34 Daisy Lea Lane, Huddersfield, HD3 3LP

Client: Mrs. Betty Webb

Ecological Assessment

31/10/2016

Status	Issue	Name of Author/Reviewer	Date
Draft	1	Jason Guile FDSC BSc (Joint Hons)	16/09/2016
Review	1.1	Julie Powell MCIEEM, Technical Lead	20/09/2016
Draft	1.2	Jason Guile FDSC BSc (Joint Hons)	23/09/2016
Draft	2.0	Jason Guile FDSC BSc (Joint Hons)	24/10/2016
Review	2.1	Chris Formaggia BSc (Joint Hons) CBiol CEnv MCIEEM MRBS VR - Principal	27/10/2016
Final	3.0	Jason Guile FDSC BSc (Joint Hons)	27/10/2016

Update	4.0		

Guidelines

This assessment has been designed to meet:

- Chartered Institute of Ecology and Environmental Management 'Guidelines for Preliminary Ecological Appraisal' (2013); and
- British Standard 42020 (2013) 'Biodiversity – Code of Practice for Planning and Development'.

Proportionality

> The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.
>
> This approach is enshrined in Government planning guidance, for example, paragraph 193 of the National Planning Policy Framework for England.
>
> The desk studies and field surveys undertaken to provide a preliminary ecological appraisal (PEA) might in some cases be all that is necessary.
>
> (BS 42020, 2013)

In consequence of the scale and intensity of the proposed development, the low impact on ecological receptors identified through both the site survey and search of local biological records, and the passive interface with the mitigation hierarchy, this plan-led report is considered adequate and proportionate. It communicates all relevant information necessary to determine a planning application, or support the recommendation for further survey.

Limitations

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Site Details and Non-Technical Summary	
Site location and grid reference	34 Daisy Lea Lane, Huddersfield HD3 3LP GR: SE 1220 1809

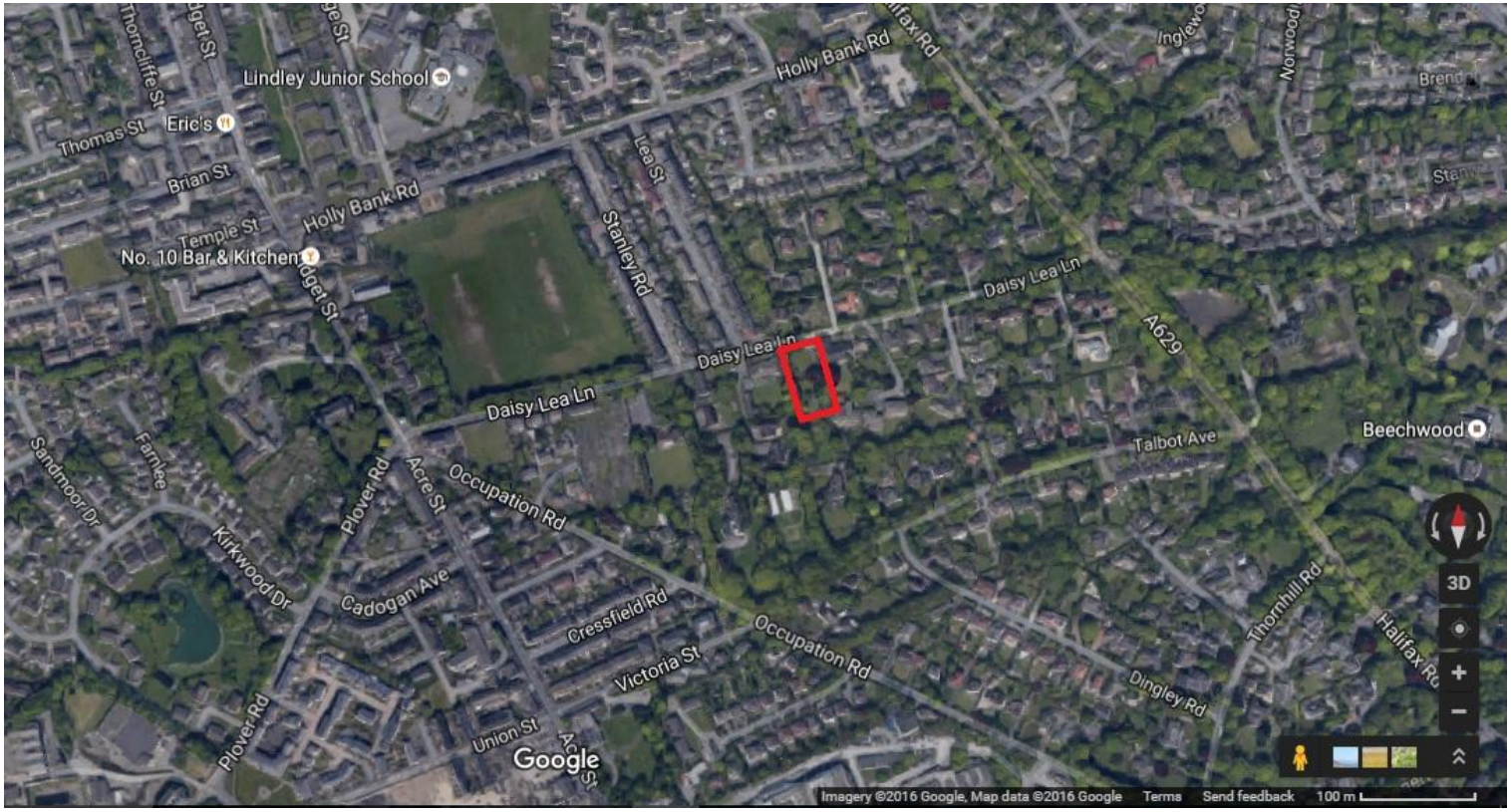

Figure 1: Aerial photo of site [red line indicates perimeter of site] (Google, 2016)

Description of existing land use and habitat character (Appendix 1)	The site is currently a large garden split into sections of amenity grassland and ornamental flower beds and shrub. The garden is surrounded by a large brick/stone wall that isolates the site from the surrounding landscape for mobile terrestrial fauna. There are no ponds within 500m of the site, therefore great crested newts are not anticipated to be present on the site. The site has suitable basking and foraging resource for reptile species, however due to the habitat isolation and well maintained garden on site, reptiles are not anticipated to be present. There were no tracks, paths or evidence found at the time of the survey to indicate the presence of badgers using the site or a badger sett on site. There are five buildings/structures present on site. Buildings 1, 3 and 5 have habitat value for roosting bats. The remaining structures have negligible value for roosting bats. The hedgerow and trees present on site are a suitable nesting/foraging resource for bird species. **[J1.2] Amenity grassland** Dominates the centre of the site. The grass is well maintained due to regular visits by the gardener. The surrounding ornamental shrub and flower gardens are also well maintained. The species present include both native and non-native flora species. **[J2.3] Hedgerow with trees** Located within the western boundary of the site. The tree species present include cypress *Chamaecyparis sp.*, laurel *Prunus sp.,* sycamore *Acer sp.* and yew *Taxus sp.*, with an understory of holly *Ilex aquifolium*, laurel and rose *Rosa sp*. **[J2.5] Brick Wall** A six-foot boundary to the entire site. The only entry to site is the entrance gate. **[J3.6] Buildings** - Refer to accompanying Preliminary Roost Assessment (Arbtech, September 2016) for a detailed description of the buildings/structures. *Building 1* Two-storey brick/stone-built residential house. The roof comprises large heavy slate tiles that have risen in numerous sections to allow potential roosting opportunity for crevice dwelling bat species and/or access into the roof space. Located on the eastern

	elevation of the main building is a single-storey extension with a flat roof. The building and roof appear to be in good condition, providing no suitable access and/or roosting opportunity for bat species. Based on the non-intrusive external survey, the building has moderate value for roosting bats. *Building 2* A single-storey wood-built shed with dual pitch roof of felt over wood. The structure appears to be in good condition and regularly used by the current land owner. Based on the non-intrusive external survey, the structure has negligible likelihood of supporting roosting bats. *Building 3* A single-storey wood-built shed with mono-pitched roof of felt. The structure appears to be in good condition, however the roof has numerous damaged and raised sections of felt providing potential access and/or roosting opportunity for bats species to utilise. Based on the non-intrusive external survey, the structure comprises negligible likelihood of supporting roosting bats. *Building 4* A single-storey brick-built single garage with mono-pitched roof of felt over wood. The roof of the structure has collapsed opening the structure to further water damage and the elements. The walls of the structure appear to require repair, the brickwork and mortar appear to be crumbling, possibly causing the structure to be unsafe. Based on the non-intrusive external survey, the building has low value for roosting bats. *Building 5* A single-storey wood-built garage with mono-pitched roof of felt over wood. The building appears to be in dis-repair. The wooden slats of the walls of the structure have large holes present due to the wood having warped and pulled away. The roof appears to require repair, large sections of the felt appear to be torn and are pulling away from the structure, providing potential access and/or roosting opportunity for bat species. Based on the non-intrusive external survey, the building has low value for roosting bats. **[J5] Hard standing**

	Located around the site as the existing driveway to the garages and the border to each of the amenity grassland sections. **Scattered trees** Located all around the site are scattered trees as individuals or small groups. The species present on site include sycamore, laurel, cypress, elm *Ulmus sp.*, beech *Fagus spp.*, whitebeam *Sorbus sp.*, lime *Tilia sp*, birch *Betula spp.* and yew. The understory includes hawthorn *Crataegus monogyna*, holly, rose and ivy *Hendera helix*. Refer to accompanying arboricultural survey for comprehensive description of trees on site. Appendix 1 (*the current site conditions*) contains a Phase 1 habitat map and target notes.
Description of proposed development (Appendix 2)	The proposed plans are to construct 2 detached residential houses with associated garages and a detached garage that will belong to the original house. Appendix 2 (*the proposed development*) contains a site plan, which has been used to inform the conclusions and recommendations of this report.
Client	Mrs. Betty Webb
Ecologist	Jason Guile an accredited agent on bat license number-CLS01073
Date of survey	24 August 2016
Site area	0.2ha
Access and works areas	Along existing road network
Designated sites and habitats of principal importance	None within site boundary; the closest designated site is Gredholt Wood Local Nature Reserve (LNR) approximately 1.8km south east of the site. Designated as an area of mature woodland and rough grassland, the woodland supports a wide range of rare fungi. The site lies within the local community forest, White Rose Forest – suite of green areas within the urban environment that are maintained to enhance the local area.

<table>
<tr><td></td><td>The Magic database shows large blocks of deciduous and mixed woodland approximately 500m north, 500m east and 1km south of the site; further large blocks of woodland are located in the wider landscape > 1km from the site; and a large block of wood-pasture and parkland located approximately 1.5km south east of the site.</td></tr>
<tr><td>Weather</td><td>Wind 1/8, no rain, cloud 30% and temperature 24°C.</td></tr>
<tr><td>Summary of desk study data</td><td>Existing bat records relating to the site and a surrounding 2km radius (the study area) were requested from West Yorkshire Joint Services and will be attached to the report once received and analysed

The magic database shows there are two granted European Protected Species Licences within the 2km search radius.

<table>
<tr><th>Case reference of granted application</th><th>Approx. distance from site</th><th>Species Effected</th><th>Licence Start Date:</th><th>Licence End Date:</th><th>Impacts allowed by licence</th></tr>
<tr><td>EPSM2009-1162</td><td>500m SW</td><td>Common pipistrelle bat</td><td>18/09/2009</td><td>17/09/2011</td><td>Damage/Destruction of a resting place</td></tr>
<tr><td>EPSM2012-5292</td><td>500m SW</td><td>Common pipistrelle bat</td><td>02/01/2013</td><td>01/12/2014</td><td>Damage/Destruction of a resting place</td></tr>
</table>
</td></tr>
<tr><td>Non-technical summary of assessment</td><td>Overall, considering the habitats and surrounding area, the site is assessed as having a nature conservation importance of site value only. The habitats on site, notably the buildings, hedgerow and trees are likely to support protected species.
Therefore, further surveys are recommended to determine the presence/likely-absence of bats and nesting birds before commencement of any works.

The site is isolated from the surrounding landscape for terrestrial fauna.</td></tr>
</table>

Assessment Methodology: the desk study and the site survey

Existing records relating to the site and a surrounding 2km radius (the study area) have been requested from the West Yorkshire Joint Services. Freely available information *on designated sites, habitats and species of Principal Importance was also* reviewed, including a search on *Magic.gov.uk*, and *OS OpenData* (2010). Information obtained from the desk study included, where available:

- Landscape structure;
- Habitats and species of Principal Importance (as listed on S41 of the Natural Environment and Rural Communities (NERC) Act 2006 (Habitats and Species of Principal Importance);
- Information on designated sites;
- Information on the surrounding area, including water bodies; and
- Reports of previous ecological assessments.

An extended Phase 1 Habitat Survey of the site (the survey area) was undertaken. The survey area comprised all land that will be impacted by the proposals. The methodology for the Phase 1 habitat survey was based on the best practice publication Phase 1 Habitat Survey Methodology (JNCC, 2010). All land parcels were described and mapped in accordance with JNCC Phase 1 habitat classification (Appendix 1). Where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management (Appendix 1).

During the survey, habitats were assessed for their suitability to support protected species and notable species assemblages, and field signs indicating their presence or absence recorded. The subsequent assessment took into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the species. The likelihood of occupancy (of protected species) is ranked; the habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

The ecological value of the survey area has been assessed based on the Guidelines for Ecological Impact Assessment (IEEM, 2006), and the Handbook of Biodiversity Methods: Survey, evaluation and monitoring (David Hill, 2005), using geographic frames of reference. The biodiversity value of any identified designated sites, habitat types and associated species/assemblages has been considered. Finally, the distribution and extent of invasive species listed on Schedule 9 of the Wildlife and Countryside Act (1981) were also noted throughout the survey area.

Refer to Appendix 3 for full evaluation methodology and survey limitations.

Site Photos

Figure 2: Site photo collage. Clockwise from top left: The entrance to the site looking north; the southern section of grassland looking west; the central section of site looking west; the northern section of site looking north.

Map showing designated sites

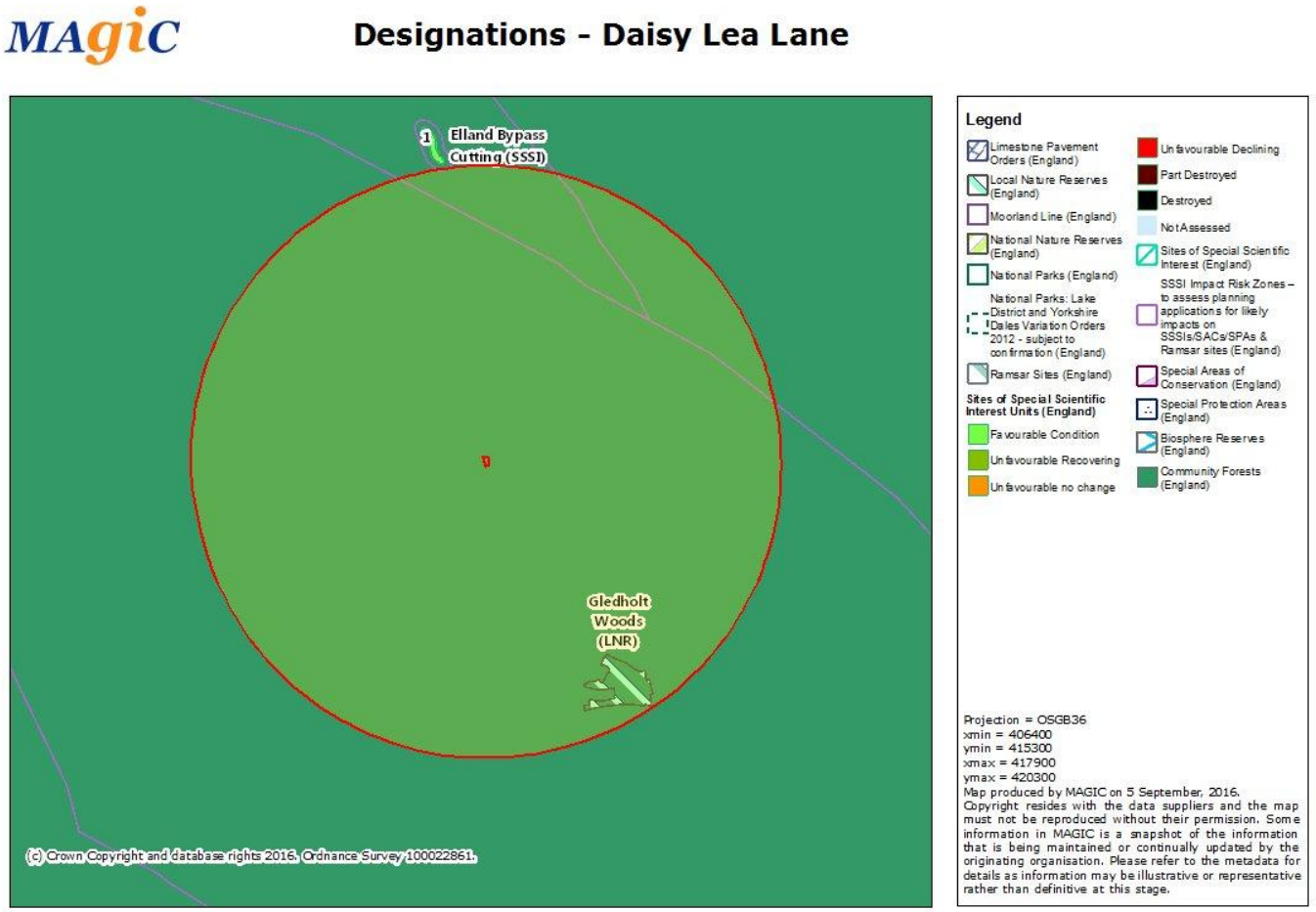

Figure 3: Magic.gov.uk Map showing designated sites in the wider landscape (buffer showing 2km radius: magic.gov.uk, accessed September 2016).

Priority Habitats and Habitats of Principal Importance

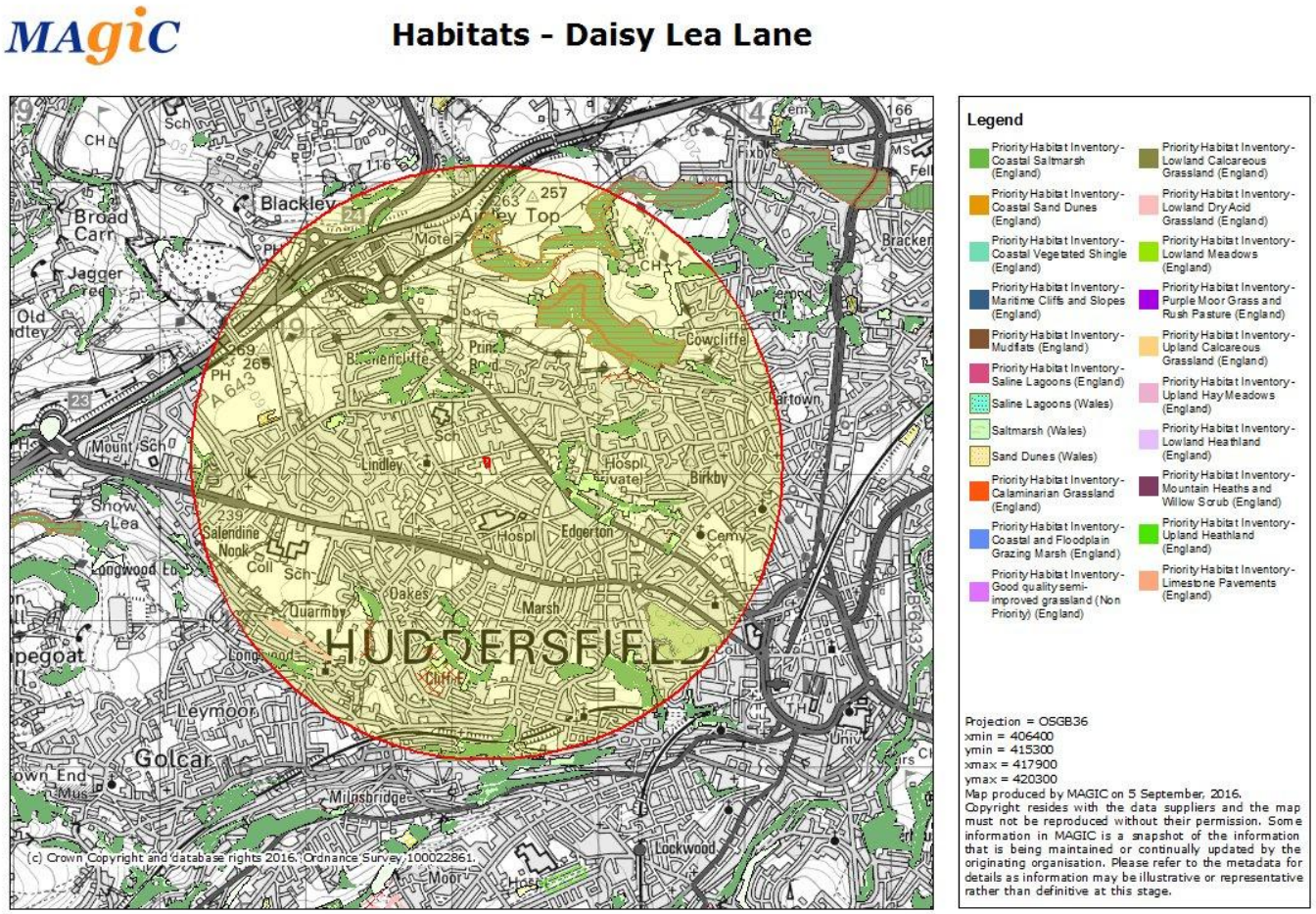

Figure 4: Magic.gov.uk Map showing Priority Habitats and Habitats of Principal Importance in the wider landscape (buffer showing 2km radius: magic.gov.uk, accessed September 2016).

Granted European Protected Species Applications

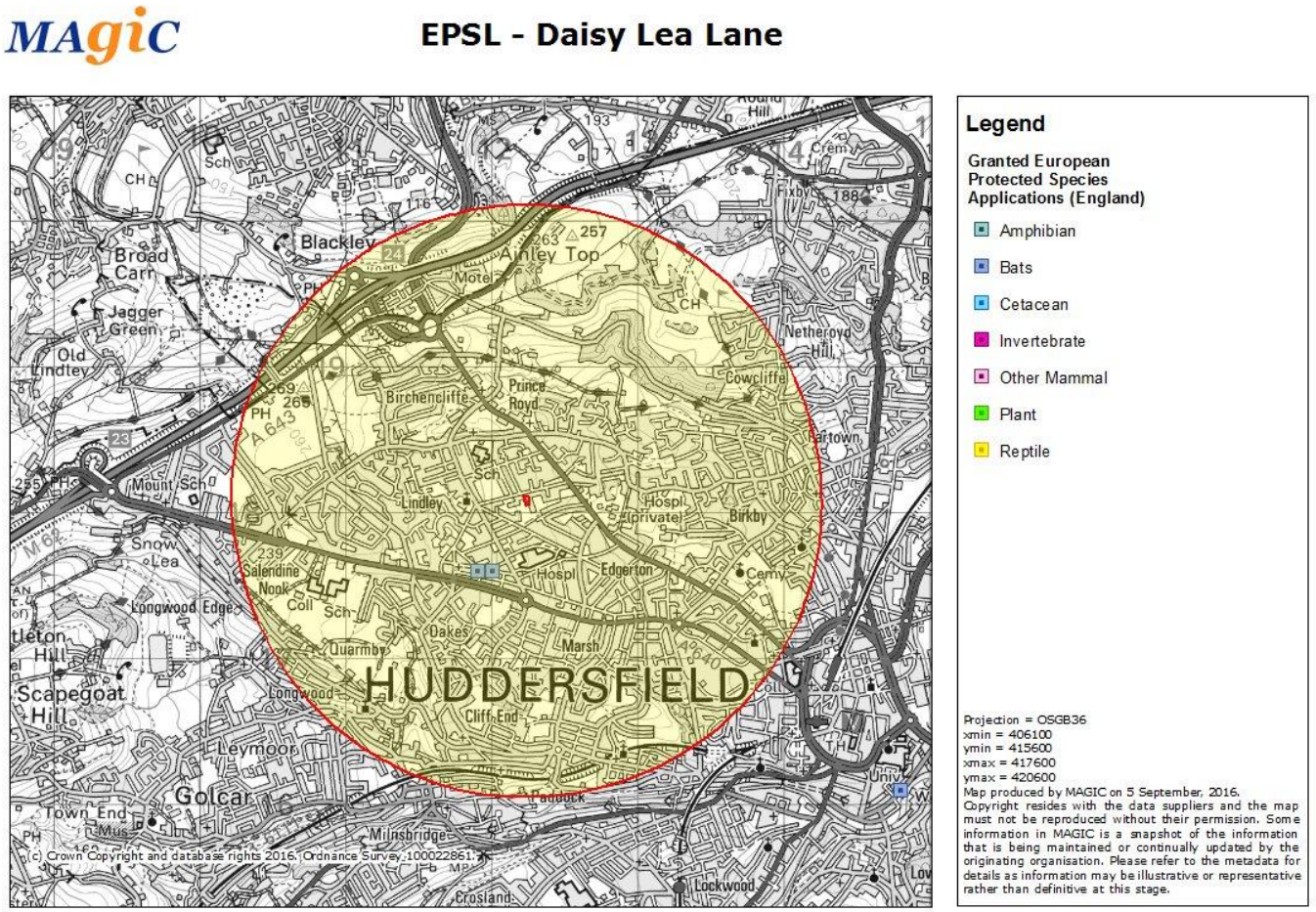

Figure 5: Magic.gov.uk Map showing Granted European Licence Applications in the wider landscape (buffer showing 2km radius: magic.gov.uk, accessed September 2016).

Impacts and the biodiversity mitigation hierarchy[1]	
Assessment of likely significant effects	**Avoidance, mitigation, and compensation**
Designated sites	
The site is not subject to any designation, and there are no designated sites nearby with the potential to be affected by the development proposals in any way.	None
Protected species	
Breeding birds Any works which affect the observed nests within the buildings, trees and hedgerow on site could have an impact on nesting birds. This would be in the form of destruction of nests along with permanent loss of nesting and foraging resources. **Bats** Based on the external inspection carried out in this survey, B1 has moderate value for supporting roosting bats; buildings B4 and B5 have low value; buildings B2, and B3 comprise negligible likelihood of supporting	**Breeding birds** Since all active bird's nests and their contents are protected from damage or destruction, any tree, vegetation and hedgerow clearance should be undertaken outside the period March to August. If this timeframe cannot be avoided, a close inspection of trees and vegetation to be removed should be undertaken prior to clearance. The search should include a survey for ground nesting birds. All active nests will need to be retained until the young have fledged. All habitats suitable for nesting and of high value for foraging birds should be replaced; native and fruiting/flowering species can be included in landscape plans and incorporated in the boundary planting. **Bats** Prior to demolition, a preliminary roost assessment (PRA) is recommended for B1, B4 and B5, and subsequently, one or more emergence surveys are likely to be required to adequately inform a planning decision. Should bats

[1] "The overarching aims of ecological work used to inform the planning process are to minimize harm and to maximize benefits for biodiversity resulting from development. The generally accepted way of doing this, now embedded within the planning system, is to follow the 'mitigation hierarchy'. This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures." (BS 42020, 2013).

roosting bats. As the proposals include the demolition of buildings B4 and B5, any bat roosts present will be disturbed in the form of dust, noise and vibration, with the additional possibility of injuring or killing individual bat, without appropriate mitigation. The proposals are to impact building B1 through disturbance, any bat roosts present will be disturbed in the form of dust, noise and vibration, with the additional possibility of injuring or killing individual bat, without appropriate mitigation. No other impacts on protected species are anticipated.	be found, the demolition would need be carried out under a Conservation Regulations licence and appropriate mitigation will be formulated. This may include the provision of alternative roosting sites and supervised soft stripping of buildings. There are likely to be seasonal constraints to the works. Lighting used pre- and post construction should be positioned to avoid disturbing any bats that may be roosting in Building 1. However, if lighting impacts are expected to arise (and given the change of use of the site, this is anticipated to be the case), tree suitability surveys and subsequent emergence or tree-climbing surveys are recommended to confirm presence/likely-absence of roosting bats and inform mitigation accordingly.
Notable habitats and species (e.g. ancient woodland)	
Direct impacts on other priority habitats (refer to Figure 4) are unlikely to arise as the works would be a sufficient distance to avoid dust, noise and visual effects on the habitats. The affected grassland, hedgerow and trees are not expected to contain rare or otherwise notable floral assemblages. Mature trees may be killed through excavation within root zones.	Appropriate protection measures should be drawn up by an arboricultural consultant, in agreement with the local tree officer, and British Standard protection measures applied to trees and their root zones.
Invasive and non-native species (e.g. Japanese knotweed)	
Rhododendron species was recorded within the northern and western hedgerow of the site (a scheduled invasive species).	Management plan needs to be established to eradicate if necessary and prevent further spread of the species in accordance with government guidelines.

Recommendations

Proposed biodiversity enhancement

The following recommendations are proposed on this site to maximise the biodiversity value of the site post-development:

1. Bird and bat boxes could be installed on the retained trees and new buildings.
- An example of a suitable bird box is the Schwegler 2H open fronted bird nest box; four of these would be appropriate for the size and location of the site.
- An example of a suitable bat box is the Schwegler 2F general use bat box; three of these would be appropriate for the site.

2. Bat adapted access tiles could be installed on the south westerly facing roof pitches of the new buildings.

3. Recommended ecological input to landscape plans.

Recommendations for further survey effort

Bats

Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn.), (Collins, 2016) recommends additional surveys for all buildings assessed as having low to high suitability for roosting bats. The survey effort recommended at this stage is iterative and if bats are recorded emerging from the buildings the survey effort should be adjusted to provide sufficient information to inform European Protected Species Mitigation licensing (EPSML). Buildings assessed as comprising negligible suitability for roosting bats do not normally require further surveys. Those known to support roosting bats may require further survey to inform a EPSML application, depending on the proposed works and assessment of impacts, and the species present/likely to be present.
As such, a Preliminary Roost Assessment (PRA) is required to fully assess the suitability of buildings B1, B4 and B5 for roosting bats, in the context of the surrounding landscape. Subsequently, one or more emergence surveys are likely to be required to adequately inform a planning decision.

Breeding Birds

It is recommended that the vegetation is removed outside the breeding bird season (March to August). However, if this is not possible, the vegetation and grassland should be surveyed for breeding/ground nesting birds immediately prior to clearance. If active nests are found, they will need to be retained in situ until the young have fledged.

Bibliography

- Google Maps (2016). *Huddersfield. https://www.google.co.uk/maps/place/Daisy+Lea+Ln,+Huddersfield+HD3+3LP/@53.6593822,-1.8187022,286m/data=!3m2!1e3!4b1!4m5!3m4!1s0x487bdcf2be3739eb:0x1c43e85526e9b96f!8m2!3d53.65938!4d-1.8171972?hl=en* [viewed September 2016]

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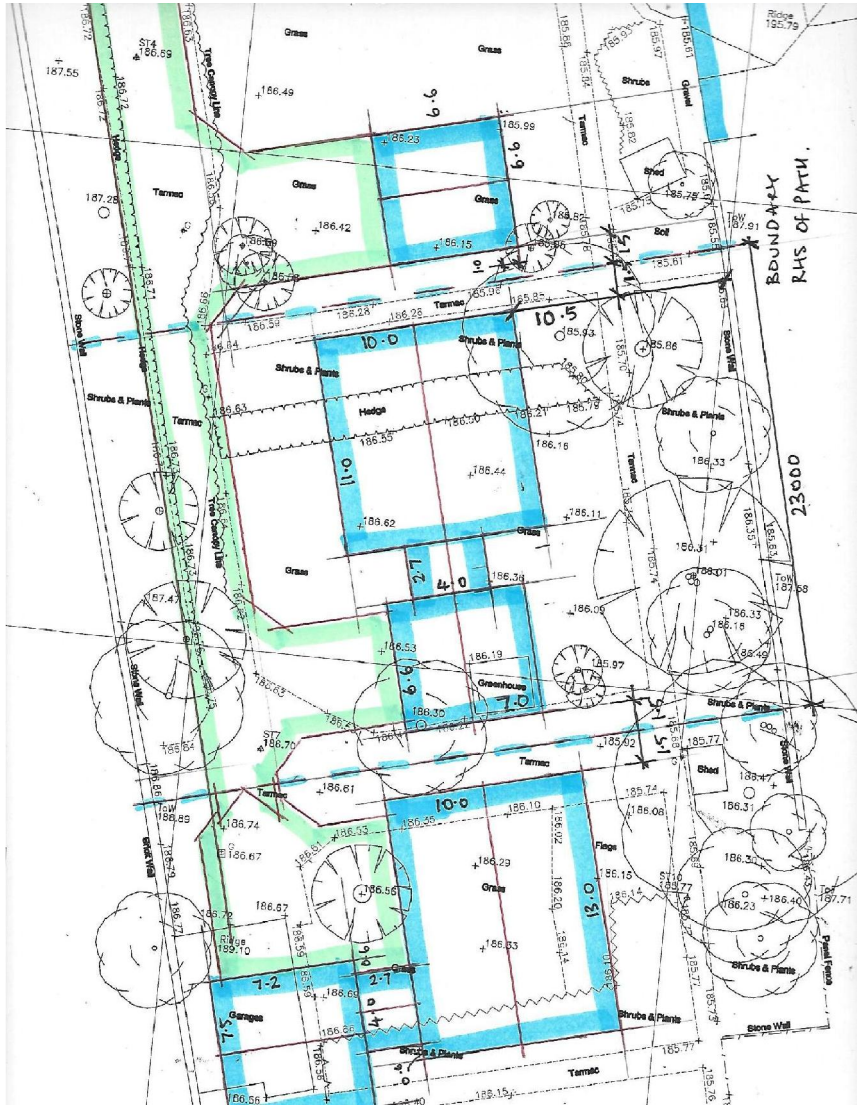
- Spon E & F.N (1995) *Guidelines for Baseline Ecological Assessment*. Institute of Environmental Assessment

Appendix 1: Phase 1 Habitat Map with photographs (*current site conditions*)

Appendix 2: Project Description and Site Plan (*the proposed development*)



Appendix 3: Assessment Methodology and Limitations

Likelihood of the presence of protected species

The habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat. The likelihood of occupancy of protected species is ranked according to the criteria listed in Table 1:

Table 1: showing criteria considered when assessing the likelihood of occurrence of protected species

PRESENT	Species are confirmed as present during the site survey or through searches of historical biological records.
HIGH	Habitat and features of high quality for species/species assemblage. Species known to be present in wider landscape (searches of historical biological records). Good quality surrounding habitat and good connectivity.
MEDIUM	Habitat and features of moderate quality. The site in conjunction with wider landscape may provide all habitat/ecological conditions required by the species/species assemblage. Within known national distribution of species and historical records present within desk study area. Limiting factors to suitability, including small area of suitable habitat, some severance/poor connectivity with wider landscape, poor to moderate habitat suitability in local area.
LOW	All habitats within the survey area poor quality. Few or no historical records. Despite above, presence cannot be discounted as within national range, and all required features/conditions are present on site and in wider landscape. Limiting factors could include isolation, poor quality landscape, or disturbance.
NEGLIGIBLE	Very limited, poor quality or no habitats. No historical records; site on edge of or outside national range. Surrounding habitats considered unlikely to support species/species assemblage.

Assessment of ecological value

The ecological value of the survey area has been assessed using the Guidelines for Ecological Impact Assessment (IEEM, 2006), and Handbook of Biodiversity Methods: Survey, evaluation and monitoring (David Hill, 2005), using geographic frames of reference. The biodiversity value of the identified designated sites, habitat types, and associated species/assemblages has been considered. The criteria listed below have been used to reach an evaluation; examples under each category of biodiversity value are provided in Table 2:

- Presence of designated sites or features;
- Presence of UK priority habitats and species (S41 of the NERC Act), and species listed as Birds of Conservation Concern (Eaton et al, 2009);

- Size of habitat, diversity of species, or population;
- Habitats or species which are rare, species which are on the edge of their range;
- Large populations of uncommon species, or plant communities that are typical of valued natural/semi-natural vegetation types;
- Habitats or features that have supporting value for high value habitats, designated sites or protected species, e.g. buffer habitat to ancient woodland; and
- Presence of legally protected species.

Table 2: examples of criteria defining conservation evaluation

EVALUATION ON GEOGRAPHICAL SCALE	EXAMPLES OF CRITERIA DEFINING EVALUATION
INTERNATIONAL	Biodiversity feature that is designated or warrants designation as a European Protected Site
NATIONAL	biodiversity feature that is designated or warrants designation as a National designated site (Site of Special Scientific Interest (SSSI) or National Nature Reserve (NNR))
METROPOLITAN OR COUNTY	Biodiversity feature that is designated or warrants designation as a county wildlife site, local nature reserve, or a Site of Metropolitan Importance for Nature Conservation (SMI). Species and habitats of principle importance.
BOROUGH	Biodiversity feature that is designated or warrants designation as a Site of Importance for Nature Conservation (SNCI), or other feature which is one of the best examples of its type within the Borough. Diverse and/or ecologically valuable hedgerow network, or ancient woodland greater than 0.25ha
LOCAL	Biodiversity feature which is one of the best examples of its type within a local context (i.e. within ~1km of the scheme extent)/local Parish. Habitat complex considered to enrich the habitat/biodiversity resource within the context of the local neighbourhood.
WITHIN THE VICINITY OF THE SITE	Biodiversity features of value within the zone of influence (site plus approximately 50m buffer).
NEGLIGIBLE	Biodiversity features of negligible value.

Following CIEEM guidance, it should be noted that legal protection or UK Biodiversity Action Plan (BAP) status does not necessarily imply biodiversity status at the equivalent scale. For example, a badger *Meles meles* sett would receive legal protection at a national scale and a native hedgerow would be a UK BAP priority habitat, but neither feature is likely to be of biodiversity value at a national scale.

Where this report supports a planning application, the ecological interest of the study area (including the survey area) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity. It will be clearly stated where a preliminary value can be given and where further information is required.

Limitations to the desk study and the site survey

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site.

Where only four figure grid references are provided for historical biological records, and other data, it is not possible to determine their precise location as they could be present anywhere within the given 1km x 1km National Grid square; an area equivalent to 100ha.

This assessment provides a *preliminary* view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

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