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Preliminary Ecological Appraisal and Biodiversity Net Gain Assessment

Project Background and Scope of Survey

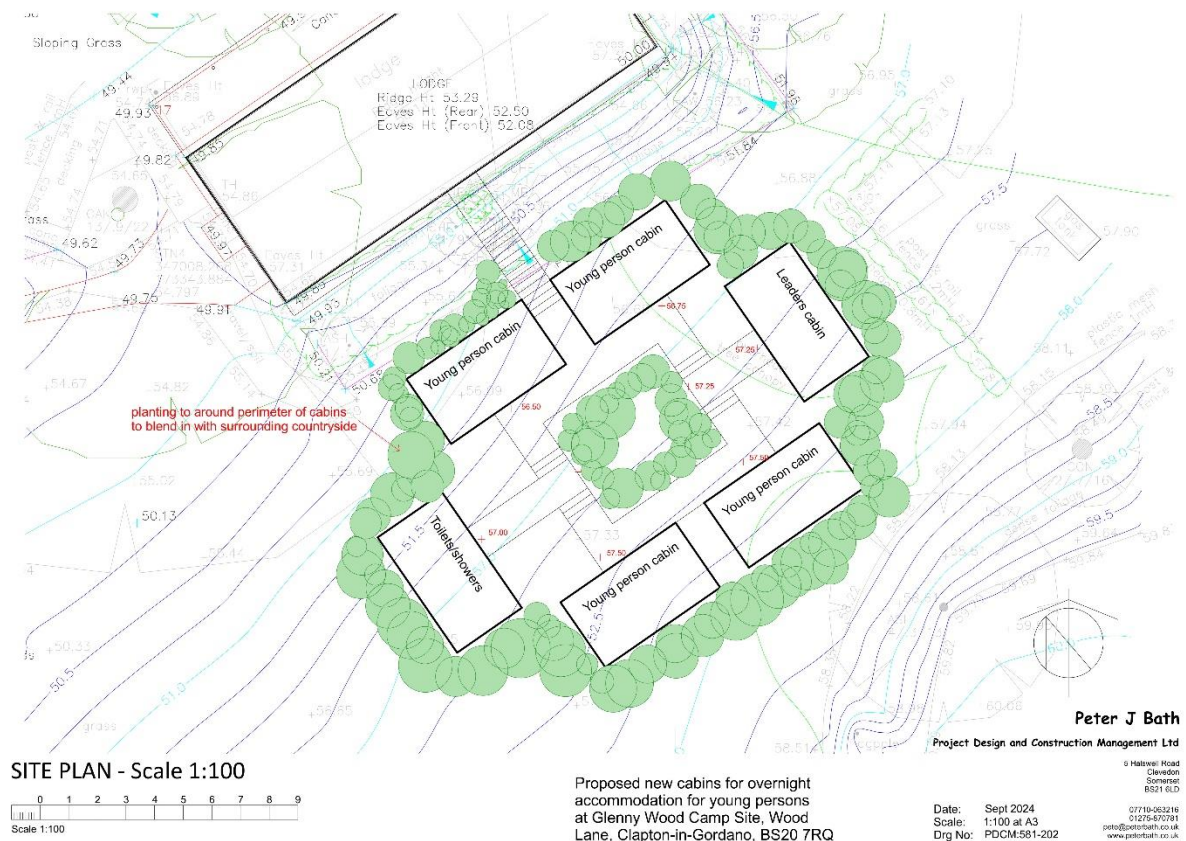
The proposals are for the construction of six small cabins providing overnight accommodation and facilities at Glenny Wood Scout Camp Site, Wood Lane, Clapton-in-Gordano, BS20 7RQ (Ordnance Survey Grid Reference ST47027333). The location of the site and layout of the proposals are shown in Figure 1 below.

The Environment Act 2021 requires that Biodiversity Net Gain (BNG) assessments demonstrating at least 10% net gain in units as assessed through the Defra statutory Biodiversity Net Gain metric are provided for sites where there is more than 25m² of habitat/soft landscaping. A Preliminary Ecological Appraisal comprising a basic ecological desk study, habitat survey and protected species has also been completed to inform the assessment.

The survey aimed to identify any designated sites, Habitats of Principal Importance (priority habitat), irreplaceable habitats and features suitable for use by protected and notable species to inform the ecological and biodiversity net gain assessment. The survey included the following objectives:

- To identify any designated nature conservation sites on or in the vicinity of the site;
- To provide an indication of protected or notable species likely to be on or in the vicinity of the site;
- To record any habitats of ecological importance and to record their condition using the Defra condition sheets (this is not strictly required for the Small Sites Metric but may be used to inform habitat creation options);
- To identify whether there is any evidence of or potential for protected or notable species to be present;
- To detail constraints and requirements for avoidance, mitigation and compensation measures to meet legislative and best practice requirements; and
- To complete the Defra BNG metric and to highlight any opportunities for net biodiversity gain.

Figure 1 Site Layout



Methodology

A full Bristol Regional Environmental Records Centre (SERC) data search for protected and notable species was not considered to be necessary or proportional in this instance. Instead, publicly available information and the surveyor's knowledge of the area based on 18 years' of local experience was used to inform a risk assessment of presence of protected and notable species. Internationally and nationally wildlife sites up to a 1km from the site and Special Areas of Conservation (SAC) designated for bat species up to 10km from the site were identified using MAGIC mapping (www.magic.gov.uk). Local Wildlife Sites within 1km were identified using the North Somerset planning map. Aerial photographs and Ordnance Survey maps were also reviewed to assess the site in context of surrounding habitats. The North Somerset great crested newt (GCN) *Triturus cristatus* District Licensing map has also been reviewed. MAGIC was also reviewed for Natural England mitigation licence applications and eDNA records for GCN within 1km.

An Extended Phase 1 Habitat survey i.e. habitat survey and protected species audit was completed in accordance with best practice guidance (*Guidelines for Ecological Impact Assessment in the UK and Ireland* (CIEEM, 2016) and *Handbook for Phase 1 Habitat Survey* (JNCC, 2010) on 15 October 2024. Habitats were also classified following UK Habitat Classification V2 (2023) guidance to be

consistent with Biodiversity Net Gain requirements. The survey was completed by Sarah Dale MCIEEM, an experienced ecologist with over 18 years' professional practice. The vegetation type, structure and dominant species of any habitats present were noted. An indicative botanical species list was made for each habitat type and four 1m² quadrats were assessed in detail for each different habitat type and condition for Biodiversity Net Gain purposes. Botanical nomenclature in this report follows that laid out by Stace (2010). The presence of any invasive species subject to legal controls was also recorded.

The habitats were also assessed for evidence and potential to support legally protected or otherwise notable flora and fauna e.g. evidence of species such as badger and potential presence of species such as reptiles and badger. All of the trees within 10m of the site boundary were also assessed from ground level from all accessible aspects using close-focus binoculars and a high-powered torch. A flexible endoscope was also available for use to inspect any features less than 2.5m above ground level. Trees were classified in accordance with the categories set out in Table 1 below to be consistent with *Bat Surveys for Professional Ecologists – Good Practice Guidelines* 4th Edition (Collins *et al*, 2023). The assessment noted any features on trees such as decay pockets and cavities, crevices around pruning wounds, cracked or flaking bark or woodpecker holes. Evidence of roosting bats was also assessed, which may include live/dead bats, droppings, staining/smooth surfaces around roost entrances, audible noise and feeding remains. Sarah Dale holds a Natural England bat survey licence (Class 2).

Table 1: Bat Roost Potential Categories for Trees
(Category descriptions drawn from Collins, 2023)

Roost Potential	Description
NONE	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF-I	suitable for individual or very small numbers of bats due to the type of feature or nature of surrounding habitats
PRF-M	suitable for multiple bats and possibly a maternity roost.

A Biodiversity Net Gain assessment was completed using the main statutory Defra metric due to the size of the site. Guidance set out in *The Small Sites Metric (Statutory Metric) – User Guide* (Defra, July 2024) was followed. Habitats were assessed using *UK Habitat Classification* methodology (as above). Habitat areas were mapped and measured using qGIS. Shapefiles are available on request. The Defra metric condition assessment was used to assess current habitats and to inform target habitat condition. Although the Small Sites Metric does not require a condition assessment for the baseline assessment, it is useful to complete an evaluation to inform habitat creation options. Conservative assumptions were made when considering habitat creation options to provide a realistic estimation of likely target habitat quality for newly created habitats, and to minimise challenges with

long-term management and delivery. All habitats within the redline were assessed to inform potential habitat creation measures.

Constraints: The entire site was accessible. Although the survey was completed at a sub-optimal time of year for botanical assessment, due to the type and quality of habitats present, this will not have changed the outcome of the assessment. qGIS has been used to estimate the areas for BNG. As this is based on translation of a redline boundary into a georeferenced format, this is a best estimate of areas.

Site Context and Desk Study

The area within the redline boundary comprises an area of just over 600m². The site currently comprises an area of regularly mown modified grassland used for recreational purposes by the Scouts. It is sometimes used for camping, being fairly level ground. There are scattered trees and a native hedgerow around the grassland edge in the wider field i.e. outside of the site boundary. The wider Scout camp includes scattered buildings and hardstanding, modified and other neutral grassland and extensive areas of broadleaved semi-natural woodland. The latter is a Habitat of Principal Importance under Section 41 of the NERC Act 2006, as are native hedgerows.

The M5 motorway lies 165m to the north, with the Gordano Valley lying beyond. There are extensive areas of woodland and scattered dwellings along Cadbury Camp Lane to the south.

There are no statutory designated sites for nature conservation within 1km. The site does not fall within Natural England's Site of Special Scientific Interest (SSSI) Impact Risk Zone criteria. There are two SSSI component units of the North Somerset and Mendip Bats Special Area of Conservation (SAC) within 10km; the closest Brockley Hall Stables SSSI lies 6.5km to the south. The SAC is designated for internationally-important populations of breeding and hibernating greater horseshoe *Rhinolophus ferrumequinum* and lesser horseshoe *Rhinolophus hipposideros* bats. The site is within Band B of the *North Somerset and Mendip Bats Special Area of Conservation Guidance on Development Supplementary Planning Document* (North Somerset Council, 2018), due to known horseshoe bat roosts in Clapton-in-Gordano.

The site falls within Cockheap Wood, Dunhill Wood and Parsonage Wood complex Local Wildlife Site (LWS). This is primarily designated due to ancient and broadleaved woodland habitats. There are no habitats of LWS quality within the site boundary. There is no ancient woodland within 15m. The closest area lies approximately 25m to the north of the site, beyond existing buildings and hardstanding. Further Local Wildlife Sites within 1km include:

- Tickenham Hill - Cadbury Camp - Chummock Wood Complex 550m south;
- Gordano Valley, Clapton Moor, Middle Bridge and rhynes 755m north;
- West Park Wood - north of M5 870m west;
- Nicholas Wood 230m north; and
- Black Horse field 575m north-east.

Tickenham Ridge and the Gordano Valley is known to support a high bat biodiversity, with at least 15 species recorded. There are two Natural England bat mitigation licence records within 1km; one for common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and brown long-eared *Plecotus auritus* bats 630m south and one for common and soprano pipistrelle, greater and lesser horseshoe and serotine bats 670m south-west. Other mammals including badger *Meles meles* and hedgehog *Erinaceus europaeus* also have a widespread distribution within North Somerset. Hazel dormouse *Muscardinus avellanarius* have been found along Tickenham Ridge and may be present in nearby woodland.

Birds of Conservation Concern (e.g. RSPB, 2015) have been recorded throughout North Somerset including species such as house sparrow *Passer domesticus*, starling *Sturnus vulgaris* and song thrush *Turdus philomelos*. Although nearby woodland is likely to support a range of bird species, there is very limited habitat for nesting birds within the site.

Slow worm *Anguis fragilis* and grass snake *Natrix helvetica* are widespread across North Somerset, but other reptile species such as common lizard *Zootoca vivipara* and adder *Vipera berus* occur less frequently. There are three waterbodies shown on Ordnance Survey mapping approximately 200m and 220m south of the site. The site falls within an Amber Zone (i.e. medium risk) on North Somerset's great crested newt (GCN) *Triturus cristatus* district licensing map. There are no GCN records shown on MAGIC mapping within 1km.

Habitats and Plant Species

Findings are mapped in the pre-development habitat map in Figure 2 and site photographs are provided below. Habitats comprise:

Modified Grassland (g4)

The site comprises entirely modified grassland with an average of 4.25 species per square metre in four quadrats. This is a low species diversity. The site sits within a grassland clearing/camping field of a similar nature and species diversity. At the time of the survey, the grassland was regularly cut to less than 5cm sward height, with occasional trampled areas due to use for camping. Grasses are dominant including perennial ryegrass *Lolium perenne*, Yorkshire fog *Holcus lanatus* and red fescue *Festuca rubra*. There are occasional herbaceous and ruderal species including white clover *Trifolium repens*, red clover *Trifolium pratense*, greater plantain *Plantago major*, dandelion *Taraxacum* agg., creeping buttercup *Ranunculus repens*, common sorrel *Rumex acetosa* and salad burnet *Sanguisorba minor*. Although the latter can occur in more species-rich habitats, it occurs very infrequently, and other species are indicative of fertile, species-poor habitats. The grassland is not of any notable ecological value. No non-native invasive species are present. The grassland would meet 'Poor' habitat condition criteria in the Defra metric spreadsheet.

Other and Adjacent Habitats

Nearby habitats outside of the site boundary include a pre-fabricated building to the north (u1b5), scattered mature trees around the boundary of the clearing (32), a species-rich planted native hedgerow along the southern boundary of the clearing and a small oil tank with a recently planted hawthorn *Crataegus monogyna* hedgerow to the east of the site. The hawthorn hedge is regularly cut to 1.2m high and 0.8m wide, offering very low ecological value.

Protected and Notable Species

Badger

There was no evidence of badger within the site or within 50m of the footprint of works.

Bat Species

The building to the south and nearby trees have negligible potential to support roosting bats. The native hedgerow could provide a linear commuting corridor for bats but this is over 30m to the south of the site. The grassland has negligible value for foraging bats, but surrounding woodland is likely to be of high importance for a range of bat species, including light-sensitive horseshoe bats. Some bat species such as horseshoe bats will actively avoid light spill of more than 0.5 lux.

Nesting Birds

The fields currently have negligible suitability for ground nesting birds due to regular disturbance and the type of habitats present. No dense habitats which could be used by nesting birds are present.

Reptiles

There is negligible potential for reptile species such as grass snake and slow worm to be present due to current management of the grassland.

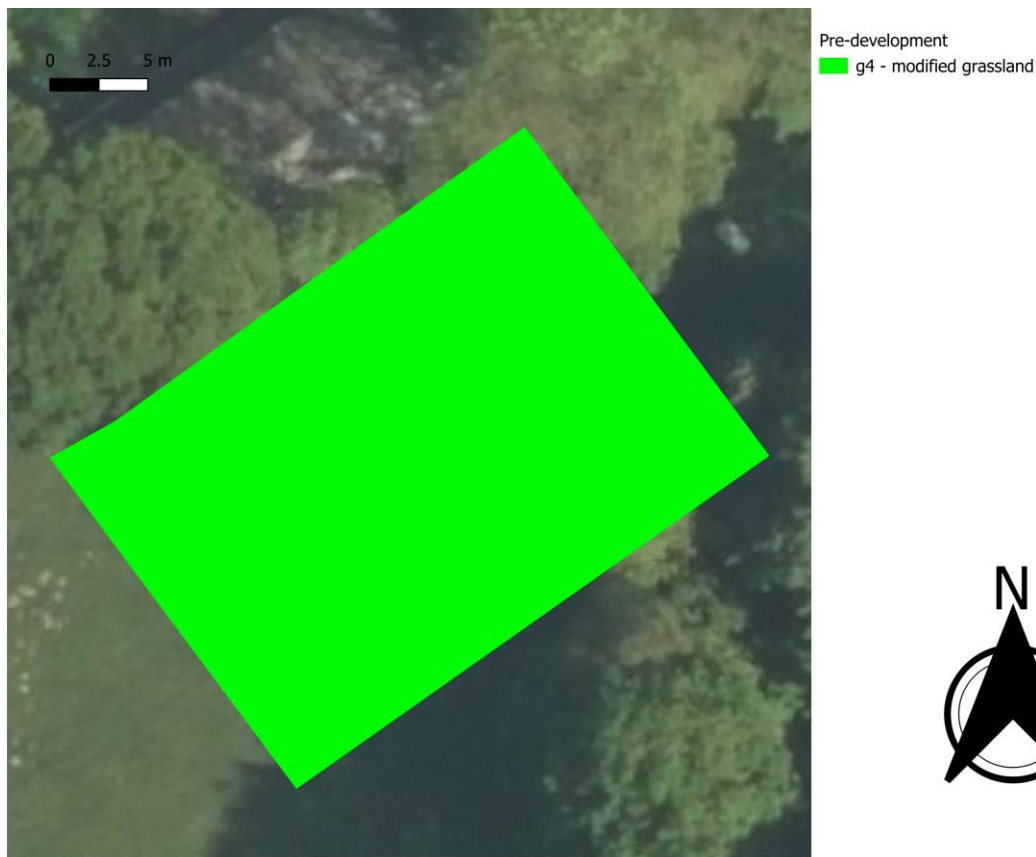
Great Crested Newt

As with reptiles, the site offers no suitable terrestrial habitat for great crested newt due to regular mowing and lack of potential refugia. There is optimal habitat in nearby woodland and great crested newt are often found within 100m of breeding ponds (Cresswell and Whitworth, 2004).

Other Species

Hazel dormouse may be present in nearby woodland and hedgerows, but there is no suitable habitat for these species within or immediately adjacent to the site. The site offers very limited habitat for any notable invertebrate species. There is negligible potential for other protected or notable species to be present or impacted.

Figure 3 Pre-development Habitat Map



Recommendations – Habitats and Protected and Notable Species

No impacts on designated sites are anticipated. All nearby trees must be protected in accordance with BS5837 – *Trees in relation to design, demolition and construction*. Otherwise, there is negligible risk to any habitats of ecological value.

As light-sensitive bat species are likely to use the area, use of external lighting must be minimised. If any additional lighting is proposed, a best practice approach to minimising light spill must be followed. Best practice will need to be followed in accordance with *Bats and Artificial Lighting at Night* (ILP, 2023). Measures include:

- Only using external lighting where absolutely necessary for safety reasons;
- All external lighting to be fitted with PIR sensors and short-duration timers (less than 2 minutes);
- Avoiding floodlighting and using downward-facing, wall-mounted and/or bollard lighting;
- Warmer light colours below 2700K to be used; and
- Light spill onto nearby trees, hedgerows and woodland to be avoided.

The Local Planning Authority may ask for an external lighting plan and details of the light fittings with the planning application, demonstrating minimal light spill onto nearby habitats.

There is negligible risk to roosting bats and nesting birds as a result of the proposals. Habitats within the footprint of the proposals must continue to be grazed or cut to less than 10cm in height before works commence to prevent any colonisation by reptiles and other wildlife. All works must be contained within the construction area which should be demarcated e.g. with Heras fencing or similar before works commence. If any evidence of protected species is unexpectedly found during site clearance or construction when an ecologist is not on-site, all works must cease immediately and ecological advice must be sought from a suitably qualified ecologist. Further surveys and mitigation may be required.

Ecological survey reports usually remain valid for up to two years. An updated Biodiversity Net Gain walkover will be required if the planning application has not been submitted by 15 April 2025.

Biodiversity Net Gain Assessment and Ecological Enhancement Measures

The Defra Biodiversity Net Gain metric spreadsheet is appended as well as the habitat condition sheets. There are no Irreplaceable Habitats within the site.

The site achieves a baseline of 0.2464 habitat units.

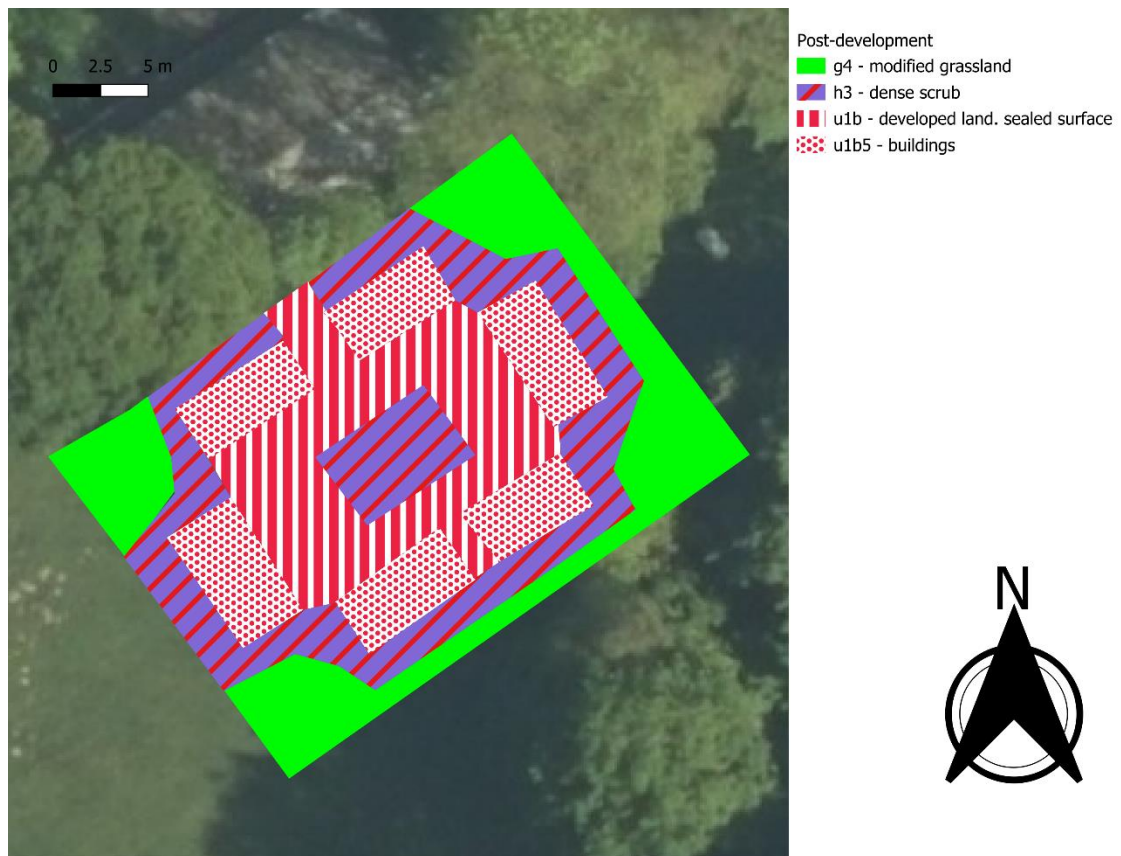
The proposals, including construction of six cabins, additional hardstanding and planting of native shrubs achieves 0.1834 habitat units i.e. a 25.55% net loss and does not meet trading rules. To address this, planting of eight new small trees will be required within the site or wider landholding. A small tree needs to be a species capable of growing to at least 7.5cm diameter at breast height but does not need to exceed 30cm dbh. This would achieve 0.2830 habitat units i.e. a 14.84% net gain. The proposals are shown in Figure 4. Tree planting is not shown on UK Habitat Code maps but will need to be indicated with the planning submission.

The shrub planting within the site will need to meet 'Moderate' condition if the Defra metric. This will require planting of a range of native shrub species such as hawthorn, blackthorn *Prunus spinosa*, native dogwood *Cornus sanguinea*, field maple *Acer campestre*, holly *Ilex aquifolium*, elder *sambucus nigra*, spindle *Euonymus europaeus* and hazel *Corylus avellana*. The shrubs would need to be intermittently pruned/coppiced on rotation (e.g. coppiced every 8-10 years) outside of the nesting bird season, with occasional specimens left to grow to maturity.

Other options are possible, but this solution is the most straightforward to meet legal requirements. A definitive approach will need to be provided with the planning submission. All plans will need to be consistent, including the redline boundary. If the boundary differs from Figure 2 and 3, the calculations will need to be revised and additional habitat creation may be required.

Use of native tree planting would be advised at this location. As an additional enhancement measure, general purpose bird boxes could be installed on northern elevations of the new cabins at least 2m above ground level. Habitat piles (e.g. log, compost or brash piles) within shrub planting would also be of benefit.

Figure 4 Post-Development Habitat Plan



Site Photographs



P1 Site facing west



P2 Site facing south



P3 Site facing east – adjacent new hedgerow



P4 Site facing east from wider field



P5 Off-site building and trees to north



P6 Typical area of grassland