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St. MODWEN PROPERTIES PLC

PARKS FARM, UTTOXETER, PHASE 1B

Biodiversity Enhancement and Habitat Management Plan

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CONTENTS

FIGURES

APPENDICES

1.0 INTRODUCTION

1.1 This document has been prepared by FPCR Environment & Design Ltd on behalf of St Modwen Properties Plc. It provides details of habitats that are to be retained and protected / enhanced and new habitat creation within and adjacent to the land affected by the development of Phase 1b, Phase 1b development operations comprise the construction of:

- 40 residential dwelling houses,
- The spine road for the entirety of the Phase 1 development land.

1.2 The phase 1B planning application covers the above construction operations as well as alterations to part of the already consented Phase 1a layout.

1.3 This document includes the ecological management requirements of habitats which are retained and created within the proposed development. The document also refers to habitats provided as part of the Phase 1a planning application as the enhancements / mitigation provided for this planning application form an integral of the overall package. This management plan should be read in conjunction with:

- the Phase 1a Landscape Management Plan (RGP, July 2016, and
- the Phase 1b Infrastructure Landscape Proposals (RGP, drawing number 50057/009 Rev A, 05/02/16).

Site Location

1.4 The phase 1B development site is located off Bramshall Road, west of Uttoxeter and south of the A50.

Site Ecological Background

1.5 There are no statutory designated sites within 2km of the site, or non-statutory sites within 1km.

1.6 The Phase 1B site comprises sections of an improved grassland field and two adjacent species-poor semi-improved grassland field compartments. The route of the main access road extends north, through improved grassland field compartments. All fields are considered of no more than local ecological importance.

1.7 Field boundaries currently comprise post and rail fences or native species hedgerows with the only two hedgerow trees present comprising two crab apple *Malus sylvestris*. Hedgerows are habitats of principal importance for the conservation of biodiversity as listed within Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act (2006). Numbering of hedgerows follows the original ecological appraisal report for the site as a whole[1].

1.8 No permanent waterbodies are present on site.

[1] FPCR, June 2013: Land West of Uttoxeter Ecological Appraisal

1.10 Detailed species specific survey work was completed on relevant ecological receptors prior to the granting of the relevant planning consents. These surveys did not identify any significant statutory ecological constraints to development of the site. Following the granting of the relevant planning consents a 'small' to 'small-medium' population of GCN was identified in an off-site pond situated close to the eastern boundary. A license from Natural England has been obtained which secures the mitigation necessary to maintain the 'favourable conservation status' of this species.

Planning Background and Development Proposals

1.11 Outline planning consent granted for the construction of 700 dwellings (Ref: P/2013/00882) with enabling works planning consent for the junction access works off Bramshall Road (Ref: P/2014/00677) and detailed planning consent for Phase 1A (58 houses, Ref: P/2014/00883). Within the overall scheme, Phase 1B entails the construction of 40 dwellings with associated access roads and green infrastructure.

1.12 The development will result in the loss of the existing improved and species-poor semi-improved grassland from within the development boundary and the partial removal of existing internal hedgerows.

Overall Ecological Aims and Objectives

1.13 Working practices will ensure that retained boundary features such as hedgerows and associated trees are protected during construction through erection of appropriate protective fencing to ensure no encroachment by construction activities. Buffer zones as detailed in the separate Arboricultural Assessment (Appendix 1) will be applied to either side of all hedgerows to be retained. Similarly no works will take place within the root protection area (RPA) of retained trees, and all retained trees and hedgerows will be protected according to best practice as set out in BS5837 Guidance to Trees in Relation to Construction (BSI, 2012) and the Arboricultural Assessment.

1.14 The use of best practice construction methods across the site will reduce any potential effects of construction on the site or adjacent habitats. The possibility of fuel spillages into the groundwater or neighbouring watercourses will be minimised through sound site management including the safe and appropriate storage of materials and chemicals away from watercourses. To prevent accidental spillages entering local watercourses, site drainage systems will be designed following good practice criteria and good management practices will be adopted, including the implementation of standard pollution control mechanisms and strict adherence to the now withdrawn Environment Agency best practice guidelines[2,3] at all times during works. The developer will additionally have a responsibility to ensure that all areas outside/ surrounding the site boundaries are protected from surface water runoff from the site for the duration of the construction phase.

1.15 Appropriate working methods are provided for the removal of Himalayan balsam *Impatiens glandulifera* recorded along a short section of the eastern site boundary (Appendix 2).

[2] Environment Agency 2007. *Pollution Prevention Guidelines PPG 5 Works in, Near or Liable to Affect Watercourses*
[3] Environment Agency 2012. *Pollution Prevention Guidelines PPG 6 Working at construction and demolition sites.*

1.16 Hedgerows will be retained and buffered where possible and 'gapped up' where necessary. In order to compensate for hedgerows which will be removed to facilitate development operations, new native species hedgerow planting will be undertaken along the Phase 1A / Phase 1B eastern site boundary, the Phase 1A western site boundary and in the north of the Phase 1A land (in association with the balancing facility). This overall hedgerow provision will result in a net gain in native species hedgerows of 102m in the long term when compared with overall hedgerow losses across all Phase 1 land (i.e. land south of hedgerow H3 (see Figure 1)).

1.17 Amenity trees will additionally be provided as street trees and/or within private gardens to enhance habitat structure and species diversity and compensate for the limited tree losses across the site.

1.18 Preference will be given within the planting scheme to the use of locally native woody species, with an emphasis on species bearing nectar, berries, fruit and nuts, as these enhance the foraging opportunities of local wild fauna including birds and invertebrates. Areas of species-rich amenity grassland will be managed to provide further biodiversity interest.

1.19 Given the provision of new planting as outlined above, the site will continue to provide a permanent habitat corridor for commuting and foraging wildlife. New and retained habitats will be of low-medium sensitivity, being more species diverse than those currently present.

1.20 As a component of this management plan it is proposed that funds be made available to implement management and enhancement works across the wider site.

2.0 BACKGROUND

2.1 This Habitat Creation, Management and Monitoring Plan has been written to discharge conditions: 11 and 18 of the Planning Permission (Decision: P/2013/00882). These conditions state (sections not relevant to this document have not been included):

Condition 11

"No development of any phase shall take place until a Landscape Management Plan, indicating a scheme for the long-term management of open space, green infrastructure and planting within the public realm and details of biodiversity management within that phase have been submitted to and approved in writing by the Local Planning Authority. The open space shall thereafter be completed and maintained in accordance with the approved management scheme".

"Reason: To ensure that approved open space is managed in an acceptable manner in the interests of the visual amenities of the locality, to ensure that public access is maintained and to protect wildlife and provide suitable habitats in accordance with East Staffordshire Local Plan Saved Policy BE1, the East Staffordshire Design Guide and the National Planning Policy Framework (particularly section 11").

Condition 18

"No development of any phase shall take place until a scheme of biodiversity enhancement measures relating to that phase, including a timetable for implementation, has been submitted to and approved in writing by the Local Planning Authority. The development shall thereafter be completed in accordance with the approved details and associated timescales".

"Reason: To ensure that protected species are not harmed during the course of development and in accordance with Paragraphs 118 and 119 of the National Policy Planning Framework".

2.2 This Plan has been prepared following a desk top study and a suite of ecological surveys undertaken across the site and neighbouring habitats by ecologists from FPCR Environment & Design Ltd. during the 2010 to 2013 survey seasons, with an updating habitat survey; great crested newt eDNA surveys; great crested newt aquatic presence / absence surveys and badger survey completed in 2016. These surveys comprised:

- Extended phase 1 survey May 2010, August 2011, September 2012, April 2013 and January 2016 (see Figure 1);
- Badger survey (2011, 2012, 2016)
- Otter and water Vole surveys (2011, 2012)
- Great crested newt surveys (2012, 2013, 2016)
- Bat transect surveys (2012, 2013)
- Winter bird surveys (2013)
- Breeding bird surveys (2013)

2.3 An updating arboricultural assessment and survey of trees located at the site was also conducted by FPCR arboriculturalists in 2016 (Appendix 1).

2.4 The Site Layout Plan illustrates the location of the proposed new residential units, access roads and green infrastructure within the context of the site.

2.5 Existing hedgerows are to be retained within the scheme where possible, and will be enhanced where appropriate with supplementary planting using locally native hedgerow species.

2.6 Additional enhancements provided by the scheme for this area of the site comprise the implementation of new hedgerow planting to the east of the site, new hedgerow planting in the north-east of the site adjacent the proposed balancing facility, native species shrub/scrub planting adjacent the balancing facility, wet meadow grassland seeding in the balancing facility, tussocky grassland seeding on the banks and adjacent the balancing facility and great crested newt over-wintering habitat (hibernacula as per Natural England specifications).

2.7 4no. bird boxes and 2no. bat boxes will be provided on the eastern aspects of appropriate buildings facing the eastern site boundary, close to H26 and the associated new hedgerow planting and off-site tree line. Wildlife gardening techniques will be promoted across the residential area, with initial garden planting utilising native species of trees, climbing plants and shrubs. The Wildlife Trusts "Guide to Wildlife Gardening" will be distributed to every dwelling.

3.0 FACTORS INFLUENCING MANAGEMENT PROPOSALS

Policy and Legislation

Sites of Nature Conservation Importance

3.1 The site is not part of any statutory designated site or non-statutory site identified as being of nature conservation importance or interest. There are no statutory sites of international nature conservation importance (SACs, SPAs, Ramsar Sites) present within a 5km radius and no

statutory sites of national nature conservation importance (SSSIs or NNRs) within 2km of the site boundary. There are no non-statutory sites of ecological interest within the site or within a 1km radius.

National Planning Policy

The National Planning Policy Framework; Department for Communities and Local Government; March 2012

3.2 This national policy provides relevant information relating to the approach to be taken within the planning system by the various issues and disciplines encompassed by sustainable development, including in the production of local development plans and the determination of planning permissions for local councils. Planning applications should seek to conform to the 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 area.

3.3 The existing government circular Associated Circular Government Circular: Biodiversity and Geological Conservation, ODPM Circular 06/2005; applies to the new NPPF until such a time as this has been reviewed and revised (and for which there is no timetable).

3.4 Of relevance to this particular assessment is *Section 11: Conserving and Enhancing the Natural Environment* (paragraphs 109 - 125) of the NPPF. The following provides the overarching approach that should be taken with respect to the natural environment:

…The planning system should contribute and enhance the natural and local environment by:

Protecting and enhancing valued landscapes, geological conservation interests and soils

Recognising the wider benefits of ecosystem services

Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressure

Preventing both new and existing development from contributing to or being put at an unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability

3.5 In addition the following paragraphs of S.11 are of particular relevance to nature conservation:

112. Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution they make to wider ecological networks.

118. When determining planning applications local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or as a last resort compensated for, then planning permission should be refused.

Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted.

Opportunities to incorporate biodiversity in and around developments should be encouraged

Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged, or veteran trees found outside ancient woodland unless the need for and benefits of the development in that location clearly outweigh the loss.

125. By encouraging good design, planning policies and decisions should limit the impact of light pollution on local amenity, intrinsically dark landscapes and nature conservation

East Staffordshire Local Plan

3.6 The East Staffordshire Local Plan was adopted in 2006. The Policies were saved by a Direction made by the Secretary of State on the 9th July 2009 under the provision of paragraph 1(3) of Schedule 8 to the Planning and Compulsory Purchase Act 2004.

3.7 Policies NE8 – NE11 relate to Protection of Sites of Nature Conservation Interest, Biodiversity, Protected Species and Habitats and Sites of Ecological or Geological Interest, however none of these policies were saved when the Plan was reviewed.

Biodiversity Action Plans

3.8 In 2012 the UK Biodiversity Action Plan (UK BAP) was succeeded by the UK Post-2010 Biodiversity Framework. This aims to implement the 1992 Convention on Biological Diversity, to protect rare or declining habitats and species by targeting those identified as being of UK priority, with specific actions to reduce their rarity and decline, and additionally sets out the priorities for UK-level work to support the Convention's Strategic Plan for Biodiversity 2011-2020 and agreed strategic goals and targets. Species and habitats of Principal Importance under S41 of the NERC Act (2006) continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In England the focus is on delivering the outcomes set out in the Government's Biodiversity 2020 Strategy[4] which sets out how environment quality will be improved and follows on from policies contained in the Natural Environment White Paper, published in June 2011.

Staffordshire Local Biodiversity Action Plan (LBAP)

3.9 The Staffordshire LBAP targets those species and habitats of specific relevance to the county. A review of targets has replaced Habitat and Species Action Plans with 14 "Ecosystem Action Plans" (EAPs) and one Rivers Action Plan[5]; the LBAP aims to prioritise conservation management at a landscape level and contribute to local, regional and national conservation targets.

3.10 The site falls within the Central Farmland EAP. It is largely made up of settled or ancient clay farmlands where mixed arable and pastoral farming practices vary from low intensity, still retaining an intact ancient pattern of hedgerows and hedgerow trees, to intensively farmed arable and improved pasture where hedgerows are in decline.

[4] *Biodiversity 2020: A strategy for England's Wildlife and Ecosystem Services*, Defra, August 2011
[5] http://www.sbap.org.uk/actionplan/index.php

3.11 The primary objective for the Central Farmland EAP is to reduce fragmentation of existing semi-natural habitats by linking sites through the creation of habitat corridors and networks using hedgerows, arable field margins and rivers where possible.

3.12 The following NERC and/or EAP priority species are of potential relevance to the site, due to either their widespread distribution, existing local records and/or the site's suitability:

Table 1: Priority species and habitats as identified as being of principal importance in England, in Section 41 of the NERC Act 2006, and EAP species/habitats of relevance to this assessment.

Priority Habitat or Species	Species / Habitats of Principal Importance in England (S41 NERC Act (2006))	Central Farmland EAP
Hedgerows	✓	✓
Arable farmland, field margins and improved grassland		✓
Barn owl		✓
Farmland seed-eating birds		✓
Bullfinch	✓	
Dunnock	✓	
House sparrow	✓	
Lapwing	✓	✓
Linnet	✓	
Skylark	✓	
Song thrush	✓	
Starling	✓	
Yellowhammer	✓	
Yellow wagtail	✓	✓
Grey partridge	✓	✓
Hedgehog	✓	
Brown hare	✓	✓
Noctule bat	✓	✓
Soprano pipistrelle	✓	✓
Common pipistrelle		✓
Brown long-eared bat		✓
Grass snake		✓
Great crested newt		✓
Common toad		✓

Overview of Planning Policy Context

3.13 With regards to the Project the policies identified above require that up to date information on the ecology of the site is submitted and that biodiversity is maintained and enhanced, restored or added to. Applications should include biodiversity enhancements wherever possible.

Legislation

3.14 Key European and UK legislation of relevance to nature conservation and biodiversity includes:

- The Habitats Directive 1992;
- The Conservation of Habitats and Species Regulations 2010 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Countryside and Rights of Way Act 2000;
- The Natural Environment and Rural Communities Act 2006; and

- The Protection of Badgers Act 1992.

Existing Baseline Ecological Conditions and the Effects of Development

Habitats

3.15 The Phase 1B site comprises sections of an improved grassland field and two adjacent species-poor semi-improved grassland field compartments. The route of the main access road extends north, through improved grassland field compartments.

3.16 The existing grassland does not meet the criteria of any S41 NERC Act (2006) priority habitat classification[6].

3.17 Field perimeter hedgerows are dominated by native species and as such meet the criteria of habitat of principal importance under S41 of the NERC Act (2006), and are of local value for nature conservation.

3.18 Of the four existing hedgerows within or partially within the Phase 1B site, hedgerow H26 on the eastern boundary and sections of H24 will be retained *in situ*, whereas all of H12, the majority of H15 and short sections of H24 will be removed as part of the proposals.

3.19 Hedgerow H26 and the retained sections of H24 towards the west of the site will be 'gapped up' where appropriate using a mix of locally common hedgerow species to strengthen existing habitat corridors. Retained sections of hedgerow H24 will be buffered within the scheme by grassland strips sown with suitable native grassland species. In addition, new native hedgerow planting will be provided along the eastern boundary. This will link the retained hedgerow H26 to existing hedgerow to the south, and to off-site tree cover to the east and will extend outside the Phase 1B area.

3.20 As part of the Phase 1A development (also taking account of the re-planned layout included within the Phase 1B planning application) the remainder of hedgerow H15 will be removed and sections of hedgerows H16 and H25 will be removed to facilitate the construction of roads. The retained hedgerow along the western boundary (H23) will be extended however, with the addition of new native species hedgerow planting south from and linking to the retained hedgerow H23. Further new hedgerow planting will be created as part of licensed great crested newt mitigation planting around the Phase 1 detention basin to the north-east (see Section 7).

3.21 Hedgerow retention, loss and new planting across the Phase 1a and Phase 1b areas is shown in Appendix 3: *Hedgerow Plan Phase 1A and Phase 1B Losses and Gains* (FPCR, 3 November 2016).

3.22 Considering phases 1A and 1B together there will therefore be an overall net gain of c.122m native species hedgerow length across the Phase 1A/1B areas with additional areas of gapped up / enhanced retained hedgerow.

3.23 It is anticipated that future residential and academic development phases within the Phase 1 land will also contribute to hedgerow planting / enhancement. This will be subject to separate Reserved Matters approval.

[7] FPCR 2014. Bat Report Park Fields farm, July 2014.

3.24 Only two crab apple trees occur within the Phase 1B boundary, both of which are scheduled for removal under the proposals. New native tree planting as street trees and will more than compensate for this minor loss resulting in an overall nett gain of tree standards.

Bats

3.28 No potential tree roosts were noted during ground based inspection of trees present within the site. Neighbouring buildings associated with Park Fields Farm were inspected by a licenced bat worker (Natural England licence number CLS0316) for evidence of, and potential to support roosting bats. No direct evidence was found during internal and external building survey, and subsequent nocturnal surveys undertaken in May and June 2014 recorded no evidence of the presence of a bat roost in any of these buildings[7].

3.29 Bat activity surveys confirmed relatively low levels of bat activity across the site and did not suggest that the site represented a significant resource for foraging or commuting bats, Existing hedgerows constitute a suitable resource for foraging and commuting bats whilst the existing grassland represents a lower value resource for these functions

3.30 There will be an overall net loss of c.41m hedgerow from the Phase 1B site (i.e. minimal loss), however, overall hedgerow provision across the Phase 1A and Phase 1B land will create a net gain of approximately 20m. Furthermore, the creation of substantial areas of wet meadow and tussock grassland associated with the balancing facility and open ditch will provide a significant bat habitat enhancement for the purposes of foraging and commuting. Additionally, roadside verges and residential gardens will incorporate a range of tree and shrub species to provide further habitat structure and create partial habitat corridors through the site suitable for use by foraging and commuting bats and other wildlife.

Birds

3.31 Removal of the improved and semi-improved grassland habitats will reduce the local availability of this foraging resource for local bird populations. The wider site will however continue to provide a much reduced, though more species-rich area of grassland in the long-term, and the local area will continue to provide foraging resources for a wide range of urban edge species. The partial removal of existing internal hedgerows will reduce the overall availability of nesting

[7] FPCR 2014. Bat Report Park Fields farm, July 2014.

habitat within the site, however trees and shrubs and domestic garden areas provided as part of the soft landscaping scheme will mature with time to provide alternative potential nest sites throughout the site interior. In addition, new native hedgerow planting along the eastern boundary will provide further nesting opportunities to offset the loss of internal hedgerows. The provision of nest boxes suitable for a range of birds including hole nesting species will be provided to provide alternative nesting opportunities.

Great Crested Newt

3.32 Terrestrial habitat evaluations and aquatic presence / absence surveys were undertaken by FPCR Environment & Design Ltd ecologists within the wider site between 2010 and 2013 in support of an outline planning application for the overall scheme.

3.33 GCN aquatic survey methods followed those recommended by Natural England[8] and were undertaken on 5 ponds (P1, P2, P3 and P5 on site whilst P4 is off site). On each survey occasion three of a possible four techniques (egg search, sweep net, bottle-trap and torch) were used where suitable. No GCN or any other amphibians were recorded during aquatic surveys of ponds P1, P2, P3 and P5 in 2012. Only small numbers of smooth newt (maximum count 4 adults) were recorded present in Pond P4 during surveys undertaken in 2013. It was accordingly concluded that the aquatic and terrestrial habitat surveyed was not used by GCN.

3.34 Further update surveys were undertaken by FPCR ecologists in 2016 in support of the Phase 1b reserved matters application. These included:

- Great crested Newt eDNA survey on all aquatic habitat within 500m of the Phase 1b application site;
- Great crested newt aquatic surveys on all confirmed GCN aquatic habitat within 500m of the Phase 1b application site

3.35 An eDNA survey was undertaken in ponds P2, P3 and P4 to determine presence / absence of GCN in accordance with protocols approved for use by Natural England. Ponds P1 and P5 were over 500m from the site and were dry at the time of undertaking eDNA sampling. The results of the eDNA test concluded a positive result for P4, confirming the presence of GCN DNA in the samples taken, whilst pond P2 and P3 concluded a negative result.

3.36 Given the confirmation of GCN DNA in pond P4, further aquatic surveys were completed to confirm the presence / absence of GCN in the pond and, where present, obtain a peak count in order to inform a population size class assessment. The peak count for this pond was 2 GCN. Through consultation with Natural England, it was determined that the population associated with P4 was a small to small 'medium' population.

3.37 Given the stage of construction activities at the point where GCN were confirmed present, a risk assessment was undertaken with regard to works to date and works going forward. The conclusion of the risk assessment was that works could proceed without a mitigation licence under the Conservation of Habitats and Species Regulations 2010 (as amended). This risk assessment was legally reviewed and this legal review confirmed these proposals would not breach the legal protection offered to GCN from the Conservation of Habitats and Species Regulations 2010 (as amended).

[8] Great Crested Newt Mitigation Guidelines (English Nature, 2001)

3.38 The risk assessment also concluded works outside the Phase 1a residential area would require mitigation licence to facilitate the proposed operations. The licensable development operations comprised: Phase1a drainage infrastructure works (pumping station, balancing facility, pipe connections); and all construction activities associated with other phases within the Phase 1 area (i.e. south of hedgerow H3).

3.39 A scheme of mitigation and compensation was devised through extensive consultation with Natural England comprising:

- Capture and translocation of GCN from the working area to an *in situ* receptor;
- Enhancement and long-term management of the receptor area by constructing a linear hibernacula and grassland seeding;
- Creation and long-term management of additional terrestrial habitats associated with the balancing facility and open ditch system comprising grassland seeding, native species shrub/scrub planting, native species hedgerow planting

3.40 Full details of GCN mitigation and compensation, including habitat creation and management are provided under Objective 4.

4.0 OBJECTIVES

Long–term Ecological Management Objectives

4.1 The main objectives for the site are based on the requirement to maintain and enhance the nature conservation value of the retained habitats where possible, mitigating for the loss of existing hedgerows, trees, species-poor grasslands and species foraging areas, whilst contributing to objectives of the Local BAP and promoting S41 NERC national priority habitats. New and retained habitat corridors and sympathetic management will aim to encourage the natural dispersal of wildlife through the site and surrounding habitats, and contribute to the maintenance of ecologically valuable habitat in the long-term.

4.2 Management efforts will in particular focus on the provision of suitable habitats for use by foraging and sheltering wildlife including bats and birds.

4.3 The Plan promotes the following aims and objectives for the site's management:

Objective 1:

4.4 To maintain, protect and enhance the existing nature conservation value of retained features and associated species.

Objective 2:

4.5 To create new habitats to compensate for loss of, and impacts to, existing habitats. To enhance biodiversity of the local area and to maximise the site's biodiversity potential through appropriate management practices.

Objective 3:

4.6 To remove invasive flora species identified present on site (Himalayan balsam) using appropriate best practise methods.

Objective 4:

4.7 To implement appropriate mitigation and compensation measures in relation to protected species to ensure that their conservation status is maintained and enhanced.

5.0 HABITATS TO BE RETAINED, PROTECTED AND ENHANCED

Objective 1

5.1 To maintain, protect and enhance the existing nature conservation value of retained features and associated species.

5.2 During construction all retained hedgerow habitat and associated field perimeter trees will be suitably protected from mechanical damage and compression of the root area, for example by using high visibility fencing erected approximately 2m from the outside edge of retained hedgerows. All retained trees will be protected by barriers or ground protection around the calculated RPA or other defined constraints as detailed by the separate Arboricultural Assessment or the relevant section of BS5837. All protective fencing should be checked on a daily basis to ensure it is in place and that no works are encroaching into these areas.

5.3 The Phase 1B scheme will result in the removal of c.315m of existing native species hedgerows from the site interior (removal of H12 and H15 and partial removal of H24). This is largely in accordance with the consented outline proposals.

5.4 Measures taken to protect, maintain and manage the hedgerow will be undertaken by experienced staff including a supervisory working foreman.

5.5 Hedgerows will be gapped up where appropriate using locally sourced native woody species such as hawthorn *Crataegus monogyna,* blackthorn *Prunus spinosa*, holly *Ilex aquifolium*, field maple *Acer campestre*, hazel *Corylus avellana*, or dog rose *Rosa canina*.

5.6 Retained hedgerows within areas of public open space should be cut on a three-year rotation in late winter. No more than a third of hedgerow lengths should be cut at any one time. This will maximise food and shelter resources for wild birds and other fauna.

5.7 No removal of woody vegetation will take place during the bird nesting season unless a thorough survey by an appropriately experienced ecologist first confirms that no active nests are present. If active nests are found, areas will be left untouched and suitably buffered from works until all birds have fledged.

5.8 All neighbouring watercourses, ponds and other retained habitats will be appropriately protected from surface water runoff from the site during the construction phase, and all works, including site preparation, construction works, vehicle movement and materials storage will adhere to the now withdrawn Environment Agency Pollution Prevention Guidelines PPG5 in order to minimise the risk of disturbance or pollution of the river. All relevant personnel will be familiar with the content of these guidelines prior to commencing work within the site to reduce all risks of accidental spillages and pollution events.

6.0 HABITATS TO BE CREATED

Objective 2

6.1 To create new habitats to compensate for loss of, and impacts to, existing habitats. To enhance biodiversity of the local area and to maximise the site's biodiversity potential through appropriate management practices.

6.2 Further habitat creation is included in relation to the Phase 1A scheme, specifically in accordance with the agreed Natural England GCN mitigation licence comprising: native species scrub / shrub planting adjacent the balancing facility; wet meadow grassland seeding, tussock grassland seeding. Further details regarding creation and management of these habitats is provided in the corresponding Phase 1A Biodiversity Enhancement and Habitat Management Plan (FPCR 2016, in draft).

New native tree / shrub planting

6.3 New areas of native species tree and shrub planting will be established throughout areas of GI and as street/garden trees. Where possible the planting scheme will create new habitat connections to facilitate the movement of a wide range of wildlife through the area.

6.4 Preference will be given within the landscaping scheme to the use of locally native woody species, with an emphasis on species bearing nectar, berries, fruit and nuts, as these enhance the foraging opportunities of local wild fauna including birds and invertebrates. Furthermore the inclusion of species of varied size and form will provide amenity interest throughout the year.

6.5 New trees and shrubs will be established as standards or heavy standards and protected from potential damage with clear spirals around their base until such a time as they become established.

6.6 Suitable native species for inclusion within the planting scheme include:

Scientific Name	Common name
Alnus glutinosa	Alder
Betula pendula	Silver birch

Carpinus betulus	Hornbeam
Crataegus monogyna	Hawthorn
Fagus sylvatica	Beech
Quercus petraea	Sessile oak
Quercus robur	Pedunculate oak
Sorbus aucuparia	Rowan

6.7 This mix seeks to provide visual interest, foraging and nesting habitat, a variety of form, size and seasonal colour. The recommended period for planting of woody species is between October and March but periods of inundation or prolonged ground frost should be avoided. Planted areas will be provided with a wood chipping/bark mulch.

6.8 Grassland in amongst areas of tree/shrub planting will permitted to grow to a long sward to provide additional structural and species diversity.

6.9 The design of the site lighting scheme will be such that light spill onto woodland areas will be avoided where possible, or otherwise kept to a minimum (see paragraph 6.31).

Long-term management will include the following:

6.10 Check and tighten tree supports. If the tree has established well, then remove all stakes, ties, spacers, tubes etc. and make good surfaces disturbed, filling any holes with suitable topsoil.

Frequency: Annually and after major storm events.

6.11 For the first five years all dead and dying specimens are to be replaced with a tree of either the same species or similar species as those existing. This is to allow some flexibility and to avoid problems encountered with 'Same Tree Disease'.

Frequency: Annually and/or as required for first 5 years

6.12 Prune back any diseased or rotten wood (including the removal of main stems and limbs) back to sound wood. A suitably skilled and qualified arboriculturalist shall carry out such pruning. Arisings should be cleared to a designated composting area or removed from the site.

Frequency: One visit in early/mid- summer and/or as required.

6.13 Spray and weed around tree boles.

Frequency: One visit during each of spring, early and late summer and/or as required.

6.14 Feed season using an approved liquid feed (N10:P15:K10) at a rate of 60g/ m² to promote healthy growth, taking care not to over feed.

Frequency: Twice annually, in early May and late September

6.15 Water trees in periods of extreme drought. Water in the morning or in the evening to restrict water evaporation. After establishment continue to water only if deemed to be required.

Frequency: As required for first 5 years

6.16 Top up mulch levels where necessary.

Frequency: as required.

New ornamental shrub

6.17 Ornamental shrub planting is proposed at locations through the site comprising a variety of woody species to enhance the visual amenity of such spaces. Recommended planting densities are 2-3 plants per m^2 to allow space for growth. Suggested species have been selected with specific regard to their wildlife value and will provide a varied nectar, fruit and seed resource suitable to support a range of invertebrate and vertebrate species.

6.18 Suitable species for inclusion within the planting scheme include:

Scientific Name	Common Name
Cornus alba siberica	Dogwood
Cytisus x praecox 'Allgold'	Broom
Lonicera nitida 'Maigrun'	Honeysuckle
Lonicera pileata	Honeysuckle
Perovskia atriplicifolia 'Blue Spire'	Russian sage
Photinia x fraseri 'Red Robin'	Photinia
Potentilla 'Farrer's White'	Cinquefoil
Prunus laurocerasus 'Otto Luyken'	Dwarf laurel
Prunus lusitanica	Laurel
Pyracantha x waterei	Fire thorn
Rosmarinus officinalis	Rosemary
Rubus cockburnianus	Ghost bramble
Ulex europaeus	Gorse
Viburnum tinus	Laurustinus viburnum
Amelanchier lamarckii	Snowy mespilus
Cotinus coggygria 'Flame'	Smoke bush
Viburnum x carlcephalum	Fragrant snowball

6.19 A 50mm depth wood chipping or bark mulch will be applied to all areas of shrub planting, and topped up as necessary.

6.20 Long-term management of shrub habitat in public areas will include the following:

6.21 Any loose plants will be firmed in and straightened. Shrubs plants will be replaced that are lost, damaged or become sick or weak from senescence, vandalism, theft, disease, drought, inclement or stormy weather, fungal or other pathogenic or pest attack, or other adverse cause. Such shrubs will be replaced with the same or similar species on a one for one basis. Nursery stock shall be container grown and shall be a minimum stock size of 3L pot to National Plant Specification classifications of stock size, quality, and number of breaks.

Frequency: Annually and/or as required for first 5 years

6.22 All habitats provided in the proposed development area should be managed in the long term to ensure that the overall biodiversity gains are maximised. Consequently the habitat enhancements proposed as part of the scheme will be in accordance with local and national planning policies.

Native Hedgerow Planting

6.23 The Phase 1B scheme will result in the creation of c.260m new native species hedgerow habitat, to be located along the eastern site boundary and providing habitat linkage to off-site hedgerows and tree groups. Further hedgerow planting in relation to the Phase 1A scheme will result in an overall net gain of 20m over the two phases.

6.24 Hedgerow and native shrubs to be supplied as bare root stock unless stated otherwise, and will be planted in accordance with horticultural best practice guidelines and as per the plant schedule details provided in the Soft Landscape Proposals. The following species are suggested:

Species
Crataegus monogyna
Ligustrum ovalifolium
Acer campestre
Corylus avellana
Crataegus monogyna
Ligustrum vulgare
Prunus spinosa

6.25 Hedgerow shrubs will be planted in a double staggered row of 5 plants per linear metre; 450mm between rows. Plants to be inserted into ground in random groups of 15-21 by species along length of proposed hedge. All plants to have clear plastic spiral rabbit guards, secured into ground with bamboo canes. Plant into 1m wide mulch mat roll. Roots of bareroot stock shall be treated with Mycorrhizae Whip Dip to manufacturer's instruction. All whips supplied to site shall be of British provenance. A certificate proving such shall be provided to the Landscape Architect prior to delivery to site.

6.26 New hedgerow sections within areas of public open space will be managed on a three-year rotational basis with up to a maximum of one third of hedgerow lengths cut at any one time. This management will be undertaken in late winter. This will ensure a continuous supply of foraging for local fauna throughout the year.

6.27 Hedgerows will be cut outside of the bird nesting season. Hedgerows will be trimmed into an 'A' profile to promote a wide base, more beneficial to local wildlife. Care will be taken to avoid damage to potential future mature hedgerow trees during cutting to enable their successful growth.

6.28 Long-term management will include the following:

Replacement of all dead and dying specimens with either the same or similar species as existing until hedgerows / native shrubs are mature and established.

Frequency: As required for first 5 years

Prune back any diseased or rotten wood back to sound wood. A suitably skilled and qualified arboriculturalist shall carry out such pruning. *Frequency: As required, avoiding the bird breeding season between March – September inclusive*.

Starting in year 4 after planting new hedgerow sections will be cut along one side annually, alternating between the two sides of the hedgerow each year. Hedgerows will not be cut during heavy frost.

All disease free cut material should be chipped and used as mulch around newly planted shrubs and trees or composted or removed from site.

Frequency: in November. Avoid bird breeding season March – September.

All arisings will be cleared to a designated composting area or removed from site. Diseased material will be removed from site.

Protected / notable species

6.30 To minimise the risk of harm to terrestrial fauna during works, any trenches or other deep excavations left overnight will be provided with a sloping end or a ramp to prevent animals, from becoming trapped. Alternatively they will be suitably covered before dusk to prevent any passing animals falling in. Materials such as netting, wiring or cutting tools will not be left in the works area where they might entangle or injure wildlife.

6.31 Wherever possible, works adjacent to hedgerows and trees will be undertaken during daylight hours to minimise night time disturbance which may otherwise affect bat foraging/commuting habits.

6.32 The lighting scheme will be carefully designed to minimise potential disturbance due to light spill onto existing and new potential bat foraging areas and roost sites including hedgerows, tree and shrub planting, and potential roost sites including bat boxes. Where artificial lighting cannot be avoided the lighting scheme will be designed with reference to the Bat Conservation Trust and Institute of Lighting Professionals guidance[9,10,11] and will be designed to reduce spill and be downwardly directional. All new lighting will meet the current environmental standards of good practice in order to reduce potential light pollution and will use the lowest intensity possible for its purpose. Disturbance through lighting effects are therefore expected to be negligible for local bat species.

6.33 As part of the proposed scheme a range of bird and bat boxes will be erected at a height of at least 4m, and located below the eaves or gables of selected buildings to provide increased opportunities for use by nesting birds and roosting bats. 4no. bird boxes and 2no. bat boxes will be provided on the eastern aspects of appropriate buildings facing the eastern site boundary, close to H26 and the associated new hedgerow planting and off-site tree line. Suitable designs include:

Integral (building) bat box designs:

- Habitat bat box (choice of brick, rendered, stone or custom timber facings);
- Ibstock enclosed bat box 'C';
- Schwegler bat tube 1FR &/or 1WI

[9] Bat Conservation Trust. 2009. *Bats and Lighting in the UK*. Bats and the Built Environment Series.
[10] Bat Conservation Trust. 2011. *Statement on the Impact and Design of Artificial Light on Bats*.
[11] Institute of Lighting Professionals. 2011. *Guidance notes for the reduction of Obtrusive Light*.

Suitable bird box designs for use on buildings:

- Schwegler 1SP sparrow nest box;
- Schwegler 16S swift box;
- Schwegler brick nest boxes - types 24, 25, 25A or 26

Available from http://www.nhbs.com and other suppliers.

7.0 INVASIVE FLORA

Objective 3

7.1 To remove invasive flora species identified present on site (Himalayan balsam) using appropriate best practise methods.

7.2 A Method Statement for the removal of Himalayan balsam has been provided to the landowner (Appendix 2), and removal works have commenced in accordance with the methods outlined in this document.

7.3 It is noted that Himalayan balsam also occurs on off-site land and, as such, eradication of this species from the site is unlikely to be achievable. Therefore, treatment will aim to minimise the risk of spread of the plant to currently unaffected off-site land.

8.0 PROTECTED SPECIES

Objective 4

Great Crested Newt (GCN)

8.4 This species was confirmed present in one off site pond (P4) during 2016. A Natural England derogation licence was subsequently sought and granted (Natural England mitigation licence application reference: *2016-26222-EPS-MIT)* in order to facilitate construction works associated with the Phase 1a consented development. This licence enables the removal of GCN from the entirety of the Phase 1 construction area (including those areas which do not currently have Reserved Matters planning permission) in order to minimise overall impacts on this species. As such, all mitigation and compensation in relation to this species has already been agreed and is currently being implemented with regard to the Phase 1a development. At the time of the start of Phase 1b construction activities, no additional mitigation or compensation will be required other than the maintenance of mitigation and compensation measures implemented under the approved licence. However, for completeness, the following is a summary of GCN site status and the mitigation and compensation strategy as agreed with Natural England under mitigation licence. These details will also be provided the corresponding *Biodiversity Enhancement and Habitat Management (FPCR, 2016 in draft)* document for Phase 1a.

Mitigation and Compensation Strategy

8.5 Given the presence of GCN associated with P4 and the availability of suitable terrestrial habitat within the development site which is linked to the off-site pond the following strategy to be implemented under mitigation licence was devised through detailed consultation with Natural England.

8.6 In order to minimise the impacts of double-handling GCN (through a phased licence approach) or through GCN isolation from their aquatic habitat, all licensable works south of hedgerow H3 will be undertaken under one licence. Natural England have confirmed no further licence applications are required for future development phases to the north of hedgerow H3.

8.7 Compensatory habitat and the associated management prescriptions which have been agreed with Natural England through granting of licence reference *2016-26222-EPS-MIT* are shown on Figure 3 and comprise:

- Preparation of an *in situ* GCN receptor area, close to the off-site GCN pond P4 which will be managed in the long-term, comprising:
    1. A linear hibernacula (as per Natural England[12] (GCNMG) specifications) with dimensions 60m long by 2m wide by 1m high;
    2. over-seeding of improved grassland and bare ground with EM10 tussock grassland mix.
- Capture of GCN from the licensable area (all land within the Phase 1 area, i.e. south of hedgerow H3) over a 30 day period using standard temporary amphibian fencing (TAF), drift fencing, pitfall traps and artificial refuges (carpet tles). All captured animals will be relocated immediately to the receptor area.
- Provision of additional GCN habitat at the completion of Phase 1a drainage infrastructure works, which will be managed in the long term comprising:
    1. native species scrub planting (0.03Ha);

[12] Great Crested Newt Mitigation Guidelines (English Nature, 2001)

2. seeding of bare ground with Emorsgate EM8 wildflower meadow wetland mix and EM10 Tussock mix (0.64Ha);
3. linear hibernacula (as per GCNMG standard specification) overseeded with grassland mix: 100m long x 2m wide x 1m high.
4. 102m native hedgerow planting.

9.0 OUTLINE MANAGEMENT PRESCRIPTIONS

Habitat	Prescription
Retained hedgerows	Retained hedgerows will be protected from damage and from soil compaction during construction using fenced RPAs where construction works are to be undertaken in the vicinity, in accordance with guidance in British Standard 5837 (2005).
	Retained hedgerows will be enhanced/gapped up using listed native species. Planting of new material will be undertaken between October to March, avoiding periods of inundation or prolonged ground frost. Failed specimens will be replaced on a like-for-like basis.
	Retained hedgerows will be cut on a three-year rotation in late winter, comprising up to a maximum of one third of hedgerow lengths to a height of between 1.5m and 2.5m to suit circumstances. Hedgerows will be trimmed into an 'A' profile to promote a wide base to benefit local wildlife. Hedgerows will not be cut during bird breeding season (March to September inclusive).
	Any diseased or rotten wood will be pruned back to sound wood, including the removal of main stems and limbs. Cut material will be removed from the site. No on-site burning will be permitted.
New native tree / shrub planting	New areas of tree planting will be established between October to March, avoiding periods of inundation or prolonged ground frost. Mulch using wood chippings or bark. Individual tree guards will be required to prevent damage to saplings by browsing rabbits and deer. Planting will include suitable native species for the region (see Section 5).
	Review and remove guards and stakes as necessary after three years. If the tree has yet to establish, replace or adjust ties, spacers and tree tubes as appropriate. If the tree has established well, then remove all stakes, ties, spacers, tubes etc. and make good surfaces disturbed – filling any holes with suitable topsoil.
	Replace failed specimens on a like-for-like basis during the first five years of establishment. Top up mulch levels where necessary.
	Prune any diseased or rotten wood (including the removal of main stems and limbs) back to sound wood. Remove all stems and limbs which are unsafe or are in danger of falling or breaking during gales. A suitably skilled and qualified arboriculturalist shall carry out such pruning. Remove all diseased material from site. Do not site burn.
	During the first 5 years following planting, water trees in periods of extreme drought. After establishment continue to water only if deemed to be required.
	All new areas of tree planting shall be fertilised using an approved liquid feed (N10:P15:K10) at a rate of 60g/m² during early May and late September during the first 5 years following planting to promote healthy growth, taking care not to over feed.
	Group planting will be assessed after 5 years, and where necessary, some specimens removed to enhance the development of others, however a non-intervention management approach to individual trees will be adopted wherever possible.
New ornamental shrub	Prune out dead, leggy and broken branches, without damage to natural habit of plant. Prune back shrubs in the period October to March. Firm in and straighten any plants loosened. Replace dead or dying shrubs with the same or similar species on a one for one basis.
	Top up mulch levels where necessary, using to a 50mm depth using wood chipping or

Habitat	Prescription
	bark mulch.
	Shrubs will be dead-headed after flowering.
	Prune no more than one third of woody growth cut to ensure a continuous supply of flowers and fruits in autumn/winter (October to March inclusive). Prune out dead, leggy and broken branches, crossover branches, invasive suckers, dead wood and damaged stems, pruning back to a node, shoot or bud. Shrubs will not be box clipped or rounded off. Trim shrubs and ground cover planting back from paths etc.
	Weed growth will be removed by hand as necessary to ensure weed free and tidy planting beds.
	During the first 5 years following planting, shrubs will be watered during periods of extreme drought. After establishment watering will continue only if deemed to be required.
	All shrubs shall be fertilised using an approved liquid feed (N10:P15:K10) at a rate of 60g/ m² during early May and late September, taking care not to over feed.
	All litter, stones or other debris should be collected and removed by the Contractor at each visit, leaving the site clean and tidy.
Native hedgerow planting	Plants to be inserted into ground in random groups of 15-21 by species along length of proposed hedge. Plant into 1m wide mulch mat roll. All whips supplied to site shall be of British provenance.
	All plants to have clear plastic spiral rabbit guards, secured into ground with bamboo canes.
	Roots of bareroot stock shall be treated with Mycorrhizae Whip Dip to manufacturer's instruction.
	New hedgerow sections will be cut on a three-year rotation in late winter, comprising up to a maximum of one third of hedgerow lengths to a height of between 1.5m and 2.5m to suit circumstances. Hedgerows will be trimmed into an 'A' profile to promote a wide base to benefit local wildlife. Hedgerows will not be cut during bird breeding season (March to September inclusive).
	Replace dead or diseased specimens on a like-for like basis. Prune back any diseased or dying wood.
New wildflower - rich grassland seeding	**Habitat Creation**: 1. Prepare soil by scraping off first 100mm of top soil to remove weed seed bank and reduce nutrients. 2. Sow with seed mix (Emorsgate EM8 / EM10) during either spring or autumn (autumn sowing is often more successful first year germination).
	Ongoing Management: Management is designed in accordance with the granted Natural England mitigation licence with respect to great crested newts. Active GCN Phase Habitat Management 1. Grassland will be cut / mowed up to twice per year to a minimum height of 150mm during periods of dry weather in early and mid-summer. All arisings will be removed, by hand where necessary, and removed from site. This will encourage use of the grassland throughout the active phase by GCN.

Habitat	Prescription
	Dormant GCN Phase Habitat Management 1. Grassland in the balancing facility and ditch will also be cut / mowed once per year to a minimum height of 75mm during a period of dry weather in early October. All arisings will be removed, by hand where necessary, and removed from site. This will encourage GCN to utilise adjacent hibernacula features during the dormant phase rather than the balancing facility / ditch.

10.0 WORK PROGRAMME

10.1 The prescriptions provided here should not be set in stone and will be altered if required. The management plan should run for a period of ten years, the work programme will be reviewed at the end of the five year period. An outline is detailed below. Flexibility is essential and managers will have the ability to adjust the regime in order to respond promptly to changing circumstances.

10.2 Litter should be removed from the site as part of the general management and maintenance visits.

Table 2 – Five Year Work Programme

Description of works	**Years Active with Priority**					
	1	**2**	**3**	**4**	**5**	**Post 5 yrs**
Hedgerows						
1. Gap up existing hedgerows and plant new hedgerows with native woody species.	✓	-	-	-	-	-
2. Existing hedgerows cut in late winter to avoid the bird breeding season on a three-year rotation. Up to one third of hedgerow lengths cut at any one time.	✓	✓	✓	✓	✓	✓
3. New hedgerows cut in late winter to avoid the bird breeding season on a three-year rotation. Up to one third of hedgerow lengths cut at any one time.				✓	✓	✓
4. Prune back diseased or dying wood.	✓	✓	✓	✓	✓	✓
5. Replace diseased or dying specimens on a like-for-like basis	✓	✓	✓	✓	✓	✓
Tree and Shrub Planting						
1. Plant young tree and shrub species	✓	-	-	-	-	-
2. Replace dead or dying species on a like for like basis.	-	✓	✓	✓	✓	-
3. Prevent encroachment into adjacent habitats.	✓	✓	✓	✓	✓	✓
Wildflower-Rich Grassland						
1. Prepare ground and sow seed mix	✓					
2. Active GCN Phase (mid-March to end October) Management - cut / mow up to twice per year to a minimum height of 150mm during dry weather, in early and mid-summer. Remove all arisings.	✓	✓	✓	✓	✓	✓
3. Dormant GCN Phase (November to mid-March) Management – Grassland in balancing facility and ditch cut / mowed once per year to 75mm minimum height during dry weather in early October. All arisings removed.	✓	✓	✓	✓	✓	✓
Monitoring						
1. Monitor general green infrastructure habitats every two to three years and use results to inform future management.	-	-	✓	-	-	✓

H3
H3
H12
H12
H17
H13
H22
W5
H14
H14
H16
H16
SI
H15
H26
H24
H24
SI
H23
H15
Park
Fields

Key:

- Site Boundary
- Built Environment: Buildings/hardstanding
- Bare ground
- Standing water
- Scrub - dense/continuous
- Retained Habitat
- Sparsely Vegetated
- Cleared Vegetation
- Construction Zone
- Other tall herb and fern - ruderal
- I — Improved grassland
- Cultivated/disturbed land - amenity grassland
- SI — Poor semi-improved grassland
- Standing water
- Intact hedge - species-poor
- Fence
- Scrub - scattered
- Broadleaved tree

St. Modwen Homes Limited

Parks Farm
Uttoxeter

Phase 1 Habitats

Scale @ A3: 1:2,500 RJJH/RG 24/10/2016

Figure 1 **4348-E-01**

N

0 50 100 150 200 250 m

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masterplanning ▪ environmental assessment ▪ landscape design ▪ ecology ▪ architecture ▪ arboriculture ▪

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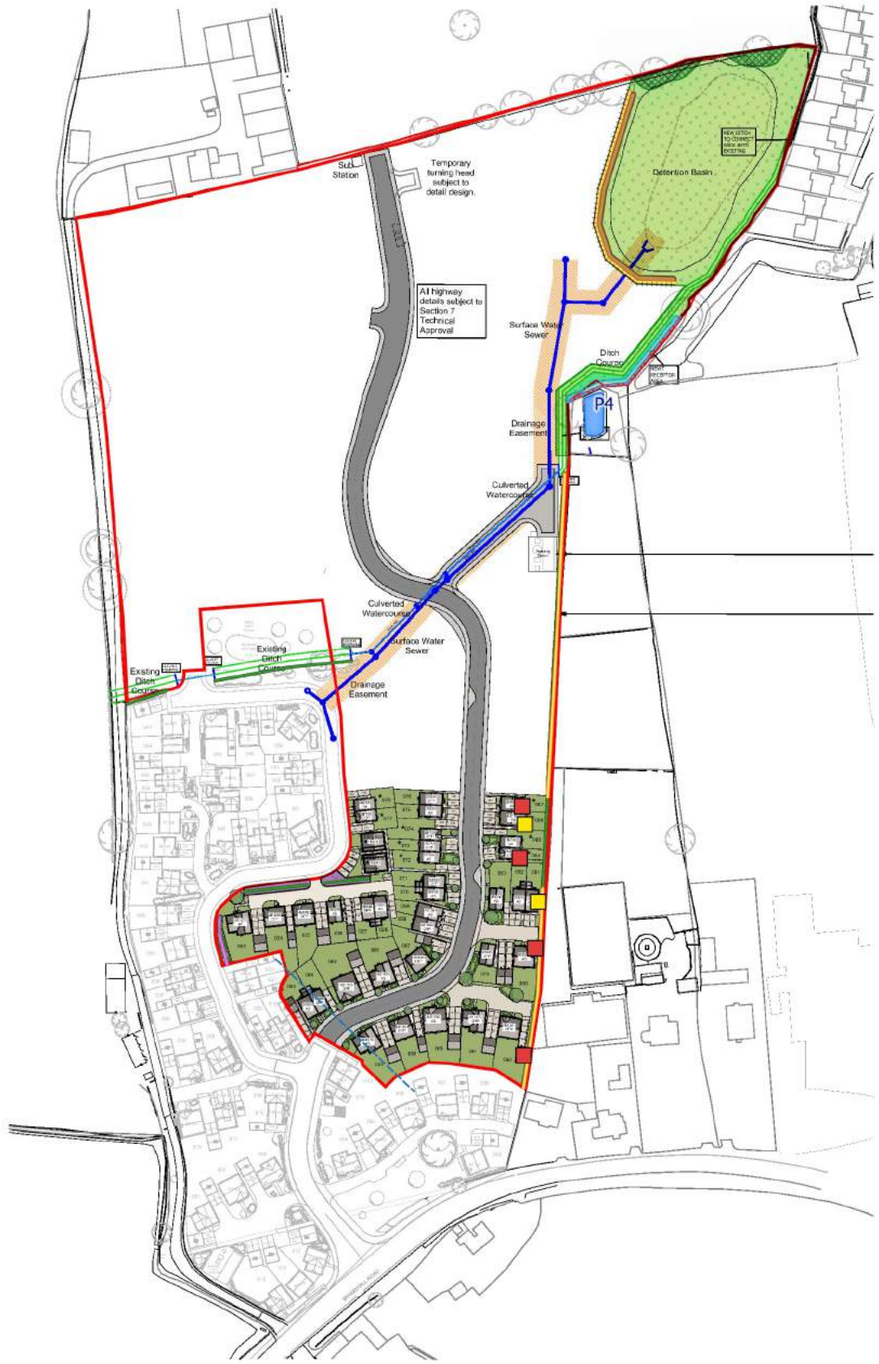

Key:

- Site Boundary
- GCN Pond (P4)

Receptor Area

- Receptor Area
- Construction of linear hibernacula (60m long, 2m wide and 1m high as per GCN mitigation guideline specifications) with overseeding of existing grassland and hibernacula with Emorsgate EM10 tussock grassland mix

Enhancements

- Native Species Scrub Planting
- Grassland seeding (Wet Meadow Emorsgate EM8 / Tussock EM10)
- Hibernacula
- Native Species Grassland
- New Tree
- Post & Rail Fence
- Retained Hedgerow
- New Native Species Hedgrerow
- New Native Species Hedgrerow/Shrub
- Suggested Bat Box Location
- Suggested Bird Box Location

St Modwen Developments Ltd.

Park Fields Farm
Uttoxeter

Landscape & Ecological Enhancement Plan

Scale @ A3: 1:2,500 RJJH/RG 24/10/2016

Figure 2 **4348-E-02**

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0 50 100 150 200 250 m

N

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Scrub Planting

Native shrub planting will be left to achieve a vaiable height of 6 - 12m. Small scale roational coppice regime on a 3 - 8year cycle.

Hedgerows

Prune annually in late November (after the leaves have started to drop) to a height of between 1.5 and 2m to suit circumstances. Part cut on rotation basis: divide into three sections and cut each section every three years on rotation. Retain hedgerow trees allowing them to mature into standard trees within the hedgerow. Remove all cut material; chip all arising's and store it in compost heaps or top up log piles within the receptor site.

Active GCN Phase Habitat Management

Grassland will be cut/mowed up to twice per year to a minimum height of 150mm during periods of dry weather in early and mid-summer. All arising's will be removed by hand where necessary and removed from site. This will encourage use of the grassland throughout the active phase by GCN.

Dormant Phase Habitat Management

Grassland in the balancing facility will be cut/mowed once per year to a minimum height of 75mm during a period of dry weather in early October. All arisings will be removed by hand where necessary and removed from site. This will encourage GCN to utilise adjacent hibernacula features during the dormant phase rather than the balancing facility.

Key:

- Site Boundary
- GCN Pond (P4)

Enhancement Areas

- Native Species Scrub Planting
- Grassland seeding (Wet Meadow Emorsgate EM8 / Tussock EM10)
- Hibernacula
- Native Species Hedgerow
- Post & Rail Fence

Receptor Area

- Receptor Area
- Construction of linear hibernacula (60m long, 2m wide and 1m high as per GCN mitigation guideline specifications) with overseeding of existing grassland and hibernacula with Emorsgate EM10 tussock grassland mix

0 10 20 30 40 50 m

0 50 100 150 200 m

N

St Modwen Developments Ltd.

Park Fields Farm
Uttoxeter

Great Crested Newt Habitat Creation and Management Plan

Scale @ A3: 1:2,000 RJJH/JSE 24/10/2016

Figure 3 **4348-E-03**

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J:\4300\4348\QGIS\Plans\GCN Licence Figures\Rachel's\Figure 3 - Great Crested Newt Habitat Creation and Management Plan

APPENDIX 1:

Arboricultural Assessment

Overpage.

St Modwen

Bramshall Road, Uttoxeter

Arboricultural Assessment

October 2016

FPCR Environment and Design Ltd
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-	Draft	EC / 23.02.16	HCK / 24.02.16
-	Final	EC / 26.02.16	HCK / 26.02.16
A	Final	EC / 14.09.16	HCK / 14.09.16
B	Final	EC / 11.10.16	HCK / 11.10.16

CONTENTS

TABLES

FIGURES

APPENDICES

1.0 INTRODUCTION

1.1 This report has been prepared by FPCR Environment and Design Limited on behalf of St Modwen to present the findings of an arboricultural assessment and survey of trees located at Bramshall Road, Uttoxeter, (hereafter referred to as the site), Grid Ref SK 073 345 as shown in Figure 1. The latest tree survey was carried out on the 19th January 2016.

1.2 An initial survey of trees on the site was carried out during May 2013 for a larger outline application area and the original tree numbers have been used within this report for consistency.

1.3 The tree survey and assessment of existing trees has been carried out in accordance with guidance contained within British Standard 5837:2012 *'Trees in Relation to Design, Demolition and Construction - Recommendations'* (hereafter referred to as BS5837). The guidelines set out a structured assessment methodology to assist in determining which trees would be deemed either as being suitable or unsuitable for retention.

1.4 The guidance also provides recommendations for considering the relationship between existing trees and how those trees may integrate into designs for development; demolition operations and future construction processes so that a harmonious and sustainable relationship between any retained trees and built structures can be achieved.

1.5 The purpose of the report is therefore to firstly present the results of an assessment of the existing trees' arboricultural value, based on their current condition and quality and to secondly provide an assessment of impact arising from the proposed development of the site for residential use.

1.6 This report has been produced to accompany a Reserved Matters planning application for a residential development and has included an assessment of any impact to the tree cover. The survey has therefore focused on any trees present within or bordering the site that may potentially be affected by the future proposals or will pose a constraint to any proposed development.

1.7 The site comprises pastureland situated to the east of the town of Uttoxeter and comprises a portion of the larger outline application area for the Parks Farm development. Residential dwellings abut a portion of the site's eastern boundary and to the north and west are further open fields used as pasture. Established native hedgerows bound the majority of the fields within which are located a number of larger proportioned trees.

1.8 Following consultation with the Local Planning Authority, East Staffordshire District Council, it is understood that there are no Tree Preservation Orders or Conservation Area Designations that would apply to any trees present on, or in close proximity to the assessment site and therefore at the time of writing there would not be any statutory constraints to the development in respect of trees.

1.9 It must be understood that should any specific tree protection be required, this would need to be separately considered where needs arise prior to the commencement of construction activity following approval of the application. This should be in the form of an Arboricultural Method Statement produced in accordance with guidance in BS5837 and is beyond the scope of this arboricultural assessment.

2.0 METHODOLOGY

2.1 The survey of trees has been carried out in accordance with the criteria set out in Chapter 4 of BS5837. The survey has been undertaken by a suitably qualified and experienced arboriculturist and recorded information relating to all those trees within the site and those adjacent to the site which may be of influence to any proposals. Trees were assessed for their arboricultural quality and benefits within the context of proposed development in a transparent, understandable and systematic way.

2.2 Trees have been assessed as groups where it has been determined appropriate. The term group has been applied where trees form cohesive arboricultural features either aerodynamically, visually or culturally including biodiversity or habitat potential for example parkland or wood pasture. An assessment of individual trees within the groups has been made where there has been a clear need to differentiate between them for example. in order to highlight significant variation between attributes including physiological or structural condition or where a potential conflict may arise.

2.3 Trees have been divided into one of four categories based on Table 1 of BS5837, *'Cascade chart for tree quality assessment'*. For a tree to qualify under any given category it should fall within the scope of that category's definition (see below). Category U trees are those which would be lost in the short term for reasons connected with their physiology or structural condition. They are, for this reason not considered in the planning process on arboricultural grounds. Categories A, B & C are applied to trees that should be material considerations in the development process. Each category also having one of three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural or conservation values accordingly.

2.4 **Category (U) – (Red):** Trees which are unsuitable for retention and are in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. Trees within this category are:

- Trees that have a serious irremediable structural defect such that their early loss is expected due to collapse and includes trees that will become unviable after removal of other category U trees.
- Trees that are dead or are showing signs of significant, immediate or irreversible overall decline.
- Trees that are infected with pathogens of significance to the health and or/safety of other trees nearby trees or are very low quality trees suppressing adjacent trees of better quality.
- Certain category U trees can have existing or potential conservation value which may make it desirable to preserve.

2.5 **Category (A) – (Green):** Trees that are considered for retention and are of high quality with an estimated remaining life expectancy of at least 40 years with potential to make a lasting contribution. Such trees may comprise:

- Sub category (i) trees that are particularly good examples of their species, especially if rare or unusual, or are essential components of groups such as formal or semi-formal arboricultural features for example the dominant and/or principal trees within an avenue.

- Sub category (ii) trees, groups or woodlands of particular visual importance as arboricultural and / or landscape features.
- Sub category (iii) trees, groups or woodlands of significant conservation, historical, commemorative or other value for example veteran or wood pasture.

2.6 **Category (B) – (Blue):** Trees that are considered for retention and are of moderate quality with an estimated remaining life expectancy of at least 20 years with potential to make a significant contribution. Such trees may comprise:

- Sub category (i) trees that might be included in category A but are downgraded because of impaired condition for example the presence of significant though remediable defects, including unsympathetic past management and storm damage.
- Sub category (ii) trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.
- Sub category (iii) trees with material conservation or other cultural value.

2.7 **Category (C) – (Grey):** Trees that are considered for retention and are of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm. Such trees may comprise:

- Sub category (i) unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
- Sub category (ii) trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value or trees offering low or only temporary / transient screening benefits.
- Sub category (iii) trees with no material conservation or other cultural value.

Tree Schedule

2.8 Appendix A presents details of the individual trees, groups and hedgerows found during the assessment including heights, diameters at breast height, crown spread (given as a radial measurement from the stem), age class, comments as to the overall condition at the time of inspection, BS5837 category of quality and suitability for retention and the root protection area.

2.9 General observations particularly of structural and physiological condition for example the presence of any decay and physical defect and preliminary management recommendations have also been recorded where appropriate.

Hedgerows

2.10 For the purposes of this assessment, a hedgerow is described as any boundary line of trees or shrubs less than 5m wide at the base and are managed under a regular pruning regime. Hedgerows and substantial internal or boundary hedges (including evergreen screens) have been recorded including lateral spread, height and stem diameter(s). Where trees are present within a hedgerow that are significantly different in character from the remainder, these have been identified and recorded separately.

2.11 A tree survey in accordance with BS5837 does not assess hedgerows against the Hedgerow Regulations 1997 or specifically from an ecological perspective, and is outside the scope of this assessment.

Other Considerations

2.12 It may be necessary during detailed design to undertake further assessment and accurate positioning of woody species within hedgerows and tree groups to assist structural calculations for foundation design of structures in accordance with current building regulations. Knowledge of soil type was not known at the time of this tree assessment. If a current soil survey of the site has taken place then it should be read in conjuction with the results of the tree survey when determining foundation design in accordance with NHBC Chapter 4.2 Building near Trees.

Conditions of Tree Survey

2.13 The survey was completed from ground level only and from within the boundary of the site. Aerial tree inspections or the internal condition of the stem/s or branches were not undertaken at this stage as this level of survey is beyond the scope of the initial assessment. Evaluation of tree condition given within this assessment applies to the date of survey and cannot be assumed to remain unchanged. It may be necessary to review these within 12 months, in accordance with sound arboricultural practice.

Site Plans

2.14 Figure 1 (drawing no. 4348-A-01_A) identifies the assessment area including trees beyond the application boundary that may be affected by future development of the site and should not be considered as the application boundary.

2.15 The individual positions of trees and groups have been shown on the Tree Survey Plan, Figure 2 (drawing no 4348-A-02_B). The positions of trees are based on a topographical / land survey, as far as possible, supplied by the client. The crown spread, root protection area and shade pattern (where appropriate) are indicated on this plan.

2.16 As part of the Arboricultural Impact Assessment, the Tree Retention Plan, Figure 3 (drawing no 4348-A-03_C) has been prepared to show the proposed layout in relation to the existing tree cover allowing an assessment of any potential conflicts. The plan also identifies which trees that are to be removed or retained as part of the proposed development and also trees considered unsuitable for retention through the assessment process (Category U).

Tree Constraints and Root Protection Area (RPA)

2.17 Below ground constraints to future development are represented by the area surrounding the tree that contains sufficient rooting volume for the specimen to have the best chance of survival in the long term this is known as the root protection area (RPA). The RPA has been calculated in accordance with section 4.6 of BS5837 and requires suitable protection in order for the tree to be incorporated into any future scheme.

2.18 Where groups of trees have been assessed, the RPA has been shown based on the maximum sized tree in any one group and so may exceed the RPA required for some of the individual specimens within the group.

2.19 Above ground constraints such as the current and potential crown spread of the trees and an illustration of the shade pattern (where appropriate) have been considered and identified within the Tree Survey Plan and Tree Retention Plan plans to indicate their potential area of shading influence.

3.0 RESULTS

3.1 A total of twenty two individual trees, one group of trees and eight hedgerows were surveyed as part of the arboricultural assessment tree numbers have been retained from the original outline application for consistency. Trees were surveyed as individual trees and groups/blocks of trees where examples are clearly present as such per the description. Refer to Figure 2 – Tree Survey Plan (drawing no 4348-A-02) and Appendix A – Tree Schedule for full details of the trees included in this assessment.

3.2 The table below summarises the trees assessed. Several of the trees have been discussed in more detail following the table, owing to their physical condition or arboricultural significance.

Table 1: Summary of Trees by Retention Category

	Individual Trees	Total	Groups of Trees	Total
Category U - Unsuitable	T81, T93, T98	3	TG14	1
Category A (High Quality / Value)	T73, T75	2		0
Category B (Moderate Quality / Value	T71, T72, T74, T90, T94, T95, T102, T110	8		0
Category C (Low Quality / Value)	T76, T77, T78, T91, T92, T97, T99, T100, T101	9	H1, H2, H3, H4, H5, H6, H7, H8	8

Results Summary

3.3 The site housed a number of high and moderate quality mature trees mostly situated along the hedgerows of the field boundaries. The most dominant species present is English oak *Quercus robur,* other species included common ash *Fraxinus excelsior* and crab apple *Malus sylvestris.*

3.4 As would be expected with trees in this environment, individual examples showed evidence of storm damaged branch material, dead wood and occasional branch failures and the individual specimens were categorised accordingly. As a result of these minor defects individual specimens may require remedial tree surgery should these be retained within close proximity to residential dwellings or publicly accessible areas.

3.5 T97 an over mature crack willow pollard had partially collapsed with the stem having split and hollowed. Although possessing a sizable stem diameter for the species T97 was not considered to have a sufficient amount or quality of the attributes of veteran trees nor the minimum number of characteristic features pertaining to veteran trees thus would not be regarded as a tree of this status.

3.6 Due to its deteriorating physical conditions, T97 was assessed as being category C, and should it be retained for its contribution to the sites overall bio-diversity, would require re-pollarding.

3.7 Originally assessed as a group TG14 now comprises a single mature crack willow positioned on the site's eastern boundary. This remaining specimen was in a poor condition at the time of the assessment with a large stem having failed at the base leaving a substantial tear wound. TG14 would be unlikely remain intact beyond 10 years and as such was considered as unsuitable for retention (category U).

3.8 Two further individual trees T93 and T98 were also assessed as being unsuitable for retention as a result of significant defects and a future life expectancy of less than 10 years and as such should not form material consideration within the design process.

3.9 Hedgerows on site all comprises hawthorn *Crataegus monogyna* and blackthorn *Prunus spinosa* the majority of which had been regularly maintained by means of flail mowing. The presence of large gaps and the limited landscape value of these hedgerow from an arboricultural perspective resulted in them all being considered retention category C

4.0 ARBORICULTURAL IMPACT ASSESSMENT (AIA)

4.1 The following paragraphs present a summary of the tree survey and discussion of particular trees and groups recorded in the context of any proposed development in the form of an Arboricultural Impact Assessment in accordance with section 5.4 of BS5837. Any final tree retentions will need to be reconciled with the advice contained within this report.

4.2 The AIA has been based upon the Site Layout and seeks to outline the relationship between the proposals and the existing trees and hedgerows. The above drawing for the Reserved Matters application shows the proposals for a residential development indicating the position of individual dwellings, internal road layout, provision of green space and flood attenuation. An overlay of the above layout has been incorporated in the Tree Retention Plan (Figure 3) to assist in identifying the relationship and any potential conflicts between the proposals and the existing trees and hedgerows.

4.3 The proposals have where practicable, attempted to retain category A and B specimens and have incorporated these into the proposals mostly as part of the supporting green infrastructure. However for a feasible layout to be achieved a small number of tree losses would be necessary internally to the site, the large majority of which with the exception of T94 and T95 were assessed as being of low arboricultural value.

4.4 Trees considered as retention category U should all be removed in the interests of safety on arboricultural grounds and should therefore not be material considerations within the development.

4.5 The proposed development has retained a large majority of the higher quality and mature existing trees and has incorporation these retained specimens into the supporting 'Green Infrastructure' requiring no excavation or construction within the indicative root protection area and as such there should be no major objections from an arboricultural perspective.

4.6 It will be necessary to ensure that the prescribed root protection areas for all retained trees is adequately protected by the erection of the requisite tree protection barrier whilst allowing sufficient access/construction zone for the implementation of the proposed layout.

New Tree Planting

4.7 There are several areas of open space within which new tree planting has been illustrated and this new tree planting should form an integral part of the development proposals. New tree planting should be appropriate for the future use of the site and it is recommended that any supporting landscaping scheme should seek to provide an adequate quantity of tree planting to suitably mitigate for the loss of trees required to facilitate the development.

4.8 The purpose and function of any new tree planting should be understood from the start of any design stages so that key objectives from a landscape perspective can also be achieved. The landscaping scheme should consider the use of both native tree species (for their low maintenance requirements and nature conservation value) and ornamental species (for their contribution to urban design and amenity value).

4.9 Species choices should be selected on the basis of their suitability for the final site use. Careful consideration would need to be given to the following: ultimate height and canopy spread, form, habit, density of crown, potential shading effect, colour and maintenance requirements in relation to both the built form of the new development and existing properties.

4.10 The landscaping scheme should consider providing tree planting in the following situations; new amenity planting as part of any proposed road infrastructure; private gardens; areas of incidental open space; larger areas of open space; and structural buffer planting where appropriate.

4.11 Tree planting should be avoided where they may obstruct overhead power lines or cables. Any underground apparatus should be ducted or otherwise protected at the time of construction to enable trees to be planted without resulting in future conflicts. Wherever possible, following discussions with the developer and utility company concerned, particularly on new development sites, common service trenches should be specified to minimise land take associated with underground service provision and to facilitate access for future maintenance.

Tree Management

4.12 All retained trees should be subjected to sound arboricultural management as recommended within section 8.8.3 of BS5837 *Post Development Management of Existing Trees,* where there is a potential for public access in order to satisfy the landowner's duty of care. Additionally, inspections annually and following major storms should be carried out by an experienced arboriculturalist or arborist to identify any potential public safety risks and to agree remedial works as required.

4.13 All tree works undertaken should comply with British Standard 3998:2010 and should therefore be carried out by skilled tree surgeons. It would be recommended that quotations for such work be obtained from Arboricultural Association Approved Contractors as this is the recognised authority for certification of tree work contractors.

4.14 All vegetation and, particularly, woody vegetation proposed for clearance should be removed outside of the bird-breeding season (March - September inclusive) as all birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest. Where this is not possible, vegetation should be checked for the presence of nesting birds prior to removal by an experienced ecologist.

5.0 TREE PROTECTION MEASURES

5.1 Retained trees will be adequately protected during works ensuring that the calculated RPA for all retained trees can be appropriately protected through the erection of the requisite tree protection barriers. Measures to protect trees should follow the guidance in BS5837 and will be applied where necessary for the purpose of protecting trees within the site whilst allowing sufficient access for the implementation of the proposed layout. These have been broadly summarised below.

5.2 Retained trees will be adequately protected during works ensuring that the calculated root protection area for all retained trees can be appropriately protected through the erection of the requisite tree protection barriers. Measures to protect trees should follow the guidance in BS5837 and will be applied where necessary for the purpose of protecting trees within the site whilst allowing sufficient access for the implementation of the proposed layout. These have been broadly summarised below.

General Information and Recommendations

5.3 All trees retained on site will be protected by suitable barriers or ground protection measures around the calculated RPA, crown spread of the tree or other defined constraints of this assessment as detailed by section 6 and 7 of BS5837.

5.4 Barriers will be erected prior to commencement of any construction work and before demolition including erection of any temporary structures. Once installed, the area protected by fencing or other barriers will be regarded as a construction exclusion zone. Fencing and barriers will not be removed or altered without prior consultation with the Project Arboriculturalist.

5.5 Any trees that are not to be retained as part of the proposals should be felled prior to the erection of protective barriers. Particular attention needs to be given by site contractors to minimise damage or disturbance to retained specimens.

5.6 Where it has been agreed, construction access may take place within the root protection area if suitable ground protection measures are in place. This may comprise single scaffold boards over a compressible layer laid onto a geo-textile membrane for pedestrian movements. Vehicular movements over the root protection area will require the calculation of expected loading and the use of proprietary protection systems.

5.7 Confirmation that tree protective fencing or other barriers have been set out correctly should be gained prior to the commencement of site activity.

Tree Protection Barriers

5.8 Tree protection fencing should be fit for the purpose of excluding any type of construction activity and suitable for the degree and proximity of works to retained trees. Barriers must be maintained to ensure that they remain rigid and complete for the duration of construction activities on site.

5.9 In most situations fencing should comprise typical construction fencing panels attached to scaffold poles driven vertically into the ground. For particular areas where construction activity is anticipated to be of a more intense nature supporting struts acting as a brace should be added and fixed into position through the application of metal pins driven into the ground to offer additional resistance against impacts.

5.10 Where site circumstances and the risk to retained trees do not necessitate the default level of protection an alternative will be specified appropriate to the level / nature of anticipated construction activity. The recommended methods of fencing specifications for this site have been illustrated in Appendix B.

5.11 It may be appropriate on some sites to use temporary site offices, hoardings and lower level barrier protection as components of the tree protection barriers. Details of the specific protection barriers for the site can be provided as part of a site specific Arboricultural Method Statement and in accordance with the guidance contained within BS5837.

5.12 It may be appropriate on some sites to use temporary site offices, hoardings and lower level barrier protection as components of the tree protection barriers. Details of the specific protection barriers for the site can be as part of a site specific Arboricultural Method Statement for a Reserved Matters application and in accordance with the guidance contained within BS5837.

Protection outside the exclusion zone

5.13 Once the areas around trees have been protected by the barriers, any works on the remaining site area may be commenced providing activities do not impinge on protected areas.

5.14 All weather notices should be attached to the protective fencing to indicate that construction activities are not permitted within the fenced area the area within to be a construction exclusion zone.

5.15 Wide or tall loads etc. should not come into contact with retained trees. Banks-man should supervise transit of vehicles where they are in close proximity to retained trees.

5.16 Oil, bitumen, cement or other material that is potentially injurious to trees should not be stacked or discharged within 10m of a tree bole. No concrete mixing should be done within 10m of a tree. Allowance should be made for the slope of ground to prevent materials running towards the tree.

5.17 No fires will be lit where flames are anticipated to extend to within 5m of tree foliage, branches or trunk, taking into consideration wind direction and size of fire.

5.18 Notice boards, telephone cables or other services should not be attached to any part of a retained tree.

5.19 Any trees which need to be felled adjacent to or are present within a continuous canopy of retained trees must be removed with due care (it may be necessary to remove such trees in sections).

5.20 Any trees which are to be retained and whose RPAs may be affected by the development should be monitored to identify any alterations in quality with time and to assess and undertake any remedial works required as a result.

Protection for Aerial Parts of Retained Trees

5.21 Where it is deemed necessary to operate a wide or tall load, plant bearing booms, jibs and counterweights or other such equipment as part of the construction works it is best advised that appropriate, but limited tree surgery, be carried out beforehand to remove any obvious problem branches. This is termed as ‘access facilitation pruning’ within BS5837 and any such pruning should be undertaken in accordance with a specification prepared by an arboriculturalist.

5.22 It is strongly advised that a pre-commencement site meeting is held with contractors who are responsible for operating machinery, as described above, to firstly highlight the potential for damage occurring to tree crowns and to ensure that extra care is applied when manoeuvring machinery during such operations within close proximity to retained trees to avoid any contact.

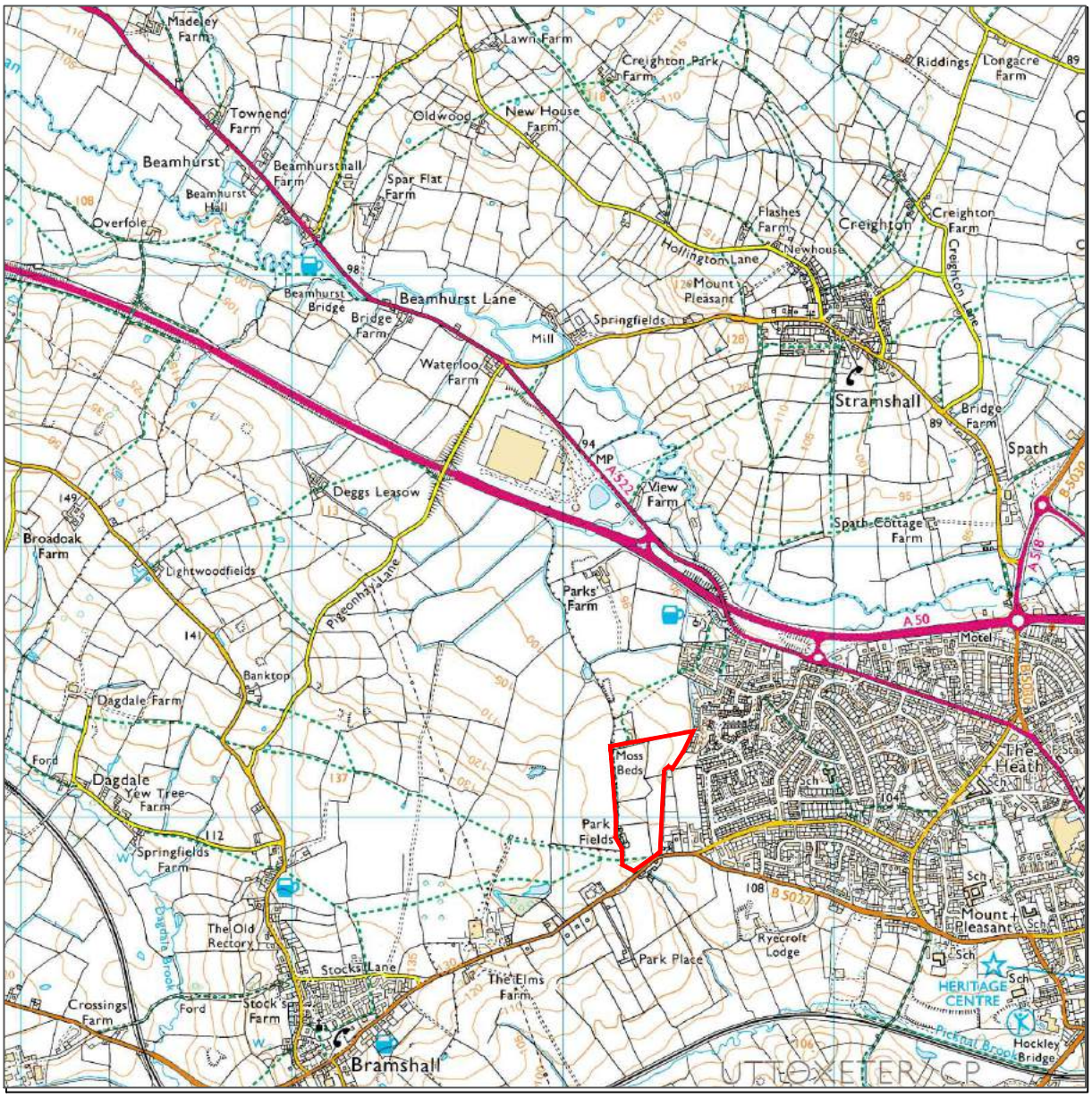
5.23 In the event of having caused any such branch or limb damage to retained trees it is strongly recommended that suitable tree surgery be carried out, in accordance with British Standard 3998:2010 to correct the damage, upon completion of development.

6.0 CONCLUSION

6.1 Only minimal tree losses would occur to facilitate the development as per proposed layout and of these losses mostly were of low arboricultural quality, hence should not raise objection from an arboricultural perspective. These losses would be more than adequately mitigated for through new tree planting which will provide a net gain in tree cover across the site, as part of the overall green infrastructure proposals supporting the development.

6.2 Trees that are to be retained, will in most cases be retained to form part of landscaped buffers or be retained within open spaces thereby reducing conflicts commonly associated with mature trees being retained adjacent to properties. Tree surgery may however be required to address issues of dead / defective branch material in line with public safety.

6.3 Provided retained trees are adequately protected during construction work by the requisite tree protection barriers, existing retained trees will be successfully integrated with the development proposals, and overall therefore along with new tree planting to ensure a future generation of trees within the development, the proposals should be considered as positive from an arboricultural perspective.



KEY

Assessment Boundary

rev	date	description	by

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
arboriculture

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client
St Modwen

project
Bramshall Road
Uttoxeter

drawing title
ASSESSMENT BOUNDARY PLAN
FIGURE 1

scale	drawn	date
1:25000 @ A4	EC	September 2016

drawing number
4348-A-01

rev
A

CAD file: J:\4300\4348\Arboriculture\Arb 2016\Plans\Fig 1 Site Location Plan.dwg

KEY

- Category U - Trees / Groups Unsuitable for Retention (BS 5837:2012)
- Category A - Trees / Groups of High Quality (BS 5837:2012)
- Category B - Trees / Groups of Moderate Quality (BS 5837:2012)
- Category C - Trees / Groups of Low Quality (BS 5837:2012)
- Hedgerow (Colour indicates BS5837:2012 Category)
- Root Protection Area (The RPA has been altered where appropriate to reflect underground constraints)
- T1 (A) TG1 (A) — Individual / Group Number and BS5837:2012 Category
- Indicative Shade Pattern (in accordance with BS5837:2012 where appropriate)

Scale 1:2000 @ A3

0 50 100m

NOTES

All dimensions to be verified on site. Do not scale this drawing. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule .

Drawing produced in colour, a monochrome copy should not be relied upon, and is based on digital information supplied by the client in dwg format. The exact position of trees are to be checked and verified on site prior to any tree work or construction work being undertaken.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by a qualified arboriculturalist or tree surgeon should works commence 12 months after the time of this survey. Please note that no works should be undertaken to any trees illustrated herein without first obtaining the proper authorisation to do so.

rev	date	description	by
-	21.01.16	First Issue	EC
A	14.09.16	Rev A	EC
B	11.10.16	Rev B	EC

masterplanning
environmental assessment
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drawing title
TREE SURVEY PLAN
FIGURE 2

scale	drawn	date
1:2000 @ A3	EC	October 2016

drawing number
4348-A-02

rev
B

CAD file: J:\4300\4348\Arboriculture\Arb 2016\Plans\Fig 2 Tree Survey Plan 14.09.16.dwg

KEY

- Tree/Group to be Retained
- Tree/Group to be removed to facilitate the proposals
- Category U - Unsuitable for retention on arboricultural grounds
- Hedgerow Proposed to be Retained
- Hedgerow Proposed to be Removed to Facilitate the Development upon Approval of the Application
- Root Protection Area (Shown for retained trees only)
- T1 (A) TG1 (A) — Individual / Group Number and BS Category
- Indicative Shade Pattern (where appropriate)

Scale 1:2000 @ A3

0 50 100m

NOTES

All dimensions to be verified on site. Do not scale this drawing. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule .

Drawing produced in colour, a monochrome copy should not be relied upon, and is based on digital information supplied by the client in dwg format. The exact position of trees are to be checked and verified on site prior to any tree work or construction work being undertaken.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by a qualified arboriculturalist or tree surgeon should works commence 12 months after the time of this survey. Please note that no works should be undertaken to any trees illustrated herein without first obtaining the proper authorisation to do so.

rev	date	description	by
-	23.02.16	40623 001 K Site Layout	EC
A	14.09.16	40776 019 H Site Layout	EC
B	11.10.16	Amendments	EC
C	11.10.16	Amendments	EC

masterplanning
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project
Bramshall Road
Uttoxeter

drawing title
TREE RETENTION PLAN
FIGURE 3

scale	drawn	date
1:2000 @ A3	EC	October 2016

drawing number
4348-A-03

rev
C

CAD file: J:\4300\4348\Arboriculture\Arb 2016\Plans\Fig 3 Tree Retention Plan 11.10.16.dwg

Appendix A - Tree Schedule

<table>
<tr><th>Measurements</th><th>Age Class</th><th>Overall Condition</th><th>Root Protection Area (RPA)</th></tr>
<tr><td>Height - Measured using a digital laser clinometer (m)</td><td>YNG: Young trees up to ten years of age</td><td>G - Good: Trees with only a few minor defects and in good overall health needing little, if any attention</td><td rowspan="4">• The RPA Radius column provides the extent of an equivalent circle from the centre of the stem (m).
• The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the rooting area required for a tree to be successfully retained. Tree roots extend beyond the calculated RPA in many cases and where possible a greater distance should be protected.
• Where veteran trees have been identified the RPA has been calculated in accordance with Natural England guidance i.e. 15x the stem diameter, uncapped.</td></tr>
<tr><td>Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837</td><td>SM: Semi-mature trees less than 1/3 life expectancy</td><td>F - Fair: Trees with minor rectifiable defects or in the early stages of stress from which it may recover</td></tr>
<tr><td>Crown Radius - Measured using a digital laser clinometer radially from the main stem (m)</td><td>EM: Early mature trees 1/3 – 2/3 life expectancy</td><td>P - Poor: Trees with major structural and/or physiological defects such that it is unlikely the tree will recover in the long term</td></tr>
<tr><td rowspan="2">Abbreviations
est - Estimated stem diameter
avg - Average stem diameter for multiple stems
upto - Maximum stem diameter of a group</td><td>M: Mature trees over 2/3 life expectancy</td><td>D - Dead: This could also apply to trees in an advanced state of decline and unlikely to recover</td></tr>
<tr><td>OM: Over mature declining or moribund trees of low vigour</td><td colspan="2" rowspan="2">The BS category particular consideration has been given to the following
• The health, vigour and condition of each tree
• The presence of any structural defects in each tree/group and its future life expectancy
• The size and form of each tree/group and its suitability within the context of a proposed development
• The location of each tree relative to existing site features e.g. its screening value or landscape features
• Age class and life expectancy</td></tr>
<tr><td></td><td>V: Veteran tree possessing certain attributes relating to veteran trees</td></tr>
</table>

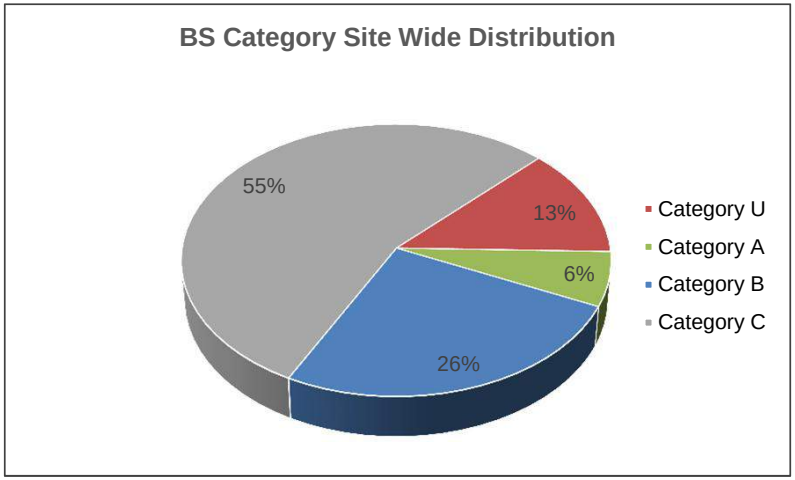
Structural Condition
The following is an example of considerations when inspecting structural condition: • The presence of fungal fruiting bodies around the base of the tree or on the stem, as they could possibly indicate the presence of possible internal decay • Soil cracks and any heaving of the soil around the base • Any abrupt bends in branches and limbs resulting from past pruning • Tight or weak 'V' shaped forks and co-dominant stems • Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Amenity Trees No. 4 1994) • Cavities as a result of limb losses or past pruning • Broken branches or storm damage • Damage to roots • Basal, stem or branch / limb cavities • Crown die-back or abnormal foliage size and colour

Quality Assessment of BS Category
Category U - Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category B - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category C - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.
Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value

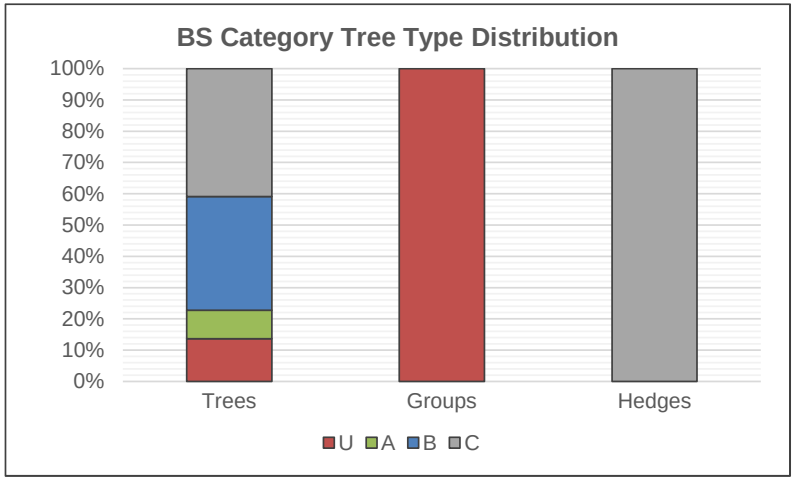
Appendix Summary

	Individual Trees	Totals	Tree Groups and Hedgerows	Totals
Category U	T81, T93, T98	3	TG14	1
Category A	T73, T75	2		0
Category B	T71, T72, T74, T90, T94, T95, T102, T110	8		0
Category C	T76, T77, T78, T91, T92, T97, T99, T100, T101	9	H1, H2, H3, H4, H5, H6, H7, H8	8
	Total	22	Total	9

BS Category Site Wide Distribution shows the proportion of trees assessed in each category across the whole site which allows an interpretation of the site's overall quality.



BS Category Tree Type Distribution displays the proportion of trees assessed in each type to enable a better understanding of the category distribution.



Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
INDIVIDUAL TREES										
T71	Oak *Quercus robur*	9	820	5	M	F	Gnarled looking appearance Epicormic growth on the main stem Occluded wire in the lower stem Minor dead wood Waterlogged ground at base	304	9.8	B (i)
T72	Oak *Quercus robur*	13	800	6	M	G	Twisted / s-shaped stem form - leaning to the east before correcting to an upright form Occluded wire in the lower stem Broken branches noted in crown Minor dead wood	290	9.6	B (i)
T73	Oak *Quercus robur*	20	1290	12	M	G	Stem sub-divides from 2m above ground level into a multiple leaders form Minor dead wood Occluded wire in the lower stem Low crown form	707	Capped at 15m	A (i)
T74	Oak *Quercus robur*	12	520	6	EM	F	Occluded wire in the lower stem Suppressed specimen Interlocked crown with T73 and T75	122	6.2	B (i)
T75	Oak *Quercus robur*	18	1160	11	M	G	Multi leadered form Major dead wood Occluded wire in the lower stem Low crown form	609	13.9	A (i)
T76	Crab apple *Malus domestica M. sylvestris*	5	280 240 220	4	EM	F	Multiple leaders from 0.5m with included union Die back noted in crown with minor dead wood Suppressed specimen low crown form Crossing and rubbing branches	83	5.2	C (i)
T77	Ash *Fraxinus excelsior*	13	490 370	4	EM	F	Twin stemmed from ground level with included union Low crown form Crossing stem point at 2m where wood has fused together Large basal sucker	171	7.4	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T78	Ash *Fraxinus excelsior*	12	380 260	5	EM	F	Twin stemmed from 0.5m Numerous crossing and rubbing branches Minor dead wood Occluded wire in the lower stem	96	5.5	C (i)
T81	Crab apple *Malus domestica M. sylvestris*	5	250 250 250	3	M	F	Multiple stemmed form Single stem has been removed A further stem has been heavily reduced Occluded wire in the lower stem	N/A	N/A	U
T90	Oak *Quercus robur*	14	900	8	M	G	Storm damaged branch material Major dead wood, old branch tear wounds and branch stubs Burred stem Low crown Prominent root buttresses	366	10.8	B (i)
T91	Ash *Fraxinus excelsior*	12	410 320	7	M	F	Multiple stemmed from old stool Base is partially rotten Minor dead wood and broken branches Animal burrows / activity at base Exposed roots on track side	122	6.2	C (i)
T92	Oak *Quercus robur*	14	730	6	EM	G	Tree located on the trackside Minor growth of epicormic shoots on lower stem and branches Minor dead wood and broken branches	241	8.8	C (i)
T93	Ash *Fraxinus excelsior*	13	780	N - 5 S - 6 E - 6 W - 8	M	P	Fruiting bodies of Inonotus hispidus on main stem Dense ivy to 7m extending along all primary lateral branches Die back noted in crown Lrge lever arm branch above access track Past pruning of branches lowest hanging over the track	N/A	N/A	U
T94	Oak *Quercus robur*	10	510	5	EM	G	Hedgerow tree Moderate quantity of dead wood throughout of minor nature Broken branches Light ivy growth on lower stem	118	6.1	B (i)

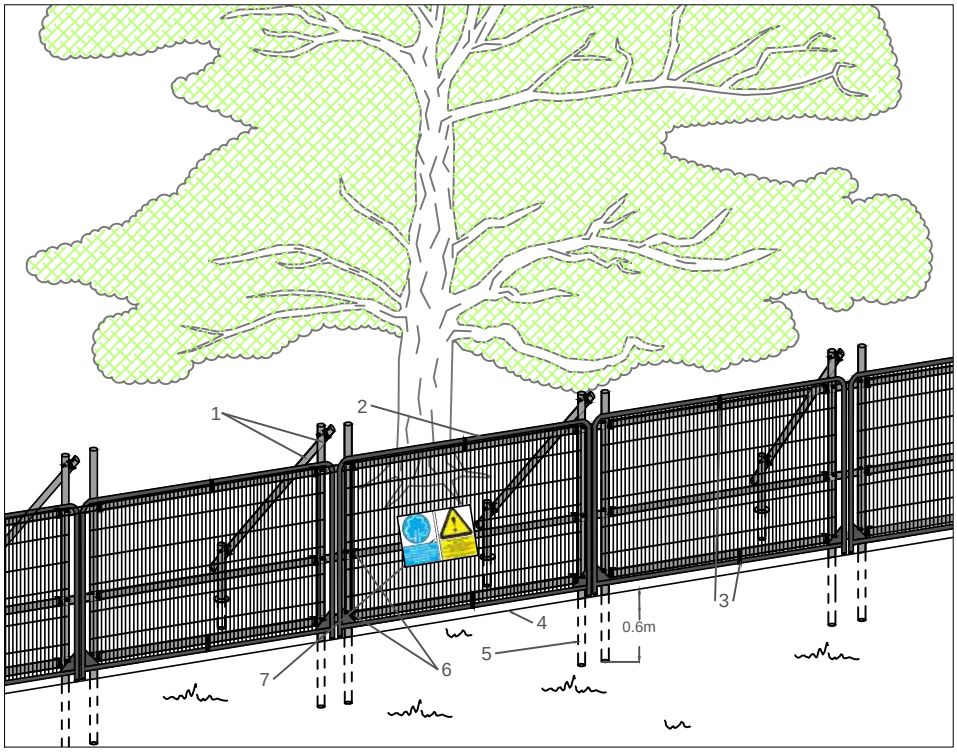
Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T95	Oak *Quercus robur*	13	600	5	EM	G	Small quantity of minor dead wood and occasional broken branches Base obscured by vegetation Light ivy growth on the main stem to approximately 5m above ground level	163	7.2	B (i)
T97	Crack willow *Salix fragilis*	9	est 1500	N - 8 S - 7 E - 5 W - 5	OM	P	Large old pollard Severely structurally impaired condition Regrowth from stem of approximately 6 stems Structurally collapsed and split open Evidence of physical degeneration to the internal heartwood North side of crown - limbs touch the ground	707	Capped at 15m	C (i)
T98	Ash *Fraxinus excelsior*	12	510	N - 4 S - 6 E - 7 W - 6	M	P	Minor die back noted in crown Old raised shallow bank has exposed roots Inonotus hispidus bracket noted on the lower stem Light ivy cover on main stem	N/A	N/A	U
T99	Alder *Alnus glutinosa*	9	360 340	4	EM	F	Old laid specimen - two remaining lead stems Stems separated by 1m and joined by a trunk section Bark wound noted on main stem Exposed heartwood	111	5.9	C (i)
T100	Crab apple *Malus domestica M. sylvestris*	6	380	5	EM	F	Leaning stem Minor dead wood Typically characteristic for the species Branch socket cavities on the stem Crossing and rubbing branches	65	4.6	C (i)
T101	Crab apple *Malus domestica M. sylvestris*	5	360	4	M	F	Leaning stem Past pruning evident to lower branches Typically characteristic for the species Broken branches and dead wood present	59	4.3	C (i)
T102	Oak *Quercus robur*	12	650	6	EM	F	Small amount of minor dead wood Low crown Minor dead wood Evenly balanced crown form Ganoderma bracket noted at base	191	7.8	B (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T110	Oak *Quercus robur*	15	810	8	M	F	Storm damaged branch material Major dead wood, old branch tear wounds and branch stubs Obscurred base Crown extends above access track	297	9.7	B (i)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
GROUPS OF TREES										
TG14	Crack willow *Salix fragilis*	20	800	8	M	P	Large specimens located on the site boundary Northerly and southerly specimens have failed Only the central specimen remains intact Twin stemmed in form with only single stem remaining Large tear wound at base with exposed heartwood Central specimen houses ivy growth to 7m	N/A	N/A	U

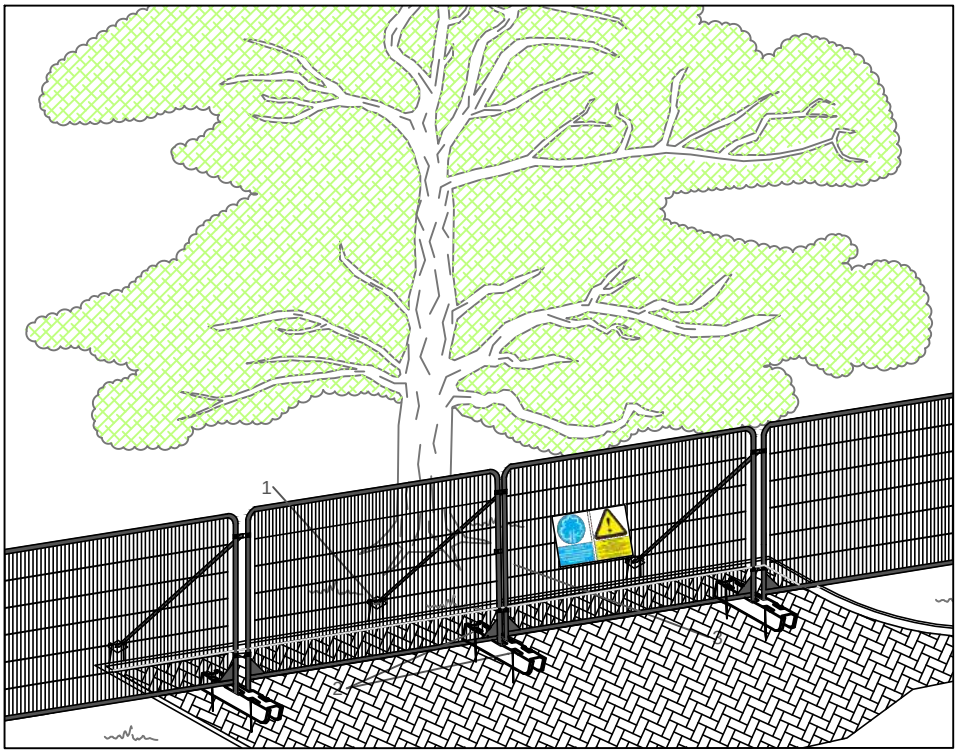
Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
HEDGEROWS										
H1	Hawthorn Crataegus monogyna Blackthorn Prunus spinosa Holly Ilex aquifolium	4	150 150	2	M	P	Unmaintained hedgerow Sporadic apperance Large gaps present	20	2.5	C (ii)
H2	Hawthorn Crataegus monogyna Blackthorn Prunus spinosa Holly Ilex aquifolium	1.5	70 70	1	EM	F	Maintained hedgerow Typical form Gaps present	4	1.2	C (ii)
H3	Hawthorn Crataegus monogyna Blackthorn Prunus spinosa Holly Ilex aquifolium Ash Fraxinus excelsior Alder Alnus glutinosa	6	200 200	3	EM	F	Unmaintained hedgerow Sporadic apperance Self seeded specimens Dense undergrowth and ivy cover through out Dead and failed trees noted Large gaps present	36	3.4	C (ii)
H4	Hawthorn Crataegus monogyna Blackthorn Prunus spinosa Holly Ilex aquifolium	4	150 150	2	M	P	Unmaintained hedgerow Sporadic apperance Dense iby cover through out Large gaps present	20	2.5	C (ii)
H5	Hawthorn Crataegus monogyna Blackthorn Prunus spinosa Holly Ilex aquifolium Ash Fraxinus excelsior	6	200 200	3	EM	F	Unmaintained hedgerow Sporadic apperance Self seeded specimens Past pruning for adjacent access track Large gaps present	36	3.4	C (ii)

Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
H6	Hawthorn Crataegus monogyna Blackthorn Prunus spinosa Holly Ilex aquifolium	1.5	70 70	1	EM	F	Maintained hedgerow Typical form Large gaps present	4	1.2	C (ii)
H7	Hawthorn Crataegus monogyna Blackthorn Prunus spinosa Holly Ilex aquifolium	1.5	70 70	1	EM	F	Maintained hedgerow Typical form Large gaps present Out grown forms to south up to 6m in height	4	1.2	C (ii)
H8	Hawthorn Crataegus monogyna Blackthorn Prunus spinosa Holly Ilex aquifolium	4	150 150	2	M	P	Unmaintained hedgerow Sporadic apperance Large gaps present	20	2.5	C (ii)



Standard specification for protective barrier

1. Standard scaffold poles
2. Heavy gauge 2m tall galvanized tube and welded mesh infill panels
3. Panels secured to scaffold frame with wire ties
4. Ground level
5. Uprights driven into the ground until secure (min depth of 0.6m)
6. Standard scaffold clamps
7. Construction Exclusion Zone signs



Above ground stabilising systems

1. Stabiliser strut with base plate secured with ground pins
2. Feet blocks secured with ground pins
3. Construction Exclusion Zone signs

Protective Fencing to be positioned to the specified dimensions in accordance with Figure 3 Tree Retention Plan

NOTES

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
arboriculture

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drawing title

APPENDIX B
PROTECTIVE FENCING SPECIFICATIONS

CAD file: S:\Arb resources\Basic Templates\Tree Protection\Appendix B - Protective Fencing A4.dwg

APPENDIX 2:

Method Statement for Removal of Himalayan Balsam (FPCR, September 2016)

Overpage.

St Modwen Homes Ltd

Park Fields Farm, Uttoxeter

METHOD STATEMENT FOR REMOVAL OF HIMALAYAN BALSAM

September 2016

FPCR Environment and Design Ltd
Registered Office: Lockington Hall, Lockington, Derby DE74 2RH
Company No. 07128076. [T] 01509 672772 [F] 01509 674565 [E] mail@fpcr.co.uk [W] www.fpcr.co.uk

Rev	Issue Status	Prepared / Date	Approved/Date
-	Draft 1	Mjh 28.09.16	jse / 29.09.16

CONTENTS

PHOTOGRAPHS

FIGURES

APPENDICES

1.0 INTRODUCTION

1.1 The following method statement has been prepared by FPCR Environment & Design Ltd on behalf of the client, St Modwen Developments Ltd. It provides a detailed strategy for the removal of Himalayan balsam to be undertaken on a site located at Parks Farm, Uttoxeter (Figure 1).

1.2 Works to be undertaken include: removal of several stands of Himalayan balsam to facilitate the installation of temporary amphibian fencing and construction of a Great Crested Newt (GCN) receptor area to include hibernaculum construction under a Natural England derogation licence.

1.3 The site is located on the western edge of Uttoxeter town, to the north of Bramshall road. Agricultural land extended to the north south and west of the survey area, with a residential area to the east. Central Grid Reference SK 073 341.

1.4 The site comprised improved grassland field compartments divided by a mixture of post and rail fences and mature hedgerows. A number of prominent, mature trees were recorded throughout the survey area.

2.0 HIMALAYAN BALSAM

2.1 Himalayan Balsam is a tall growing (2-3m) annual non-indigenous plant. Introduced to the UK in 1839 it has naturalised and is found mainly on riverbanks and in waste places where it has become a problem weed. It grows rapidly, spreads easily, out-competes other vegetation and readily colonises new areas. Part of the 'Buzy Lizzie' family Himalayan Balsam has reddish coloured stems, large lance shaped leaves with jagged edges and large brightly coloured flowers in variable shades of purple and pink. The flowers are said to resemble the shape of a policeman's helmet. When the plants die down in winter they leave large bare areas that are sensitive to erosion. Himalayan balsam flowers from June to October and seeds are set from August to October. There are 4-16 seeds per pod and each plant can produce 800 seeds. The entire seed population germinates synchronously in spring to form a dense stand.

3.0 RELEVANT LEGISLATION

3.1 In the United Kingdom there are at present two main pieces of legislation that cover Japanese knotweed, the Wildlife and countryside Act 1981 and the Environmental protection Act 1990.

3.2 Under Schedule 9, Section 14 of the Wildlife and Countryside Act 1981 it is an offence to plant or otherwise cause Japanese knotweed to grow in the wild.

3.3 Section 14 (2) of the Act states that 'if any person plants or otherwise causes to grow in the wild any plant which is included in Part 2 of Schedule 9, he shall be guilty of an offence. Japanese knotweed is a Schedule 9 plant.

3.4 Under the Environmental Protection Act (EPA) 1990 Section 34, soil contaminated with Japanese knotweed is classed as 'controlled waste' and if taken off site can only be disposed of in a registered landfill site. Under Section 34 of the EPA it imposes a duty of care on persons who produce, import, dispose of, or treat controlled wastes.

3.5 More recently the Anti-social Behaviour Crime and Policing Act 2014, Section 57 can also be used to require someone to control the growth of Japanese knotweed and other plants that are capable of causing serious problems to communities.

3.6 Other relevant legislation includes:

- Town & Country Planning Act 1990 Pt VIII, Chapter II, Sects 215 - 219
- The Environmental Protection, (Duty of Care) Regs 1991
- Prevention of Damage by Pests Act 1949
- Highways Act 1980, Sect 154, Section 100 (9)
- Environment Protection Act 1980, Section 80Water Resources Act 1991 - care needs to be taken when spraying or treating knotweed in the presence of a watercourse (whether occasionally dry or otherwise). Under section 221 of the Act watercourses are deemed to be "rivers, streams, ditches, drains, cuts, culverts, dykes, sluices, sewers and passages through which water flows

4.0 METHODOLOGY

4.1 A total of two large stands and multiple sporadic single plants were recorded around an offsite pond against the eastern boundary of the site (Photographs 1 and 2).

Photograph 1: Himalayan Balsam stand north-east of pond P4

Photograph 2: Himalayan Balsam stand north-west of pond P4

4.2 The stands and adjacent vegetation will be removed to the boundary to facilitate the construction of a GCN hibernaculum and temporary amphibian fencing. Works may only proceed on receipt of the appropriate great crested newt licence from Natural England. Confirmation from James Eales (FPCR) must be received prior to the start of any ground operations).

4.3 Prior to the excavation of viable Himalayan balsam a treatment area will be prepared to receive the excavated plants and contaminated soil which may contain a viable seed bank. The treatment area will be prepared using the bunded method as laid out in the Environment Agency 'The Knotweed code of practice' (Version 3 2013 as amended).

4.4 Also prior to excavation all ground will be hand searched for the presence of Great Crested Newts. This includes the area to be cleared of Himalayan Balsam and any access route through the site.

4.5 All soil containing Himalayan balsam and the seed bank within the site boundary will be excavated to a depth of 100-150mm and to extend 4m away from any above ground plants under supervision of a trained operative from FPCR Environment and Design Ltd. The contaminated soil will be transferred to the designated treatment area via dumper. The total area of clearance will be approximately 40mx4m. The designated treatment area is shown on Figure 1.

4.6 Designated haul roads will be used from excavation area to treatment area.

4.7 Excavation will be undertaken by a mechanical excavator and dumper truck.

4.8 Excavators will sit more than 4m away from any above ground plants to ensure that they do not track in any soil that may contain a seedbank.

4.9 Following the excavation of the Himalayan balsam all excavators and dump trucks will be cleaned off and jet washed before leaving the extraction area.

4.10 Good working practice recommends that excavator buckets and dumpers should only be half filled during excavation and transportation to treatment area to avoid spillages which would result in cross-contamination.

4.11 All excavations should be completed within one day.

4.13 All site attendees are required to wear a minimum of Hi-Viz Jacket or Vest, hard hat and Steel toe and Midsole Boot,

4.14 All risk assessments can be found in Appendix 1.

5.0 EMERGENCY PROCEDURES

5.1 The nearest hospital is Cheadle Hospital, Royal Walk, Stoke on Trent, ST10 1NS.Telephone 01538 487500.

5.2 First aid kits will be kept in all vehicles on site.

6.0 REFERENCES

6.1 Managing Japanese knotweed on development sites (Version 3, amended in 2013). The knotweed code of practice. Environment Agency.

Site boundary

Extent of Himalayan Balsam

Main stands of Himalayan balsam

Approximate position of treatment area

St. Modwen Developments Ltd

Parks Farm, Uttoxeter

HIMALAYAN BALSAM LOCATION PLAN

N

Not to Scale @ A3 MJH / MJH 28.09.2016

Figure 1

FPCR Environment and Design Ltd, Lockington Hall, Lockington, Derby, DE74 2RH ■ t: 01509 672772 ■ f: 01509 674565 ■ e: mail@fpcr.co.uk ■ w: www.fpcr.co.uk ■
masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture ■

J:\4300\4348\Ecology\Himalayan Balsam Location Plan.cdr

RISK ASSESSMENT FORM

A.

Ref No:	OOR01

Company:	FPCR Environment and Design Ltd
Activity Location:	Out of Office

B.

Description of work activity being assessed	Persons specifically at risk
Site visit – all sites	Landscape Architects, Ecologists, Arboriculturalists & Architects

No.	Significant hazard	Control measures needed	Control measure in place	
			No	*Yes*
	Before visiting site			
1	Hazardous features generally (e.g. animals, existing buildings, watercourses, railways, quarries, mineshafts, settlement pits, shafts, etc)	Check maps and surveys of the site for potentially hazardous features. Note these on the job specific risk assessment; attach plan if necessary.		Y
2	Existing buildings or structures of uncertain condition	Obtain and read any reports from clients on the nature and condition of existing buildings or structures. Note these on the job specific risk assessment; attach plan if necessary.		Y
3	Hazardous substances	Obtain and read any reports from clients on the nature and location of hazardous substances within or around the site. Every non-residential building must have an Asbestos Register, which provides relevant information about any asbestos-containing materials to anyone who is liable to work on or disturb them. Ask to see it. Further info here: www.hse.gov.uk/asbestos/duty.htm Note findings on the job specific risk assessment; attach plan if necessary.		Y
4	Challenge on private property	Obtain owner's permission in advance. Always carry personal identification.		Y
5	Sites remote from habitation, risk of no one knowing you're lost or injured.	Take a mobile phone at all times. Arrange and implement a 'buddy system' appropriate to the nature of the work. Refer to Risk Assessment OOR05		Y
6	Minor injuries on sites remote from habitation	Take one of the FPCR Small Travelling First Aid Boxes, available from FPCR Accounts. Any usage to be reported on return for replenishment of box and completion of accident report form.		Y

RISK ASSESSMENT FORM

No.	Significant hazard	Control measures needed	Control measure in place	
			No	*Yes*
	On site			
7	Personal injury	Determine and use appropriate PPE for each specific visit &/or activity. Refer to PPE risk assessments.		Y
8	Injury to feet, ankles, body and head whilst walking over loose and potentially unstable piles of rubble.	Do not walk over piles of rubble.		Y
9	Injury to feet, ankles, body and head, whilst walking through unexplored vegetation containing potential hazards.	First conduct a visual inspection of the area to identify hidden obstacles and hazards. Record significant hazards encountered on a site plan and the job specific risk assessment form. Ensure that other staff visiting the site are made aware of these hazards.		Y
10	Existing buildings & features	Take notice of hazards identified in the reports obtained above. If there is no 3rd party report on the physical condition or no 3rd party present with first-hand experience of the site, proceed with caution. Carry out initial visual assessment from a safe location looking for areas of collapse/possible collapse, or unguarded edges. If in any doubt DO NOT approach or enter.		Y
11	Injury due to fall in, or partial collapse of, existing buildings in poor state of repair	Avoid going near any areas of damaged flooring. Look out for items dangling from above, especially electrical cables. Do not attempt to operate any equipment, or service, within the building. Do not walk over piles of rubble		Y

Low risk rating will only be achieved if all the above control measures are implemented

RISK ASSESSMENT FORM

Risk rating when all control measures are implemented												
Severity	**3**		**Probability**	**1**		**Rating**	***S x P =***	**3**		**Risk rating**	***9 =H/ 4 to 6 =M/ 1 to 3 =L***	**L**
Low			Medium			High						

Low is the only acceptable risk rating.

	Yes	***No***
1. Adequate control measures are in place and low risk rating achieved?	Y	
2. Additional control measures are required from section B to reduce the risk rating to low?		N
3. Are other risk assessments required for this work activity? (*tick below*)	Y	

P.P.E	✓	D.S.E		Pregnant Worker		Other	OOR05 & Site Specific
Manual Handling		C.O.S.H.H		Young Worker			

D.

Review frequency		
Low: annually	**Medium: 3 - 6 months**	**High: 1 - 3 months**

Review Date	Date reviewed	Reviewed by	Signature
July 2010	31 Aug 2010	Tony Pearson	
July 2011	31 Aug 2011	S M Mansfield	
July 2012	16 Aug 2012	Tony Pearson	
Aug 2013	20 Aug 2013	Tony Pearson	
Aug 2014	14 Oct 2014	Tony Pearson	
Nov 2015	08 Dec 2015	Tony Pearson	Tony Pearson
Dec 2016			

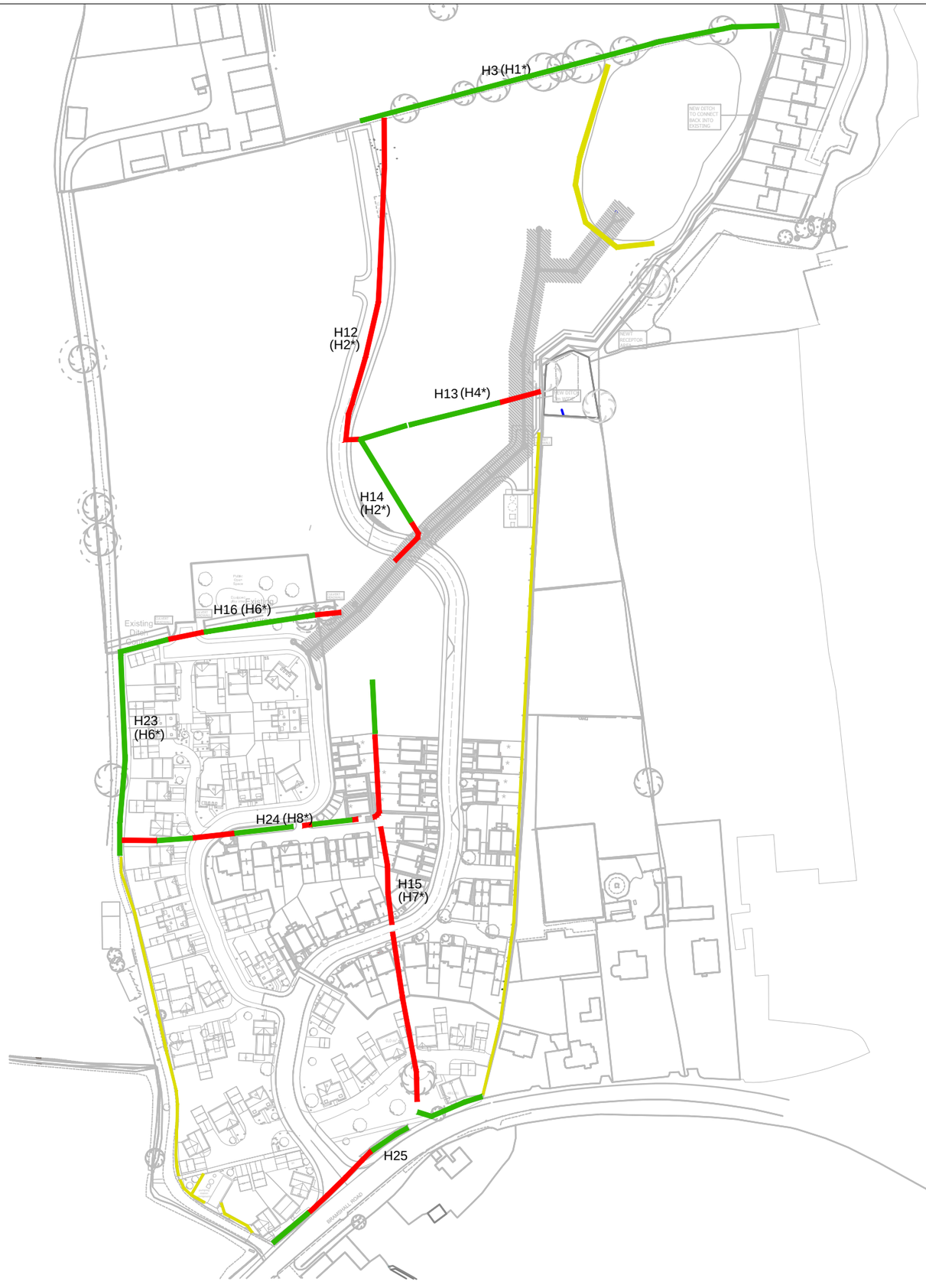
E.

Assessment type	
Initial	**x**
Review	✓

Original assessment date	Original assessment carried out by
23/07/2003	I. Culley

Re-assessed by	Date
C A Pearson	15/7/09

Endorsed by	Date
S M Mansfield	15/7/09



NOTES

Ordnance Survey base mapping - supplied by client.

N

Key

- Hedgerows to be Retained
- Hedgerows to be Removed
- Proposed Native Hedgerow

Existing Hedgerows	Retention (lin/m)	Removal (lin/m)
H3 (H1*)	183	N/A
H12 (H2*)	N/A	144
H13 (H4*)	60	18
H14 (H2*)	42	48
H16 (H6*)	70	26
H23 (H6*)	86	N/A
H24 (H8*)	57	38
H15 (H7*)	22	133
H25	67	37
Total	587	444

Total Proposed Native Hedgerow Planting 566 lin/m

Notes:
Hedgerow reference numbers in brackets are arboricultural reference numbers. Refer to arboricultural tree retention plan (drawing ref: 4348-A-03 REV C October 2016)

rev	date	description	drn	chkd
C	03.11.2016	Amendments to proposed hedgerows	OFD	KG
B	02.11.2016	Amendments to proposed hedgerows	OFD	RG
A	02.11.2016	Amendments to proposed hedgerows	OFD	RG
-	02.11.2016	First issue.	OFD	RG

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client
St Modwen

project
Parks Farm
Uttoxeter

drawing title
Hedgerow Plan
Phase 1A and Phase 1B Losses and Gains

scale
1:2000 @ A3

drawn / checked
OFD/RG

revision date
3 November 2016

drawing number
4348-L-04

rev
C

CAD file: J:\4300\4348\CAD\4348-Hedgerow retention removal plan REV C.dwg