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## STANDEN, CLITHEROE PHASE 5 AND 6

PREPARED BY PEGASUS GROUP  
P22-0161.G001v1  
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Application no: 3/2012/0942  
In relation to Condition 31



## LONG TERM LANDSCAPE AND ECOLOGICAL MANAGEMENT PLAN

**Taylor  
Wimpey**

**Pegasus  
Group**

# CONTENTS

## 1

### INTRODUCTION

03 / Introduction  
03 / Management Plan Period  
04 / Overall Design Vision  
04 / Management Objectives  
04 / Management Company

## 2

### EXISTING LANDSCAPE FEATURES

06 / Existing Features

## 3

### ECOLOGICAL ENHANCEMENT & MONITORING

08 / Introduction  
08 / Ecological Enhancement &  
Biodiversity Planting  
10 / Biodiversity Mitigation and  
Enhancement Objectives  
11 / Ecological Monitoring

## 4

### GENERAL MAINTENANCE OPERATIONS

12 / Monitoring  
12 / Litter Picking & Removal  
12 / Graffiti Removal

## 5

### HARD LANDSCAPING

13 / Proposed Hard Surfacing  
13 / Temporary Fencing  
13 / Rabbit Proof Fencing  
13 / Foot/Cycle Path  
13 / Play equipment  
14 / Benches  
14 / Dog and litter bins

## 6

### SOFT LANDSCAPE ELEMENTS

15 / Existing Trees / Vegetation  
15 / New Tree Planting  
16 / New Native Hedgerow Planting  
17 / New Native Shrub Planting  
18 / Grassed Areas

## 7

### MAINTENANCE SCHEDULES

19 / Maintenance Schedules

## A

### APPENDICES

22 / A - Preliminary Ecological  
Appraisal

# 1 / INTRODUCTION

- 1.1 This document has been prepared by Pegasus Group, with input from Urban Green to discharge Condition 31 of Outline Application (Application ref. 3/2012/0942), relating to a proposed residential development (Standen phase 5 and 6) east of Littlemoor Road, Clitheroe.
- 1.2 The aim of this document is to set out responsibilities of the Management Company with respect to hard and soft landscape for all landscaped and habitat areas. This is set out within this document to ensure an attractive landscape setting to the development for the long term benefit of occupiers, the public and biodiversity.
- 1.3 The requirements are set out in a clear and practical manner for its future management via a Management Company, or other arrangement, should this be the case.
- 1.4 Planned management and maintenance operations are set out for both 'soft' planted and 'hard' surfaces within all areas of public open space (POS) identified in Figure 1.
- 1.5 Reference is made throughout the document to the 'Urban Green', Preliminary Ecological Appraisal (see appendix A).
- 1.6 The detailed landscape proposals are set out on Pegasus drawings, P22-0161.001-007.

## MANAGEMENT PLAN PERIOD

- 1.7 This plan is for the lifetime of the development

### Application No. 3/2012/0942 Land east of Littlemoor Road, Clitheroe Outline Planning Condition 31:

*"No site clearance, site preparation or development work shall take place within a phase until a Long Term Landscape and Ecological Management Plan to include long term design objectives post completion management responsibilities and maintenance schedules for all landscaped/habitat areas (other than privately-owned domestic gardens) including any areas of public open space not covered by condition 30 and the buffer zones in conditions 20 and 21 such as grasslands, hedges, trees, swales, reed beds and other sustainable drainage features within that phase has been submitted to and approved in writing by the Local Planning Authority. The Long Term Landscape and Ecological Management Plan shall include (but not be limited to):*

- *monitoring of the establishment of all landscape planting and habitat planting;*
- *aftercare of all landscape planting and habitat enhancement in accordance with conservation and biodiversity objectives;*
- *monitoring and treatment of invasive species;*
- *monitoring of condition of and maintenance of footpaths to encourage use and avoid the creation of informal footpaths that may damage other habitats;*
- *monitoring and maintenance of bat and bird boxes;*
- *maintenance of SUDS; and*

- *appropriate timings of management works to ensure avoidance of bird nesting seasons etc.*

*The Long Term Landscape and Ecological Management Plan shall be informed by the details contained within Chapter 7 Volume 1 of the Environmental Statement (October 2012) lodged with the planning application prepared by Amec. The Long Term Landscape and Ecological Management Plan shall be carried out as approved".*

and may be subject to updates and revisions as the planting matures and the changing character and needs of the development evolve.

### **OVERALL DESIGN VISION**

- 1.8 The creation, establishment, enhancement and management of POS to provide areas for recreation, habitat creation and enhancement and of benefit to protected species.

### **MANAGEMENT OBJECTIVES**

- 1.9 The overarching objectives of the management operations are as follows:
- Provide a pleasant, safe environment for residents and visitors;
  - Provide a neat and tidy appearance to the development and surrounding area;
  - Maximise the life of all elements of the landscape and the health of planting;
  - Provide wildlife habitat, in particular that are favoured by European protected species;
  - To fulfil planning obligations.

### **MANAGEMENT COMPANY**

- 1.10 It is envisaged that a management company covering all the works set out in this document will be set up by Taylor Wimpey. Individual plot holders will maintain private garden areas. The local authority will maintain adopted roads and

lighting. It would be anticipated that drainage features within the Public Open Space (POS) will be the responsibility of the Statutory Undertaker for the region (in so far as this relates to operations necessary to maintain the management of water to their required standards).

- 1.11 Figure 1 illustrates the areas of landscape to which the operations set out in this document relate. Details relating to these areas are set out on the detailed landscape proposals. Pegasus drawings, P22-0161.001-007.



## 2 / EXISTING LANDSCAPE FEATURES

### EXISTING FEATURES

- 2.1 The site comprises mostly agricultural land comprising improved grassland across much of the site. Two hedgerows are present in the western area of the site, both described as “*species poor and defunct*” in the PEA (Urban Green). Woodland is present along the southern boundary, associated with Pendleton Brook as well as an area running through the centre of the site from north to south-west along a tributary of Pendleton Brook. Scattered trees are also present mainly in the eastern area of the site. One dis-used building is present on site.
- 2.2 Ecological surveys have confirmed that one building and two trees have high bat roost potential. A further six trees have been assessed as having moderate bat roost potential and 16 with low bat roost potential. The PEA states that the site provides high value commuting and foraging habitat for bats. It also states that the presence of great crested newts on site has been “*reasonably discounted*”, however, common amphibians may occur and the site has potential to support reptiles. It is considered that there is limited habitat suitable for ground nesting birds, whilst there is optimal habitat for passerine birds. The site also has potential to support birds of prey and barn owl. Hedgehogs, water vole and badgers are also noted as potentially being present within the site, as well as foraging and commuting opportunities for otters.
- 2.3 The landscape proposals for the site have sought to retain key ecological features within the Landscaped Areas including the woodland and hedgerow running through the central area of POS. Existing woodland will be enhanced with native shrub mixes planted adjacent to these areas. Existing improved grassland within the proposed POS areas will be enhanced with species rich meadow, whilst a wetland meadow mix is proposed to the margins of both existing and proposed water features. Trees are proposed throughout the development to replace those to be removed. The proposals aim to enhance existing and create new habitats for the benefit of protected species including bats, birds and badgers.
- 2.4 The majority of trees on site are proposed to be retained, three trees are proposed for removal along with one small tree group, two hedgerows and one short section of another hedgerow for access and a section of woodland in the centre of the site, also to facilitate access. Full details are outlined in the Arboriculture Impact Assessment (Urban Green).



Figure 2: Phase 1 Habitat Map (Urban Green)

# 3 / ECOLOGICAL ENHANCEMENTS AND MONITORING

## INTRODUCTION

- 3.1 The landscape design process has involved liaising with Urban Green and has considered and incorporated the ecological constraints and recommendations outlined in Chapter 6 of the PEA (Appendix A). Recommendations highlight the opportunities relating to the successful creation of habitats, whilst considering the necessary measures which need to be put in place to support the flora and fauna of the site and in particular to the benefit of protected species.
- 3.2 Subsequent ecological advice was received which recommended the species and management of the landscape proposals. These informed the following elements:
- New trees;
  - Native shrub areas; and
  - Bird and bat boxes.
- 3.3 Overall, in line with the proposed landscape proposals, the scheme will serve to protect and enhance the existing habitats which are to be retained, whilst assisting with the re-creation and enhancement of those which are proposed for removal.

## ECOLOGICAL ENHANCEMENTS & BIODIVERSITY PLANTING

- 3.4 The following section describes the ecological enhancements and biodiversity planting on the site.

### Native Shrub Mix to woodland edges and northern boundary south of Lingfield Avenue and Little Moor

- 3.5 Native shrub planting along the edges of existing woodland, particularly through the central area of the POS and locations along the southern wooded boundary will provide additional biodiversity value. It also acts as a buffer between the proposed site and existing properties in the north-western corner of the site. Shrub planting will use a mix of native shrubs to provide good floristic diversity and to serve as food resource for pollinators, with fruiting species to provide food for birds and small mammals. The shrubs will be allowed to grow to a height of at least 2-3m to provide dense cover in which birds would nest. Some of the proposed species include the following:
- Hazel – *Coryllus avellana*
  - Dogwood – *Cornus sanguinea*
  - Holly – *Ilex aquifolium*
  - Cherry - *Prunus spinosa*
  - Elder - *Sambucus nigra*
- 3.6 The native shrub planting will be an important part of the habitat creation in combination with other proposed habitats across the POS areas, such as wildflower meadows and additional tree planting. Together these elements will bolster the central POS and southern boundary green spaces maintaining connectivity for wildlife to the north

and south.

### Native Hedgerows

- 3.7 Both single species and mixed native hedgerows will be planted throughout the development, along the spine road and in some locations where the development edge meets areas of public open space.
- 3.8 The mixed native hedgerows will contain a good mix of shrub species providing a resource for pollinators, birds and small mammals. Blackthorn is a good early food resource for pollinators and also provided dense cover for nesting birds, while hazel will be a valuable food resource for small mammals. The native hedgerow mix will comprise:
- Hawthorn – *Crataegus monogyna*
  - Field maple – *Acer Campestre*
  - Holly – *Ilex aquifolium*
  - Dog rose – *Rosa canina*
  - Blackthorn – *Prunus spinosa*
  - Guelder Rose – *Viburnum opulus*

### Wetland Grassland (Attenuation Basins)

- 3.9 The two attenuation basins and existing watercourse within the central POS area will be sown with a species-rich wetland meadow seed mix to maximise floristic diversity the resource for pollinators. The proposed Emorsgate EM8

Meadow Mixture for Wetlands contains all native species of grasses (9 species) and wildflowers (19 species) suited to wetter conditions but also tolerating some drier periods. Wildflowers in the mix include species particularly attractive to pollinators including Devil's-bit scabious *Succisa pratensis*, bird's-foot trefoil *Lotus corniculatus*, and greater bird's-foot trefoil *Lotus pedunculatus*. Low intensity cutting will maintain late spring / summer blooms for pollinators, and enable wildflowers to set seed.

- 3.10 The attenuation basins and existing watercourse will form part of the southern and central 'wildlife corridors' with their attraction to flying insects potentially enhancing the value of the corridor as a foraging area for bats.

### Wildflower Grassland

- 3.11 Grassland within the Public Open Space (POS) will maximise the biodiversity value of amenity areas with a species-rich wildflower meadow grassland seed mix. Along with the wetland meadow grassland in the attenuation basins this is intended to maximise the floristic diversity of herbaceous vegetation within the soft landscape. The grassland will further enhance the site's potential value for invertebrates particularly pollinators, and its wider value for bats and birds. The Proposed Emorsgate EM1 Basic General Purpose Meadow Mixture contains wildflowers with high value for pollinators particularly

- 3.12 Most of the wildflower grassland will be cut infrequently to maintain spring summer flowers and allow wildflowers to set seed. However, the mixture responds well to frequent mowing allowing narrow verges alongside the access road to be kept short.

### Individual Tree Planting

- 3.13 New tree planting will provide additional structure to grassland areas with native species including crab apple - *Malus sylvestris*, rowan - *Sorbus aucuparia*, and bird cherry - *Prunus avium*, to provide a valuable food resource for birds and small mammals. Larger trees such as oak - *Quercus robur* and beech - *Fagus sylvatica* within the central POS will add height and structure to the shrub planting as well as adding biodiversity value.

### Ornamental Garden Planting

- 3.14 While the garden planting lies within the private ownership of the houses, the species palette has been selected to include many species which are primarily used for their horticultural qualities but which also have value for wildlife, specifically pollinators.
- 3.15 Ornamental garden planting will include the following species which are listed by the Royal Horticultural Society (RHS) as being of benefit to pollinators
- *Bergenia* 'Silberlicht'

- *Helleborus lividus*
- *Hebe pinguifolia* 'Sutherlandii'
- *Rudbeckia fulgida* 'Goldsturm'
- *Skimmia Japonica* 'Rubella'
- *Verbena bonariensis*

### Bulb planting

- 3.16 Bulb planting is proposed throughout the POS areas and the wider development. Species include both crocus and daffodil, providing an early source of pollen to pollinators.

### Additional Habitat Enhancement

- 3.17 The following additional measures for habitat creation and provision will be carried out.

#### Provision of Bird Boxes

- 3.18 The PEA recommends the inclusion of bird boxes on retained trees on site. These should be installed at least 2m high on the north and east elevations of the tree and target general passerine species known to be in the local area. A minimum of 40 no. boxes should be erected on site, the locations have been indicated on drawings P22-0161.001-007.
- Vivara Pro Seville 32mm WoodStone Nest Box; and
  - Vivara Pro Barcelona WoodStone Open nest Box

- 3.19 Bird boxes are most effective when positioned on a north-east to north-west facing aspect to prevent overheating during the summer nesting season. Care is to be taken to make sure boxes are not angled in such a manner to allow rain to enter them. They should be placed at least 2m from the ground.

#### Maintenance of Bird Boxes

- 3.20 Bird boxes require periodic checking and cleaning, once every two years. **Note bird boxes must only be opened and cleaned outside the bird nesting season (which is between March to September inclusive).**

- Unhatched eggs may be removed legally between October and January and must then be disposed of.
- Disused nests must be removed, and the box must be cleaned using boiling to remove parasites. Boxes should be left to dry before replacing the lid. Insecticides and flea powders must not be used.
- If any boxes are identified as damaged or missing, they are to be replaced with a box of similar specification.

#### Timing of installation of Bird Boxes

- 3.21 Bird boxes are to be installed during the construction phase of the development.

#### Provision of Bat Boxes

- 3.22 The PEA recommends that integrated bat boxes will be installed on constructed buildings on site to the following specification.

- Crevice Bat Box (w280mm x l650mm x h400mm)

- 3.23 40 no. bat boxes should be erected on the western aspect of the building, the locations have been indicated on drawings P22-0161.001-007

#### Positioning of Bat Boxes

- 3.24 Bat boxes should be located so that they receive the maximum amount of sunlight and are sheltered from exposure, ideally on the westerly aspects of buildings. Bat boxes should be positioned a minimum of 4 metres (but preferably 5 to 7 metres) above ground.

#### Maintenance of Bat Boxes

- 3.25 Bat boxes are considered self-cleaning and require minimal maintenance once installed. The boxes are made of hard-wearing material that is generally long-lasting. Bat boxes are to be checked periodically (e.g. every two years) to assess their use and the condition of the boxes. Appendix 2 includes the maintenance schedule.

- 3.26 If any boxes are identified as damaged or missing, they are to be replaced with a box of similar specification.

#### **3.27 Note only those holding the appropriate Natural**

**England Class 2 bat licence may open and inspect these boxes. It is an offence for anyone without this licence to open a bat box. If a bat box becomes occupied by a bird the nest must be left *in situ* until after the bird nesting season (March to September inclusive).**

#### Timing of installation of Bird Boxes

- 3.28 Bat boxes are to be installed during the construction phase of the development, prior to the occupation of the dwelling.

#### Deadwood

- 3.29 Recommendations in the PEA suggest retaining as much deadwood habitat on site as possible and that if this is not possible then other deadwood habitats should be created. Indicative locations for deadwood piles have been indicated on drawings P22.0161.001-007

### **BIODIVERSITY MITIGATION AND ENHANCEMENT OBJECTIVES**

- 3.30 The following management objectives have been identified in relation to the proposed soft landscaping for biodiversity mitigation and enhancement:
- Promote the successful establishment and long-term health of new planting and sowing;
  - Promote dense cover within new shrub and hedgerow planting to provide habitat for nesting birds;

- Maximise availability of autumn / winter fruits on new tree and shrub planting for birds; and,
- Promote wildflower species diversity within wildflower and wetland meadow grassland to provide a nectar and pollen resource for invertebrates.

3.31 Management prescriptions and a timetable of works are given in Section 4 onwards.

### **ECOLOGICAL MONITORING**

3.32 This management plan is for the lifetime of the development, however will be subject to review on an annual basis. The reviews will include an appraisal of the habitats present at the site, assessment of the success of the management plan to date and liaison with the developer/owner/management company regarding any potential issues and any required revisions to the plan.

3.33 The habitat management works will be undertaken by the management company as set out in this document.

### **Habitat Condition Monitoring**

3.34 Habitat condition monitoring will be carried out to ensure the habitats area establishing in line with the management objectives. Typically habitat condition is assessed simultaneously with management practices by qualified grounds persons. Additional formal habitat condition monitoring will also be undertaken by an ecologist

in the second and fifth year after completion. A site visit would be undertaken in mid-summer to assess the new habitats against the management objectives.

### **Reporting and Management Review**

3.35 Following each monitoring visit the management plan will be reviewed and should any changes be necessary a revised version will be produced.

# 4 / GENERAL LANDSCAPE MAINTENANCE OPERATIONS

## MONITORING OF MANAGEMENT OPERATIONS

- 4.1 Should it be brought to the attention of the Management Company, that the site requires any additional operations not explicitly set out here or that the objectives are not being satisfactorily met, the frequency of operations set out within this document may be subject to review at any time.
- 4.2 **Maintenance Action 1:** Annual monitoring visits are to be taken in perpetuity to ensure the operations set out in this document are being undertaken and any necessary adjustments to the prescribed actions are made.

## LITTER PICKING AND REMOVAL

- 4.3 **Maintenance Action 1 (soft areas):** Litter shall be removed from site at each maintenance visit in order that the site appears free from litter.
- 4.4 **Maintenance Action 2 (hard areas):** Ensure all areas are litter picked as necessary at each maintenance visit to ensure the site appears litter free.
- 4.5 **Maintenance Action 3(hard areas):** Any fly tipping or abandoned vehicles are to be reported and arrangements made for immediate removal.

## GRAFFITI REMOVAL

- 4.6 **Maintenance Action 1 (hard areas):** Ensure all outdoor furniture and play equipment is checked for graffiti at each maintenance visit. Graffiti removal is to be undertaken at the earliest opportunity by suitable means (to manufacturers recommendations).

# 5 / HARD LANDSCAPE ELEMENTS

## TEMPORARY FENCING

- 5.1 Protective fencing will be installed prior to construction activities taking place to protect the existing trees across the site.
- 5.2 Some limited areas of chestnut pailings may be required by the landscape contractor implementing the scheme, where for example areas have been seeded or recently planted to provide temporary protection.
- 5.3 **Maintenance Action 1:** Areas of temporary fencing to be removed as soon as function becomes redundant.

## RABBIT PROOF FENCING

- 5.4 Temporary rabbit proof fencing or shrub shelters/spirals can be used to protect planting at the landscape contractor's discretion.
- 5.5 **Specification:** Tensioned wire fencing with timber posts and wire mesh buried at base to prevent egress (see Figure 5).
- 5.6 **Maintenance Action 1:** The integrity of rabbit fencing/protection shall be checked at each maintenance visit, any damage to be rectified by the management company.
- 5.7 **Maintenance Action 2:** once the plant material has established (After approximately 5 years) temporary rabbit proof fencing can be removed from site. Timber elements can be left in situ in perpetuity.

## FOOT/CYCLE PATH

- 5.8 A new connective footpath through the site will replace a section of the existing Public Right of Way maintaining the connection to routes leading from the north and south of the site.
- 5.9 **Specification:** Colour and type in accordance with Highway Authority specification.
- 5.10 **Maintenance Action 1:** Paths shall be swept/blown as necessary to remove any loose material, stones, mulch, soil, leaves, grass cuttings etc. so that surfaces remain clear from obstruction and appear neat and tidy at each visit. Edge-up to keep full width of surfacing open
- 5.11 **Maintenance Action 2:** Any deterioration in the surfacing is to be reported immediately for rectification by the Highways Authority.

## PLAY EQUIPMENT

- 5.12 The play areas have been developed throughout the POS areas to be naturalistic, comprising pieces of trim trail style equipment and natural elements such as rocks and logs. There are two areas containing play features. There are 12 items located the central green space, split in to two areas north and south of the spine road. There are 3 items within the pocket park located within phase 6.
- 5.13 **Specification:** The equipment proposed by Norna Playgrounds to tie in with earlier phases of the scheme.

Suggested Barrier Specification (as per BS5837: 2012)

Default Specification for Protective Barrier

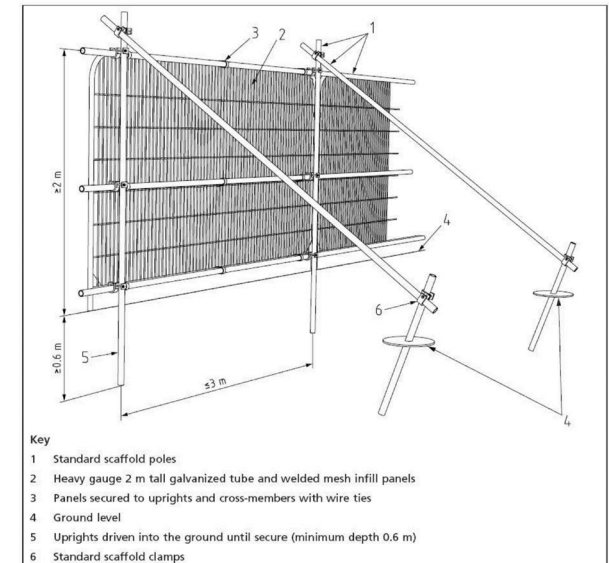


Figure 3: Typical Tree Protection Fencing Detail to BS 5837: 2012

- 5.14 **Maintenance Action 1:** All equipment/ features to be checked at each maintenance visit. Damage is to be reported immediately and be rectified or removed and replaced by a landscape contractor instructed by the Management Company. Signage shall be affixed to any damaged equipment and if considered appropriate, equipment should be fenced off to deter use until such time that repair is carried out.
- 5.15 Should householders notify the Management Company of any damage to equipment at any

time between scheduled maintenance visits, the Management Company shall attend site at the earliest opportunity to assess damage and take necessary measures to make the equipment safe, or prohibit use, as set out above.

- 5.16 Maintenance Action 2:** When any play equipment fails/reaches the end of its safe and serviceable life then it shall be replaced with undated equipment of similar play value.

#### **BENCHES**

- 5.17 Timber benches are located throughout the Landscaped Area adjacent to the diverted public right of way and within the LAP/LEAP Play area.
- 5.18 Specification:** Woodscape Mill Backrest seat or similar and approved
- 5.19 Maintenance Action 1:** Benches to be checked for damage and graffiti at each maintenance visit.
- 5.20 Maintenance Action 2:** Any deterioration in condition or function is to be reported immediately and be rectified by the Management Company. Any rectifications are to be to the original specification and manufacturers recommendations. Any paintwork is to be assessed and renewed as required annually to prolong the life of the furniture and maintain an attractive appearance to the open spaces.
- 5.21 Maintenance Action 3:** Should the benches reach the end of their serviceable life then they should be renewed to a similar and up to date

specification.

#### **DOG & LITTER BINS**

- 5.22 Bins are provided in locations throughout the landscaped areas including adjacent to the play area.
- 5.23 Specification:** TBC by condition
- 5.24 Maintenance Action 1:** All equipment/ features to be checked at each maintenance visit. Bins to be emptied on a weekly basis.
- 5.25 Maintenance Action 2:** Any deterioration in condition or function is to be reported immediately and be rectified by the Management Company. Any rectifications are to be to the original specification and manufacturers recommendations. Any paintwork is to be assessed and renewed as required annually to prolong the life of the furniture and maintain an attractive appearance to the open spaces.
- 5.26 Maintenance Action 3:** Should the bins reach the end of their serviceable life then they should be renewed to a similar and up to date specification.

# 6 / SOFT LANDSCAPE ELEMENTS

## EXISTING RETAINED TREES / VEGETATION

- 6.1 Maintenance Action 1:** Trees are to be checked (from ground level), on an annual basis for any tree works necessary to remove any dead limbs, crossing branches, or other works which may be required to ensure the trees continue to make a positive contribution to the landscape. Generally, works should be avoided, unless considered necessary to the health of the tree, good management, or a risk to people or property.
- 6.2 Prior to undertaking any works to trees, a check is to be made to determine whether there are any constraints which may delay the works (presence of Tree Preservation Orders for example). If the tree is in a dangerous condition, evidence should be obtained (photographs/written description) and contact made with Local Planning Authority to advise them of the intent to carry out the works to make the tree safe.
- 6.3 Should any trees on, or adjacent to the site fall due to wind-blow or vandalism, these trees should be left in situ providing that the trees have settled into a safe position or that a safe position can be achieved. In any instance where a tree has fallen across a path, verge or road, the landscape maintenance contractor shall be contacted so that they can make an assessment of the work required and, if beyond the scope of their activities, a specialist arborist competent at hazard operations should be engaged by the contractor to remedy the obstruction.

- 6.4 Works should be undertaken outside the bird breeding season, unless necessary and appropriate checks are carried out.
- 6.5 Any work undertaken shall be in accordance with good practice advice from the HSE and AFAG, including provision of public exclusions zones where appropriate to the work to be undertaken.
- 6.6 Professional services should be sought in instances where all but the lightest of tree surgery is required and this is to be carried out to BS3998:2010 Recommendations for Tree Work.
- 6.7 Maintenance Action 2:** Existing vegetation should be checked for the growth of non-native invasive plant species .
- 6.8 Where invasive non-native species are encountered the Environment Agency or specialist contractor should be contacted for advice and where appropriate.
- 6.9 Treatment/removal must be carried out using Environment Agency approved methods.

## NEW TREE PLANTING

- 6.10 The following trees have been specified within the areas of Public Open Space.

### 6.11 Specification:

Plant Species	Size (girth cm)
Acer campestre	14-16cm, 400-450cm ht, min 200cm cs
Alnus glutinosa	14-16cm, 400-450cm ht, min 200cm cs
Betula pendula	14-16cm, 400-450cm ht, min 200cm cs
Carpinus betulus	14-16cm, 400-450cm ht, min 200cm cs
Corylus avellana	45-65L, 150-200cm, multi-stem, bushy, 5st
Fagus sylvatica	14-16cm, 400-450cm ht, min 200cm cs
Malus sylvestris	14-16cm, 400-450cm ht, min 200cm cs
Prunus avium	14-16cm, 400-450cm ht, min 200cm cs
Quercus robur	14-16cm, 400-450cm ht, min 200cm cs
Sorbus aria	14-16cm, 400-450cm ht, min 200cm cs
Sorbus aucuparia	14-16cm, 400-450cm ht, min 200cm cs
Tilia cordata	14-16cm, 400-450cm ht, min 200cm cs

- 6.12 Trees to be planted in individual pits 750mm x 750mm x 750mm, back filled with 1 part compost to 2 parts topsoil secured with softwood stakes and suitable ties, and protected with a spiral guard. Each tree shall be mulched, 1.5m diameter and 50mm depth.

- 6.13 Maintenance Action 1:** All trees shall be maintained weed and rubbish free.
- 6.14 Maintenance Action 2:** In periods of dry weather all trees shall be regularly watered to field capacity.
- 6.15 Maintenance Action 3:** All trees shall be checked at each maintenance visit and any broken or unattached ties, guards or stakes reinstated or replaced. Any material subject to wind rock or disturbance shall be re-firmed.
- 6.16 Maintenance Action 4:** At the end of each growing season all trees shall receive an application of

slow release fertiliser.

- 6.17 Maintenance Action 5:** Mulch shall be topped up to maintain original levels. (The area around the base of each tree is to be kept mulched to 50mm depth minimum and weed free to a minimum diameter of 1.5m). Strimmers should not be required and are not to be used around the bases of trees.
- 6.18 Maintenance Action 6:** Pruning - Trees are to be allowed to grow to their natural form and height. Any pruning is to be to remove crossing or damaged branches and maintain balance only.

- 6.19 Maintenance Action 7:** Plant material will be assessed during September of each year. Any dead or dying material will be replaced by a landscape contractor instructed by the Management Company with material to match the original specification during the next planting season (November to March).
- 6.20 Maintenance Action 8:** After approximately 5 years stakes and ties are to be removed once trees have established.
- 6.21 Maintenance Action 9:** Soils beneath trees should be aerated on an annual basis.

### NEW HEDGEROW PLANTING

- 6.22** Mixed native hedgerows are proposed to define boundaries within the areas of Public Open Space.

### 6.23 Specification:

Plant Species	Size (girth cm)
Acer campestre	B 40-60cm ht 1+0
Crataegus monogyna	B 40-60cm ht 1+0
Rosa canina	B 40-60cm ht 1+0
Prunus spinosa	B 40-60cm ht 1+0
Ilex aquifolium	C 40-60cm ht 2lt
Viburnum opulus	B 40-60cm ht 1+0

- 5.1** Plants to be at 5/linear meter in a double staggered row.
- 5.2** Hedge trenches to be dug 750 wide x450mm

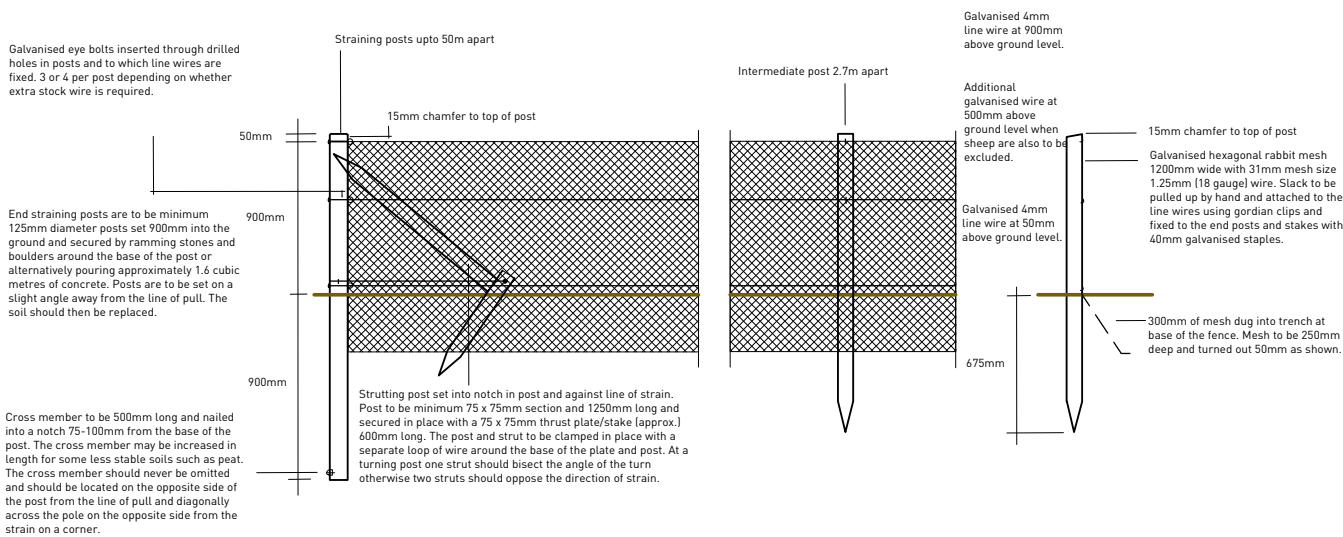


Figure 4: Typical Rabbit Proof Fencing Detail (Not to Scale)

- depth, back filled with 1 part compost to 2 parts topsoil and mulched 800mm wide and 50mm depth.
- 5.3 All hedge planting is to be protected with a rabbit proof fencing to the perimeter of the hedge line. A typical fencing detail illustrated at Figure 5.
- 5.4 **Maintenance Action 1:** All hedgerows shall be maintained weed and rubbish free and any loose plants re-firmed.
- 5.5 **Maintenance Action 2:** All hedge lines shall be regularly watered in times of drought to field capacity.
- 5.6 **Maintenance Action 3:** All canes and rabbit proof fencing where employed shall be checked at each maintenance visit and adjusted or replaced as required.
- 5.7 **Maintenance Action 4:** All hedge lines shall receive an annual application of slow release fertiliser to the manufacturers recommendations at the end of each growing season.
- 5.8 **Maintenance Action 5:** Mulch shall be topped up annually to original levels, (50mm depth) until hedges have become well established (minimum 3 years).
- 5.9 **Maintenance Action 6:** All native hedge lines shall be maintained initially to encourage dense and bushy growth (until approximately year 3). Hedgerows are to be allowed to grow to 2m high and 2m wide in final form, cut biannually. The

exception being where growth extends across paths or within the ownership of individual plots.

- 5.10 Cutting shall take place ideally in February, however due care shall be taken if cutting is carried out during the bird breeding season (March – end August), where the hedge line should be inspected by an Ecologist prior to work being undertaken.
- 5.11 **Maintenance Action 7:** Plant material will be assessed during September of each year. Any dead or dying material will be replaced by a landscape contractor instructed by the Management Company with material to match the original specification during the next planting season (November to March).
- 5.12 **Maintenance Action 8:** Rabbit protection is to be removed once hedgerow material has established (approximately 5 years).

## NEW NATIVE SHRUB PLANTING

### 5.13 Specification:

Plant Species (NH1/NH2)	Size (girth cm)
Cornus sanguinea	B 60-80cm ht 1+1
Corylus avellana	B 60-80cm ht 1+1
Hedera helix	C 1.5L 40-60cm
Ilex aquifolium	C 3L 40-60cm
Lonicera periclymen	C 0.5L
Prunus spinosa	B 60-80cm ht 1+1
Sambucus nigra	B 60-80cm ht 1+1
Viburnum opulus	B 60-80cm ht 1+2

- 5.14 Individual pits shall be dug 300mm x 300mm x 300mm for shrub stations, the bases of which shall be broken up before the placement of the plant and backfilling. Back fill material is to comprise of one-part approved peat free tree and shrub planting compost to two parts top soil.
- 5.15 Each planting station is to be protected from rabbit damage with rabbit proof fencing. Typical fencing illustrated in Figure 5).
- 5.16 Area to be mulched throughout to 50mm depth.
- 5.17 **Maintenance Action 1:** Native shrub areas are to be kept weed and rubbish free and any loose plants re-firmed.
- 5.18 **Maintenance Action 2:** Plants are to be regularly watered to field capacity in times of drought.
- 5.19 **Maintenance Action 3:** All stakes and shelters where employed, (instead of rabbit proof fencing, see hard areas) shall be checked at each maintenance visit and adjusted or replaced as required. Any loose plants re-firmed.
- 5.20 All plant protection should be removed by the end of year five, if not before.
- 5.21 **Maintenance Action 4:** Plants shall receive an annual application of slow release fertiliser to manufacturers recommendations during the first 3 years following planting.
- 5.22 **Maintenance Action 5:** Mulch shall be topped up annually to original levels, (50mm depth) until plants have become well established (minimum 3 years).

**5.23 Maintenance Action 6:** Pruning – Plant material is to be allowed to grow to their natural form and height. Any pruning is to be to remove crossing or damaged branches and maintain balance only. At year 10 an assessment is to be made of any material that should be coppiced on a 5yr rotational basis. No more than 10% of material is to be coppiced in any one year.

5.24 Cutting shall take place ideally in February, however due care shall be taken if cutting is carried out during the bird breeding season (March – end August).

**5.25 Maintenance Action 7:** Plant material will be assessed during September of each year. Any dead or dying material will be replaced by a landscape contractor instructed by the Management Company with material to match the original specification during the next planting season (November to March).

**5.26 Maintenance Action 8:** Rabbit protection is to be removed once planting has established (approximately 5 years).

#### **GRASSED AREAS**

5.27 Two grass mixes are specified to suit different areas within the POS, (refer to Pegasus Detailed Landscape Proposals Drawings P22-0161.001-007 for their locations).

#### **5.28 Specification:**

- Emorsgate EM08 Wetland Mixture (SUDS and existing watercourse).
- Emorsgate EM1 General Purpose Meadow Mix (Wildflower meadow and amenity grassland).

**5.29 Maintenance Action 1:** Any areas which fail to provide a good quality initially vigorous grass sward or become worn shall be re-cultivated and re-sown as required.

**5.30 Maintenance Action 2:** Amenity grassland areas to be mown (shown hatched on drawing P22-0161.001-007), no fewer than 18 times throughout year, to maintain the sward at 15-35mm height.

5.31 Litter to be removed before mowing and pathways to be swept afterwards.

5.32 Wetland grassland areas above any water line to be strimmed annually in August. The Management Company shall ensure that any such works on banks or near water bodies, shall be risk assessed and methods adopted to ensure safe working at all times.

5.33 Wildflower meadow cut annually in late summer.

**5.34 Maintenance Action 3:** Any pernicious weeds within grassed areas are to be spot treated with approved herbicide.

**5.35 Maintenance Action 4:** All grass margins with pathways are to be edged up with shears or a half

moon cutter annually.

**5.36 Maintenance Action 5:** Thatch is to be removed from the grass areas on an annual basis and the areas spiked for aeration.

## 7/ MAINTENANCE SCHEDULES

	Prescriptions	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	GENERAL												
	Monitoring												
MA1	As necessary to ensure objectives are met.												
	Litter picking and removal												
MA1	Soft areas – Litter pick as required.	At each scheduled maintenance visit											
MA2	Hard areas- Litter pick as required.	At each scheduled maintenance visit											
MA3	Report fly-tipping	At any occurrence											
	Graffiti removal												
MA1	Checked and remove as required.	At each scheduled maintenance visit											
	HARD LANDSCAPE												
	Temporary fencing												
MA1	Remove tree protection	Once implementation works are complete											
	Rabbit proof fencing												
MA1	Integrity to be checked.	At each scheduled maintenance visit											
MA2	Remove once planting established (approx. year 5)				Year 5								
	Hard surfacing												
MA1	Areas to be swept.	As appropriate to maintain paths clear of arisings or debris											
MA2	Deterioration in surfacing to be reported and rectified as required.												

	Prescriptions	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	SOFT LANDSCAPE												
	Existing Trees /Vegetation												
MA1	Annual inspection of existing trees.	Annual inspection. Time of inspection to vary each year											
MA2	Check for non-native invasive plants and treat/ remove where appropriate.					Annual inspection							
	New Tree Planting												
MA1	Retain weed and rubbish free.	At each scheduled maintenance visit											
MA2	Watered to field capacity in dry weather.				As necessary to maintain vigour during dry weather								
MA3	General checks to trees and ties	At each scheduled maintenance visit											
MA4	Application of fertiliser												
MA5	Topped up mulch												
MA6	Formative pruning (only if necessary)												
MA7	Identification of defects and replacement planting.	Replace								Identify		Replace	
MA8	Remove stakes and ties (by year 5)				Year 5								
MA9	Soil aeration												
	New Native Hedgerow Planting												
MA1	Maintain weed and rubbish free and re-firm plants	At each scheduled maintenance visit											
MA2	Watered to field capacity in dry weather.				As necessary to maintain vigour during dry weather								
MA3	Check stakes and fencing and loose plants	At each scheduled maintenance visit											
MA4	Application of fertiliser												
MA5	Top up mulch												

	Prescriptions	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
MA6	Formative pruning & coppicing (biannually)												
MA7	Identification of defects and replacement planting.	Replace								Identify		Replace	
MA8	Removal of stakes				Year 5								
	Native shrub mix												
MA1	Retain weed and rubbish free.	At each scheduled maintenance visit											
MA2	Watered to field capacity in dry weather.				As necessary yo maintain vigour during dry weather								
MA3	Check stakes and guards and loose plants	At each scheduled maintenance visit											
MA4	Application of fertiliser												
MA5	Top up mulch												
MA6	Formative pruning												
MA7	Identification of defects and replacement planting.	Replace								Identify		Replace	
MA8	Removal of stakes after approximately 5 years				Year 5								
	Grassed areas												
MA1	Reinstate/repair if required												
MA2	Amenity grassland - Minimum 18 cuts.												
	Meadow grassland - 1 cut												
	Wetland grassland areas - 1 strim September												
MA3	Treatment of pernicious weeds												
MA4	Edging up of margins annually												
MA5	Removal of thatch												

# APPENDIX A - Preliminary Ecological Appraisal

# PRELIMINARY ECOLOGICAL APPRAISAL

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**February 2022**




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**Standen Phase 5 and 6,**  
Littlemoor Road,  
Clitheroe,  
BB7 1HF

U R B A N  
G R E E N



# QUALITY MANAGEMENT

<b>Project No.:</b>	UG1451				
<b>Project:</b>	Standen Phase 5 and 6				
<b>Location:</b>	Littlemoor Road, Clitheroe, BB7 1HF				
<b>Title:</b>	Preliminary Ecological Appraisal				
<b>Document Type:</b>	PEA	<b>Issue No.:</b>	01		
<b>Date:</b>	24/02/2022				
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<b>Revision Status:</b>					
<b>Rev:</b>	<b>Date:</b>	<b>Issue/Purpose/Comment:</b>	<b>Prepared:</b>	<b>Checked:</b>	

# NON-TECHNICAL EXECUTIVE SUMMARY

Taylor Wimpey are proposing to develop land at Littlemoor Road in Clitheroe (hereafter referred to as ‘the site’). The proposals include the development of a residential estate in two phases, with associated hard and soft landscaping and areas of public open space (POS).

Urban Green have been appointed to complete a Preliminary Ecological Appraisal of the site. The objectives of the assessment are to identify habitats on site and determine the suitability for any ‘protected and/or notable’ species may occur on site. Further ecological surveys and mitigation are recommended to aim to minimise potential impacts on ecology, due to the proposed development.

Following the survey work, the key recommendations are summarised in the following table

Current Site Use and Adjacent Site Use	The site currently comprises arable land that was previously used for livestock farming. Residential properties surround the site to the north and west.
Potential Impacts on Designated Sites	No potential impacts on designated sites nearby to the site are anticipated to occur due to the proposed development. The site is located at a sufficient distance from nearby designated sites, and the proposed development activities have been considered.
Habitats	The site comprised predominantly improved grassland with broadleaved woodland, scattered trees, hedgerows, watercourse, and a building.
Ecological Constraints	<p>The following potential ecological constraints were identified during the assessment:</p> <ul style="list-style-type: none"> <li>• One building and two trees were assessed as having <b>High</b> bat roost potential.</li> <li>• Six trees were assessed as having <b>Moderate</b> bat roost potential.</li> <li>• Sixteen trees were assessed as having <b>Low</b> bat roost potential.</li> <li>• The site provides high value commuting and foraging habitat for bats</li> <li>• Suitable habitats for nesting notable bird species, including barn owl.</li> <li>• Suitable habitat for common amphibians, hedgehog, and badgers.</li> <li>• Suitable commuting and foraging habitat for otter and water vole.</li> </ul>
Recommended Ecological Mitigation	<p>The following mitigation measures are recommended to minimise potential impacts due to the proposed development:</p> <ul style="list-style-type: none"> <li>• Precautionary Working Methods during the construction phase for common amphibians, reptiles, hedgehog, bats, badgers, and barn owl.</li> <li>• If any vegetation requires removal, it should be completed outside of the breeding bird season (March to September, inclusive). If this is not feasible, a Nesting Bird Check is to be completed by a qualified ecologist within 48 hours before removal is completed.</li> </ul>
Recommended Further Surveys and Reports	<p>The following ecological surveys and reports are recommended to further assess the sites suitability for protected/notable fauna and/or flora:</p> <ul style="list-style-type: none"> <li>• Further aerial tree surveys.</li> <li>• Further invertebrates, reptiles, breeding birds, barn owl, bats, water vole, and otter surveys.</li> <li>• Production of a CEMP.</li> </ul>
Recommended Ecological Enhancements	The National Planning Policy Framework (NPPF) (2021) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment. The proposed development provides the opportunity to enhance the site and ecological enhancements have been recommended.

# CONTENTS

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
1.1	Background to the Scheme.....	1
1.2	Site Context.....	1
1.3	Purpose of this Report .....	2
<b>2</b>	<b>Methods .....</b>	<b>3</b>
2.1	Desk Study.....	3
2.1.1	Online Resources and Local Records Centre.....	3
2.2	Field Survey .....	3
2.2.1	Vegetation.....	3
2.2.2	Fauna .....	4
2.3	Bat Assessment.....	5
2.3.1	Preliminary Roost Assessment .....	5
2.3.2	Commuting and Foraging Bats .....	5
2.4	Constraints to the Survey .....	6
2.5	Lifespan of Report .....	7
2.6	Definitions .....	7
<b>3</b>	<b>Baseline Ecological Conditions .....</b>	<b>8</b>
3.1	Desk Study.....	8
3.1.1	Site Location .....	8
3.1.2	Designated Sites .....	8
3.1.3	Flora and Fauna.....	8
3.2	Field Survey .....	13
3.2.1	Improved Grassland.....	13
3.2.2	Hedgerow with trees.....	14
3.2.3	Broadleaved Woodland.....	15
3.2.4	Scattered Trees.....	16
3.2.5	Watercourses.....	17
3.2.6	Building.....	17
3.3	Site Suitability for Protected and Notable Species.....	19
3.3.1	Species Discounted from Assessment .....	19
3.3.2	Vascular Plants.....	19

3.3.3	Invertebrates.....	19
3.3.4	White-Clawed Crayfish.....	19
3.3.5	Amphibians.....	19
3.3.6	Reptiles.....	20
3.3.7	Birds.....	20
3.3.8	Bats.....	21
3.3.9	Hedgehog.....	21
3.3.10	Red Squirrel.....	22
3.3.11	Water Vole.....	22
3.3.12	Otter.....	22
3.3.13	Badger.....	22
3.4	Invasive Species .....	22
3.4.1	Flora.....	22
4	Ecological Constraints and Recommended Mitigation.....	23
4.1	Proposed Development.....	23
4.2	Designated Sites .....	23
4.3	Habitats .....	23
4.3.1	Broadleaved Woodland, Trees, and Hedgerows .....	23
4.3.2	Watercourses.....	24
4.4	Fauna .....	24
4.4.1	Invertebrates.....	24
4.4.2	Amphibians.....	24
4.4.3	Reptiles.....	24
4.4.4	Birds.....	25
4.4.5	Barn owl.....	25
4.4.6	Bats .....	25
4.4.7	Hedgehog .....	26
4.4.8	Otter and Water Vole .....	26
4.4.9	Badgers.....	27
5	Further Surveys.....	28
5.1	Invertebrates.....	28
5.1.1	Preliminary Survey .....	28
5.1.2	Further Survey (if necessary).....	28
5.2	Reptiles .....	28

5.3	Breeding Birds.....	28
5.4	Barn Owl.....	29
5.5	Bats .....	29
5.5.1	Nocturnal Emergence/Re-entry Surveys.....	29
5.5.2	Transect and Static Surveys .....	30
5.6	Water Vole.....	30
5.7	Otter .....	31
6	Opportunities for Enhancement.....	32
7	Conclusion .....	33
8	References .....	34
	Appendix 1 – Relevant Legislation.....	36
	Appendix 2 – Preliminary Roost Assessment.....	39
	Appendix 3 – Habitat Map and Target Notes .....	65

# 1 Introduction

## 1.1 Background to the Scheme

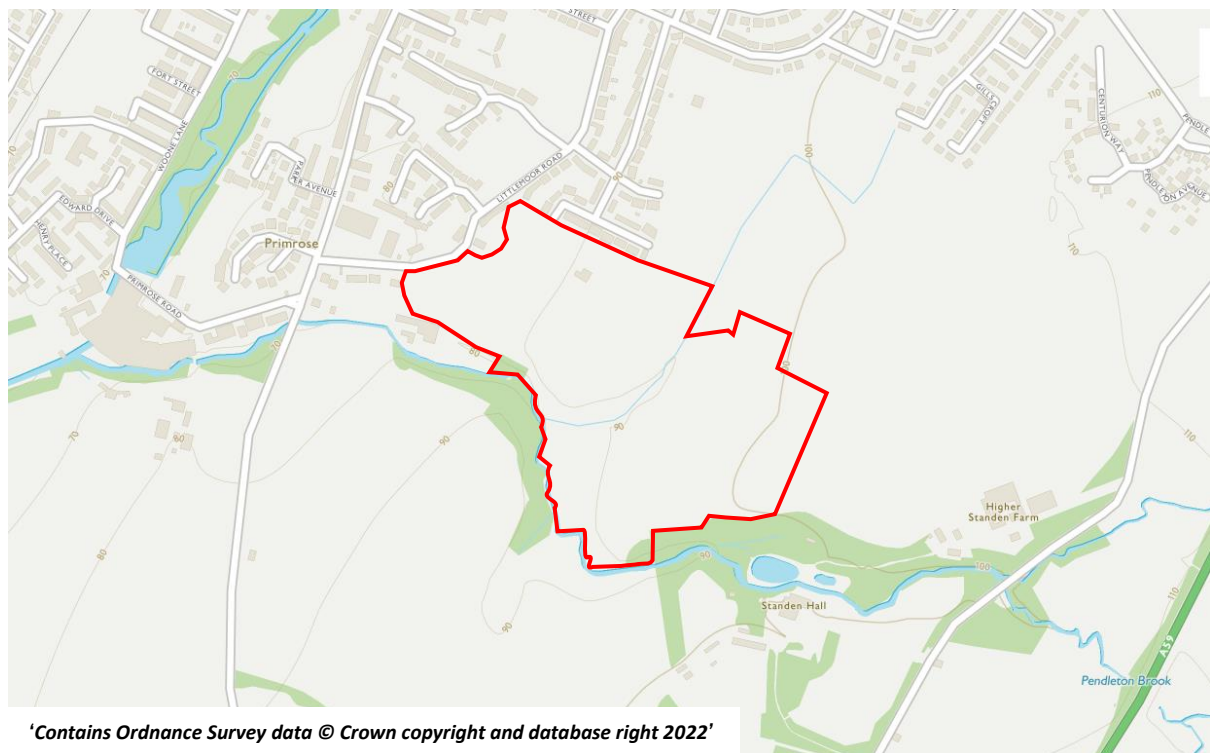
Taylor Wimpey are proposing to develop land at Littlemoor Road in Clitheroe (hereafter referred to as 'the site'). The proposals include the development of a residential estate in two phases, with associated hard and soft landscaping and areas of public open space (POS). The spine road for the development has already gained outline approval and will run through the site in an east to westerly direction.

Urban Green have been appointed to undertake a Preliminary Ecological Appraisal (PEA) of the site.

The author of the report is Jake Healy, MSc, Qualifying CIEEM, Assistant Ecologist at Urban Green. Jake has experience providing ecological consulting services for a range of development schemes across the UK, including residential and commercial schemes.

## 1.2 Site Context

The site is located at National Grid Reference SD 74382 40702 and comprises a total area of approximately 17.2ha (see Figure 1).



**Figure 1 – Site Extent**

The site is located on the rural-urban fringe of Clitheroe town, which is present approximately 1km north of the site. An un-named tributary of Pendleton Brook (a tributary of Mearley Brook which flows into the River Ribble) is present on site running north to south-west through the centre of the site. Pendleton Brook borders the south of the site running from east to west. The River Ribble is located approximately 1.5km west of the site, with Mearley Brook present approximately 350m west of the site. Residential properties are located to the north, north-west and west of the site with arable grassland

present on all other aspects. Areas of woodland are present within the wider area to the south of the site. The A59 is present approximately 600m east of the site.

### **1.3 Purpose of this Report**

This report has been produced to set out the methods, results, and conclusions of a PEA. The purpose of the PEA report is to identify habitats on site and determine the sites potential value for protected and/or notable fauna and flora, with the addition of potential impacts on designated sites. This will inform the need for any further ecological surveys and/or mitigation to minimise the potential impacts on ecology on site and within the local area.

Further information and details of UK legislation for those species which are formally protected is defined in Appendix 1, which are considered throughout the assessment.

The National Planning Policy Framework (NPPF) (2021) and other Local Planning Policies are considered with the PEA. Ecological enhancements are advised to be in line with relevant Planning Policies.