis</i>	F		X
Red Clover	<i>Trifolium pratense</i>	R	X	X

Table 13: NVC from northern grassland field

Common Name	Scientific Name	DAFOR Scale	MG4 Indicator Species	LWS species
Black Bent	<i>Agrostis gigantea</i>	R		
Creeping Bent	<i>Agrostis stolonifera</i>	D		
Sweet Vernal Grass	<i>Anthoxanthum odoratum</i>	R		
False Oat	<i>Arrhenatherum elatius</i>	R		
Tor Grass	<i>Brachypodium pinnatum</i>	R		
Hairy Sedge	<i>Carex hirta</i>	R		
False Fox Sedge	<i>Carex otrubae</i>	R		
Knapweed	<i>Centaurea nigra</i>	R		X
Crested Dogs Tail	<i>Cynosurus cristatus</i>	F	X	
Cocks Foot	<i>Dactylis glomerata</i>	A		
Tufted Hair Grass	<i>Deschampsia cespitosa</i>	O		
Red Fescue	<i>Festuca rubra</i>	O	X	
Meadow Sweet	<i>Filipendula ulmaria</i>	R	X	X
Meadow Cranesbill	<i>Geranium pratense</i>	R		
Yorkshire Fog	<i>Holcus lanatus</i>	D	X	
Wall Barley	<i>Hordeum murinum</i>	R		
Cats Ear	<i>Hypochaeris radicata</i>	O		
Compact Sedge	<i>Juncus conglomeratus</i>	R		
Compact Rush	<i>Juncus conglomeratus</i>	R		
Soft Rush	<i>Juncus effusus</i>	R		
Hard Rush	<i>Juncus Inflexus</i>	R		
Meadow Vetchling	<i>Lathyrus pratensis</i>	R		X
Italian Rye Grass	<i>Lolium multiflorum</i>	R		
Perennial Ryegrass	<i>Lolium perenne</i>	F	X	
Greater Birds Foot	<i>Lotus pedunculatus</i>	R		
Timothy Grass	<i>Phleum pratense</i>	F		
Ribwort Plantain	<i>Plantago lanceolata</i>	R	X	
Rough Meadow Grass	<i>Poa trivialis</i>	R		
Common Sorrel	<i>Rumex acetosa</i>	O	X	X
Curly Dock	<i>Rumex crispus</i>	O		
Great Burnet	<i>Sanguisorba officinalis</i>	O	X	X
Lesser Stitchwort	<i>Stellaria graminea</i>	R		
Red Clover	<i>Trifolium pratense</i>	R	X	X
Tufted Vetch	<i>Vicia cracca</i>	R		

Table 14: NVC Quadrat Locations

Quadrat number	W3W	Approx. Grid reference
1	guard.callers.butterfly	SK 49545 10213
2	broached.backtrack.leans	SK 49554 10207
3	committee.habits.bogus	SK 49563 10195
4	respond.remission.aquatics	SK 49436 10323
5	brew.prepped.blesses	SK 49415 10317

Figure 13: Quadrat locations used in the botanical survey work

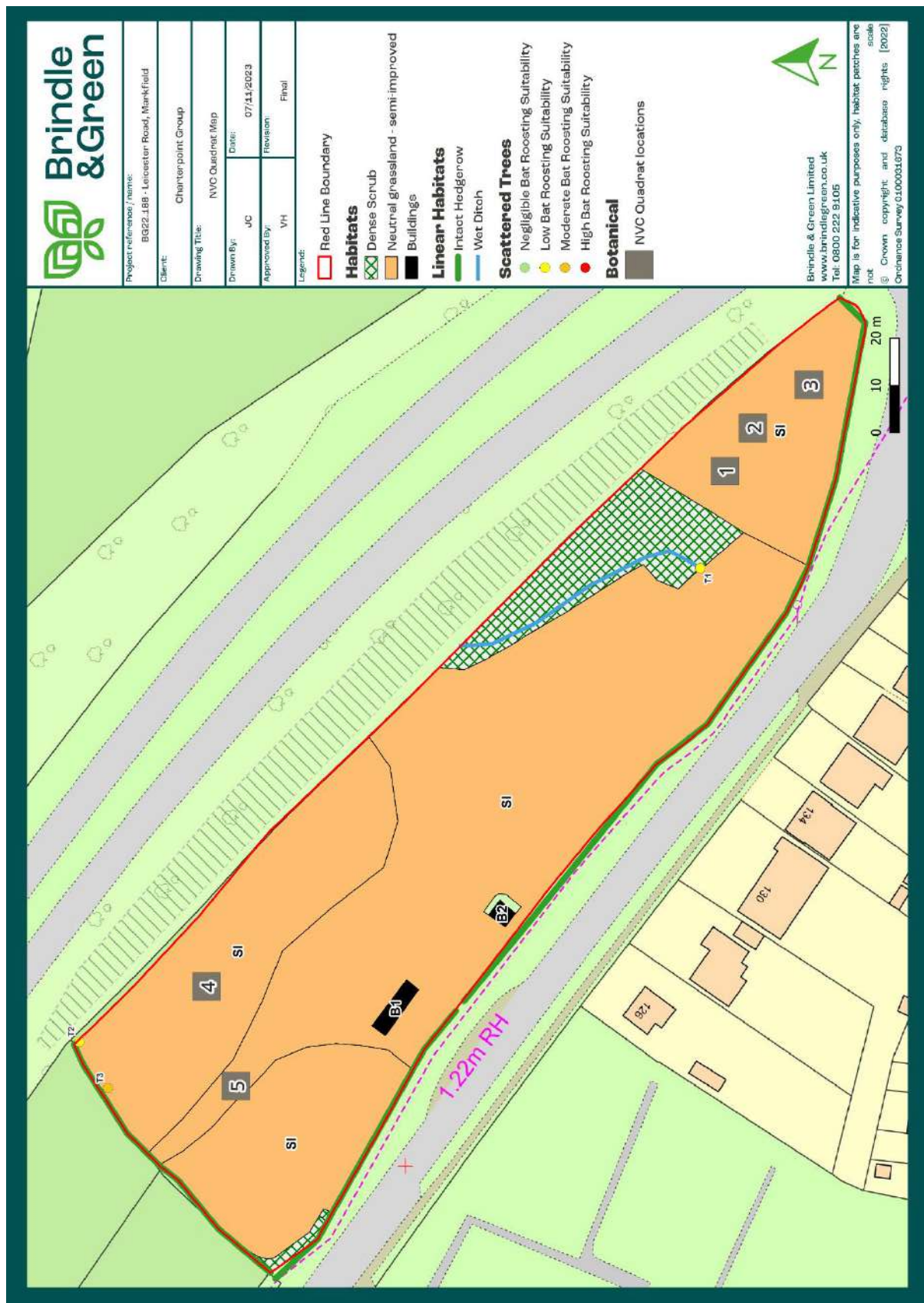


Table 15: NVC Quadrat Data

Quadrat number	Latin Name	Common Name	Cover (DOMIN scale)
1	<i>Holcus lanatus</i>	Yorkshire Fog	8
	<i>Cynosurus cristatus</i>	Crested Dogs Tail	3
	<i>Anthoxanthum odoratum</i>	Sweet Vernal Grass	5
	<i>Festuca rubra</i> agg.	Red Fescue	5
	<i>Alopecurus pratensis</i>	Meadow Foxtail	4
	<i>Poa trivialis</i>	Rough Meadow Grass	3
	<i>Centaurea nigra</i>	Knapweed	8
	<i>Lotus pedunculatus</i>	Greater Birds Foot	5
	<i>Ranunculus acris</i>	Meadow Buttercup	3
	<i>Rumex acetosa</i>	Common Sorrel	4
	<i>Cerastium fontanum</i>	Mouse Eared Chickweed	1
	<i>Eriophorum angustifolium</i>	Sedge	4
	<i>Plantago lanceolata</i>	Rib Plantain	2
	<i>Ranunculus repens</i>	Creeping Buttercup	2
	<i>Deschampsia cespitosa</i>	Tufted Hair Grass	1
	<i>Agrostis stolonifera</i>	Creeping Bent	4
	<i>Succisa pratensis</i>	Devil's-bit Scabious	3
2	<i>Holcus lanatus</i>	Yorkshire Fog	3
	<i>Anthoxanthum odoratum</i>	Sweet Vernal	5
	<i>Festuca rubra</i> agg.	Red Fescue	8
	<i>Lotus pedunculatus</i>	Greater Birds Foot	4
	<i>Deschampsia cespitosa</i>	Tufted Hair Grass	5
	<i>Agrostis stolonifera</i>	Creeping Bent	4
	<i>Potentilla erecta</i>	Tormentil	4
	<i>Trifolium pratense</i>	Red Clover	2
	<i>F</i>	Compact Rush	2
	<i>Carex hirta</i>	Hairy Sedge	3
	<i>Festuca rubra</i> agg.	Betony	3
	<i>Stellaria graminea</i>	Lesser Stitchwort	1
	<i>Succisa pratensis</i>	Devil's-bit Scabious	9
	<i>Dactylorhiza majalis praetermissa</i>	Southern Marsh Orchid	1
	<i>Equisetum arvense</i>	Horse Tail	1
3	<i>Holcus lanatus</i>	Yorkshire Fog	9
	<i>Anthoxanthum odoratum</i>	Sweet Vernal	2
	<i>Festuca rubra</i> agg.	Red Fescue	2
	<i>Alopecurus pratensis</i>	Meadow Tail	7
	<i>Poa trivialis</i>	Rough Meadow	2
	<i>Lotus pedunculatus</i>	Greater Birds Foot	4
	<i>Ranunculus acris</i>	Meadow Buttercup	3
	<i>Rumex acetosa</i>	Common Sorrel	5
	<i>Ranunculus repens</i>	Creeping Buttercup	3
	<i>Agrostis stolonifera</i>	Creeping Bent	6
	<i>Trifolium pratense</i>	Red Clover	2

	<i>Stellaria graminea</i>	Lesser Stitchwort	5
	<i>Sanguisorba officinalis</i>	Greater Burnet	3
	<i>Agrostis capillaris</i>	Common Bent	4
4	<i>Arrhenatherum elatius</i>	False Oat	1
	<i>Holcus lanatus</i>	Yorkshire Fog	7
	<i>Dactylis glomerata</i>	Cocks Foot	4
	<i>Lolium perenne</i>	Perennial Ryegrass	2
	<i>Phleum pratense</i>	Timothy Grass	7
	<i>Agrostis stolonifera</i>	Creeping Bent	7
	<i>Cynosurus cristatus</i>	Crested Dogs Tail	3
	<i>Anthoxanthum odoratum</i>	Sweet Vernal Grass	2
	<i>Juncus conglomeratus</i>	Compact Sedge	1
	<i>Plantago lanceolata</i>	Rib Plantain	1
	<i>Sanguisorba officinalis</i>	Greater Burnet	5
	<i>Festuca rubra</i> agg.	Red Fescue	4
	<i>Filipendula ulmaria</i>	Meadow Sweet Grass	4
	<i>Rumex crispus</i>	Curly Dock	2
	<i>Poa trivialis</i>	Rough Meadow Grass	2
	<i>Carex hirta</i>	Hairy Sedge	3
	<i>Juncus conglomeratus</i>	Compact Rush	2
	<i>Rumex acetosa</i>	Common Sorrel	3
5	<i>Arrhenatherum elatius</i>	False Oat	1
	<i>Holcus lanatus</i>	Yorkshire Fog	3
	<i>Dactylis glomerata</i>	Cocks Foot	2
	<i>Lolium perenne</i>	Perennial Ryegrass	3
	<i>Phleum pratense</i>	Timothy Grass	6
	<i>Agrostis stolonifera</i>	Creeping Bent	8
	<i>Cynosurus cristatus</i>	Crested Dogs Tail	2
	<i>Festuca rubra</i> agg.	Red Fescue	2
	<i>Rumex crispus</i>	Curly Dock	1
	<i>Poa trivialis</i>	Rough Meadow Grass	4
	<i>Carex hirta</i>	Hairy Sedge	7
	<i>Juncus conglomeratus</i>	Compact Rush	4

Appendix 8B – Bat Activity Surveys

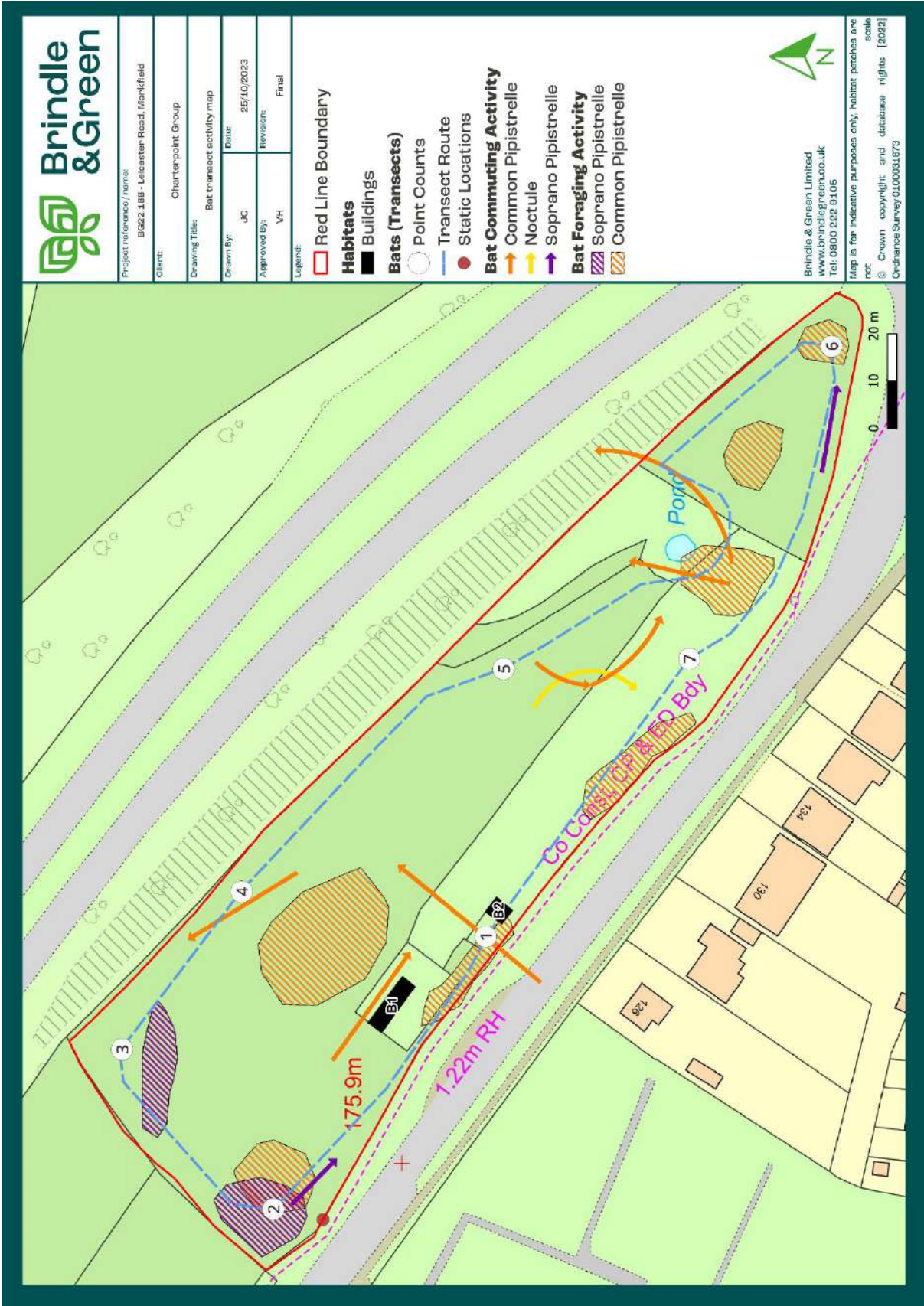
Survey Conditions

The surveys were undertaken in weather conditions considered conducive to bat activity. The weather conditions for the surveys are summarised within Table A below.

Table 16: Bat activity survey dates and weather conditions

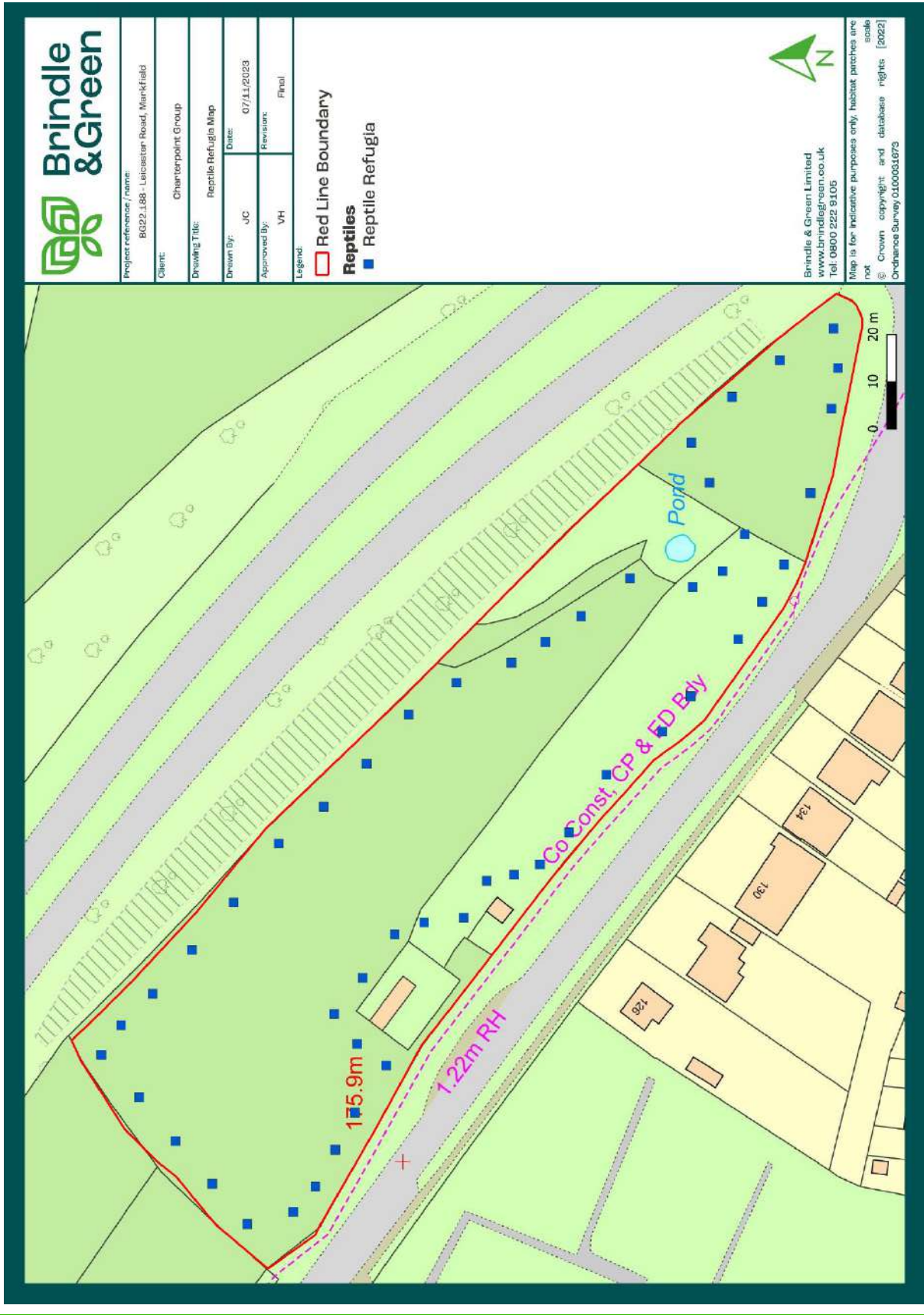
Survey Date	Weather	Start Time	Finish Time	Sunrise/Sunset Time
20 th June 2023	18°C, Precipitation 0/8, 3/8 Cloud cover, Wind Speed 1BF, Humidity 75% - 82%	21:33	23:05	21:33
7 th August 2023	14°C dropping to 13°C, Precipitation 0/8, 1/8 Cloud cover, Wind Speed 2BF, Humidity 74% - 80%	20:47	22:47	20:47
19 th September 2023	18°C, Precipitation 0/8, 7/8 Cloud cover, Wind Speed 4BF, Humidity 80%	19:15	21:15	19:13

Figure 14: Summary of bat activity recorded between June and October 2023



Appendix 8C –Reptile Surveys

Figure 15: Artificial Reptile Refugia Placement



BG22.188.4 Leicester Road, Markfield – Ecological Impact Assessment



Bird Box

Schwegler 1B Bird
Boxes



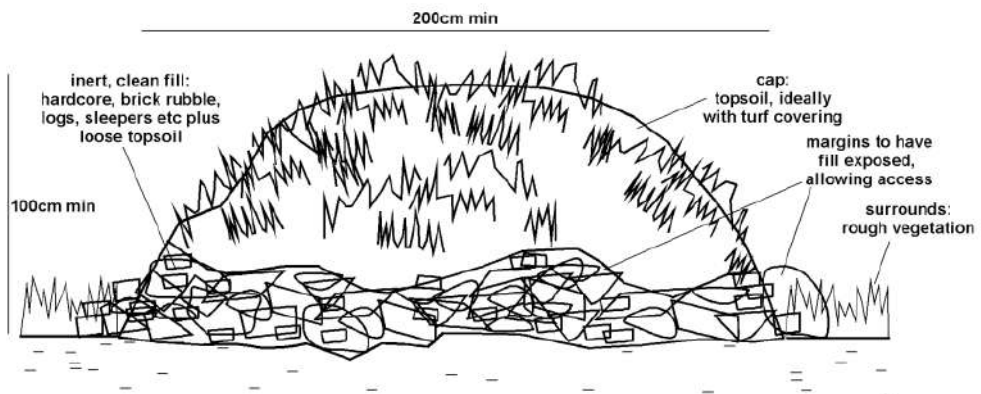
Bat Box

Greenwood Eco habitat
Crevice box



Reptile Hibernaculum

Reptile
Hibernacula
constructed
from inert
rubble and
untreated
logs,
overlaid with
turf lifted
during site
clearance.
Dimensions
2m long x 1m
high
minimum.



Hedgehog Dome

Schwegler
Hedgehog
Dome

