



Charlie Moore Bsc (Hons) MArborA AMRSB

Arboricultural and Ecological Consultant

Email: charliemoore@arbtech.co.uk

Arbtech Consulting Ltd

arbtech.co.uk

Preliminary Ecological Appraisal

Survey site:

Land at the High Street, Grimethorpe, Barnsley, South Yorks, S72 7BB

Client:

Mark Garfitt

Survey date:

17-02-2024

Project:

This report is prepared to inform a planning application for the clearance of the majority of site, construction of a chalet building with supporting exterior features including a driveway and areas of hardstanding.

Survey methodology and legislation can be found in the Arbtech Supplement: [PEA Methodology and Legislation - 2024.](#)

The site survey was undertaken by Charlie Moore (Accredited Agent on Natural England Bat Licence Number: 2022-10404-CL18-BAT)					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
17-02-24	12	82	90	22.5	None

Ecological Survey Factor	Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.
Conclusion, Impact or Recommendations	
Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, photos in appendix 3 and proposal plan in appendix 4). Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).	
Summary of Survey Findings (UKHab codes used)	The survey site is centred on National Grid Reference SE 40776 08909 and has an area of approximately 0.5ha. It is located to the general western extent of Grimethorpe and is comprised of a large open area with several mature trees bounding and present onsite. Furthermore, a brook runs along the eastern extent of the site. Present onsite are several piles of hardcore, which has likely been placed onsite recently due to a lack of ground flora covering them, along with the piles being absent on aerial imagery. Furthermore, several large piles of brash and branches are also present onsite. Historically, there appears to have been partial construction onsite, as a retaining wall is present along half of the site, and the site topography appears to have been levelled – aerial imagery depicts that the site has been cleared historically, as recently as May 2022. Due to these features, it is likely that the species and habitats present are comprised from pioneer species that have established due to a lack of recent management. A search of the Magic.gov database reveals this site is not registered as an open mosaic

	habitat (or any other priority habitats), which is often the case with historically developed and unmanaged sites. The habitats onsite include: • Scattered trees (u1f-32) • Lines of trees (u1f-33) • Bramble scrub (h3d-518) • Sparsely vegetated urban land (u1f-518) <u>Scattered Trees</u> 6no. individual mature trees are present onsite, with species including willow and poplar. They are of similar age and size - approximately 20m tall, with a stem diameter of approximately 650mm. <u>Lines of trees</u> Several lines of trees are present on and offsite. A large line of poplars over 20m tall are present offsite, along the western boundary, with 4no. willows (~180mm diameter) present on the northern extent, and a large line of several trees present adjacent to the stream along the eastern extent of site. Species for this eastern group include alder, poplar, willow and hazel. Approximate measurements for this group range between 5m and 15m in height and 80mm and 500mm in diameter, and present also are dense shrubs including bramble and buddleia.
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	<u>Bramble Scrub</u> Sections of bramble scrub clearly dominate the edges of site, and due to the sites' neglect and lack of management have spread into the interior of the site also. These areas range from ground level to 2m tall and are comprised almost solely of bramble. <u>Sparsely vegetated urban land</u> Dominating the site is a large area of unmanaged and neglected land that has previously been developed or cleared, as recently as May 2022. It is not listed as an open mosaic habitat on the Magic.gov database. Due to its unmanaged nature, the species present in this habitat parcel are comprised of pioneer species, and include thistle, plantain (a), dandelion, cow parsley (f), creeping buttercup, hogweed, willow herb, teasle, meadow grass (o) and dock (r). There are also several areas of bare ground present, along with seasonally wet ditches or puddles – likely due to the previous management of the site, and the proximity of the adjacent brook. The sward height for this habitat parcel ranges from ground level to approximately 1m. <u>Local habitats</u> The local area surrounding the site is comprised of a typical semi urban dwelling area, with several dwellings and supporting features including main roads, street lighting, mature scattered trees and amenity areas, and several industrial estates. 2no. notable habitats are present within 2km of site, being deciduous woodland (also noted as semi ancient woodland) located ~1km east of site. The intervening
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	habitats between the site and these areas is comprised of main access roads and urban dwelling areas – as such, the woodland is not considered to have suitable connectivity to the site. The brook adjacent to site runs along the eastern boundary of site and is cloudy in colour and is located adjacent to an industrial estate and main road, with a sewage treatment works approximately 40m west of the site. Due to this, it is likely that this brook is impacted significantly by run off from the road, industrial estate and sewage works, and so is likely to be suboptimal for many species.
<i>Foreseen Impacts</i>	No notable habitats are present or are within affecting distance of site. However, due to the proximity of the brook to the site, run off and pollution from construction works is likely.
<i>Recommendations</i>	Best practice measures to minimise the possibility of pollution affecting the nearby ancient woodland must be implemented during construction. A Construction Environment Management Plan (CEMP) may be required for this.
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	Several designated sites have been returned within a 2km search of the local area: <u>West Haigh Wood Local Nature Reserve (LNR) 1500m east</u> Archaeological features including abandoned Victorian ponds. Mixed deciduous woodland with oak dominating. West Haigh is next to Ladywood and Houghton Common and together they form a site known as White City Woods. <u>Carlton Main Brickworks Site of Special Scientific Interest (SSSI) 620m south</u> This operational clay pit lies just to the south of Grimethorpe, six kilometres east of Barnsley. The special interests are within the Coal Measures strata, exposed by the extraction of clay. They include one of the

	best available exposures of the Top Marine Band (Westphalian C, Middle Carboniferous) in the Pennines coalfields. It has yielded an anomalous Myalina-facies fauna, a shelly fauna which contrasts with the Anthracoceras/pectinoid facies fauna found elsewhere in this area of Yorkshire. The Top Marine Band is the highest Coal Measures marine band in Britain, and is the last evidence of normal marine conditions in this country during the Carboniferous Period. A site of considerable scientific interest. <u>Dearne Valley Wetlands SSSI 1200m south</u> • Dearne Valley Wetlands SSSI is of special interest for the following nationally important features: Breeding gadwall <i>Mareca strepera</i>, shoveler <i>Spatula clypeata</i>, garganey <i>Spatula querquedula</i>, pochard <i>Aythya ferina</i>, bittern <i>Botaurus stellaris</i>, black-headed gull <i>Chroicocephalus ridibundus</i> and willow tit <i>Poecile montanus klienschmidt</i>. • Non-breeding gadwall <i>Mareca strepera</i> and shoveler <i>Spatula clypeata</i>. • Diverse assemblages of breeding birds of Lowland damp grasslands, Lowland scrub and a mixed assemblage of Lowland open waters and their margins and Lowland fen. The site itself is not subject to any designation, however it is located within an impact risk zone for the two SSSIs noted above. The presence of non-statutory designated sites within 2km cannot be established without biological records data from the Barnsley Biological Records Centre.
<i>Foreseen Impacts</i>	The proposed development is likely to include underground or overhead infrastructure including pipelines or underground cables, which have been listed as a possible risk to the two SSSI sites identified above.

	No other impacts to designated sites as a consequence of the proposal are anticipated.
<i>Recommendations</i>	Natural England may need to be consulted for impacts to the 2no. SSSI sites.
Invasive / Non-native species	
<i>Summary of Survey Findings</i>	No problematic invasive and non-native species recorded on site.
<i>Foreseen Impacts</i>	N/A
<i>Recommendations</i>	No further surveys but remain vigilant.
Invertebrates	
<i>Summary of Survey Findings</i>	No habitat for protected or notable invertebrates is found on site. However the bramble scrub and brook will support more common species of invertebrates.
<i>Foreseen Impacts</i>	the development could impact common species of invertebrates.
<i>Recommendations</i>	No further surveys – however the proposal should include species rich wildflower planting in suitable locations onsite to improve the area for common invertebrates.
Bats	
<i>Summary of Survey Findings</i>	There are no bat roosting habitats on site – the trees present onsite lack suitable features such as cavities, included bark unions, historic pruning wounds and sheer cracks to be considered suitable for roosting. Bats could use the scattered trees onsite, brook and lines of trees on and offsite for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site and commuting around the area. There is a single EPSL for bats within 2km present, which covered common pipistrelles and expired in 2014.

<i>Foreseen Impacts</i>	The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats. The proposed development will likely include the removal of the scattered trees onsite; however this is not likely to significantly reduce the available foraging habitat in the area for bats.
<i>Recommendations</i>	A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting-2
Birds	
<i>Summary of Survey Findings</i>	No evidence of nesting birds was found on site during the surveys; however, birds could use the scattered trees and scrub for nesting. No habitat for schedule 1 birds was observed – the banks present on the brook are suboptimal for kingfishers due to the coverage of the banks by dense ground flora.
<i>Foreseen Impacts</i>	The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.
<i>Recommendations</i>	Any vegetation removal should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged.
Reptiles	

<i>Summary of Survey Findings</i>	The scrub onsite, along with the piles of scrub could support reptiles. Furthermore, several brick piles are also present onsite which could provide substantial hibernacula, therefore the site has good suitability for reptiles. However, the site is bounded immediately to the north, east and south by major man-made barriers including a main road, industrial estate and a brook. A large area of greenspace is present west of site, however this, similar to the site itself, is bounded by a significant main road. Therefore, the site is not likely to be suitably connected to the wider area. Therefore, despite the habitat value onsite for reptiles, it is unlikely that reptiles could access the site, and as such, the site is suboptimal for reptiles. If reptiles are present onsite, they are likely to be a isolated.
<i>Foreseen Impacts</i>	Although suitable habitat (scrub and bricks) is being removed as part of the development, there is a low risk that a low number of reptiles could be present in the vicinity of the works. These could be injured or killed without mitigation.
<i>Recommendations</i>	<i>A precautionary working method will be implemented for widespread reptiles during construction, including the following measures:</i> <i>• Vegetation will be maintained at a short sward (5cm) to discourage reptiles.</i> <i>• Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape.</i> <i>• Best practice pollution prevention measures will be implemented to minimise impacts to nearby habitats.</i> <i>• Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.</i>

	• <i>If any reptiles are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.</i> • <i>In the unlikely event that a reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist.</i> The site could be enhanced for reptiles post development with the inclusion of log and/or rubble piles and other hibernacula in suitable areas onsite.
Amphibians	
<i>Summary of Survey Findings</i>	Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). A review of aerial imagery indicates the presence of 3no. standing water bodies within 500m of site, located west and northwest, with the closest being located 100m directly west from the site. The intervening habitats between the site and these ponds is comprised of a main road with kerbs, which is likely to result in the site not being suitably connected to these ponds. The brook located adjacent to site is not likely to support great crested newts due to it having a steady flow of water, and aforementioned likelihood of pollution from run off of the road and adjacent industrial areas. The habitats identified above for reptiles are also likely to provide some value for more common species of amphibians including common toads and frogs.

	The standing water body onsite is not present on historic maps, and so is likely to be a recent addition due to the landscaping works. Due to this, it is likely to be seasonably wet, and generally unsuitable for great crested newts. There are no great crested newt European Protected Species License (EPSL) within 2km.
<i>Foreseen Impacts</i>	Common species of amphibian could be present onsite, and so works could harm or endanger common species of amphibians. Great crested newts are not likely to be present onsite due to the man-made barriers and lack of connectivity to suitable water bodies.
<i>Recommendations</i>	No further surveys are required – precautionary working methods for reptiles will assist amphibians. In the unlikely event a great crested newt or evidence thereof is identified during works, all works must cease, and advice should be sought from an appropriately qualified ecologist.
Badger	
<i>Summary of Survey Findings</i>	No evidence of badgers was found on or within 30m of the site. Furthermore, a palisade fence runs around the extent of site that is likely to restrict badgers being able to access the site.
<i>Foreseen Impacts</i>	<i>None foreseen</i>
<i>Recommendations</i>	None.
Riparian animals	
<i>Summary of Survey Findings</i>	Upon inspection of aerial imagery, the brook adjacent to site is not suitably connected to a wider array of watercourses, and so is not likely to support riparian mammals, including otters. The brook is also soft sided and so could support water voles – however there are no suitable habitats for water voles present on the site, and the flora present on the brook is comprised of bramble scrub.

	As previously mentioned, the brook is also likely subject to significant run off from surrounding manmade areas, and so is not likely to be overtly suitable for riparian mammals. Furthermore, the site itself lacks suitable habitats including grassland to be considered suitable for riparian mammals.
<i>Foreseen Impacts</i>	No impacts are anticipated on riparian animals as a result of the proposed development, as they are not likely to be present onsite.
<i>Recommendations</i>	N/A
Hazel dormouse	
<i>Summary of Survey Findings</i>	The site is located outside the known range of any dormice populations. The site also lacks any hedgerows, and so has no suitability for hazel dormice.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	None.
Other e.g. hedgehog	
<i>Summary of Survey Findings</i>	The scrub onsite and piles of brash are likely to be of high value for hedgehogs. Furthermore, the palisade fence is not likely to be considered a barrier for hedgehogs due to its construction.
<i>Foreseen Impacts</i>	Scrub and brash piles are likely to be removed to facilitate the works.
<i>Recommendations</i>	A precautionary working method will be implemented during construction, including the following measures: - Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use.

	Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.
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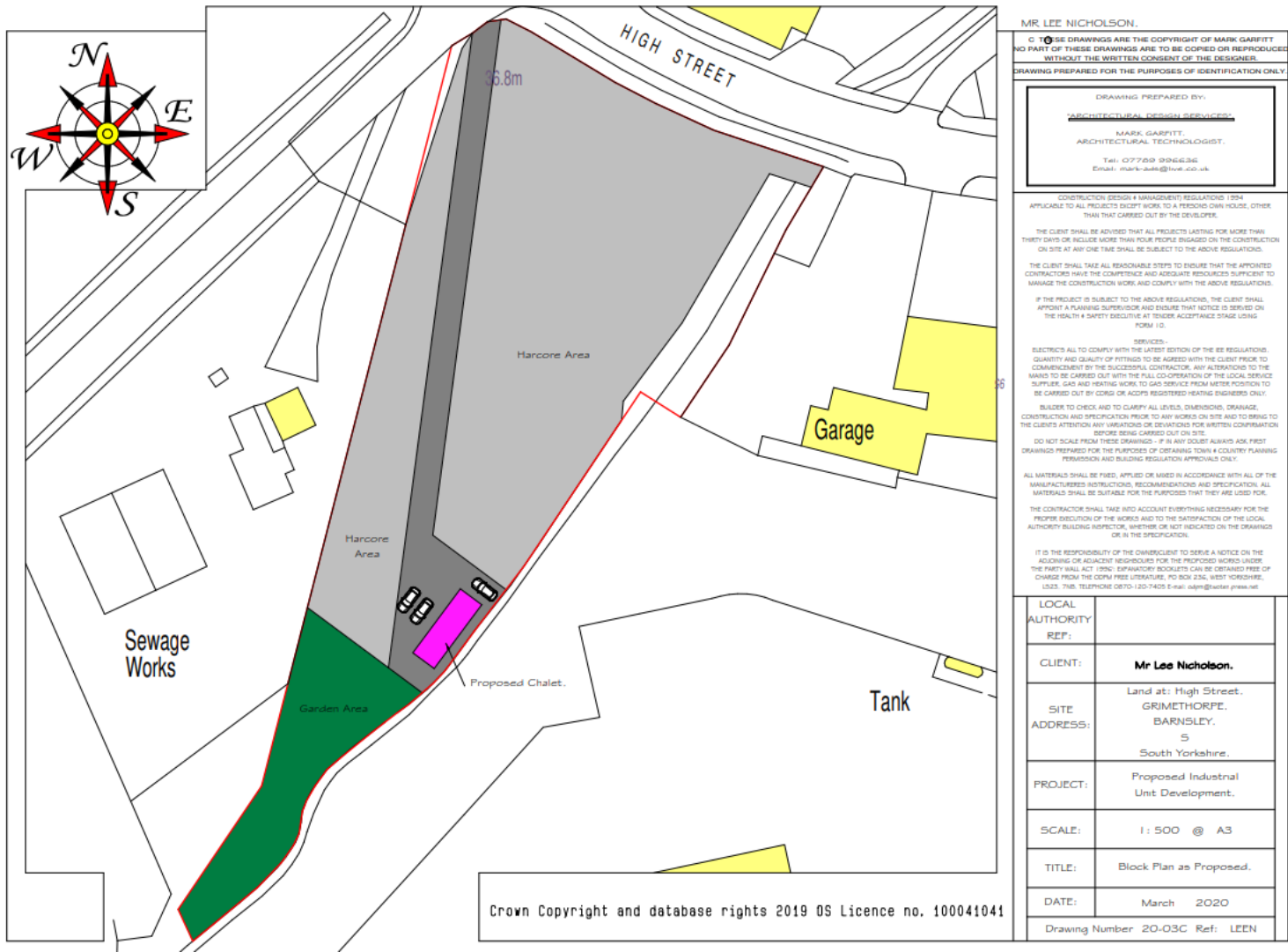
Appendix 1: Survey/Habitat map



Appendix 2: Location map



Appendix 3: Proposed plan



Appendix 4: Photos



Photo 1: aerial drone shot of the site, with the hardcore piles visible on the northern extent, along with existing manmade barriers around the site.



Photo 2: evidence of historic groundworks and hardcore in situ.



Photo 3: looking south up the brook with bramble scrub.



Photo 4: seasonally wet pond identified onsite.



Photo 5: large brash piles suitable for hedgehogs.

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