



CNG Fuels

Land Off Burton Road, Derby

ECOLOGICAL IMPACT ASSESSMENT

November 2022

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NON-TECHNICAL SUMMARY

- 1.1 An Ecological Impact Assessment (EcIA) was undertaken following published guidelines on the likely effects upon biodiversity as a result of the proposed CNG Fuel site. The assessment draws from a desk study and field surveys of the Site and surrounding area.
- 1.2 The application site occupies land to the east of Burton Road/A38 in Derby, Derbyshire (centred on grid reference SK 30257 31240) and is comprised by hardstanding with ruderal growth, areas of scrub, and a woodland belt. The landscape beyond the Site is predominantly agricultural, with an industrial area on the opposite side of Burton Road to the north-east, and some residential area to the north.
- 1.3 The assessment identified the following ecological features which could be affected by proposals or warrant consideration due to the legal protection afforded them:
 - broadleaved woodland habitat;
 - nesting birds;
 - bats; and
 - hedgehogs
- 1.4 Proposals will not result in any residual negative effects on designated sites within the specified zone of influences.
- 1.5 Proposals will result in permanent losses of habitats under the footprint of the development. The habitats lost are predominantly of low ecological importance, while the habitats around the boundaries of the site. Broadleaved woodland and mixed scrub are of higher importance.
- 1.6 Mitigation through design has been utilised to avoid impacts and impacts will be further minimised through careful control of construction activities through an industry best practice CEMP. As a result, all other predicted effects on important ecological features are not anticipated to be significant.
- 1.7 Creation and enhancement of habitats are to be incorporated, including planting of mixed scrub, wildflower rich grassland, and areas of native and ornamental shrub mixes. Further faunal enhancements such as the incorporation of bird and bat boxes are recommended.

2.0 INTRODUCTION

- 2.1 This Ecological Impact Assessment (EclA) has been prepared by FPCR Environment and Design Ltd on behalf of CNG Fuels in relation to a site off Burton Road, Derby (Grid reference: SK 30257 31240). The Site is located to the east of Burton Road/A38. The Site currently comprises hardstanding with areas of ruderal growth, scrub, and a woodland belt. The landscape beyond the Site is predominantly agricultural, with an industrial area on the opposite side of Burton Road to the north-east, and some residential area to the north. Proposals entail development of the site into a fuelling station.
- 2.2 The EclA has been prepared with reference to the Chartered Institute of Ecology and Environmental Management's (CIEEM) Ecological Impact Assessment Guidelines¹. In line with this guidance, the EclA describes the assessment methodology; establishes the baseline conditions, currently existing at the Site and surroundings; the likely significant environmental effects; the mitigation measures required to prevent or reduce any impacts; the likely residual effects after these measures have been employed; and the compensation measures required to offset any residual effects.
- 2.3 This report has been prepared by an experienced ecologist at FPCR Environment & Design Ltd.

¹ CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

3.0 METHODOLOGY

Legislation, Planning Policy and Guidance

- 3.1 The policy and guidance framework for nature conservation is provided by various national, regional and local planning policies as outlined below, with further details, as necessary, within relevant subsequent sections.

Legislative Framework

- 3.2 In addition to the National, Regional and Local policies (discussed below), the following legislation and European Directives afford protection to wildlife and have been used to inform this assessment.

- The Conservation of Habitats & Species Regulations 2017 (as amended)²;
- Wildlife and Countryside Act 1981 (as amended) (WCA)³;
- Natural Environment and Rural Communities Act 2006 (NERC)⁴.
- The Protection of Badgers Act 1992⁵.
- The Hedgerow Regulations Act 1997⁶.
- The Environment Act 2021⁷.

National Policy Context

National Planning Policy Framework

- 3.3 The latest National Planning Policy Framework (NPPF)⁸ sets out the Government's planning policies for England and how these are expected to be applied within the planning system. It provides a framework for local councils to produce local plans and determine planning applications in order to achieve more sustainable developments. Planning applications should aim to confirm to principles set out within this framework, which should be reflected at a local level in local development frameworks and other planning policy documents for that local area.
- 3.4 The ecological assessment has been guided by the requirements of the NPPF by ensuring that the determining authority is in receipt of adequate information to be able to make an informed assessment of the proposed scheme against National and Local planning policies regarding biodiversity.
- 3.5 Although the UK Biodiversity Action Plan (BAP) has now been superseded by the UK Post-2010 Biodiversity Framework⁹ and Biodiversity 2020¹⁰ the former UK Biodiversity Action Plan (BAP) lists of priority habitats and species continue to be regarded as conservation priorities under the Framework, and they have been used to compile the statutory lists of priority species and habitats

² HMSO. The Conservation of Habitats and Species Regulations 2017 (as amended) – No.1012.

³ HMSO. The Wildlife and Countryside Act 1981 (as amended).

⁴ HMSO. (2006), Natural Environment and Rural Communities Act.

⁵ HMSO. The Protection of Badgers Act 1992 (as amended).

⁶ HMSO. The Hedgerow Regulations Act 1997

⁷ HMSO The Environment Act 2021

⁸ Ministry of Housing, Communities and Local Government (2021). National Planning Policy Framework. London

⁹ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012) UK Post-2010 Biodiversity Framework. July 2012.

¹⁰ DEFRA (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services.

as required under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (also referred to as Habitats and Species of Principal Importance). Whilst different planning authorities across the country are likely to take differing approaches with regard to delivery of biodiversity within their areas, Local BAPs remain a key element for securing the requirements of the NPPF at a local level, consequently this assessment has taken due consideration of the priority habitats and species within the Lowland Derbyshire Biodiversity Action Plan¹¹.

Local Policy Context

South Derbyshire Local Plan

- 3.6 The long-term development plan for South Derbyshire is outlined in the Local Plan¹². Chapter 8 of the local plan contains Policy BNE3, described in Table 1 below.

Table 1: South Derbyshire Local Plan Policy BNE3

Policy BNE3: Biodiversity	
A. <i>The Local Planning Authority will support development which contributes to the protection, enhancement, management and restoration of biodiversity or geodiversity and delivers net gains in biodiversity wherever possible by:</i> i. <i>Protecting sites of International, European, National and 129 County importance, together with local nature reserves, from inappropriate development within and adjacent to sites;</i> ii. <i>Delivering long term plans to restore the River Mease Site of Special Scientific Interest (SSSI)/Special Area of Conservation (SAC) to a more natural condition and improve water quality within Mease and other catchments failing to meet Water Framework Directive objectives.</i> iii. <i>Developing and maintaining a District-wide ecological network of SSSI's and local wildlife sites together with corridors and stepping stones sites to support the integrity of the biodiversity network, prevent fragmentation, deliver ecosystem services and enable biodiversity to respond and adapt to the impacts of climate change.</i> iv. <i>Supporting and contributing to the targets set out in the Lowland Derbyshire and/or National Forest Biodiversity Action Plan (BAP) for priority habitats and species</i> v. <i>Protecting ancient woodland and veteran trees from loss, unless the need for, and benefits of, the development in that location clearly outweigh the loss</i> B. <i>Planning proposals that could have a direct or indirect effect on sites with potential or actual ecological or geological importance including:</i> • <i>Internationally important sites</i> • <i>Nationally important sites (such as SSSIs)</i> • <i>Sites of County importance (such as Local Nature Reserves, Local Wildlife Sites and Local Geological Sites)</i> • <i>Ancient woodlands, veteran trees and hedgerows</i> • <i>Priority habitats and species</i> <i>will need to be supported by appropriate surveys or assessments sufficient to allow the Authority to fully understand the likely impacts of the scheme and the mitigation proposed. Where mitigation measures, or exceptionally, compensation cannot sufficiently offset the significant harm resulting from the development and/or where the development can potentially</i>	

¹¹ Lowland Derbyshire Biodiversity Action Plan 2011-2020. Access [online] 25.11.22 Available at: [Lowland Derbyshire BAP \(derbyshire.gov.uk\)](https://www.derbyshire.gov.uk/lowland-derbyshire-biodiversity-action-plan)

¹² South Derbyshire Local Plan 2011-2028. Access [online] 25.11.22 Available at: [Adopted Local Plan \(southderbyshire.gov.uk\)](https://www.southderbyshire.gov.uk/adopted-local-plan)

Policy BNE3: Biodiversity

be located on an alternative site that would cause less or no harm, planning permission will be refused.

Scope of Assessment**Assessment Approach**

- 3.7 The EcIA has been prepared with reference to the Chartered Institute of Ecology and Environmental Management's (CIEEM) Ecological Impact Assessment (EcIA) Guidelines, published in 2018. Baseline information and potential impacts have been quantified as far as practical to inform the assessment, supported by professional judgement and experience as appropriate. Where uncertainties exist, a precautionary approach has been adopted and a 'worse case' scenario approach assumed for the purposes of assessing impacts and recommending mitigation.
- 3.8 The significance of ecological impacts in relation to a proposal can be considered in relation to the importance of affected ecological features and the predicted magnitude of impact upon them.
- 3.9 The main source of information for this assessment are:
- biological records (obtained from the relevant Local Biological Records centre and local interest groups);
 - online sources of Ecological Data;
 - review of legislation and land-use policies; and
 - field surveys.

Zone of Influence

- 3.10 The CIEEM guidelines require the identification of a 'zone of influence' (Zol) within which the ecological features that may be affected by the proposed scheme can be identified. This will identify the potential impact of the development not just to the Site but beyond the boundaries of proposed scheme.
- 3.11 The Zol is determined by the source / type of impact, a potential pathway for that impact and the location and sensitivity of the important ecological feature beyond the boundary. For the majority of impacts identified as part of the proposed scheme, the Zol is generally considered as the application site and immediately surrounding areas.
- 3.12 However, the Zol can also vary considerably depending upon the species potentially affected by the proposed scheme. For example, some species may be confined to a specific location whilst others, such as bats and birds are more mobile and can occupy much larger home ranges. The presence of dispersal barriers can also have an effect on the Zol such as roads or rivers which may either reduce the potential of animals crossing it or could cause a potential means of killing on injury. As such, this could isolate areas of potentially suitable habitat within the proposed scheme due to fragmentation. In each case this is considered in association with the nature and scale of the proposed scheme and informed by best practice guidance and professional judgement.

- 3.13 Specific study areas were identified for the desk study and field surveys to inform the valuation of ecological features and the selection of ‘key’ ecological features material to the assessment.

Desk Study

- 3.14 In order to compile existing baseline information, relevant ecological information was requested and received from the Derbyshire Biological Records Centre (DBRC) and the Derbyshire Bat Group in September 2022, including records of protected or notable species and sites of designated for nature conservation interest.
- 3.15 Online sources of ecological data were also sought from the Multi Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk).
- 3.16 Further inspection, using colour 1:25,000 OS base maps (www.ordancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk), was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.
- 3.17 The search area varied depending upon the likely significance and ZoI of the data requested, as follows:
- A minimum of a 10km radius around the Site was searched for sites with an international statutory designation: Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar sites;
 - A minimum of a 2km radius around the Site for sites of national / regional or local importance with a statutory designation: Site of Special Scientific Importance (SSSI) or National Nature Reserve (NNR);
 - Up to a 1km radius around the Site for sites of local importance with statutory designation of Local Nature Reserve (LNR), or non-statutory designation of Site of Importance for Nature Conservation (SINC) or the equivalent Local Wildlife Site (LWS); and
 - 1km search area for records of notable / protected species, including Species of Principal Importance under S41 of the Natural Environment and Rural Communities Act (NERC) 2006 and local biodiversity action plan species.
- 3.18 Further consideration of potential zones of influence in relation to statutory designated sites of International and National importance was made using Natural England’s SSSI Impact Risk Zone Tool¹³ which outlines the likely zone of influence from impacts for a range of development types.

Field Survey - Habitats

- 3.19 Where available all surveys were undertaken with regard to methodologies published in guidelines accepted by statutory and non-statutory agencies, including Natural England and CIEEM.

Extended UKHAB Habitat Survey

- 3.20 An Extended UKHAB Habitat Survey was undertaken using UKHab methodology (Butcher et al., 2020¹⁴) on 6th September 2022 and comprising a systematic walk over the Site to classify the broad

¹³ <https://data.gov.uk/dataset/5ae2af0c-1363-4d40-9d1a-e5a1381449f8/sssi-impact-risk-zones>

¹⁴ Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User Manual 1.1 at <http://www.ukhab.org>

habitat types and identify any Habitats of Principal Importance (HPI) for the conservation of biodiversity as listed within Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act (2006). During the survey plant species lists were compiled for each habitat mapped, along with additional notes regarding the current 'condition'¹⁵ of the habitat, completed in accordance with the Natural England's The Biodiversity Metric 3.1 Technical Supplement¹⁶.

- 3.21 Any habitats suitable for, or features with the potential to support, protected or notable species were also assessed and recorded with the surveys.

Field Survey - Species

Bats

- 3.22 Based on the assessment of suitability during the Extended UKHAB Habitat Survey, scoping bat surveys were carried out. These comprised a point count survey and an automated static detector survey.
- 3.23 The primary objective of the surveys was to identify foraging areas, commuting routes, species composition, and species utilisation of the Site. Methodologies took into account guidance from English Nature (now Natural England)¹⁷ and further guidelines from the Bat Conservation Trust¹⁸.
- 3.24 The point count survey utilised two experienced surveyors positioned within the Site where they were able to observe the features of potential value to bats that are to be most affected by proposals (such as hedgerows, tree lines, dense scrub etc). The survey commenced at sunset and had a duration of two hours. When a bat passed by the species, time and behaviour were recorded on a site plan to help to form a general view of the bat activity present on Site and highlight any habitat types associated with bat activity.
- 3.25 Surveyors used Wildlife Acoustics Inc. Echo Meter Touch® bat detectors were utilised in conjunction with Echo Meter Touch® app and Apple Inc. iPad® during the transect surveys to detect bats and aid species identification.
- 3.26 Post-survey, bat calls were analysed using Kaleidoscope Viewer® (Wildlife Acoustics, Inc) software package, by taking measurements of the peak frequency, inter-pulse interval, call duration and end frequency. From this, the level of bat activity across the Site in relation to the abundance of individual species foraging and commuting along habitats was assessed.

Table 2: Bat Point Count Survey Conditions

Date	Survey Start/End Times	Sunset/Sunrise Times	Weather Conditions
22.09.22	19:05/21:05	19:05	15C – 15C, 100% – 90% cloud cover, no wind, no rain.

- 3.27 A static passive recording broadband detector was also deployed on Site to supplement the point count survey.

¹⁵ 'Condition' is one of the measures of the quality of a habitat used within the DEFRA biodiversity metric. It takes into account key physical characteristics and typical species of a particular habitat type.

¹⁶ Natural England Joint Publication JP039 The Biodiversity Metric 3.1 auditing and accounting for biodiversity Technical Supplement. Access [online] 18.07.22 Available at: <http://publications.naturalengland.org.uk/publication/6049804846366720>

¹⁷ English Nature (2004) *Bat Mitigation Guidelines*.

¹⁸ Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London.

- 3.28 Passive monitoring was undertaken using an automated logging system Wildlife Acoustics Inc. Song Meter® SM4Bat FS bat detectors with outputs saved to an internal storage device. The detector used a SMM-U2 microphone. The detector was placed along the woodland edge.
- 3.29 The detector was programmed to activate 30 minutes before dusk and recorded continuously until 30 minutes following sunrise. Recording took place over a period of five nights. The recorded data were analysed using Kaleidoscope Viewer® (Wildlife Acoustics, Inc) software package to assess the amount of bat activity on Site by recording the number of bat passes.
- 3.30 The detector units record sound files of up to 12 seconds in length before a new file is created. The analysis of the SM4BAT FS files recorded can highlight the presence of more than one bat recorded simultaneously on the same sound file. However, it is not possible to determine whether consecutive sound files have been recorded as the result of several different bats passing the detector as they commute across the landscape or by one bat repeatedly triggering the detector as it forages in close proximity for an extended period. Therefore, each sound file is counted as a single bat registration. The number of sound files recorded does however reflect the relative importance of the location of the detector by calculating the bat registrations per hour.

Survey Limitations

- 3.31 Where bat calls could not be identified to species level, for example due to the lower quality of those recordings or where there are similarities between species echolocation calls (particularly for *Myotis* and *Nyctalus* species) making a definite identification difficult, a likely species identification is provided. This is based on the features displayed by the calls when analysed using the Kaleidoscope data analysis software package and considering the geographical location of the Site and the habitats present.

Assessment Methodology

- 3.32 The impact assessment for ecology has been carried out using guidance from CIEEM (2018). The impact assessment process involves:
- Identifying and characterising impacts;
 - Incorporating measures to avoid and mitigate (reduce) these impacts;
 - Assessing the significance of any residual effects after mitigation; and
 - Identifying appropriate compensation & enhancement measures to offset significant residual effects.
- 3.33 The starting point for the assessment of impacts is to determine the importance of ecological features and as such, which should be subject to detailed assessment. Ecological features can be important for a variety of reasons, for examples, the quality of designated sites or habitats, habitat / species rarity, or their rate of decline (CIEEM, 2018).

Determining Importance

- 3.34 CIEEM have identified various characteristics that can be used to identify ecological features or features likely to be important in terms of biodiversity. These include:
- Animal or plant species that are rare or uncommon, either internationally, nationally or more locally;

- Ecosystems and their component parts, which provide the habitats required by the above species, populations and / or assemblages;
 - Endemic species or locally distinct sub-populations of a species;
 - Habitat diversity, connectivity and or / synergistic associations (e.g. networks of hedgerows and areas of species-rich pasture that may provide important feeding habitat for rare species);
 - Notably large populations of animals or concentrations of animals considered uncommon or threatened in a wider context;
 - Plant communities (and their associated animals) that are considered to be typical valued natural / semi-natural vegetation types – these will include examples of natural species-poor communities;
 - Species on the edge on their range, particularly where their distribution is changing as a result of global trends and climate change;
 - Species-rich assemblages of plants and animals; and
 - Typical faunal assemblages that are characteristic of homogenous habitats.
- 3.35 Once an ecological feature has been identified as being important, guidelines promote the use of characterising this feature with the relevant geographic frame of reference. This allows the scale of significance of effects to be presented in a meaningful way and provides a focus of maintaining a feature at an appropriate scale. The known or potential value of an ecological feature within this assessment will be considered within the following geographical context:
- International;
 - National;
 - Regional;
 - County (Derbyshire); &
 - Local (Derby).
- 3.36 If an ecological feature is not considered to be important, the proposed scheme is not anticipated to have an effect that would be of relevance to the decision maker and these features are not considered further within the assessment. Exceptions to this would be if the species, population or habitat in question was identified as having a high social or economic value or if they are afforded legal protection (e.g. badgers). While the assessment does include protected species that receive statutory protection and are of material consideration at the local level, the presence of such a species does not necessarily infer value in relation to the proposed scheme but only to the level of protection it receives.
- 3.37 As such the value of the proposed scheme for protected species is considered by the specific ecological feature, taking into account the level of activity, the level of protection it receives and the overall value of habitat to that species within the Site.
- 3.38 Features with a value of Local or above were considered to represent an ‘Important Ecological Feature’ (IEF). Those features not meeting the criteria for IEF’s were classified as having either lower than local level (immediate zone of influence) or negligible ecological importance.

- 3.39 Evaluation of habitats which did not reach this scale of significance were otherwise recognised as being of negligible significance or as providing habitat diversity at a site level but not considered to appreciably enrich the habitat resource at a local level or above.

Determining Impacts and Effects

- 3.40 The CIEEM guidelines, define an impact as an influence on an ecological feature. The effect is the outcome of the influence on the ecological feature. As part of the EclA it is important to assess whether or not an impact is defined as an effect (negative or positive) on the integrity of a defined site or ecosystem and / or the conservation status of a habitat or species within a given geographical area (CIEEM, 2018).
- 3.41 Impacts should be identified and understood to be able to determine their likely effect (consequence) of that impact in relation to the ecological feature.
- 3.42 As part of the process of determining whether there is likely to be an effect on the status of an ecological feature, the following questions are considered:
- Will any site / ecosystem process be removed or changed?
 - What will be the effect on the nature, extent, structure and function of component habitats?
 - What will be the effect on the average population size and viability of the component species?
- 3.43 A description of parameters that are considered when assessing the degree and type of change are detailed in Table 3 below.

Table 3: Parameters used to describe effects

Parameter for describing impacts on ecological structure and function	Definition of the parameter
Positive or Negative	Whether the impact has a positive or negative effect
Extent	The area of which the effect occurs
Magnitude	The size or amount of an effect
Duration	The time for which the effect is predicted to last prior to recovery or replacement of the resource or feature
Reversibility	Whether the effect is permanent (i.e. irreversible) or temporary (i.e. reversible)
Timing and Frequency	How often the effect occurs (e.g. repeated noise from piling work) and when it occurs (e.g. vegetation clearance undertaken outside of the bird breeding season).

- 3.44 With reference to the duration of an ecological impact, in addition to other uses, for the purposes of the assessment Table 4 defines the timeframes used within the chapter:

Table 4: Definition of timeframes

Term	Definition within this assessment
Short term	1-5 years
Medium term	6-15 years
Long term	16-60 years

- 3.45 In addition to considering the effect on the ecological feature an assessment of significance of the residual effect (for the type / nature of change), is provided in Table 5, below.

Table 5: Classification of the significance of the effects

Impact Classification	Explanation
Significant Negative Effect	Likely to create a significant negative effect, including loss, or long-term or irreversible damage on the status of the ecological feature.
Not Significant Negative Effect	Likely to create a negative effect without causing long-term or irreversible damage to the status of ecological feature.
Neutral	Effects are either absent or such that no overall net change to the ecological feature.
Not Significant Positive Effect	Likely to create a beneficial effect on an ecological feature, or providing a new lower value ecological feature without improving its conservation status.
Significant Positive Effect	The activity is likely to create a significant beneficial effect, including long-term enhancement and favourable conditions for an existing ecological feature.

- 3.46 Once an effect is considered to be significant then the scale of effect is assessed on a geographical scale (i.e. international, national, regional, district etc.). For example, the effect may not be significant at a district scale, but significant at a more local scale. It is important to note that effects on features will need to be considered at more than one geographical scale.

Mitigation, Compensation and Enhancement

- 3.47 For the purpose of the EclA, impacts on ecological features are generally assessed without mitigation in place. Although in some situations it is impossible to separate the mitigation as this is embedded into the scheme, in these situations it will be acknowledged and just the residual effects considered.
- 3.48 In line with current CIEEM guidelines, a sequential process, known as the 'mitigation hierarchy' should be adopted on negative ecological impacts and effects. This involves:
- Avoid negative ecological effects;
 - Reduce negative effects that cannot be avoided (mitigate); and
 - Compensate for any remaining significant ecological effects.

4.0 BASELINE CONDITIONS AND EVALUATION

- 4.1 This section presents a description and evaluation of baseline conditions for the EcIA, based upon consultation and the results of the Extended Phase 1 Habitat survey and the subsequent specialist surveys.

Site Description and Context

- 4.2 The application site occupies land to the east of Burton Road/A38 in Derby, Derbyshire (centred on grid reference SK 30257 31240) and is comprised by hardstanding with ruderal growth, areas of scrub, and a woodland belt. The landscape beyond the Site is predominantly agricultural, with an industrial area on the opposite side of Burton Road to the north-east, and some residential area to the north.

Statutory and Non-statutory Designated Sites

- 4.3 No internationally designated sites are located within 10km of the Site and no nationally designated sites located within 2km of the Site. There are no non-statutory designated sites of local conservation interest located within 1km of the Site.

Protected / Notable Species

- 4.4 The desk study did not identify any species records within the Site boundary. However, several records of protected or notable species were identified within 1km of the Site. These are summarised below.

Amphibians

- 4.5 No records of any amphibian species were returned within 1km of the Site boundary.

Bats

- 4.6 Table 6 summarises records of bat species collected during the desk study.

Table 6. Desk study bat records

Common name	Scientific name	No. records within 1km	Closest record	Date of latest record
Barbastelle	<i>Barbastella barastellus</i>	4	127m north-east	06.2020
Brown long-eared	<i>Plecotus auritus</i>	15	127m north-east	06.2021
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	104	68m north	06.2021
Daubenton's bat	<i>Myotis daubentonii</i>	2	586m east	08.2016
Leisler's bat	<i>Nyctalus leisleri</i>	4	127m north-east	06.2021
Myotis	<i>Myotis</i> sp.	71	127m north-east	06.2021
Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>	6	127m north-east	06.2021
Natterer's bat	<i>Myotis nattereri</i>	1	586m east	10.2013
Noctule	<i>Nyctalus noctula</i>	55	127m north-east	06.2021
Nyctalus	<i>Nyctalus</i> sp.	18	127m north-east	12.2018
Pipistrelle	<i>Pipistrellus</i> sp.	16	127m north-east	10.2014

Common name	Scientific name	No. records within 1km	Closest record	Date of latest record
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	55	127m north-east	06.2021

Birds

- 4.7 Records of twelve notable birds were returned by the desk study within 1km of the site. These are summarised below in Table 7.

Table 7. Desk study notable bird records.

Common name	Scientific name	No. records within 1km	Status	Date of latest record
Bullfinch	<i>Pyrrhula pyrrhula</i>	3	Amber list, UKBAP, NERC	03.2018
Barn owl	<i>Tyto alba</i>	1	WCA Schedule 1	02.2019
Fieldfare	<i>Turdus pilaris</i>	4	WCA Schedule 1	11.2020
Hobby	<i>Falco subbuteo</i>	1	WCA Schedule 1	05.2020
Lapwing	<i>Vanellus vanellus</i>	7	Red list, UKBAP, NERC	06.2020
Linnet	<i>Carduelis cannabina</i>	1	Red list, UKBAP, NERC	04.2020
Red kite	<i>Milvus milvus</i>	7	WCA Schedule 1	04.2021
Redwing	<i>Turdus iliacus</i>	3	WCA Schedule 1	11.2020
Reed bunting	<i>Emberiza schoeniclus</i>	2	Amber list, UKBAP, NERC	2019
Skylark	<i>Alauda arvensis</i>	2	Red list, UKBAP, NERC	04.2020
Song thrush	<i>Turdus philomelos</i>	6	Red list, UKBAP, NERC	06.2020
Swift	<i>Apus apus</i>	6	Amber list, UKBAP	08.2020

Status ley: UKBAP = UK Biodiversity Action Plan, NERC = Natural Environment and Rural Communities Act 2006, WCA = Wildlife and Countryside Act 1981.

Other Mammals

- 4.8 Eight records of European hedgehog *Erinaceus europaeus* (UKBAP; LBAP¹⁹) were returned, most recently in 2020 and the closest located approximately 720m south-east of the Site. All records were located within Findern.
- a. Two records of brown hare *Lepus europaeus* (UKBAP; LBAP) were recorded 845m south-west of the Site in 2004, most recently in 2004.

Reptiles

- 4.9 No records of any reptile species were returned within 1km of the Site boundary.

Invertebrates

- 4.10 No records of any notable invertebrate species were returned within 1km of the Site boundary.

¹⁹ [Lowland Derbyshire Biodiversity Action Plan \(LBAP\) 2011-2020](#)

Plants

- 4.11 No records of any notable plant species were returned within 1km of the Site boundary.

Invasive non-native species

- 4.12 One record of Himalayan balsam *Impatiens glandulifera* (WCA Sch 9) was returned 350m north-east of the Site in 2006. No other records of invasive species were recorded within 1km of the Site boundary.

Habitats

- 4.13 A detailed description of each habitat type is described below with the location of each habitat type illustrated in Figure 2. A full botanical species list is provided in Appendix A.

Developed land / sealed surface

- 4.14 Within the red line boundaries are areas of concrete/hardstanding with low growing ruderal plant species growing between concrete slabs and cracks. These areas comprise the northern entry road, the footprint of the derelict fuelling station structure, and an area south of the structure. Vegetation graded into other habitats present on Site and included bent grass *Agrostis* sp., cock's foot grass *Dactylis glomerata*, and bramble *Rubus fruticosus*. Some young self-set scrub species including goat willow *Salix caprea* and rose *Rosa* sp. were also noted across these areas.
- 4.15 This habitat is considered to have negligible value to nature conservation due to restricted botanical and structural diversity, therefore is not considered to be an IEF and will not be subject to detailed assessment.

Other broadleaved woodland

- 4.16 Bordering the Site to the east and the south was an area of other broad-leaved woodland. The Site boundary bisects the woodland to the east but encompasses most of the woodland to the south. The canopy was dominated by goat willow with the remaining trees including ash *Fraxinus excelsior*, blackthorn *Prunus spinosa*, crack willow *Salix fragilis*, hawthorn *Crataegus monogyna*, Norway maple *Acer platanoides*, sycamore *Acer pseudoplatanus*, wild cherry *Prunus avium*, and a single apple *Malus* sp.. The understory featured bracken *Pteridium aquilinum*, common ivy *Hedera helix* and wood avens *Geum urbanum*. A large rubble pile was noted within the woodland shown at Figure 2 target note 2.
- 4.17 . This habitat is a likely self-sown secondary woodland and is absent of typical woodland ground flora therefore does not meet the definition of a priority habitat under the Lowland Derbyshire Biodiversity Action Plan as Lowland mixed broad-leaved woodland. However, considering the intrinsic ecological value provided by woodland it is considered to be of importance at a **local** scale

Ruderal / ephemeral

- 4.18 Within the red line boundary was an area of ruderal vegetation on a previously developed surface, graded into the scrub and the woodland. The vegetation was moderately diverse but sparse and limited in structural diversity. Species included bent grass, cock's foot grass, fescue grass *Festuca* sp., bramble, bristly oxtongue *Helminthotheca echioides*, colt's foot *Tussilago farfara*, creeping thistle *Cirsium arvense*, hogweed *Heracleum sphondylium*, nettle *Urtica dioica*, ragwort *Senecio*

jacobaea, ribwort plantain *Plantago lanceolata*, rosebay willowherb *Chamaenerion angustifolium*, spear thistle *Cirsium vulgare*, and white clover *Trifolium repens*. An area of ruderal vegetation at the south-west corner of the Site was dominated by rosebay willowherb.

- 4.19 Scattered self-set scrub species were also present across this area, predominantly comprising goat willow.
- 4.20 This habitat is considered to have negligible value to nature conservation due to restricted botanical and structural diversity, therefore is not considered to be IEF and will not be subject to detailed assessment.

Scrub

- 4.21 The A38 side of the Site consisted primarily of scrub, with a south-western portion of this classified as bramble scrub, due to predominantly consisting of bramble, and the rest classified as mixed scrub. Within both areas, vegetation was interspersed with many of the same species as within the ruderal vegetation, particularly rosebay willowherb, creeping thistle, and nettle, with the vegetation between these areas grading into one another. Scrub species present included goat willow, wild cherry, elder *Sambucus nigra*, field maple *Acer campestre*, hawthorn, and rose.
- 4.22 Whilst scrub provides some intrinsic ecological value, this is not considered to provide any value over Site level and therefore is not considered to be IEF and will not be subject to detailed assessment.

Protected and Notable Species

Great Crested Newt

- 4.23 There were no waterbodies located directly on Site, therefore the scheme will not result in the loss of any GCN breeding habitat.
- 4.24 The desk study results including review of OS mapping indicated that four ponds may be present within 250m of the Site, see Figure 4. A Site visit on 6th September 2022 confirmed that P1 directly adjacent to the Site and P2 approximately 90m to the south were not present.
- 4.25 A third pond (P3) is located 170m north-east on the opposite side of the A38 which is considered to present a significant barrier to dispersal. Therefore, any GCN that may utilise this pond are unlikely to be able to disperse to terrestrial habitat within the Site.
- 4.26 A fourth pond (P4) is located 250m south of the Site boundary. Natural England Research Report 576²⁰ (An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt *Triturus cristatus*) provides details (in addition to the Great Crested Newt Mitigation Guidelines²¹) regarding GCN habitat associations and mitigation recommendations. This document states:

“The most comprehensive mitigation, in relation to avoiding disturbance, killing or injury is appropriate within 50m of a breeding pond. It will also almost always be necessary to actively capture newts 50-100m away. However, at distances greater than 100m, there should be careful consideration as to whether attempts to capture newts are necessary or the most effective option

²⁰ Cresswell W and Whitworth R (2004) An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt *Triturus cristatus*. English Nature Research Report 576. English Nature, Peterborough.

²¹ English Nature. 2001. Great crested newt mitigation guidelines.

to avoid incidental mortality. At distances greater than 200-250m, capture operations will hardly ever be appropriate”.

And,

“The least favoured direction of terrestrial dispersal has been found to be towards the habitat least likely to provide favourable conditions: arable land and open areas.”

- 4.27 These recommendations are also broadly consistent with findings in the literature, since although a maximum routine migratory range has been estimated as approximately 250 m from a breeding pond (Franklin, 1993²²; Oldham and Nicholson, 1986²³; Jehle, 2000²⁴), Jehle (2000) determined a terrestrial zone of 63 m, within which 95% of summer refuges were located. In addition, following the breeding season, (Jehle and Arntzen, 2000) recorded 64% of newts within 20 m of the pond edge. More recent research (Kovar *et al* 2009²⁵) also found GCN at the farthest, 249m from the water.
- 4.28 Whilst surveys have not been undertaken to determine if GCN are present or absent within P4, this is not considered necessary in this case given the relative distance of the pond from the Site as it is considered unlikely that newts will over this distance (250m). This can be further demonstrated with reference to Natural England Rapid Risk Assessment tool. As shown on Figure 4 and Table 8 below, 0.007ha of the proposed Site falls within the 100m to 250m of P4 and 0.939ha of the Site greater than 250m of P4. This outcome is “Green: offence highly unlikely”, which is defined further below.

Table 8: Abstract from Natural England’s Rapid Risk Assessment Tool

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.001 – 0.01 ha lost or damaged	0.005
Land >250m from any breeding pond(s)	0.5 – 1 ha lost or damaged	0.03
Individual great crested newts	No effect	0
Maximum:		0.03
Rapid risk assessment result:		GREEN: OFFENCE HIGHLY UNLIKELY

“Green: offence highly unlikely” indicates that the development activities are of such a type, scale and location that it is highly unlikely any offence would be committed should the development proceed. Therefore, no licence would be required. However, bearing in mind that this is a generic assessment, you should carefully examine your specific plans to ensure this is a sound conclusion, and take precautions (see Non-licensed avoidance measures tool) to avoid offences if appropriate. It is likely that any residual offences would have negligible impact on conservation status, and enforcement of such breaches is unlikely to be in the public interest.

²² Franklin P.S. (1993) *The migratory ecology and terrestrial habitat preferences of the great crested newt, Triturus cristatus, at Little Wittenham Nature Reserve*. M.Phil. Thesis, De Montfort University, UK.

²³ Oldham, R.S. & Nicholson, M., 1986. Status and ecology of the warty newt *Triturus cristatus*. Report to the Nature Conservancy Council (Contract HF 3/05/123), Peterborough.

²⁴ Jehle, R., 2000.. The terrestrial summer habitat of radio-tracked great crested newts (*Triturus cristatus*) and marbled newts (*T. marmoratus*). *Herpetological Journal*, 10, pp. 137-142.

²⁵ Kovar R, Brabec M, Vita R & Bocek R (2009) Spring migration distances of some Central European amphibian species. *Amphibia-Reptilia* 30 (2009): 367-378

- 4.29 Therefore despite suitable terrestrial habitat for GCN within the red line boundary which is restricted to the area of woodland along the boundary of the Site and the areas of scrub and rubble piles, it is considered highly unlikely that GCN will be present within the Site and therefore GCN are not considered to be an IEF and will not be subject to detailed assessment.

Bats

- 4.30 No features such as buildings or trees with bat roosting potential were noted within the Site boundary. The woodland within bordering the Site boundary and the scrub within Site provides potential suitable commuting and foraging habitat. A derelict fuelling station structure is present centrally within the Site, but this was assessed as having negligible bat roosting potential.
- 4.31 Due to the number of bat records within 1km of the Site boundary, and the presence of potential suitable foraging and commuting habitat within the Site, bats are considered an IEF and have been subjected to detailed assessment below.
- 4.32 During the point count survey, a total of four bats were recorded commuting through or adjacent to the Site, described in Table 9 below.

Table 9: Point Count Bat Survey Results

Time of contact	Species	Behaviour	Passes
19:22	Soprano pipistrelle	Commuting	1
19:24	Noctule	Commuting	1
19:28	Common pipistrelle	Commuting and foraging	1
19:52	Noctule	Commuting	1

- 4.33 The static bat detector was deployed at the woodland edge in the area where a section of the woodland is to be removed. However, due to the small size of the site it is likely that recordings of bats may be due to activity elsewhere on the Site or the adjacent area. Low numbers of bats were recorded over the five-night period, with a total of 135 recordings broken down in Table 10 below.

Table 10: Static Detector Survey Results

Species	Number	Average recordings per hour
<i>Myotis</i> sp.	43	0.682
Soprano pipistrelle	32	0.508
Noctule	32	0.508
Common pipistrelle	23	0.365
Brown long-eared	5	0.079

- 4.34 It was noted during the point count survey that the hardstanding, ruderal, and scrub habitats on the Site were heavily lit by road lighting from the A38.

Badger

- 4.35 No evidence of badger *Meles meles*, such as the presence of setts, hairs, latrines or snuffle holes, were observed at the time of the survey. The woodland habitat on Site provides limited suitable foraging and sheltering habitat for badger, as does the adjacent areas of scrub and hedgerow.

- 4.36 The value of the habitats directly within the Site for badgers is not considered to be an IEF in the context of this assessment, and with no evidence or records in the wider area they will not be subject to detailed assessment.

Birds

- 4.37 The other broadleaved woodland on Site is considered suitable for breeding and foraging urban-, woodland-, and woodland edge bird species. The scrub habitat also provides suitable nesting and foraging habitat. No nests were observed at the time of the survey.
- 4.38 Wild bird species are protected while nesting by the Wildlife and Countryside Act 1981 (as amended). This legislation protects wild birds and their eggs from intentional harm, and makes it illegal to intentionally take, damage, or destroy a wild bird nest while it is in use or being built. As such, to ensure legal compliance during construction, standard avoidance measures or mitigation have been included within section 5.
- 4.39 The habitats on-site provide suitable nesting and foraging habitat for a range of bird species, including those recorded within 1km of the Site. As such birds are considered to be an IEF at a **Local** scale and will subject to detailed assessment.

Reptiles

- 4.40 Habitats on Site are largely sub-optimal for reptiles, although the woodland provides some suitable habitat for reptile species which favour woodland edge habitats, such as common lizard *Lacerta vivipara* and grass snake *Naatrix helvetica*. Other habitats on Site provide limited foraging habitat, and a rubble pile within the woodland (Figure 2, target note 2) provides possible shelter and basking opportunities. None were observed incidentally during the habitat survey. Furthermore, there were no areas adjacent to or with good connectivity to the Site likely to be suitable for reptile species
- 4.41 Therefore, reptiles are not considered to be an IEF and will not be subject to detailed assessment.

Mammals

- 4.42 Habitat on Site was generally suitable for hedgehogs, with the woodland edge and scrub providing suitable foraging and nesting habitat. Considering this and the presence of hedgehog within the local area, hedgehog are therefore considered to be an IEF at a **Local** scale and will subject to detailed assessment.
- 4.43 While the woodland edge does provide some suitable for brown hare, the majority of the Site is considered less suitable being not very open and highly vegetated. Therefore, brown hare are not considered to be an IEF and will not be subject to detailed assessment.

Summary of Important Ecological Features

- 4.44 A summary of the ecological features that have been determined as requiring detailed assessment is provided in Table 11.

Table 11: Summary of Important Ecological Features and their Relative Ecological Importance

Ecological Feature	Ecological Frame of Reference
Broadleaved woodland	Local
Birds	Local

Ecological Feature	Ecological Frame of Reference
Bat species	Local
Hedgehog	Local

5.0 DESCRIPTION OF THE PROPOSED SCHEME

- 5.1 Current proposals for the Site include the erection of a Bio-CNG fuelling station comprising fuel pump islands, plant compound, access, landscaping, and associated development.
- 5.2 Two points of vehicular access into the development will be provided from Burton, one leading into the Site and one exiting onto the A38.
- 5.3 The proposed development will primarily be confined to the footprint of the existing areas of hardstanding, ruderal vegetation, and mixed scrub, with most of these habitats being lost. Some areas of the woodland will be lost, primarily an area to the south-east of the site, as well as some tree losses for the installation of underground drainage structures. The majority of the woodland is to be retained.

6.0 IMPACT ASSESSMENT

Woodland

- 6.1 Other broadleaved woodland comprises the north, east, and south perimeters of the Site.

Potential Construction Phase Impacts

- 6.2 A small area of the woodland is proposed to be removed, towards the south-eastern corner of the site to create room for a secure trailer bay and compressor. Proposed security fencing will run through the woodland, which may result in damage to and/or removal of trees. Drainage will also run through the woodland, which is likely to entail the removal of at least two trees to allow for the installation of an attenuation tank and fuel interceptor. Installation of further underground drainage structures have the potential to result in damage or necessitate the removal of further trees within the woodland.
- 6.3 Lowland mixed broad-leaved woodland is a Priority Habitat within the Lowland Derbyshire Biodiversity Action Plan. Although the woodland on site does not meet the definition of this habitat within the BAP, and the trees to be removed (Goat willow *Salix cinerea*) are not included within the relevant NVC types, care will be taken to maintain the biodiversity value of the on-site woodland.
- 6.4 The trees along the woodland edge have the potential to be impacted indirectly during the construction phase of the development, including from dust deposition, particularly in periods of dry weather. In the absence of mitigation, dust deposition could result in damage to vegetation and potentially affect associated fauna. Where impacts are severe, some species may disperse from affected areas in the short-term.
- 6.5 In the absence of mitigation, the impact of habitat loss during the construction phase would result in a **negative** impact on the woodland habitat however considering the small areas of habitat loss and in relation to the overall size of the woodland, this would be **not significant**.

Potential Operational Phase Impacts

- 6.6 It is not anticipated that the proposals will have any significant impacts on woodland habitat during the operational phase.

Mitigation Measures

- 6.7 Dust and emissions from construction are to be controlled at source to prevent impacts from dust deposition on the line of trees. Measures will be outlined within the CEMP.
- 6.8 The arboriculture report outlines measures to protect trees within this habitat where possible during construction using tree protection fencing and root protection buffers. Native tree planting will be incorporated into the green infrastructure where possible.
- 6.9 Installation of the fencing and underground drainage should be carefully considered to minimise felling of trees or damage to root structures.

Significance of Residual Effects

- 6.10 The successful implementation of tree protection measures throughout the construction phase will ensure the residual effects in relation to dust deposition and accidental damage are avoided. However due to habitat loss the impact will remain to be **negative** but **not significant**.

Birds

- 6.11 Along the boundary between the Site and Burton Road/A38 is an area of mixed scrub comprising a mix of planted and self-set standards of varying age which provide some suitable foraging and nesting habitat for birds, including species recorded within 1km of the Site such as bullfinch and song thrush. The rest of the perimeter of the site consists of a mixed broadleaved woodland belt.

Potential Construction Phase Impacts

- 6.12 Proposals entail the loss of much of the scrub habitat and small amounts of woodland area. Impacts from the loss of this habitat will be most likely to foraging and breeding birds.
- 6.13 During the construction phase there is a potential impact arising from vegetation and site clearance through the damage and destruction of active nests. Impacts on potential breeding birds along the woodland edge are possible as a result of increased levels of artificial noise, during both the construction phase.

Potential Operational Phase Impacts

- 6.14 Considering the proximity of the Site to the existing A38, it is not anticipated that the operation of the Site will result in any significant increase to birds over the existing baseline levels.
- 6.15 Therefore, in the absence of mitigation the proposals have the potential to result in **non-significant negative** impact on the local breeding bird populations.

Mitigation Measures

- 6.16 In the case of vegetation clearance, to avoid disturbance to breeding birds and to ensure legal compliance, suitable nesting habitat will be removed outside the bird-breeding season, which runs from March to August, inclusive. If this is not possible, vegetation will be checked prior to removal by an experienced ecologist. If active nests are found, the area will be left untouched and suitably buffered from works until all birds have fledged. Specific advice will be provided prior to undertaking the clearance. This is a statutory requirement due to the protection of all nesting birds and their nests under the WCA 1981 (as amended). A suitably qualified ecologist will supervise this.
- 6.17 Native scrub planting will be included within areas of green infrastructure following development, to mitigate the loss of scrub habitat that is available to birds.

Significance of Residual Effects

- 6.1 The loss of the Site's habitat is expected to have a negligible impact on the local breeding status of the bird species, while new planting of mixed scrub will mitigate the potential impact associated with habitat loss. Therefore, with habitat compensation measures and good working methods, the residual effects are expected to be **Neutral**.

Bats

- 6.2 A large number of bat records were returned by the desk study. Suitable habitat on-Site comprises broadleaved woodland and scrub, and the Site may form part of a larger commuting corridor. No bat roosting features were identified on any of the trees or the derelict structure on Site. Impacts on potential foraging and commuting bats along the woodland edge are possible as a result of increased levels of artificial light and noise, during both the construction and operational phases.
- 6.3 Overall, the field survey results show a low number of bats using the Site, primarily for commuting. Visual observations of bats were limited to two sightings, comprising a soprano pipistrelle and a common pipistrelle commuting over the perimeter woodland. The species composition of bats is expected for the area, with no Annex II species found to be present. It is possible that the site is largely unsuitable to bat species, possibly due to light spill from the A38, with the exception of the perimeter woodland which provides a commuting corridor. Removal of a section of the woodland has the potential to disrupt this commuting corridor.
- 6.4 Therefore, in the absence of mitigation the proposals have the potential to result in a **negative** but **non-significant** impact on the local bat population.

Mitigation Measures

- 6.5 Provided no light is directed at the woodland, a sensitive lighting scheme is considered to be likely sufficient to protect and mitigate any effects of light throw on the woodland edge. The CEMP will include controls on all temporary external lighting during the construction phase in order to minimise light spill on to the woodland edge.
- 6.6 Supplemental native tree planting where the section is removed is recommended to maintain a contiguous woodland corridor for commuting bats.
- 6.7 Habitat compensation measures outlined in Section 7 will provide some foraging and commuting habitat for bats.

Significance of Residual Effects

- 6.8 The successful implementation of the supplemental planting and directional lighting away from the woodland edge will ensure residual effects due to light throw and habitat loss will be **Neutral**.

Hedgehogs

- 6.9 Eight European hedgehog records were returned from within 1km of the Site boundary, with the woodland and scrub providing suitable habitat.

Potential Construction Phase Impacts

- 6.10 The woodland and scrub habitats on site may contain refugia for hedgehogs, which are known to be in the area. Works in these areas including vegetation clearance, or removal of rubble or other possible refugia materials, could result in harm to hedgehogs.

Mitigation Measures

- 6.11 It is recommended that clearance works within scrub or woodland habitats are carried out under a precautionary working method statement, to prevent harm to hedgehogs during construction.

Significance of Residual Effects

- 6.12 Implementation of recommended supervision during the construction phase will ensure no accidental harm to hedgehogs using the site. This, in addition to supplementary planting along the woodland edge, will ensure residual effects from vegetation clearance will be **Neutral**.

7.0 COMPENSATION & ENHANCEMENT

- 7.1 The application includes areas of new landscaping around the Site, including native and ornamental shrub planting around the Site boundaries. The majority of the perimeter woodland is set to be retained, with areas of vegetation clearance being replaced with native species planting once construction works are complete. The section of woodland proposed to be lost is to be offset through supplemental planting in the retained area to maintain a contiguous woodland corridor around the site. Where trees are felled to necessitate works, particularly during the installation of underground drainage structures, replacement native planting is to be carried out in the same area once construction is complete.
- 7.2 The proposed habitat creation within the landscape strategy will provide a range of foraging and nesting habitat for breeding birds and foraging and commuting habitat for bats. This will include mixed scrub, wildflower rich grassland, areas of native and ornamental shrub mixes, individual native tree planting and native species rich hedgerow. It is anticipated that this habitat creation would have benefits for a range of species. The inclusion of bird and bat boxes within the scheme would provide additional nesting and roosting opportunities.

General Enhancements

- 7.3 In line with NPPF, it is recommended that the development of the Site results in a gain in value for wildlife by incorporating biodiversity in and around the development via the use of ecological enhancement measures. In addition to the recommendations with respect to individual species and habitats outlined above, opportunities exist within the scheme for general biodiversity enhancements to be undertaken; the following are recommended for this specific Site:
- Soft landscaping using native and ecologically valuable species would enhance the Site, avoid using non-native species with overly complex flower structure or those of an invasive nature such as cotoneasters;
 - An ecological management plan will be devised and adhered to for all retained and created habitats in order for them to maintain existing value and/or realise enhanced value, making sure that management is appropriate and ongoing for the life of the development.
 - A variety of bat and bird boxes could be installed on retained trees on the woodland edge to increase availability of roosting and nesting sites;
 - Deadwood piles could be created in areas of retained open space/ woodland to provide a habitat niche for amphibians and small mammals as well as deadwood for invertebrates such as saproxylic beetles.

8.0 CONCLUSIONS

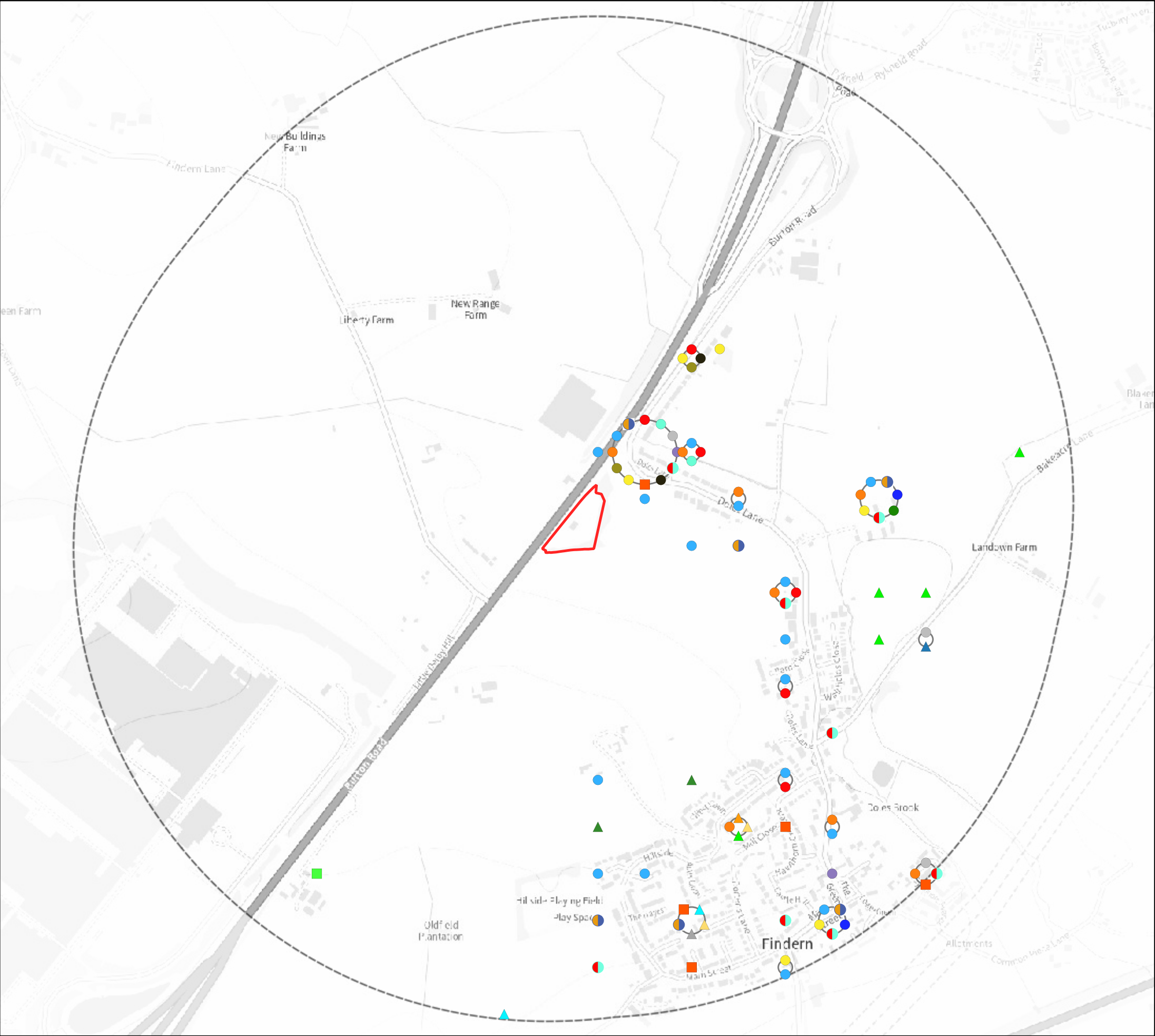
- 8.1 Proposals will not result in any residual negative effects on designated sites within the specified zone of influences.
- 8.2 Proposals will result in permanent losses of habitats under the footprint of the development. The habitats lost are of generally low ecological importance, and those of higher ecological importance, particularly the other broadleaved woodland, have been retained and enhanced where possible. Where losses of woodland habitat are unavoidable, replacement planting is to be undertaken post-construction. Creation of new habitats, including mixed scrub and wildflower planting, will limit negative impacts further. Mitigation through design has been utilised to avoid impacts to valuable boundary habitats, including the perimeter woodland, which is retained within the scheme.
- 8.3 Impacts will be further minimised through careful control of construction activities through an industry best practice CEMP. This also reduces the impacts on important faunal species that may utilise these habitats, such as the impacts of light throw on foraging and commuting bats. As a result, all other predicted effects on important ecological features are not anticipated to be significant.

APPENDIX A – BOTANICAL SPECIES LISTS

The principal habitat types were mapped within the Site and a representative species list for each habitat recorded. Species lists are not exhaustive of all flora present in each habitat type.

Common Name	Scientific Name	Developed land / sealed surface	Mixed scrub	Other broad-leaved woodland	Ruderal / ephemeral
Apple	<i>Malus sp.</i>			✓	
Ash	<i>Fraxinus excelsior</i>			✓	
Bent	<i>Agrostis sp.</i>	✓			✓
Blackthorn	<i>Prunus spinosa</i>			✓	
Bracken	<i>Pteridium aquilinum</i>			✓	
Bramble	<i>Rubus fruticosus</i>		✓		✓
Bristly oxtongue	<i>Helminthotheca echinoides</i>				✓
Cat's-ear	<i>Hypochaeris radicata</i>		✓		✓
Cinquefoil	<i>Potentilla reptans</i>		✓		✓
Cock's foot	<i>Dactylis glomerata</i>	✓	✓		✓
Colt's foot	<i>Tussilago farfara</i>		✓		✓
Common ivy	<i>Hedera helix</i>			✓	
Crack willow	<i>Salix fragilis</i>			✓	
Creeping thistle	<i>Cirsium arvense</i>	✓	✓		✓
Curly dock	<i>Rumex obtusifolius</i>	✓	✓		✓
Elder	<i>Sambucus nigra</i>		✓		
Fescue	<i>Festuca sp.</i>	✓		✓	
Field maple	<i>Acer campestre</i>		✓		
Goat willow	<i>Salix caprea</i>		✓	✓	
Greater burdock	<i>Arctium lappa</i>		✓		✓
Hard rush	<i>Juncus inflexus</i>				✓
Hawthorn	<i>Crataegus monogyna</i>		✓	✓	
Hogweed	<i>Heracleum sphondylium</i>				✓
Horsetail	<i>Equisetum arvense</i>				✓
Mugwort	<i>Artemisia vulgaris</i>				✓
Mullein	<i>Verbascum thapsus</i>		✓		✓
Nettle	<i>Urtica dioica</i>	✓	✓		✓
Norway maple	<i>Acer platanoides</i>			✓	
Oak	<i>Quercus sp.</i>				✓
Perforate St John's-wort	<i>Hypericum perforatum</i>		✓		✓
Ragwort	<i>Senecio jacobaea</i>		✓		✓
Red campion	<i>Silene dioica</i>				✓
Ribwort plantain	<i>Plantago lanceolata</i>	✓	✓		✓

Common Name	Scientific Name	Developed land / sealed surface	Mixed scrub	Other broad-leaved woodland	Ruderal / ephemeral
Rose	<i>Rosa</i> sp.		✓		
Rosebay willowherb	<i>Chamaenerion angustifolium</i>	✓	✓		✓
Soft rush	<i>Juncus effusus</i>				✓
Sow thistle	<i>Soncus</i> sp.		✓		✓
Spear thistle	<i>Cirsium vulgare</i>	✓	✓		✓
Sycamore	<i>Acer pseudoplatanus</i>			✓	
Teasel	<i>Dipsacus fullonum</i>		✓		✓
White clover	<i>Trifolium repens</i>				✓
Wild cherry	<i>Prunus avium</i>		✓	✓	
Wilson's honeysuckle	<i>Lonicera nitida</i>			✓	
Wood avens	<i>Geum urbanum</i>			✓	
Yarrow	<i>Achillea millefolium</i>				✓



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Key

- 1km search radius
- Site Boundary
- Barbastelle
- Brown Hare
- Brown long-eared
- Bullfinch
- Common pipistrelle
- Daubenton's bat
- Hedgehog
- Lapwing
- Leisler's bat
- Linnet
- Myotis bats
- Nathusius' pipistrelle
- Natterer's bat
- Noctule
- Nyctalus bats
- Pipistrelle bats
- Reed bunting
- Skylark
- Song thrush
- Soprano pipistrelle
- Swift
- Whiskered/Brandt's bat



client
CNG Fuels Ltd
project
Burton Road,
Derby
drawing title
Consultation Plan

scale @ A3
1:8500

drawn
SFW

issue date
28/9/2022

drawing / figure number
Figure 1

rev

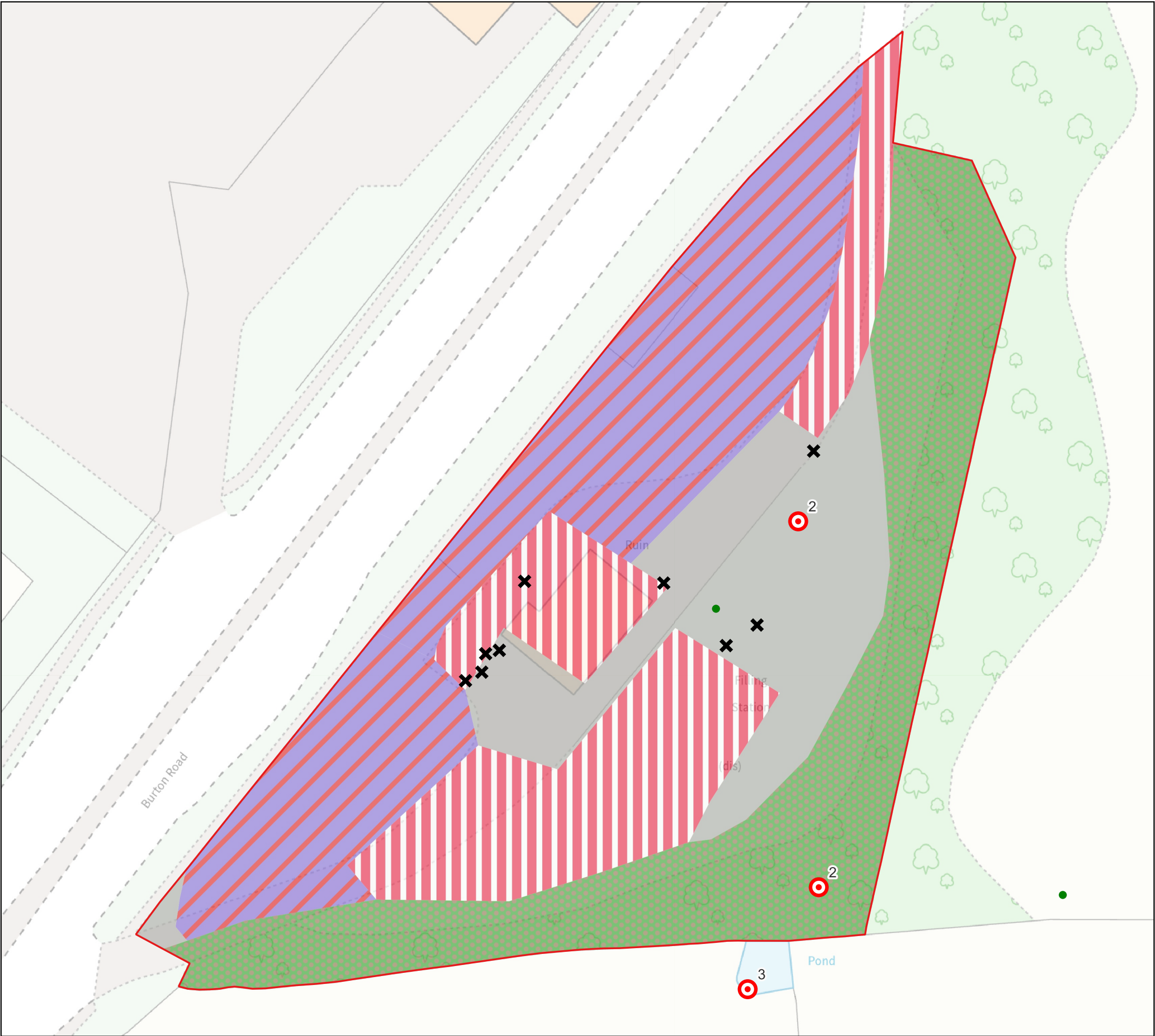
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Key

- Site Boundary
- Developed land; sealed surface
- Scrub
- Other woodland; broadleaved
- Ruderal/Ephemeral
- Broadleaved tree
- Scrub - scattered
- Target note





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Key

 **Site Boundary**

Baseline Habitat Condition

 **Moderate**

 **Poor**

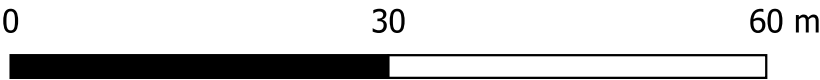
 **N/A - Other**

Baseline Habitat Distinctiveness

 **Medium**

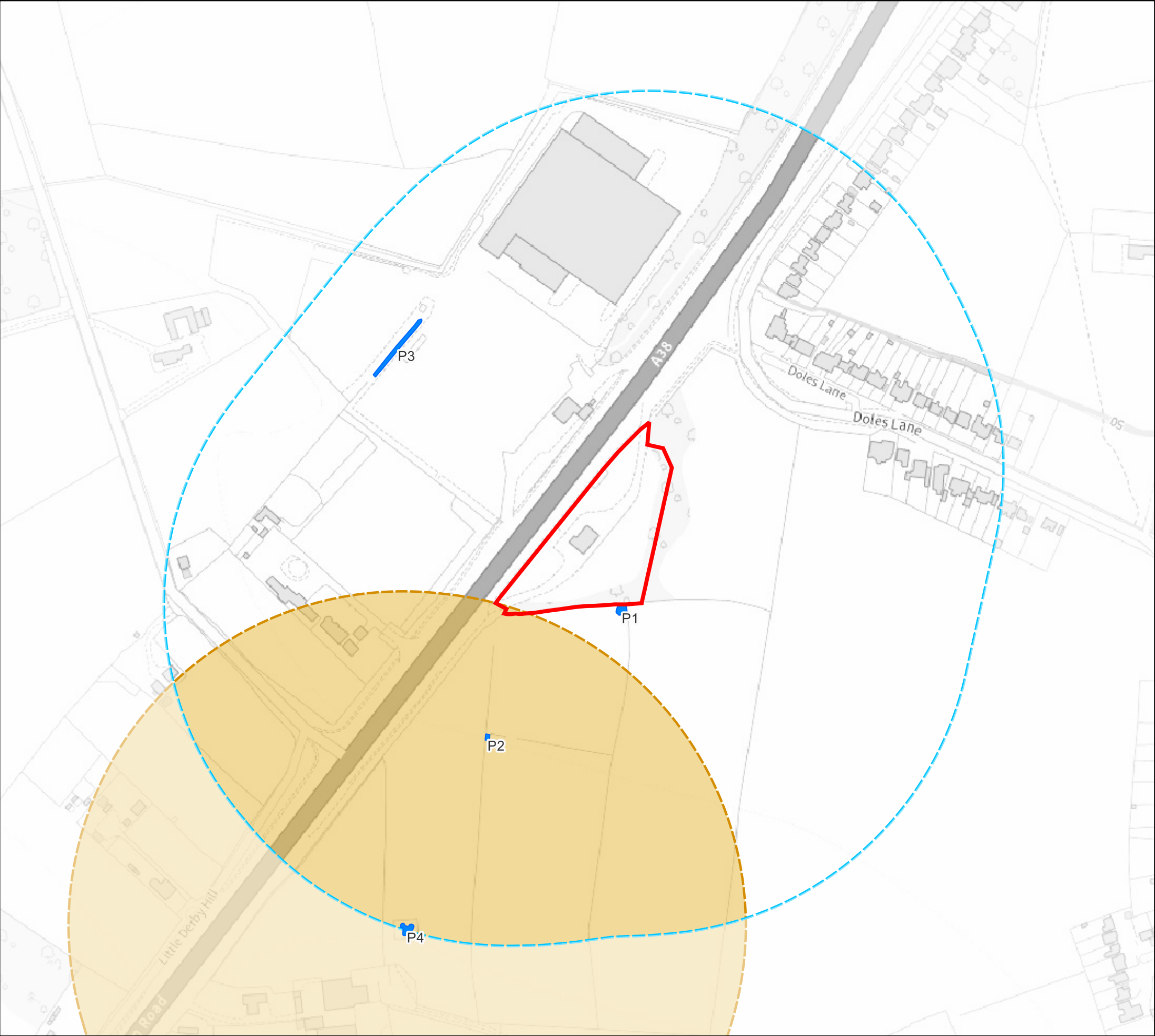
 **Low**

 **V.Low**



client
CNG Fuels
project
**Burton Road,
Derby**
drawing title
Baseline Habitat Condition / Distinctiveness

scale @ A3
1:600
drawn
SFW
issue date
29/9/2022
Figure 3



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Key

-  Site Boundary
-  250m Search
-  Ponds
-  P4 250m Buffer