



Hallam Land Management Ltd

Rockfield Road, Monmouth

ECOLOGICAL APPRAISAL

August 2019

FPCR Environment and Design Ltd

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1.0 INTRODUCTION

- 1.1 The following report has been prepared by FPCR Environment and Design Ltd. on behalf of Hallam Land Management Ltd. and provides the results of an Ecological Appraisal, entailing an ecological desk study and extended Phase I survey, of an area of land located to the west of Rockfield Road, Monmouth (Ordnance Survey (OS) Grid Reference SO 495134). The location of the land is shown in Figure 1.
- 1.2 The land (hereafter referred to as the ~~Site~~) has been subject to previous ecological assessment by FPCR in August 2007 with follow-up surveys undertaken in September 2011 and March 2013 to inform a planning application for 145 dwellings (Monmouthshire County Council Planning Ref: DC/2008/00576) which was refused and a subsequent unsuccessful appeal (APP/E/A132195263) and again in May 2016 to support an approved outline planning application for 70 dwellings covering the western half of the site (DC/2017/00539).
- 1.3 The current report presents the results of a further updated desk study and extended Phase I survey conducted in June 2019 to support an outline planning application for up to 130 residential dwellings and associated landscaping. This level of survey effort was considered sufficient to inform the previous 2013 and 2016 applications and no objections or reasons for refusal were received from the Local Planning Authority (LPA) or Natural Resource Wales NRW, formally the Countryside Council for Wales) with respect to ecology.

Site Context

- 1.4 The Site is 4.33ha in extent and comprises a single field of improved grassland, bounded by hedgerows on all aspects and divided centrally on a north-south axis by fence-lines which run along a public footpath. Additional habitats are limited to mature trees occurring predominately within the northern boundary hedgerow and two ditches located in association with the eastern and western boundaries.
- 1.5 Surrounding land-use comprises fields of grassland to the north, areas of existing residential dwellings to the west and south and Rockfield Road along the remaining eastern boundary.

2.0 METHODOLOGY

Desk Study

- 2.1 In order to compile existing baseline information, relevant ecological information was sought in 2016 and updated in June 2019 from both statutory and non-statutory organisations. For the purpose of the current report these included;
- The Multi Agency Geographic Information for the Countryside (MAGIC);
 - South East Wales Biodiversity Records Centre (SEWBRc).
- 2.2 The search area for biodiversity information was related to the significance of the Site, species and potential zones of influence, as follows;
- 5km around the Site for sites of International Importance (e.g. Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar sites);
 - 2km around the Site for sites of National or Regional importance (e.g. Sites of Special Scientific Interest (SSSI)); and
 - 1km around the Site for sites of County or Local Importance (e.g. Sites of Importance for Nature Conservation (SINC) or Local Nature Reserves (LNR)) and species records (e.g. Statutory Protected, Species of Principal Importance (SPI) under Section 42 of the National Environment & Rural Communities (NERC) Act 2006 or notable species (e.g. Red Data Book (RDB) species).
- 2.3 Further inspection, using colour 1:25,000 OS base maps and aerial photographs from Bing (<http://www.bing.com/maps>) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

Field Survey – Flora/Habitats

Extended Phase I Survey

- 2.4 Extended Phase 1 Habitat Surveys were completed by FPCR in August 2007, September 2011, March 2013 and updated on 11th May 2016 using the standard Phase I Habitat Survey methodology¹. This involved a systematic walkover of the Site to classify the broad habitat types and to identify any Habitats of Principal Importance (HPI) under the NERC Act. In accordance with good practice guidelines on each of these survey occasions the scope of the Phase I survey was extended to allow for the recording of information on the presence of, or potential for protected or notable fauna.
- 2.5 The Site was re-visited on the 17th June 2019 and the results of the previous 2016 assessment appraised to determine if there had been any material change in the nature of the habitats present and to identify any additional constraints which may have emerged in respect of protected species since this previous survey was undertaken.

¹ JNCC, (2010), Handbook for Phase 1 habitat survey - a technique for environmental audit

Hedgerows

- 2.6 As part of the previous appraisal of the Site, hedgerows were evaluated against the Wildlife and Landscape criteria of the Hedgerow Regulations 1997² and assessed using the Hedgerow Evaluation Grading System (HEGS)³. The HEGS methodology awards each hedgerow a grade based on four attribute groups (structure, connectivity, diversity and associated features). These grades are used to assign a nature conservation value to each based on the scale as follows: -
- | | |
|-----------------|-------------------------------|
| Grade -1, 1, 1+ | High to very high value |
| Grade -2, 2, 2+ | Moderately high to high value |
| Grade -3, 3, 3+ | Moderate value |
| Grade -4, 4, 4+ | Low value |
- 2.7 Hedgerows graded -2 and above are suggested as being of nature conservation priority.
- 2.8 Hedgerows were also assessed under wildlife and landscape criteria of the Hedgerow Regulations 1997, Statutory Instrument No: 1160. This broadly follows the above methodology, although an average canopy species per 100 metres is calculated. Results are assessed against the set wildlife and ecological criteria laid out in the regulations to ascertain whether a hedgerow is classed as Important. Hedgerows may also qualify as Important under the Archaeological criteria, although this has not been assessed within this report.
- 2.9 As part of the June 2019 assessment the general condition of the hedgerows was reviewed against the 2016 survey results to determine if there had been any material change.

Field Survey – Fauna

General

- 2.10 During the survey of the Site, observations, signs of or suitable habitat for any species protected under Part I of the Wildlife and Countryside Act 1981 (as amended), The Conservation of Habitats and Species Regulations 2017 (as amended) and the Protection of Badgers Act 1992. Consideration was also given to the existence and use of the Site by other notable fauna such as those of Species of Principal Importance (SPI) under the (NERC) Act, LBAP or RDB species.

Bats

- 2.11 During the June 2019 survey all trees within and immediately adjacent to the Site were inspected from ground-level, with the aid of a torch and binoculars (where appropriate), for their potential to support roosting bats.
- 2.12 The inspection sought the presence of Potential Root Features (PRF) for bats which (based on P16, British Standard 8596:2015 Surveying for bats in trees and woodland, October 2015⁴), included:
- Natural holes (e.g. knot holes) arising from naturally shed branches or branches previously pruned back to a branch collar.

² HMSO (1997) The Hedgerow Regulations 1997 in Statutory Instrument 1997 No. 1160

³ Clements, D. & Toft, R. (1992) Hedgerow Evaluation and Grading System (HEGS) in a methodology for the ecological survey, evaluation and grading of hedgerows, Countryside Planning and Management

⁴ BSI (2015) BS8596:2015 Surveying for bats in trees and woodland. British Standards Institution. London

- Man-made holes (e.g. cavities that have developed from flush cuts or cavities created by branches tearing out from parent stems).
 - Woodpecker holes.
 - Cracks/splits in stems or branches (horizontal and vertical).
 - Partially detached, loose or bark plates.
 - Cankers (caused by localised bark death) in which cavities have developed.
 - Other hollows or cavities, including butt rots.
 - Compression of forks with occluded bark, forming potential cavities.
 - Crossing stems or branches with suitable roosting space between.
 - Ivy stems with diameters in excess of 50mm with suitable roosting space behind (or where roosting space can be seen where a mat of thinner stems has left a gap between the mat and the trunk).
 - Bat or bird boxes.
 - Other suitable places of rest or shelter.
- 2.13 Certain factors such as orientation of the feature, its height from the ground, the direct surroundings and its location in respect to other features may enhance or reduce the potential value.
- 2.14 Trees were classified into general bat roost potential groups based upon the presence of these features. Table 1 (below) broadly classifies the potential categories as accurately as possible as well as discussing the relevance of the features. This table is based upon Table 4.1 and Chapter 6 in Bat Surveys for Professional Ecologists: Good Practice Guidelines (J., Collins (Bat Conservation Trust, 2016).
- 2.15 Although the British Standard 8596:2015 document groups trees with moderate and high potential, these have been separated below (as per Table 4.1 in The Bat Conservation Trust Guidelines) to allow more specific survey criteria to be applied.

Table 1: Classification and Survey Requirements for Bats in Trees

Classification of Tree	Description of Category and Associated Features (based on Potential Roosting Features listed above)	Likely Further Survey work / Actions
Confirmed Roost	Evidence of roosting bats in the form of live / dead bats, droppings, urine staining, mammalian fur oil staining, etc.	A Natural England derogation licence application will be required if the tree or roost site is affected by the development or proposed arboricultural works. This will require a combination of aerial assessment by roped access bat workers (where possible, health and safety constraints allowing) and nocturnal survey during appropriate periods (e.g. nocturnal survey - May to August) to inform on the licence. Works to tree undertaken under

Classification of Tree	Description of Category and Associated Features (based on Potential Roosting Features listed above)	Likely Further Survey work / Actions
		supervision in accordance with the approved good practice method statement provided within the licence. However, where confirmed roost site(s) are not affected by works, work under a precautionary good practice method statement may be possible.
High Potential	A tree with one or more Potential Roosting Features that are obviously suitable for larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat. Examples include (but are not limited to); woodpecker holes, larger cavities, hollow trunks, hazard beams, etc.	Aerial assessment by roped access bat workers (if appropriate) and / or nocturnal survey during appropriate period (May to August). Following additional assessments, a tree may be upgraded or downgraded based on findings. If roost sites are confirmed and the tree or roost is to be affected by proposals a licence from Natural England will be required. After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate.
Moderate Potential	A tree with Potential Roosting Features which could support one or more potential roost sites due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat but unlikely to support a roost of high conservation status (i.e. larger roost, irrespective of wider conservation status). Examples include (but are not limited to); woodpecker holes, rot cavities, branch socket cavities, etc.	A combination of aerial assessment by roped access bat workers and / or nocturnal survey during appropriate period (May to August). Following additional assessments, a tree may be upgraded or downgraded based on findings. After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate. If a roost site/s is confirmed a licence from Natural England will be required.
Low Potential	A tree of sufficient size and age to contain Potential Roosting Features but with none seen from ground or features seen only very limited potential. Examples include (but are not limited to); loose/lifted bark, shallow splits exposed to elements or upward facing holes.	No further survey required but a precautionary working method statement may be appropriate.

Classification of Tree	Description of Category and Associated Features (based on Potential Roosting Features listed above)	Likely Further Survey work / Actions
Negligible/No potential	Negligible/no habitat features likely to be used by roosting bats.	None.
* The Conservation of Habitats & Species Regulations 2017 (as amended) affords protection to breeding sites and resting places of bats. The EU Commission's Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC, February 2007 states that these are places where there is a reasonably high probability that the species concerned will return		

3.0 RESULTS

Desk Study

- 3.1 The locations of all statutory and non-statutory designated sites referred to in the following section are illustrated on Figure : Designated Sites.

Statutory Designated Sites

- 3.2 Three statutory designated sites of international conservation interest are located within 5km.
- 3.3 The River Wye SAC / SSSI is located approximately 1.6km to the south-east of the Site boundary, at its nearest point. It is an extensive designation, approximately 2234ha in size, the catchment of which is divided between Wales and England; forming the border from south of Monmouth to Chepstow and to the east of Hay-on-Wye. The river provides high quality spawning grounds and juvenile habitat in both its main channel and tributaries for Atlantic salmon *Salmo salar*, and the population is of considerable importance in UK terms. It also holds the densest and most well-established otter *Lutra lutra* population occurring in lowland freshwater habitats in the Welsh borders and is considered one of the best rivers in the UK for white-clawed crayfish *Austropotamobius pallipes*. Other species of importance supported by the river include twaite shad *Alosa fallox*, bullhead *Cottus gobio* and river lamprey *Lampetra fluviatilis*, sea lamprey *Petromyzon marinus* and brook lamprey *L. planeri*.
- 3.4 Wye Valley Woodland SAC is located approximately 2.5km east of the Site and is a large woodland that straddles the Wales-England border. The site covers 914ha and is underpinned by seven SSSIs. The Wye Valley contains abundant and near-continuous semi-natural woodland along the gorge. Beech *Fagus sylvatica* stands occur as part of a mosaic with a wide range of other woodland types, and represent the western range of *Asperulo-Fagetum* beech forests. Such a variety of woodland types is rare in the UK. The woods of the lower Wye Valley on the border of south Wales and England form one of the most important areas for woodland conservation in the UK and provide extensive examples of *Tilio-Acerion* forest in the west of its range.
- 3.5 Penallt Old Church, one of the thirteen separate units forming the Wye Valley and Forest of Dean Bat SAC is located approximately 3.6km south-east of the Site. The church is the site of the largest known lesser horseshoe nursery roost in the UK.
- 3.6 The qualifying features of the River Wye SAC / SSSI, Wye Valley Woodland SAC and Wye Valley and Forest of Dean Bat Sites SAC are summarised in Table 2.

Table 2. SAC Qualifying Criteria

Site / Designation	Qualifying Feature
River Wye SAC	Annex I Habitats primary reason for selection: • Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation Annex I habitats qualifying feature: • Transition mires and quaking bogs Annex II species primary reason for selection: • White-clawed crayfish <i>Austropotamobius pallipes</i> • Sea lamprey <i>Petromyzon marinus</i> • Brook lamprey <i>Lampetra planeri</i> • River lamprey <i>Lampetra fluviatilis</i> • Twite shad <i>Alosa fallax</i> • Atlantic salmon <i>Salmo salar</i> • Bullhead <i>Cottus gobio</i> • Otter <i>Lutra lutra</i> Annex II Species qualifying feature: • Allis shad <i>Alosa alosa</i>
Wye Valley Woodland SAC	Annex I habitats primary reason for selection: • <i>Asperulo-Fagetum</i> beech forests • <i>Tilo-Acerion</i> forests of slopes, screes and ravines* Priority feature • <i>Taxus baccata</i> woods of the British Isles* Priority feature Annex II species qualifying feature: • Lesser horseshoe bat <i>Rhinolophus hipposideros</i>
Wye Valley and Forest of Dean Bat Sites SAC	Annex II Species primary reason for selection: • Lesser horseshoe bat • Greater horseshoe bat <i>Rhinolophus ferrumequinum</i>

Non-Statutory Designated Sites

- 3.7 Six non-statutory designated Sites of Importance for Nature Conservation (SINC) occur within 1km of the Site. A summary of these sites is provided in Table 3.

Table 3. Non-Statutory Designated Sites of Importance for Nature Conservation (SINC) located within 1km of the Site.

Site name	Grid Reference	Area (ha)	Main Habitat	LBAP Priority Habitat / Species	Wildlife Site Qualifying Criteria	Relative Location
River Monnow	SO 51141214 (Start) & SO 33462267	c. 40km	River	Otter White clawed crayfish	H15 Watercourse S1 Mammals S2 Birds S5 Fish S6 Invertebrates	275m east
Sergeant's Wood & Sergeants Grove	SO 484134	5.1ha	Ancient Semi-Natural Woodland / Planted Ancient Woodland Site	Information not available	Information not available	690m west
Croft-Y-Bwla	SO478127	13.99ha	Grassland Marshy Grassland Woodland Stream Ancient Broadleaved Woodland Watercourse Species-rich hedgerow Mature/veteran trees Species-rich grassland	Species-rich grassland Ancient Woodland Ancient or semi natural woodland Linear features Veteran trees	H4 Neutral Grassland H17 Hedgerows H15 Water Feature H1 Woodlands	720m west
Wonastow Fields	SO 494124	2.98ha	Neutral Grassland (MG6) Marshy Grassland	Species Rich Grassland (HAP)	N4 Neutral Grassland	785m south
Little Anchrehill Wood	SO 491143	2.5ha	Ancient Semi-Natural Woodland / Planted Ancient Woodland Site	Information not available	Information not available	840m north

Protected species

- 3.8 Records provided by SEWBRc in May 2016 and June 2019 pertaining to protected or otherwise notable taxa within 1km of the Site are summarised in Table 4.

Table 4. Protected & Notable Species Records for within 1km of the Site.

Species Name	Most recent record	Legislative / Conservation Status	Notes
Daubenton's bat <i>Myotis daubentonii</i>	2006	CHSR, WCA	
Whiskered bat <i>Myotis mystacinus</i>	2016	CHSR, WCA,	Includes roost records
Whiskered / Brandt's bat <i>Myotis mystacinus / brandtii</i> agg.	2006	CHSR, WCA	
Noctule bat <i>Nyctalus noctula</i>	2006	CHSR, WCA, NERC	
Pipistrelle <i>Pipistrellus</i> agg.	2012	CHSR, WCA, NERC	Includes roost records
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2006	CHSR, WCA, NERC	
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	2013	CHSR, WCA, NERC	Includes roost records
Brown-long eared bat <i>Plecotus auritus</i>	2013	CHSR, WCA, NERC	Includes roost records
Greater horseshoe bat <i>Rhinolophus ferrumequinum</i>	2005	CHSR, WCA, NERC	
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	2018	CHSR, WCA, NERC	Includes roost records
Slow-worm <i>Anguis fragilis</i>	2010	WCA, NERC	
Great crested newt <i>Triturus cristatus</i>	2013	CHSR, WCA, NERC	Closet record approx. 450m south
Otter <i>Lutra lutra</i>	2009	CHSR, WCA, NERC	
Hazel dormouse <i>Muscardinus avellanarius</i>	2018	CHSR, WCA, NERC	Single dormouse and nest recorded within hedgerow adjacent to Site by Cresswell Associates 2005. 2005 Juvenile Male record provided by SEWBRc adjacent/within the application Site.
Badger <i>Meles meles</i>	2013	PBA	Sett record 300m south-west

Species Name	Most recent record	Legislative / Conservation Status	Notes
Western European hedgehog <i>Erinaceus europaeus</i>	2018	NERC	
Rustic (moth) <i>Hoplodrina blanda</i>	2015	NERC	
Shoulder-striped wainscot (moth)	2015	NERC	

Legislative / Conservation Status Key: CHSR - Conservation of Habitats & Species Regulations 2017 (as amended), WCA - Wildlife & Countryside Act 1981 (as amended), NERC - Species of Principal Importance under section 42 of the National Environment & Rural Communities Act 2006, PBA - The Protection of Badgers Act 1992.

- 3.9 SEWBRc also provided a number of records of protected and notable bird species for within 1km of the Site. For conciseness a summary of these is presented within Appendix A.

Field Survey – Habitats/Flora

- 3.10 The locations of the habitats described in the following sections can be found on Figure 3: Phase I Habitat Plan. Photographs of the Site taken during the 2016 and 2019 surveys are presented in Appendix B.

Improved Grassland

- 3.11 The field compartment forming the Site comprises improved grassland (see Photographs 1 & 2). As is characteristic of the habitat, the sward is of extremely restricted diversity and dominated by a few broad-leaved grass species and the presence of herbs limited to a small number of common forbs.
- 3.12 Perennial rye-grass *Lolium perenne* and Yorkshire-fog *Holcus lanatus* form the dominant grasses with occasional cocks-foot *Dactylis glomerata*, rough meadow-grass *Poa trivialis* and Timothy *Phleum pratense*, barren brome *Anisantha sterilis* and common bent *Agrostis capillaris* rare within the sward. False oat-grass *Arrhenatherum elatius* and common couch *Elytrigia repens* occur locally abundant in association with the hedgerow margins and central fenced footpath.
- 3.13 Herbs present included abundant white clover *Trifolium repens*, frequent creeping buttercup *Ranunculus repens* and occasional dandelion *Taraxacum agg.* and curled dock *Rumex crispus*. Additional herbs present of rare occurrence included common mouse-ear *Cerastium fontanum*, hogweed *Heracleum sphondylium*, doves-foot crane's-bill *Geranium molle*, cut-leaved crane's-bill *G. dissectum*, broad-leaved dock *Rumex obtusifolius*, spear thistle *Cirsium vulgare*, common vetch *Vicia sativa*, lesser trefoil *T. dubium*, red clover *T. pratense*, meadow buttercup *Ranunculus acris* and meadow vetchling *Lathyrus pratensis*, the presence of the latter three species restricted to the grassland's eastern extent. Herbs associated with the coarse field margins included locally abundant cow parsley *Anthriscus sylvestris*, common nettle *Urtica dioica*, cleavers *Galium aparine* and hedge bindweed, and of rare occurrence bush vetch *Vicia sepium* and hedge mustard *Sisymbrium officinale*.

Ditches

- 3.14 Ditches lie adjacent to the eastern and western boundaries. The eastern ditch adjacent to Rockfield Road is continuous extending both north and south beyond the Site. Its profile is steep with vertical sides approximately 3m high by 1m wide. The western bank is formed from earth and the eastern engineered. The ditch appears to be ephemeral in nature and was noted to be largely dry during the surveys undertaken in 2007 and 2011 and supported shallow amounts of water (typically 10cm deep, although with some deeper pooled areas) at the time of the 2013 assessment and was observed to support increased levels with a strong flow in May 2016 which was during following heavy rainfall in the days preceding the survey. At the time of the 2019 survey the ditch exhibited a low, gentle flow (no greater than a few centimetres deep along the majority of its length) with some localised deeper pooled areas (up to a deep of 40cm) at its southern extent.
- 3.15 The ditch is heavily shaded by the adjacent hedgerow and in channel vegetation is of a ruderal composition comprising hedge bindweed *Calystegia sepium*, and tall herbs which included great willowherb *Epilobium hirsutum*, garlic mustard *Alliaria petiolate*, common vetch, common cleavers *Galium aparine*, cow parsley *Anthriscus sylvestris*, common nettle, smooth sow-thistle *Sonchus oleraceus* and hemp-agrimony *Eupatorium cannabinum*, in addition to patches of bramble *Rubus fruticosus* agg. At the southern end of the ditch under the tree canopy, common ivy dominates the banks with locally abundant hart's-tongue *Phyllitis scolopendrium* and male-fern *Dryopteris filix-mas*.
- 3.16 The western ditch lies outside of the Site boundary within the green space of the adjacent Parc Glyndwr development. The ditch is shallow with trapezoidal in profile, measuring approximately 2m deep by 0.5m wide with 50° earth banks, and was noted to be dry at the time of the June 2019 survey. For the majority of its length the ditch is over-shaded by the adjacent hedgerow with more open areas vegetated by tall ruderal herbs and coarse grasses which include great willowherb, creeping thistle *Cirsium arvense*, hogweed *Heracleum sphondylium*, prickly sow-thistle *Sonchus asper*, false oat-grass, Yorkshire-fog and common couch.

Hedgerows

- 3.17 All aspects of the Site are bounded by hedgerows. Those forming the western, eastern and southern boundary of the Site are subject to regular management, resulting in a more compact rectangular structure (Photographs 3, 4 & 5). The northern boundary hedgerow is of an outgrown structure, measuring approximately 6m in height by 3m wide, and tree standards form a frequent component of the canopy (Photograph 6). With the exception of hedgerow H6 forming the boundary to the residential property adjacent to the north-east of the Site, all of the hedgerows were found to be species-rich (containing at least 5 species per average 30m section).
- 3.18 The 2019 found that the nature of the hedgerows forming the Site boundaries was consistent with the 2016 survey, with the exception of a short approx. 15m section which had been removed from the eastern of hedgerow H5 forming the northern boundary where it forms the dwelling to the residential property and an approx. 30m section removed from the hedgerow H3 along the southern boundary.
- 3.19 Canopy compositions along with other characteristics of the hedgerows are summarised in Table 5.

Table 5. Hedgerow Survey Summary

Ref	Canopy Sp.	Height / Width (m)	Length (m)	Sp. per Av. 30m	Notes	HEGS Grade	Import. HR*
1	<i>Ac, Ap, Ca, Cm, Cs, Es, Fe, Lv, Ms, Ps, Qc, Rc, Rf, Sci, Ul</i>	1-2 / 1-2	170	6	Species-rich Hedgerow, >5 Mature Standards/100m, <3 Young Standards/100m, <10% Gaps, 3 End Connections, Ditch	1	Yes
2	<i>Bp, Cm, Cs, Lv, Ps, Qr, Rc</i>	2-4 / 1-2	30	7	Species-rich Hedgerow, <3 Mature Standards/100m, No Gaps, 1 End Connection	-2	Exempt i Residential Hedgerow
3	<i>Bp, Ca, Cm, Cs, Es, Fs, Lv, Ps, Rc, Sn</i>	1-2 / 1-2	200	5	Species-rich Hedgerow, <3 Mature Standards/100m, No Gaps, 3 End Connections	2+	Exempt i Residential Hedgerow
4	<i>Ca, Cm, Cs, Es, Fe, Ps, Rc, Sn</i>	1-2 / 2-3	86	5	Species-rich Hedgerow, <3 Mature Standards/100m, No Gaps, 2 End Connections, Ditch	2	No
5	<i>Ap, Ca, Cm, Cy, Es, Fe, Pis, Ps, Rc, Rf, Sal, Sc, Sn, Sya, Qr, Ul</i>	4+ / 3+	270	6	Species-rich Hedgerow, >5 Mature Standards/100m, <10% Gaps, 3 End Connections, Grass Verge 1 Side	1	No
6	<i>Ap, Ca, Cm, Ia, Lo, Ly, Ps, Ul</i>	1-2 / 1-2	50	4	No Gaps, 1 End Connection	-2	Exempt i Residential Hedgerow

Species Key: *Ac* *Acer campestre* – Field Maple, *Ap* *Acer pseudoplatanus* – Sycamore, *Bp* *Betula pendula* – Silver Birch, *Ca* *Corylus avellana* i Hazel, *Cm* *Crataegus monogyna* i Hawthorn, *Cs* *Cornus sanguinea* Dogwood, *Es* *Euonymus europaeus* Spindle, *Fe* *Fraxinus excelsior* i Ash, *Ia* *Ilex aquifolium* i Holly, *Lo* *Ligustrum ovalifolium* Garden Privet, *Lv* *Ligustrum vulgare* i Wild Privet, *Ly* *Leyland Cypress* X *Cupressocyparis leylandii*, *Ms* *Malus sylvestris* i Crab Apple, *Pis* *Picea sitchensis* - Sitka Spruce, *Ps* *Prunus spinosa* i Blackthorn, *Qp* *Quercus cerris* i Sessile Oak, *Qr* *Quercus robur* - Pedunculate Oak, *Rc* *Rosa canina* i Dog-Rose, *Rf* *Rubus fruticosus* agg. i Bramble, *Sc* *Salix caprea* i Goat Willow, *Sci* *Salix cinerea* i Grey Willow, *Sya* *Symphoricarpos albus* i Snowberry, *Ul* *Ulmus* sp. - Elm sp.

3.20 One hedgerow, H1, forming the eastern Site boundary with Rockfield Road was found to qualify as an Important Hedgerow in accordance with the Hedgerow Regulations 1997. The hedgerow qualifies on the basis that it:

- supports at least 6 woody species, ascertained in accordance with paragraph 7 (3) and at least 3 of the features specified in paragraph 7 (4) (a) to (i)

3.21 These features include;

- b) gaps which in aggregate do not exceed 10% of the length of the features;
- d) where the hedgerow exceeds 100 metres, such a number of standards (within any part of its length) as would when averaged over its total length amount to at least one for each 50 metres;
- g) a ditch along at least one half of the length of hedgerow; and
- i) a parallel hedge within 15 metres of the hedgerow.

3.22 Hedgerows H2, H3 & H6 were exempt from the Hedgerow Regulations 1997, owing to them forming the curtilage of a dwelling.

- 3.23 HEGS identified two hedgerows H1 and H5, to be of high to very high nature conservation value (Grade -1 or above), due to a combination of their species-rich nature and structural attributes, the four remaining hedgerows were all found to be of moderately high to high value.
- 3.24 All of the hedgerows comprise of at least 80% of one woody native species and subsequently qualify as a HPI in accordance with the NERC Act.

Tree Standards

- 3.25 Trees within the Site were restricted to hedgerow standards occurring in association with the northern hedgerow and the outgrown southern extent of the eastern boundary hedgerow. Specimens within the northern hedgerow were early-mature and include Douglas-fir *Pseudotsuga menziesi*, ash *Fraxinus excelsior* and a pedunculate oak *Quercus robur*. With the exception of a large mature Turkey oak *Quercus cerris* situated on the eastern corner of the Site, specimens within the eastern hedgerow were predominately semi-mature in nature and included field maple *Acer campestre*, hazel *Corylus avellana* and an elm *Ulmus sp.*

Field Survey – Fauna

Badger

- 3.26 Evidence of badger using the Site was found in the form of a single-pit latrine along the southern extent of the northern boundary hedgerow (TN1). This is consistent with the previous extended Phase I surveys undertaken on the Site which have recorded similar levels of badger activity with single latrines recorded within the eastern extent of the grassland in both 2013 and 2016 and also along the northern boundary hedgerow (H5) in 2016. several snuffle holes were noted within the eastern corner of the Site in 2013.
- 3.27 No further evidence of the species, indicating occupation such as setts, has been observed within or immediately adjacent to the Site during the previous surveys or was noted during the survey undertaken in June 2019.

3.28

- 3.29 The level of badger activity recorded throughout the surveys is indicative of the Site's occasional usage by badgers for commuting and foraging habitat. Given the Site's relatively small size it is considered unlikely to form an important part of its foraging resource, particularly given the wide availability of foraging habitat within the local area.

Bats

- 3.30 Trees on Site were generally semi-mature to early-mature in age and suitable features such as rot holes, cracks/fissures or loose bark, which could provide potential roost locations for bats were absent from the majority of the trees present. The 2019 survey identified two trees as being of low potential to support roosting bats. These included:
- TN2 i early-mature ash within the western extent of the northern boundary hedgerow, noted to support a small c.10cm diameter upward-facing rot hole located approximately 10m from ground-level on the north-east facing aspect of the trunk; and

- TN3 i mature ash, adjacent to TN2, c.10cm diameter, shallow rot hole located approximately 5m from ground-level on the south-west facing aspect of the trunk (Photograph 7).

3.31 Due to the homogenous nature of the improved grassland, the core of the Site is likely to be of negligible value for bats. However, the hedgerows, particularly the outgrown northern boundary hedgerow, offer suitable foraging and commuting habitat to local bat populations.

Breeding Birds

3.32 Given the relatively small size of the Site and dominance of improved grassland, resulting in a lack of structural or habitat diversity, the Site is considered to be of limited value to breeding birds, although the boundary hedgerows and trees contained within are likely to provide nesting habitat for a range of local bird species.

Dormouse

3.33 Dormouse have previously been recorded within a hedgerow adjacent to the Site (sharing connectivity to the northern boundary) in 2004 by Cresswell Associates. SEWBRc provided a further 2005 record of the species in this general location, although the six-figure grid reference (accurate up to 100m) provided is not of sufficient accuracy to determine if it was recorded adjacent or within the Site or not.

3.34 Owing to the bushy outgrown nature and high shrub diversity which includes species which provide potential food sources such as hazel, hawthorn, blackthorn and ash, the northern hedgerow (H5) is considered to represent good habitat to the species.

3.35 The remaining hedgerows, whilst containing similar canopy species, are considered to offer less suitable habitat, owing to their regular cutting which drastically reduces the availability of flowers and fruits that are borne on new growth.

3.36 Connectivity for dormouse to the Site has significantly reduced through the removal of the hedgerow along the northern boundary of the Parc Glyndwr development, in which dormouse had been previously recorded in 2004. The 2016 extended Phase I noted that this hedgerow was in very poor structural condition with significant gaps created in numerous locations through piecemeal management and the installation of close board fencing along this boundary (Photographs 8 & 9). The current survey found that further sections of the hedgerow have been removed and close board fencing had been installed along the entirety of this boundary (measuring approximately 200m) with now only small amounts of scattered scrub and mature trees present (see photographs 10 & 11).

Herpetofauna - Great Crested Newts

3.37 No waterbodies are present within or immediately adjacent to the Site. Examination of the OS map, MAGIC and on-line aerial photographs covering the area identified three waterbodies within 250m of the Site, located approximately 155m north, 220m south-west and 255m east of the Site (the locations of these waterbodies are highlighted on Figure 1).

3.38 The northern waterbody (P1) is located in close proximity to the farm access route leading off Rockfield Road. At the time of the 2011 survey the waterbody found to dry. The 2016 assessment found that the waterbody supported shallow amounts of water (no greater than 5cm) and had been subject to disturbance/management. The resulting open conditions had led to the

establishment of small amounts of emergent vegetation which included watercress, fool's watercress *Apium nodiflorum* and floating sweet-grass *Glyceria fluitans*.

- 3.39 The pond represents sub-optimal habitat for great crested newts as reflected in a Habitat Suitability Index (HSI) score of 0.28 (poor suitability) and given the shallow amounts of water present, it is considered unlikely to support water for a sufficient period throughout the breeding season as to provide potential habitat for great crested newts, particularly given the absence of any other ponds within 250m of its location.
- 3.40 The pond 220m south-west of the Site (P2) is a balancing pond newly created as part of the Parc Glyndwr development which would limit its potential to support great crested newts. Both this pond and the pond approximately 255m east of the Site (P3) are considered to be of sufficient distance from the Site, such that should populations of great crested newts be present within them they would be unlikely to use the habitats present within the Site as terrestrial habitat, especially as the presence of urbanised areas / Rockfield Road and the adjacent ditch are likely to form a barrier / partial barrier limiting dispersal.

Herpetofauna - Reptiles

- 3.41 No reptiles were observed during the assessment and owing to uniformity of the habitats present the Site is considered to represent sub-optimal habitat for common reptiles.

Water Vole

- 3.42 Both ditches were considered to represent unsuitable habitat for water vole *Arvicola amphibious* owing to a lack of permanent water or low water depth and their heavily over-shaded nature.

Otter

- 3.43 Otter *Lutra lutra* are known to be present on the River Monnow, to the east of the Site. Whilst otter will use small streams, ditches and dry watercourses as commuting routes the habitats on Site do not support prey items such as fish and therefore the Site does not provide opportunities for foraging.

4.0 DISCUSSION & RECOMMENDATIONS

Designated Sites

- 4.1 Three sites of international nature conservation interest have been identified within 5km of the Site. The River Wye SAC is located 1.6km to the south-west, Wye Valley Woodlands SAC is located 2.5km east and the Wye Valley and Forest of Dean Bat SAC 3.6km south-east of the Site, respectively. Given the relatively small-scale nature of the proposed development and its distance from the designations it is considered unlikely that proposals will result in any adverse impacts to these designated sites.
- 4.2 Diffuse pollution has been identified as one of the vulnerabilities to the River Wye SAC and some connectivity is shared to the designation via the ditches which run parallel to Rockfield Road and into the River Monnow. Adherence to good site practice guidelines and the incorporation of a Sustainable Urban Drainage Scheme (SuDs) as of part proposals should ensure that any impacts through diffuse pollution events are avoided.
- 4.3 Five non-statutory designated sites have been identified between 275m and 840m from the Site and all are considered sufficient distance from the Site such that they would not be subject to any direct impacts from proposal.
- 4.4 Some connectivity is shared to Wonastow Fields SINC and Croft-y-Bwla SINC through the local footpath network. Given the relatively small-scale nature of the development and the diffuse nature of the local footpath network, it is not anticipated that proposals would result in significantly increased visitation to either designated site.
- 4.5 The baseline conditions in relation to designated sites remain largely unchanged since the previous 2016 Ecological Appraisal.

Habitats/Flora

- 4.6 The Site has changed little since the initial or subsequent ecological assessments were conducted by FPCR in 2007, 2011, 2013 and 2016 and due to the intensely improved nature of the Site, habitat diversity is low. Improved grassland forms the core of the Site and is of negligible nature conservation value, being of extremely restricted botanical diversity.
- 4.7 The boundary habitats, including the hedgerows, ditches and tree standards are of increased nature conservation value and are likely to be important within a local context, providing commuting and refuge habitat for a range of species (including bats which are known to occur in the local area).
- 4.8 All of the boundary hedgerows qualify as habitats of principal importance under Section 42 of the NERC Act and owing to their species-rich nature and good structural and connectivity attributes, hedgerows H1 and H5 were found to be of particularly high nature conservation value with HEGS scores of 1. The remaining hedgerows were assessed as being of conservation priority (grade -2) in accordance with HEGS.
- 4.9 The eastern boundary hedgerow H4 was found to qualify as an important hedgerow in accordance with the Hedgerow Regulations 1997. Before removing any hedgerows considered important by the regulations, notice must be served to the local planning authority, unless exempt such as following the granting of planning permission.

- 4.10 Some hedgerow loss will occur through the creation of access into the Site and through the requirement for visibility splays. This loss would be compensated for the creation of new native species-rich hedgerow creation along this boundary and around the edge of the proposed balancing pond in the south-eastern corner of the Site. and through the structural planting of native shrubs and trees, along the Site's northern boundary as to buffer and reinforce the existing hedgerow. Native planting would include species such as hawthorn, blackthorn, wayfaring tree *Viburnum lantana*, sallow and field maple and those of particular value to dormouse including hazel and honeysuckle *Lonicera periclymenum*.
- 4.11 In order to retain their integrity and avoid their degradation through individual residential management (i.e. removal of hedgerow sections, excessive cutting by homeowners), the created eastern boundary and retained eastern boundary hedgerows will be buffered from built development by an appropriate green space corridors which will protect the hedgerows and provide the opportunity for enhancements.
- 4.12 The southern boundary hedgerow (H2 & H3), is to be retained but may form part of the boundaries of the proposed residential properties. This hedgerow is already integrated in to the residential boundaries of the existing housing estate to the south and as such it is already subjected to a degree of piecemeal management.

Fauna

- 4.13 Principal pieces of legislation protecting wild species are Part 1 of the Wildlife and Countryside Act 1981 (as amended) (WCA) and the Conservation of Habitats Regulations 2017 (as amended). Some species, for example badgers, also have their own protective legislation (Protection of Badgers Act 1992). The impact that this legislation has on the planning system is outlined in Technical Advice Note (TAN) 5 i Nature Conservation & Planning.
- 4.14 This guidance states that as the presence of protected species is a material consideration in any planning decision, it is essential that the presence or otherwise of protected species, and the extent to which they are affected by proposals is established prior to planning permission being granted. Furthermore, where protected species are present and proposals may result in harm to the species or its habitat, steps should be taken to ensure the long-term protection of the species, such as through attaching appropriate planning conditions for example.

Badgers

- 4.15 No evidence of badger occupation (setts) has been observed within the Site or immediately adjacent to its boundaries and no statutory constraints exist in relation to the species. Evidence of badger using the Site was observed in the form of single latrines recorded in 2011, 2013, 2016 and 2017. The grassland habitats present are considered to offer suitable forage habitat to the species with several snuffle holes noted within the eastern corner of the Site in 2013.
- 4.16 Given the wider availability of foraging habitat within the local area the loss of foraging within the Site is unlikely to have an adverse impact on the local badger group.

Bats

- 4.17 All species of bats are afforded full protection under the UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 (as amended). Together this legislation makes it illegal to: intentionally or deliberately disturb, take, kill or injure a bat; damage, destroy or obstruct access to bat roosts or deliberately disturb bats.
- 4.18 Two trees, TN2 & TN3, within the western extent of the northern boundary hedgerow (H5) were identified as being of low potential to support roosting bats. Development proposals will retain these tree standards and subsequently the potential presence of roosting bats is not considered a statutory constraint to development. Furthermore, these trees are to be buffered from development and artificial lighting avoided in their locality to avoid potential disturbance impacts. In the event that proposals are revised, resulting in the loss of these standards or should these standards require arboricultural remediation works, the potential presence of roosting bats would require further consideration. Whilst no further survey would be considered necessary owing to the low roost potential they provide for roosting bats, any tree works would need to be carried out under appropriate working methods such as adopting soft-fell techniques.
- 4.19 The loss of the improved grassland compartment will result in a negligible impact upon foraging and commuting bats and its loss is not considered to be significant. The boundary hedgerows, particularly the outgrown northern hedgerow, offer potential foraging and commuting habitat to the species. The majority of the features which provide habitat connectivity for commuting bats are retained in the final layout and appropriately buffered. To facilitate the creation of access in to the Site from Rockfield Road, it will be necessary to remove a section of hedgerow H1. Hedgerow loss will be kept to a minimum, and compensated for additional hedgerow planting along this boundary. The residual presence of a single-carriageway road is not considered to be a significant barrier to dispersal.
- 4.20 The desktop study has highlighted that a number of bat species are present in the wider area including lesser horseshoe and greater horseshoe. Greater horseshoe and lesser horseshoe bats are known to be particularly sensitive to artificial light and research has demonstrated that lighting can have a significant negative impact upon the selection of flight routes and dramatically reduce bat activity by horseshoe bat species.
- 4.21 The lighting and layout of the proposed development will be designed to minimise light-spill onto habitats both within and adjacent to it that are used by the local bat population foraging or commuting. This will be achieved by ensuring that the design of lighting is based upon best practice guidelines as outlined within *Guidance Note 08/18 Bats and artificial lighting in the UK*⁵, and the adoption of measures such as;
- The strategic use of landscaping and planting to avoid light spill on sensitive habitats. New planting will buffer the north boundary hedgerow to create a dark corridor.
 - The avoidance of direct lighting of existing hedgerows, trees, scrub, or proposed areas of habitat creation / landscape planting.
 - Unnecessary light spill will be controlled through a combination of directional lighting, low lighting columns, hooded / shielded luminaires or strategic planting.

⁵ Bat Conservation Trust & Institution of Lighting Professionals (2018) *Guidance Note 08/18 i Bats and artificial lighting in the UK, Bats and the Built Environment series*

- Where appropriate, luminaires on the Site boundary will be fitted with light baffles to prevent light spill.
- 4.22 With the implementation of the mitigation proposed above, residual effects on the local population of bats are likely to be negligible and no further surveys are considered necessary.

Breeding Birds

- 4.23 The site was considered to be of limited value to breeding birds, owing to its relatively small size and lack of habitat or structural diversity. However, the hedgerows, trees and scrub do provide nesting habitat for birds.
- 4.24 All birds are protected whilst on the nest. Any vegetation should therefore be removed outside of the bird breeding season (March to August/September). If this is not possible, vegetation should be checked prior to any vegetation removal being undertaken by an experienced ecologist. If active nests are found vegetation would be left untouched until all birds have fledged.

Great Crested Newts

- 4.25 The desk study highlighted the presence of great crested newts within a garden pond approximately 450m south of the Site with further records 730m southeast and 800m east. However, the location of the population 450m south is isolated by residential development with the other records are in excess of 500m from the Site. Furthermore, no suitable waterbodies were identified within or adjacent to the Site and as such the species is not considered a statutory constraint to development.

Dormouse

- 4.26 Hazel dormice and their breeding sites and resting places are protected by the Wildlife and Countryside Act 1981 (as amended) and are classified as European Protected species under The Conservation of Habitats and Species Regulations 2017 (as amended). This makes it an offence to kill, injure or disturb hazel dormouse and to destroy any place used for breeding, resting or shelter by a hazel dormouse. Dormouse is also listed as a SPI.
- 4.27 As is consistent with findings of the previous surveys of the Site, the northern boundary hedgerow (H5) being bushy outgrown in nature and high shrub diversity is considered to represent good habitat for the species. The remaining hedgerows, whilst containing similar canopy species, are considered to offer less suitable habitat, owing to their regular cutting. Overall however suitability of, and potential for, dormouse to be present within the Site has reduced since the 2016 assessment as a result of the removal of the hedgerow along the northern boundary of the Parc Glyndwr, resulting in isolation of the Site from additional areas of suitable dormouse within the local landscape and a reduction in the extent of suitable dormouse habitat.

- 4.28 The majority of the hedgerow resource is to be retained within the scheme and buffered from the proposals. However, the creation of the Site access and the required visibility splay will result in some loss of less-suitable hedgerow habitat along Rockfield Road. Based on the factors outlined above which would suggest that the presence of dormouse within the Site is reasonably unlikely, and the less suitable nature of the hedgerow to be removed, it is concluded that these works would be reasonably unlikely to result in an offence to disturb, damage or harm their habitat or the population status (in the unlikely event that they were present on site).
- 4.29 As a precautionary measure and as a requirement of planning condition 22 of the approved planning application for 70 dwellings covering the western half of the Site (DC/2017/00539) a Dormouse Conservation Strategy would be implemented, this would ensure potential impacts to the species are minimised and the Favourable Conservation Status (FCS) of any local populations are maintained.

General Considerations

- 4.30 Bird boxes will be incorporated into the buildings and on retained trees to provide a variety of additional nesting habitats. The incorporation of bat boxes / bricks into the design of the buildings and on the existing mature trees would also provide further habitat for roosting bats.
- 4.31 Landscape proposals for the Site would seek to use native species of local provenance, whilst any areas of open green space would be utilised for the benefit of wildlife by using wild flower seed mixes from a local source as an alternative to standard rye grass where feasible.
- 4.32 The development design includes a balancing facility in the south-eastern extent of the site. Whilst the pond's primary function is in respect of the Sustainable Urban Drainage System (SuDs) with sensitive design such as varied bank profile and the creation of some deeper areas where water is retained for longer periods, there is the opportunity for it to be of value to local wildlife.

**APPENDIX A – ADDITIONAL CONSULTATION
INFORMATION – BIRD RECORDS**

APPENDIX A – Desk Study Information

Species Name	Most recent record	Legalative / Conservation Status	Notes
Brambling <i>Fringilla montifringilla</i>	2011	WCA Sch. 1	
Barn owl <i>Tyto alba</i>	2012	WCA Sch. 1	
Bullfinch <i>Pyrrhula pyrrhula</i>	2016	NERC, AMBER	
Cuckoo <i>Cuculus canorus</i>	2011	NERC, RED	
Curlew <i>Numenius arquata</i>	2011	NERC, RED	
Dunnock <i>Prunella modularis</i>	2010	NERC, AMBER	
Fieldfare <i>Turdus pilaris</i>	2011	WCA Sch. 1, RED	
Grasshopper warbler <i>Locustella naevia</i>	2011	NERC, RED	
Green sandpiper <i>Tringa ochropus</i>	2011	AMBER	
Hobby <i>Falco subbuteo</i>	2011	WCA Sch. 1	
House sparrow <i>Passer domesticus</i>	2005	NERC, RED	
Kestrel <i>Falco tinnunculus</i>	2014	NERC, AMBER	
Kingfisher <i>Alcedo atthis</i>	2011	WCA Sch. 1	
Lesser redpoll <i>Carduelis cabaret</i>	2011	NERC, RED	
Lesser spotted woodpecker <i>Dendrocopos minor</i>	2011	NERC, RED	
Linnet <i>Linaria cannabina</i>	2012	NERC, RED	
Marsh tit <i>Poecile palustris</i>	2016	NERC, RED	

Appendix A – Rockfield Road, Monmouth

Species Name	Most recent record	Legislative / Conservation Status	Notes
Red kite <i>Milvus milvus</i>	2011	WCA Sch. 1	
Redwing <i>Turdus iliacus</i>	2011	WCA Sch. 1, RED	
Reed bunting <i>Emberiza schoeniclus</i>	2011	NERC, AMBER	
Skylark <i>Alauda arvensis</i>	2012	NERC, RED	
Song thrush <i>Turdus philomelos</i>	2010	NERC, RED	
Spotted flycatcher <i>Muscicapa striata</i>	2011	NERC, RED	
Starling <i>Sturnus vulgaris</i>	2011	NERC, RED	
Tree pipet <i>Anthus trivialis</i>	2010	NERC, RED	
Tree sparrow <i>Passer montanus</i>	2011	NERC	
Yellow wagtail <i>Motacilla flava</i>	2011	NERC, RED	
Yellowhammer <i>Emberiza citrinella</i>	2012	NERC, RED	

Legislative / Conservation Status Key: - WCA Sch. 1 – Wildlife & Countryside Act 1981 (as amended) Schedule 1., NERC - Species of Principal Importance under section 42 of the National Environment & Rural Communities Act 2006, RED – Red List Birds of Conservation Concern (BoCC), AMBER – Amber List BoCC.



PHOTO 1: IMPROVED GRASSLAND HABITAT, VIEWED WESTWARDS FROM ROCKFIELD ROAD (June 2019)



PHOTO 2: IMPROVED GRASSLAND HABITAT WITH FENCED PUBLIC FOOTPATH, VIEWED SOUTHWARDS (June 2019)



PHOTO 3: EASTERN BOUNDARY HEDGEROW (H1), ADJACENT TO ROCKFIELD ROAD, WITH MORE COMPACT CANOPY STRUCTURE RESULTING FROM REGULAR MANAGEMENT (June, 2019)



PHOTO 4: SOUTHERN BOUNDARY HEDGEROW (H3) VIEWED EASTWARDS SHOWING ITS INCORPORATION INTO DOMESTIC GARDENS (May, 2016)



PHOTO 5: WESTERN BOUNDARY HEDGEROW WITH PARC GLYNDWR DEVELOPMENT BEYOND (June, 2019)



PHOTO 6: NORTHERN BOUNDARY HEDGEROW (H5) VIEWED WESTWARDS WITH PARC GLYNDWR DEVELOPMENT IN BACKGROUND (June 2019)



PHOTO 7: MATURE ASH (TN3) WITH LOW BAT ROOST POTENTIAL ALONG NORTHERN BOUNDARY. POTENTIAL ROOST FEATURE (ROTHOLE) INDICATED BY ARROW (June 2019)



PHOTO 8: HEDGEROW ALONG NORTHERN BOUNDARY OF PARC GLYNDWR DEVELOPMENT MAY 2016, VIEWED EASTWARDS. NOTE ABSENCE OF BUFFERING HAS RESULTED IN PIECEMEAL MANAGEMENT AND CREATION OF LARGE GAPS



PHOTO 9: HEDGEROW ALONG NORTHERN BOUNDARY OF PARC GLYNDWR DEVELOPMENT, MAY 2016, VIEWED WESTWARDS



PHOTO 10: NORTHERN BOUNDARY OF PARC GLYNDWR DEVELOPMENT, JUNE 2019, VIEWED EASTWARDS. ILLUSTRATING REMOVAL OF HEDGEROW AND ONLY SMALL AMOUNTS OF SCATTERED SCRUB & TREES PRESENT



PHOTO 11: NORTHERN BOUNDARY OF PARC GLYNDWR DEVELOPMENT, JUNE 2019, VIEWED WESTWARDS



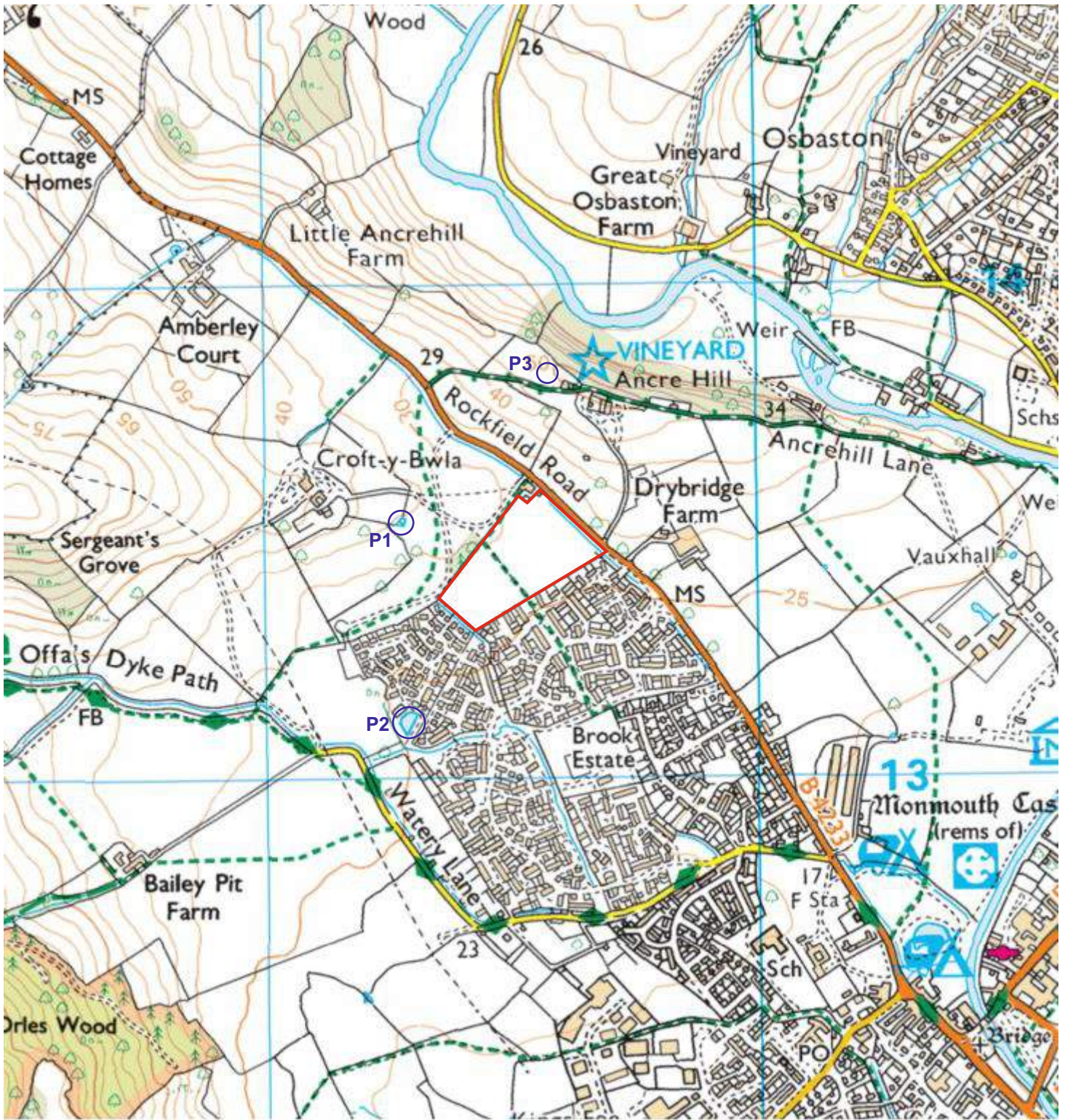
Hallam Land Management Ltd
Land off Rockfield Road
Monmouth

SITE PHOTOGRAPHS

AL

15.07.2019

APPENDIX B



SITE LOCATION



POND LOCATION (WITH REFERENCE)



Hallam Land Management Ltd

Rockfield Road
Monmouth

SITE LOCATION



AL

15.07.2019

Figure 1

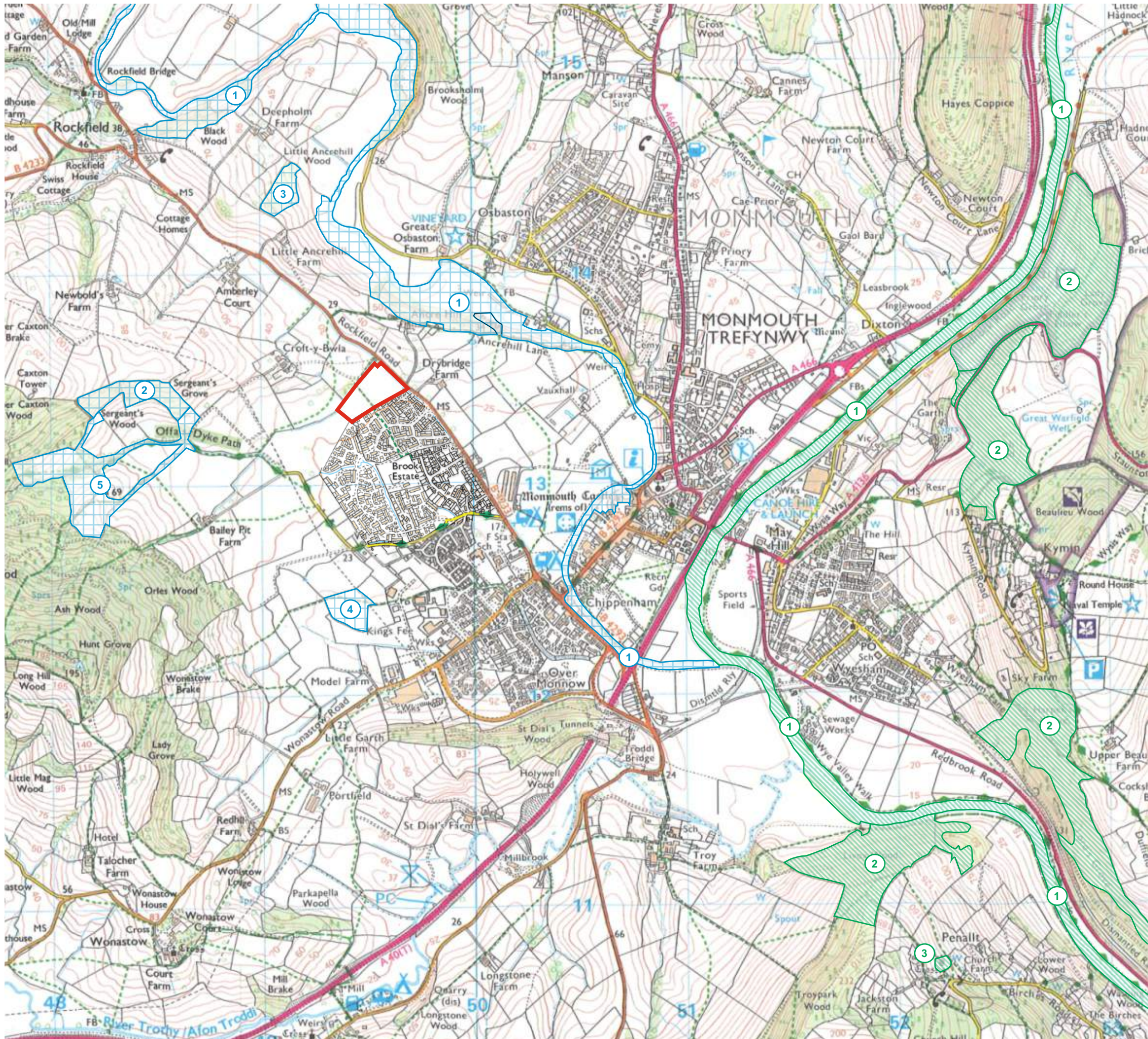
3381-E-01

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-  SITE BOUNDARY
-  WYE VALLEY WOODS SAC
-  SPECIAL AREA OF CONSERVATION (SAC)
-  RIVER WYE SAC / SSSI
-  WYE VALLEY WOODLAND SAC
-  WYE VALLEY & FOREST OF DEAN BAT SITES SAC
-  SITE OF IMPORTANCE FOR NATURE CONSERVATION
-  RIVER MONNOW
-  SERGENT'S WOOD & SERGENT'S GROVE
-  LITTLE ANCHREHILL WOOD
-  WONASTOW FIELD
-  CROFT-Y-BWLA



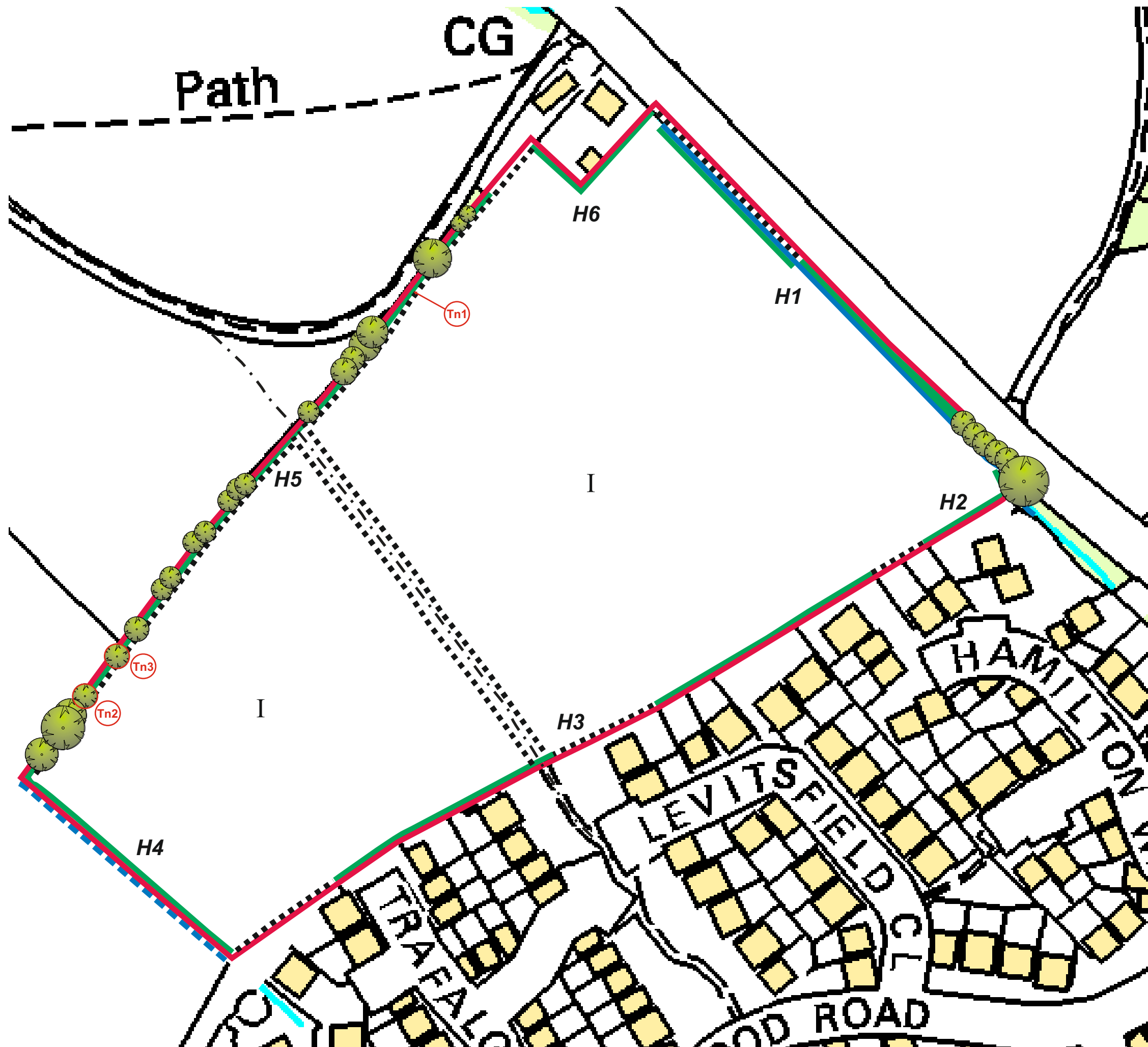
Hallam Land Management Ltd.

Land off Rockfield Road
Monmouth

SITE LOCATION AND DESIGNATED SITES

Not to Scale AL 03.07.2019

Figure 2 **3381-E-02**



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-  Site boundary
-  Improved grassland
-  Hedgerow
-  Wet ditch
-  Dry ditch
-  Fenceline
-  Mature tree standard
-  Mature tree standard with low bat roost potential
-  Target note
-  Public footpath



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Land off Rockfield Road
Monmouth

PHASE I HABITAT PLAN

Not to Scale
AL
15.07.2019

Figure 3
3381-E-03