


<p>Stairfoot Roundabout</p> <p>Update Preliminary</p> <p>Ecological Appraisal and</p> <p>Preliminary Roost</p> <p>Assessment</p> <p>Memo Report</p> <p>June 2024</p> <p>Job No. T10138</p>	
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<p>Date: 03/07/2024</p>	

1 Introduction

1.1 Temple was commissioned by Barnsley Metropolitan Borough Council on the 22 April 2024 to carry out a walkover survey to confirm the validity of the existing Preliminary Ecological Appraisal (PEA) (Brooks Ecological 2023) of land around Stairfoot roundabout, Barnsley, South Yorkshire. The previous appraisal was carried out to provide ecological information to inform a widening scheme of the roundabout to improve traffic congestion in the area. The updated Site boundary now includes further areas of the Trans Pennine Trail adjacent to Wombwell Lane,

a further stretch of Bleachcroft Way and grassland to the east of Grange Lane, a map of the new boundary can be seen in Appendix 1. This appraisal considers land within the new planning application Site boundary (henceforth referred to as 'the Site') which has been extended as indicated on the plan provided by the client (Appendix 1, Figure 1).

- 1.2 This update ecological appraisal following a Site visit/walkover survey undertaken on 30 April 2024 is intended to inform the relevant planning authority of any likely change and the need for and scope of any surveys that may need updating further as a result of the changing Site boundary to the previous reports Preliminary Ecological Appraisal (Brooks Ecological 2023) and Preliminary Roost Assessment Temple (Temple 2023).

BACKGROUND

- 1.3 The previous PEA survey, comprising a Phase 1 habitat survey (undertaken April 2023), protected species assessment and ecological evaluation was produced in June 2023 by Brooks Ecological (Brooks Ecological 2023). The summary of that visit concluded:

- *"The Site is not subject to any statutory or non-statutory nature conservation designations.*
- *The Site comprises Stairfoot roundabout and the areas of green space within and around it; the Keel Inn and associated curtilage; and, short sections of Grange Lane, Doncaster Road, Wombwell Lane, Bleachcroft Way and Hunningley Lane.*
- *The habitats within the Site are common and widespread and are likely to be of value within the immediate vicinity of the Site only (although may assume higher value where they support protected and/or notable species).*
- *Bats –Buildings on Site were assessed as having negligible suitability, however outbuildings associated with the Keel Inn and trees on Site were not assessed and a further Ground Level Tree Assessment (GLTA) and Preliminary Roost Assessment (PRA) were recommended.*
- *Foraging Bats – Due to the urban location and extensive street lighting suitable foraging opportunities are considered to be low. Suitable lighting strategies have been recommended to avoid disruption of commuting and foraging bats.*

- *Breeding birds – Incidental sightings of carrion crow, magpie, long-tailed tit, blue tit, robin, and blackbird were observed during the Site visit. The trees and shrubs across the Site provide limited suitability for nesting birds. Any necessary removal of trees and shrubs should therefore be scheduled outside the bird breeding season, September and February inclusive. Where this is not possible, a check for nesting birds prior to demolition should be undertaken by an experienced ecologist and, if any nests are found, the nests should be protected until such time as the young have left the nest. If any nesting birds are found at any time during clearance works, work should stop immediately, and an ecologist consulted. Feral pigeons were observed nesting within the Site during the GLRA surveys, which can breed outside of the main breeding bird season.*
- *Butterfly – Priority Species. There is the potential for two priority butterfly species to be breeding on-Site, within the areas of less-managed neutral grassland in the northwest. Should the road layout modification works impact on areas of grassland within the Site boundary, survey for dingy skipper and small heath may be required. These should take place during the species' peak flight periods: May—early June (dingy skipper) and July (small heath) to assess population status on-Site.*
- *Recommendations to enhance the importance of the Site for biodiversity in accordance with national and local planning policies comprise the inclusion of wildlife planting such as wildflower planting on grassland, the enhancement of woodland areas, the provision nesting birds and roosting bat opportunities and invertebrate habitat provisions."*

1.4 The Further Surveys completed on Site by Temple include a Ground Level Tree Assessment (GLTA), Preliminary Roost Assessment (PRA) for bats and a Habitat Suitability Index (HSI) Assessment for Great Crested Newts (Temple, 2023). The summary of that visit concluded:

- *All trees on Site were assessed from ground level, with the majority having negligible suitability to support roosting bats due to the size and age of the trees. Thirteen trees were assessed as being suitable for roosting bats; 10 of these had dense ivy cover and two had loose bark, which may support individual bats during the warmer months; a single tree had a dead branch with some small cavities however this was located next to a busy road and would be affected by resulting noise and light pollution, which may result in limited suitability to support roosts of species which are less light tolerant. The 13 trees were all*

rated as being of low suitability for individual bats, or very small numbers of bats due to size of the features and lack of suitable close nearby habitat.

- *The outbuilding associated with the Keel Inn had some minor roosting features such as gaps under ridge tiles and loose bricks, the location of all buildings lowered the suitability, with light pollution from the nearby streetlights and public house and noise from the roads. Two buildings, building 1 and building 2 were rated as low suitability with potential roost feature – individual suitability to support roosting bats. Two buildings, building 3 and building 4 were rated as negligible suitability.*
- *The HSI survey found that of the two potential ponds within 250m one scored Average and one scored Poor. Natural England's rapid risk assessment tool (Natural England, 2008) was used to give an indication of the likely impact of the proposed works to great crested newts. A total of 0.12ha of suitable habitat, comprising woodland adjacent to Grange Lane and Wombwell Road, located between 100m-250m from Ponds 2 and 3, will be lost as a result of the proposed works. Based on the rapid risk assessment, the proposed works therefore fall into the category of "Green: offence highly unlikely" it is considered that no further survey is required and a Precautionary Working Method Statement can be produced to manage any residual risk to great crested newt.*

SCOPE OF REPORT

- 1.5 The purpose of this update survey and report is to provide up to date information on baseline habitats to inform an Ecological Impact Assessment (EclA) and Biodiversity Net Gain (BNG) assessment and to identify whether there are any new or different ecological constraints to that detailed in the initial PEA report which may require additional mitigation and/or compensation.
- 1.6 This report presents the findings of the Site visit undertaken in April 2024 and considers:
- the ecological baseline.
 - the distribution and importance of ecological features present (or those that could be present), as far as is possible. This supports mapping the baseline habitat and valued ecological resource description/distribution.

- evaluation of whether the Site supports, or may support, a mobile species which could have moved on to Site or changed its distribution.
- whether there have been significant changes to the habitats present (and/or the ecological conditions/functions/ecosystem functioning upon which they are dependent) since the surveys were undertaken, including through changes to Site management.
- whether the local distribution of a species in the wider area around the Site has changed (or knowledge of it increased), increasing the likelihood of its presence.
- The validity of the original survey reports; and
- The need for, timing and methods for the update of surveys.

1.7 This appraisal has been prepared with reference to best practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017) and as detailed in British Standard 42020:2013 *Biodiversity - Code of Practice for Biodiversity and Development* (British Standards Institution, 2013) and *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 4th edition (Collins, J. (ed.) 2023).

SITE CONTEXT AND STATUS

1.8 The proposed scheme, hereafter referred to as ‘the Site’, is centred on Ordnance Survey National Grid Reference SE 37289 05508 encompasses Stairfoot roundabout and the areas of green space within and around it; the Keel Inn and associated curtilage; and, short sections of Grange Lane, Doncaster Road, Wombwell Lane, Bleachcroft Way, Hunningley Lane and part of the Trans Pennine Trail, where it crosses the Site on an old rail bridge.

DEVELOPMENT PROPOSALS

1.9 The development proposals for the Site are for a road widening scheme and junction improvements to alleviate traffic, based on plans provided by the client (Barnsley District Council 2024).

Extended Phase 1 Habitat Survey

- 2.1 A habitat survey of the Site was carried out on 30 April 2024. The weather conditions were a temperature of approx. 16°C, 2/8 oktas cloud, light breeze and no rain. The survey covered the entire Site however, focused on areas that were not included within the previous PEA report. Habitats were described and mapped following standard Phase 1 habitat survey methodology (JNCC, 2010). Habitats were marked on a paper base map and subsequently digitised using ESRI ArcGIS software.
- 2.2 Phase 1 habitat types have been converted to UK Habitat Classification (UK Habitat Classification, Version 2, 2023) types for the purposes of calculating the preliminary baseline units for the update BNG assessment. These are reported, alongside the calculations, in the accompanying BNG report (issued separately, Temple, 2024). The condition of each of these habitats on Site has been recorded in line with the Statutory Biodiversity Condition Assessment (Natural England, 2023).
- 2.3 Photographs of the Site are provided in Appendix 3 and the relevant legislation and policies relating to protected species and habitats are set out in Appendix 4.

Protected and Invasive Species Assessment

- 2.4 The suitability of the Site for legally protected species was assessed during the habitat survey. The likely value of habitat for protected species occurrence was ranked on a scale from 'negligible' to 'present' as described in Table 2.1.

Table 2.1: Protected species assessment

Category	Description
Present	Presence confirmed by the current survey or by recent and/or desk study records.
High	Habitat present provides all known key requirements for a given species/species group. Local records are provided by desk study. The Site is within or close to a national or regional stronghold for a particular species. Good quality surrounding habitat and good connectivity.
Moderate	Habitat present provides some of the known key requirements for a given species/species group. Several desk study records and/or the Site are within known national distribution and with suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, barriers to movement and disturbance.
Low	Habitat present is of relatively poor quality for a given species/species group. Few or no desk study records. Presence cannot be discounted on the basis of national distribution, nature of surrounding habitats or habitat fragmentation.
Negligible	Habitat is either absent or of very poor quality for a particular species or species group. No desk study records. Surrounding habitat unlikely to support wider populations of a species/species group. Outside or peripheral to the known range of a species.

2.5 The findings of this assessment establish the need for protected species surveys that are required to achieve compliance with relevant legislation. Surveys may be required where a site is judged to be of low suitability for a particular species/species group. However, in some cases there may be opportunities to comply with legislation, without further survey, through precautionary measures prior to and during construction.

SITE EVALUATION

2.6 Where sufficient baseline data are available, the Site's ecological importance has been evaluated broadly following guidance issued by CIEEM (CIEEM, 2018 which ranks the nature conservation importance of a site according to a geographic scale of reference: international, national, regional (SouthYorkshire), metropolitan, county, vice-county or other local authority-wide area (Barnsley Metropolitan Borough Council and of importance at the zone of influence of the Site only. In evaluating the nature conservation importance of the Site, the following factors

were considered: nature conservation designations; species/habitat rarity; naturalness; fragility and connectivity to other habitats. Where no importance has been assigned this is due to insufficient information.

2.7 An assessment of likely ecological impacts has been undertaken in accordance with CIEEM guidelines (CIEEM, 2018 only where clear evidence is available to substantiate and justify the findings. In the absence of such evidence, the ecological feature is merely identified as a potential constraint to development.

2.8 Where potential ecological constraints to development are identified, further survey requirements and/or mitigation measures that are proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development are described. In addition, in accordance with the NPPF and local/regional planning policies, opportunities to enhance or create benefits for wildlife are provided. These measures may be appropriate for the attainment of net gains in biodiversity, although this assessment does not provide a formal measure of Biodiversity Net Gain.

GROUND LEVEL TREE ASSESSMENT

2.9 The GLTA consisted of a comprehensive inspection of all accessible (from ground level) features present on all trees within the Site boundary. The inspection identified any potential roost features (PRFs) such as rot holes, woodpecker holes, knot holes, tear outs, hazard beams and ivy. Any evidence of use by bats, past or present, such as live or dead bats, bat droppings, fur/oil staining or other signs, were also recorded.

DATA VALIDITY AND LIMITATIONS

2.10 It should be noted that whilst every effort has been made to provide a comprehensive description of the Site, no investigation can ensure the complete characterisation and prediction of the natural environment. The walkover habitat survey does not constitute a full botanical survey that would include accurate GIS mapping for invasive or protected plant species.

- 2.11 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the Site, based on the suitability of the habitat, known distribution of the species in the local area provided in response to our enquiries and any direct evidence on the Site. It should not be taken as providing a full and definitive survey of any protected species group. It is only valid at the time that the survey was carried out. Ecological survey data are typically valid for 18 months unless otherwise specified (CIEEM, 2019).
- 2.12 An updated desk study was not carried out. The habitats within the Site are largely unchanged since the previous survey, and remain of low ecological value, and it is considered unlikely that any additional data from the local records centre would include any specific records pertaining to the Site, given the limited opportunities present.
- 2.13 Despite these limitations, it is considered that this report reflects accurately the habitats present, their biodiversity importance and the potential of the Site to support protected and notable species.

3 Results

PHASE 1 HABITAT SURVEY

Overview

- 3.1 The habitats within the updated Site boundary comprise hardstanding roadways and pavements with surrounding grassland, introduced shrub, woodlands and scattered trees. The Site has only minimal habitat changes since the previous survey (Brooks Ecological, 2023), with further hardstanding with introduced shrub to the south, an area of grassland to the north and a path bordered by introduced shrub and woodland to the south-east added to the red lined boundary.
- 3.2 A description of dominant and notable species and the composition of each habitat is provided below, with a species list (including all scientific names) provided in Appendix 2. Photographs are located in Appendix 3.

Habitat Description

Other Broadleaved Woodland

- 3.3 Several sections of broadleaved woodland occur across the Site, particularly between exit roads of the roundabout and adjacent to the Trans Pennine trail, shown in photograph 2, to the east of the Site. The updated red line boundary now means that more woodland is present within the Site area. To the north of Site on the west side of Grange Lane surrounding the Trans Pennine trail is an area of Ash and Hawthorn with some Silver Birch and Sycamore trees present. To the east of Grange Lane filling the area to Doncaster Road is a raised patch of semi-mature Ash, Alder, Hazel, Cherry Hawthorn and Willow. To the south of Doncaster Road behind the commercial properties on Wombwell Lane is a narrow strip of Blackthorn, Ash, Silver Birch and Sycamore. To the south of the roundabout is a group of semi-mature Lime, Willow, Elder and Hazel. The last section on a slope to the south of Hunningley Lane is a semi-mature patch of Cherry and Alder.

Introduced Shrubs

- 3.4 Narrow strips of ornamental shrubs are present across the Site bordering the roads with ornamental shrub species including Lonicera, Rubus, Senecio, lilac, rose, snowberry, hebe, Hippophae and Cotoneaster species, alongside natives such as apple, hazel, and silver birch. Some colonisation by natives has occurred, including maple, cherry, cleavers, bush vetch, nettle, false oat-grass, cock's-foot, bramble, mugwort, cow parsley, and elder. The area around Bleachcroft Way which was not part of the previous PEA (Brooks Ecological, 2023) has hebe and Cotoneaster species under individual cherry trees along the roadside with further patches within the disused car park to the west, shown in photograph 3.

Hardstanding

- 3.5 A large section of the Site making up the road network, associated pavements and pedestrian paths and areas of car parking for the commercial properties across the entirety of the Site.

Mixed Scrub

- 3.6 Two small areas of mixed scrub are present to the south of Site adjacent to Wombwell Lane and to the east of the roundabout adjacent to Doncaster Road. Species included ash, hawthorn, and dogwood, and also contains dog rose. This differs from the previous PEA (Brooks Ecological, 2023) as a section of mixed scrub recorded at the north of Site has been re-classified as woodland due to the change in the red line boundary including more of the wooded area and not just the encroaching understorey.

Modified Grassland

- 3.7 Areas of typical, well-mown amenity grass across the Site an example is provided in photograph 1. The sward is dominated by perennial rye-grass, white clover, daisy, dandelion, greater and ribwort plantains, and meadow buttercup and is less than 7cm tall.

Other Neutral Grassland

- 3.8 To the north of the roundabout is an area of grassland that was part of a demolished pub shown in photograph 4. This area is now larger due to the change in the red line boundary. The sward is unmanaged estimated to be 50cm tall, composed of creeping bent, false oat-grass, and cock's-foot, with various forbs including colt's-foot, ribwort plantain, common vetch, dandelion, ragwort, spear and creeping thistles, broad-leaved dock, cleavers, white deadnettle, common bindweed, tansy, mugwort, and feverfew. Scrub species such as bramble, buddleia, goat willow, and alder, are establishing in parts.

Individual Trees

- 3.9 Urban trees are spread across the Site including the centre of the roundabout, adjacent to Grange Lane, Wombwell Lane and Bleachcroft Way. Species include rowan, apple, sycamore, ash, silver birch, and alder. All are considered to fall into the 'small' urban tree category.

PROTECTED, NOTABLE AND INVASIVE SPECIES ASSESSMENT

- 3.10 The potential for the Site to support protected species has been assessed using criteria provided in Table 2.1 and based on the result of observations made during the survey of the habitats at the Site. Other legally protected species are not referred to as it is considered that the Site does not contain habitats that would be suitable to support them.
- 3.11 Table 3.1 also summarises relevant legislation and policies relating to protected and invasive species. Key pieces of statute are summarised in Section 1 and set out in greater detail in Appendix 4.

Table Error! No text of specified style in document..1: Protected, notable and invasive species assessment

Ecological feature	Status ¹²	Likelihood of occurrence	Ecological importance	Potential constraint
Bats: Roosting Foraging/commuting	HR WCA S5 LBAP SPI	<p>Roosting: Low</p> <p>No changes are recorded since the previous PRA report (Temple 2023).</p> <p>All trees on Site were assessed from ground level, with the majority having negligible suitability to support roosting bats due to the size and age of the trees. Thirteen trees were assessed as having low suitable for roosting bats; 10 of these had dense ivy cover and two had loose bark, which may support individual bats during the warmer months; a single tree had a dead branch with some small cavities however was located next to a busy road and would be affected by resulting noise and light, which may result in limited suitability to support roosts of species which are less light tolerant.</p> <p>Eight buildings on Site were externally surveyed. Six buildings were found to have negligible potential, while two buildings had some minor roosting features such as gaps under ridge tiles and loose bricks. The location of all buildings</p>	Site	Precautionary

¹ The following abbreviations have been used to signify the legislation afforded different species: HR = Conservation of Habitats and Species Regulations 2017 (as amended); WCA S1 = Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); WCA S5 = Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); WCA S9 = Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); PBA = Protection of Badgers Act 1992.

² The following abbreviations have been used to signify the policy of conservation assessments applying to notable species: SPI = Species of Principal Importance under the NERC Act 2006; LBAP = Local Biodiversity Action Plan species; BoCC = Birds of Conservation Concern - amber list / red list (Stanbury *et al.*, 2021); and/or RD/NN = red data book/nationally notable species (JNCC, undated).

		<p>lowered the suitability, with light pollution from the nearby streetlights and public house and noise from the roads. These two buildings were rated as low suitability with potential roost feature – individual suitability to support roosting bats</p> <p>Foraging & commuting: LOW</p> <p>The Site is urban based and therefore has low quality suitable foraging habitat. Within the wider areas of foraging habitat including hedgerows, woodland and grassland are present. As a result of a number of high use roads surrounding the Site, its urban setting and high disturbance through light pollution and noise the Site is unlikely to be used by foraging bats</p> <p>As such, bats are considered further in Section 4 of this report.</p>		
Great crested newt	HR WCA S5	<p>LOW: The recommendations of previous reports are still valid with no changes. No records of great crested newts were returned within the data search reported in the PEA (Brooks Ecological, 2023). Three ponds are present within 250m of the Site. Pond 1 was declared unsuitable in the PEA report, no further information was provided (Brooks Ecological, 2023). Ponds 2 and 3 were subject to HSI assessment, scoring average and poor respectively.</p> <p>As such, GCN are considered further in Section 4 of this report.</p>	Site	Precautionary

<p>Birds:</p> <p>Breeding</p> <p>Wintering</p>	<p>WCA Sections 1-8</p>	<p>Confirmed: The woodland, introduced shrub and individual trees within the Site were assessed as having low potential for nesting birds. Nests were observed during the PRA survey visit in 2023, within woodland to the west of the Keel Inn.</p> <p>The Site has negligible suitability to support species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).</p> <p>It is likely that common species breeding birds will occur at the Site in low numbers and as such they are considered further in Section 4 of this report.</p>	<p>Site</p>	<p>Possible disturbance to active nests and loss of habitat.</p>
<p>Invasive plants</p>	<p>WCA S9</p>	<p>Negligible: No invasive plant species (including those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded during the survey.</p> <p>As there is negligible likelihood of presence, invasive species listed on Schedule 9 are not considered further in Section 4 of this report.</p>	<p>N/A</p>	<p>None</p>
<p>Terrestrial invertebrates</p>	<p>S41 NERC</p>	<p>LOW: There are desk study records of dingy skipper and small heath within 270m of the Site (Brooks Ecological 2023). Both are listed in Section 41 of the NERC Act, which calls for the maintenance of their favourable conservation status. The Site contains grassland habitats, which contain the larval foodplants of small heath and dingy skipper.</p>	<p>Local area</p>	<p>Possible disturbance due to loss of breeding habitat.</p>

4.1 The Site has undergone minimal changes since the original surveys were conducted, including habitats suitable for protected species, with areas now included within the extended red line boundary having no additional ecological constraints. As such, the assessment of potential impacts and resultant recommendations set out within the previous reports remain valid and should be referred/adhered to. In the absence of mitigation, the following key ecological issues have been identified:

- Trees on Site are suitable for roosting bats, any removal of trees should follow measures outlined within a Precautionary Working Method Statement.
- Areas of vegetation to the north and south-east of the Site have potential to support great crested newts, all vegetation clearance in these areas should follow measures outlined within a Precautionary Working Method Statement.
- Habitat suitable for breeding birds is present, therefore measures must be taken to avoid harm to breeding birds during proposed development;
- Habitat suitable for commuting and foraging bats is present, therefore measures must be taken to avoid disruption to their foraging and commuting routes including adopting a sensitive lightning strategy during demolition, construction phases and in final development plans;
- Should the road layout modification works impact on areas of grassland within the Site boundary, precautions for dingy skipper and small heath may be required. These should include completing works outside of the breeding season from October to April.
- Works should follow environmental best practice standards; and
- A range of measures should be undertaken to satisfy the requirement for ecological enhancement included in national and local planning policy such as Barnsley Biodiversity Action Plan (2010).

CONSTRAINTS AND MITIGATION/COMPENSATION

Habitats

- 4.2 The woodland, mixed scrub and other neutral grassland should be retained where possible, owing to their value to local wildlife and ecosystem services they provide and protected throughout the demolition and construction phases of the development.
- 4.3 Working under the principle of net-gain as supported by planning policy, any habitats removed should be compensated for through soft landscaping proposals including wildlife planting schemes.

Protected Species

Bats

- 4.4 All British species of bat are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). Under this legislation it is an offence to deliberately disturb bats and their roosts so as to impair their ability to survive, breed, reproduce or nurture young, to hibernate or migrate to significantly affect the local distribution or abundance of the species. Some species of bat are also Species of Principal Importance, and all species are included within the Barnsley Biodiversity Action Plan (Barnsley biodiversity trust, 2010).
- 4.5 It is recommended that works should proceed under a precautionary working method statement (PWMS) in regard to bats and great crested newt. The PWMS should include precautions such as soft felling of trees which have been rated PRF – I for roosting bats, where the features are dense ivy, under supervision from an ecological clerk of works and conscientious working practices to be incorporated including sensitive lighting around trees or buildings with bat roost suitability.
- 4.6 Foraging and commuting opportunities were considered low for bats on the Site. However, given the desk study records of pipistrelle bats within 1km of the Site (Brooks Ecological 2023), it is possible pipistrelle bats may utilise this Site for foraging and commuting. Local Authorities have a duty to ensure developmentt avoids adverse impacts on BAP habitats and species, Species of Principle

Importance under the NERC (2006) Act. The recommended PWMS will give advice on how this is achievable.

- 4.7 Disruption to foraging and commuting bats may arise during the demolition, construction and operational phases of the development and in final Site plan as excessive and/or poorly directed lighting may cause bats to move away from suitable foraging grounds, movement corridors or roosting Sites, to alternative darker areas (Jones, 2000). To minimise these impacts, it is recommended that artificial lighting is only directed where necessary for health and safety reasons and light spillage is limited. Lighting should only be used for the period of time for which it is required (Jones, 2000).

Great Crested Newts

- 4.8 Great crested newts are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).
- 4.9 Small areas of suitable terrestrial habitat are present on Site for great crested newts, however due to the barriers of the roads joining the roundabout it is considered there is a low chance of great crested newts being present on Site.
- 4.10 It is recommended that works should proceed under a precautionary working method statement (PWMS) in regard to bats and great crested newt. The PWMS should include precautions such as a watching brief when working in or adjacent to habitats with potential to support great crested newt and storing materials in such a way that does not act as potential refugia.

Breeding Birds

- 4.11 All wild birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended). The proposed works require the possible removal of vegetation and trees with potential to support breeding birds. It is therefore recommended that works are carried out from September to February inclusive, to avoid any potential

offences relating to breeding birds during their main bird breeding season (Newton et al., 2011).

- 4.12 If Site clearance during the breeding season is unavoidable then potential nesting habitat must be inspected before work commences to identify active birds' nests. Should they be present, the nest and a suitable buffer of habitat around it must be retained until the young have left the nest.

Invasive Non-Native Species

- 4.13 No plants species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), where recorded during the Phase 1 habitat survey.
- 4.14 If presence is established prior to works, excavation of the plants and their roots system can be undertaken. It is however important to ensure that the entire root system is removed to avoid regrowth. The excavated material must be disposed of via a licensed landfill site to avoid spreading Schedule 9 species.

Other Protected Species

- 4.15 In the unlikely event that any protected species are found during Site clearance or construction, works must stop immediately, and advice sought from a suitably qualified ecologist on how to proceed.

ENVIRONMENTAL BEST PRACTICE

- 4.16 Best environmental practice measures which should be implemented include:
- Adherence to best construction practise including CIRIA guidance (Connolly and Charles, 2005) and Pollution prevention for businesses guidelines (Defra/ Environment Agency, 2016);
 - Protection of retained trees in accordance with British Standards Institution (2021) BS 5837:2012 – Trees in relation to design, demolition and construction guidelines;
 - Appropriate storage of fuels and chemicals to minimise the risk of accidental spillage. Sources of best construction practice and environmental management;

- Avoidance of deterioration in air quality. For example, limiting the effects of vehicle emissions by avoiding the idling of machinery and reducing dust particle deposition by damping down areas of bare ground during dust-generating activities;
- Utilisation of sensitive lighting strategy and noise control; and
- Storage of all materials and vehicles, and installation of compound area should be confined to existing areas of hardstanding.

OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENTS

4.17 Enhancements for the Site should be consistent with the previous reports, including installing bat boxes, bird boxes and tree planting. More detailed enhancements are provided within the Biodiversity Net Gain report issued separately (Temple 2024)

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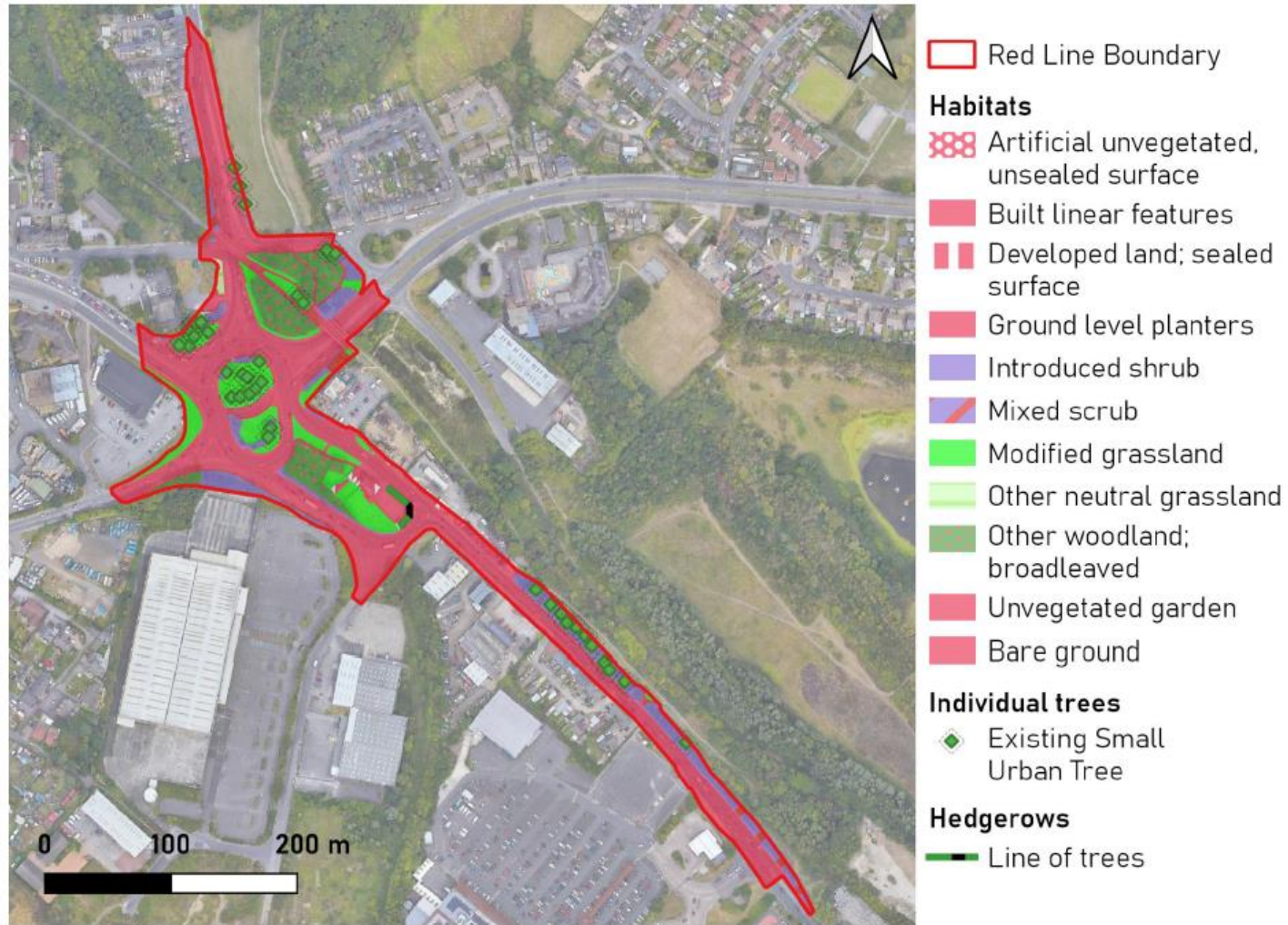
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Appendix 1: Map

Figure 1: Habitat Survey Map From 2023 Report (Brooks Ecological)

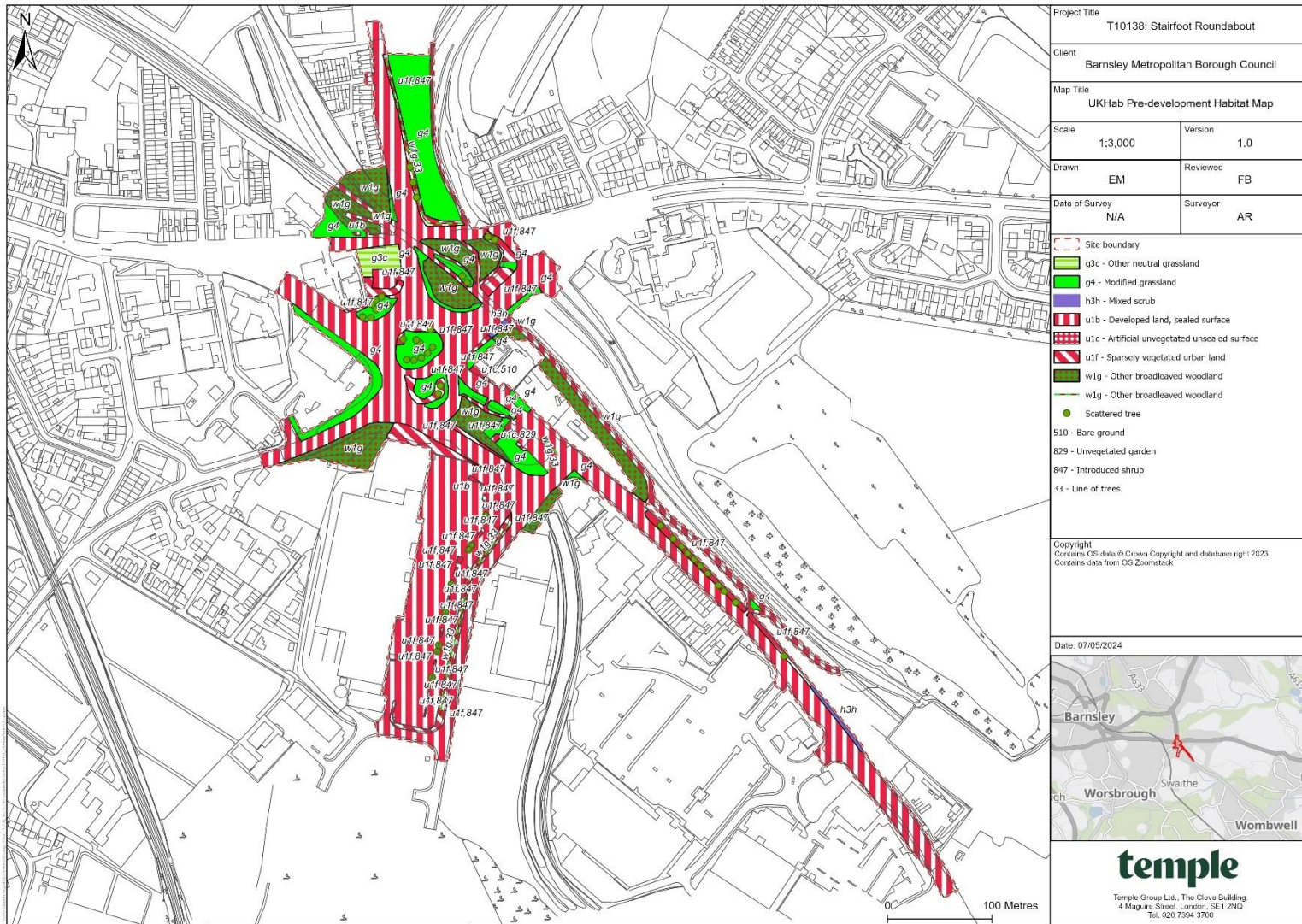


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Preliminary Ecological Appraisal Report

Figure 2: Habitat Survey Map From 2024 Site Visit



Appendix 2: Species List

Botanical Species List for Stairfoot roundabout, Barnsley.

Scientific nomenclature and common names for vascular plants follow Stace (2019) and Blockeel and Long (1998) for bryophyte species. Please note that this plant species list was generated as part of a Phase 1 habitat survey, does not constitute a full botanical survey and should be read in conjunction with the associated results section of this PEA.

Abundance was estimated using the DAFOR scale and additional notes taken as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally
 c=clumped, e=edge only, g=garden origin, p=planted, y = young, s=seedling or sucker, t=tree,
 h=hedgerow, w=water

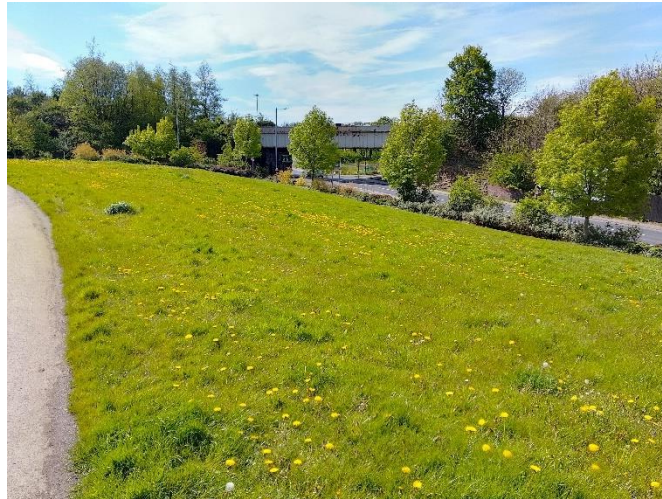
Scientific Name	Common Name	Abundance	Qualifier
<i>Acer campestre</i>	Field maple	F	t
<i>Acer pseudoplatanus</i>	Sycamore	O	t
<i>Agrostis stolonifera</i>	Creeping bent	F	
<i>Alnus glutinosa</i>	Alder	F	t
<i>Anthriscus sylvestris</i>	Cow parsley	O	
<i>Arrhenatherum elatius</i>	False oat	A	
<i>Artimesia vulgaris</i>	Mugwort	R	
<i>Asteraceae</i>	Daisy	O	
<i>Betula pendula</i>	Silver birch	O	t
<i>Buddleja davidii</i>	buddleia	R	t
<i>Calystegia sepium</i>	Bindweed	O	
<i>Cirsium arvense</i>	Creeping thistle	O	
<i>Cirsium vulgare</i>	Spear thistle	O	
<i>Cornus sanguinea</i>	Dog wood	O	
<i>Corylus avellana</i>	Hazel	O	t
<i>Cotoneaster</i>	Cotoneaster	R	
<i>Crataegus monogyna</i>	Hawthorn	F	t
<i>Dactylis glomerata</i>	Cocks foot	O	
<i>Fraxinus excelsior</i>	Ash	O	t
<i>Galium aparine</i>	Cleavers	R	
<i>Hebe</i>	Hebe	R	
<i>Hedera helix</i>	Common ivy	A	
<i>Hippophae</i>	Sea buckthorns	R	
<i>Jacobaea vulgaris</i>	Ragwort	O	
<i>Lamium album</i>	White deadnettle	O	
<i>Lolium perenne</i>	Rye Grass	A	
<i>Lonicera sp.</i>	Honeysuckle	R	
<i>Malus sylvestris</i>	Apple	R	t
<i>Plantago lanceolata</i>	Ribwort plantain	O	
<i>Plantago major</i>	Grater Plantain	R	

Scientific Name	Common Name	Abundance	Qualifier
<i>Prunus sp.</i>	Cherry	F	t
<i>Prunus spinosa</i>	Blackthorn	O	t
<i>Rosa sp.</i>	Rose sp.	R	
<i>Rubus fruticosus</i>	Bramble	O	
<i>Rumex obtusifolius</i>	Bitter dock	R	
<i>Salix caprea</i>	Goat willow	R	t
<i>Salix sp.</i>	Willow	R	t
<i>Sambucus nigra</i>	Elder	R	t
<i>Sorbus aucuparia</i>	Rowan	R	t
<i>Symphoricarpos sp.</i>	Snowberry	R	
<i>Syringa sp.</i>	Lilac	R	
<i>Taraxacum sp.</i>	Dandelion	O	
<i>Trifolium repens</i>	White clover	O	
<i>Tussilago farfara</i>	Colts foot	R	
<i>Urtica dioica</i>	Common nettle	F	
<i>Vicia sativa</i>	Common vetch	R	
<i>Vicia sepium</i>	Bush Vetch	R	

Appendix 3: Photographs

Photograph 1

Grassland area now included within the updated red line boundary north of Site.



Photograph 2

Trans Pennine Trail which is now included within the red line boundary to the south side of the Site.



Photograph 3

Bleachcroft Way and the disused retail property to the south-west of Site, now included in the updated red line boundary.



Photograph 4

Area of other neutral grassland to the north of the roundabout, now included within the red line boundary.



Appendix 4: Legislation

Bats

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g., all bats)
- Deliberate disturbance of bat species as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young;
 - (ii) to hibernate or migrate
 - b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) in respect to sub-sections 9 (4) (b) and (c) and 9 (5) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance while in their place of shelter (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g., Natural England, Natural Resources Wales) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g., survive, breed, rear young and hibernate). The licence is to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded

protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost³.

HERPETOFAUNA (AMPHIBIANS AND REPTILES)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, great crested newt *Triturus cristatus* and pool frog *Pelophylax lessonae* receive full protection under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule

2. Regulation 43 prohibits:

- Deliberate killing, injuring or capturing of species listed on Schedule 2;
- Deliberate disturbance of any Schedule 2 species as:
 - to impair their ability:
 - to survive, breed, or reproduce, or to rear or nurture young; and
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate.
 - to affect significantly the local distribution or abundance of the species.
- Deliberate taking or destroying of the eggs of a Schedule 2 species;
- Damage or destruction of a breeding site or resting place; and
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

With the exception of the pool frog, these species are also listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect to sub-sections 9 (4) (b) and (c) and 9 (5). The pool frog is afforded protection in respect of sub-sections 9(4) (b) and (c) for England only. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance while in their place of shelter (at any level);
- Intentional or reckless obstruction of access to any place of shelter or protection; and
- Selling, offering or exposing for sale, possession or transporting for purpose of sale (excluding pool frog).

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Species such as the adder *Vipera berus*, grass snake *Natrix helvetica*, common

³ Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. 150. The Mammal Society, Southampton.

lizard *Zootoca vivipara* and slow-worm *Anguis fragilis* are listed in respect to sub-section 9 (1) & (5). For these species, it is prohibited to:

- Intentionally kill or injure these species; and
- Sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

Common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *L. helveticus* are listed in respect to sub-section 9 (5) only which affords them protection against sale, offering or exposing for sale, possession or transport for the purpose of sale.

How is the legislation pertaining to herpetofauna liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect the breeding sites or resting places of those amphibian and reptile species protected under The Conservation of Habitats and Species Regulations 2017 (as amended). A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the Wildlife and Countryside Act 1981 (as amended).

Birds

All birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). Among other things, this makes it an offence to:

- Intentionally kill, injure or take any wild bird
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl, black redstart, hobby, bittern and kingfisher receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

- • Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young; and
- • Intentional or reckless disturbance of dependent young of such a bird.

Those species of bird listed on Schedule 1 are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Invasive Plant Species

Under Section 14 (2) of the Wildlife and Countryside Act 1981 (as amended), it is an offence to plant or otherwise cause to grow in the wild any species of plant listed on Part II of Schedule 9. Schedule 9 plant species include Japanese knotweed *Reynoutria japonica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*. In the main, Schedule 9 species are those that are already established in the wild, but which continue to pose a threat to the conservation of native biodiversity and habitats, such that further releases should be regulated.

How is the legislation pertaining to invasive plants liable to affect development works?

Although it is not an offence to have these plants on your land *per se*, it is an offence to *cause* these species to grow in the wild. Therefore, if they are present on site and development activities (for example movement of spoil, disposal of cut waste or vehicular movements) have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this happening prior to the commencement of works.

As a rule, planting on managed land (private gardens, estates and amenity planting, for example), where it is expected that the spread of the plant will be kept under control, and where the plant will not have an adverse impact, is not regarded as planting in the wild and thus would not constitute an offence. However, where the plant is inadequately managed or contained and is likely to have an adverse effect,

it may. Whether or not planting is an offence should therefore be judged on a case by case basis, taking into account the potential impacts on habitats and native flora and fauna, and the existence or extent of management practices to be employed⁴.

⁴ Defra (2010) Guidance on Section 14 of the Wildlife and Countryside Act, 1981. [\[ARCHIVED CONTENT\]](#)
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