

LAND AT LITTLE MILL, MONMOUTHSHIRE



PRELIMINARY ECOLOGICAL APPRAISAL REPORT

Prepared for:

Powells Chartered Surveyors, Monmouth

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SUMMARY

This Preliminary Ecological Appraisal (PEA) is intended to provide information to allow for an assessment to be made of the potential key ecological opportunities and constraints which might arise from the allocation of this site for residential development, a proposal being put forward through the revision process for the adopted Local Development Plan currently being reviewed by Monmouthshire County Council.

This PEA is also intended to allow further ecological surveys needed to inform a subsequent ecological impact assessment to be identified and appropriately designed. It will, in turn, also contribute to informing site master-planning, so as to allow any significant ecological effects which might be identified to be avoided or minimised, wherever possible. The results of this Preliminary Ecological Assessment will also be used to inform the identification of opportunities for Green Infrastructure provisions to be included within the site and its immediate vicinity.

A desk study was used to understand the basic characteristics of the site and its context, including the locations and dispositions of habitat features within, around and linking into the site, and to identify the position of designated sites in the context of the site and the wider locality. This published information was supplemented by detailed information on habitats and species obtained through a biological records data search, commissioned from the South-East Wales Biological Records Centre (SEWBREC). The data search was commissioned on 13th February and the information was provided by SEWBREC in a report dated 27th February 2018. This document is attached as an Appendix to this report. Fieldwork undertaken as a walkover survey in February was also used to inform this appraisal.

No international, national or locally designated nature conservation sites would be adversely affected by the proposed residential development of this site. Subject to the findings of the recommended further surveys, no adverse effects on protected or priority species or habitats would be likely to arise.

Carefully considered development of the site would comply with national and local planning policies and related planning guidance. It would also provide opportunities for enhancement and diversification of habitats, both within and around the periphery of the site.

1. INTRODUCTION

1.1 This Preliminary Ecological Appraisal Report (PEAR) has been prepared by John Campion BA(Hons) BLD MSc MCIEEM CMLI, Environmental Manager, Director of John Campion Associates Limited. Preparation of this document has followed current guidance published by the Chartered Institute of Ecology and Environmental Management in respect of the preparation of a Preliminary Ecological Appraisal and Ecological Report Writing.

1.2 The Report was commissioned under instructions from Powells Chartered Surveyors of Singleton Business Park, Wonastow Road, Monmouth, NP25 5JA.

Site Description

1.3 The site is comprised of a single field lying immediately to the east of the eastern edge of the village of Little Mill and abutting the north side of the A472, the main road connecting the A4042 west of Little Mill and the A449, via Usk. The site area is approximately 3.75 hectares in extent. There is a general slope across the site from roughly north to south. The northern site boundary reaches an elevation of 70 metres Above Ordnance Datum (AOD) at its extreme north-eastern corner, falling to around 58m AOD at the south-eastern corner. On the western boundary, the elevation of the north-western extremity is c. 64m AOD, falling to c. 60m AOD where the boundary hedgerow meets the main road near the junction with the residential access road known as Cae Melin.

1.4 Mature field boundary hedgerows with trees align the outer side of the post and wire livestock fences which demarcate the northern and southern site boundaries. The eastern boundary has a mature field hedgerow with very few trees beyond the post and wire boundary fence. The western boundary is also demarcated by a post and wire fence along its upper section, with a young hedgerow with very few trees along the outer side of the fence along the lower section of fronting the existing housing area at Cae Melin. A high-voltage overhead electricity transmission line crosses the site along a north-east to south-west alignment, between the upper eastern boundary and the south-western extremity of the site, near the junction of Cae Melin with the main A472 road.

1.5 At the time of the site walkover survey, the field was in use as agricultural grassland, being grazed by horses. The land to the north of the site is also pasture land and there is a small area of informal livestock shelters and fenced enclosures situated close to the northern site boundary. Abutting the north-eastern edge of the site is a small broadleaved woodland copse which is being grazed by livestock in adjoining fields to the east and north-east of the site. To the east is more pasture land. To the west is the residential area leading off Cae Melin, with pasture land further to the north-west beyond a farm access track. Beyond the southern site boundary there is further pasture land to the south of the A472, on lower land adjacent to the course of the Berthin Brook.

1.6 The location and extent of the site is shown on the *Site Location Plan* included in the *Figures* section of this report.

Purpose of the Report

1.7 This PEAR is intended to provide information to allow for an assessment to be made of the potential key ecological opportunities and constraints which might arise from the allocation of this site for residential development, a proposal being put forward through the revision process for the adopted Local Development Plan (LDP) currently being reviewed by Monmouthshire County Council. Such an allocation would be mindful of the need to take account of the technical constraints to site development arising from the alignment and characteristics of the high-voltage overhead line.

1.8 This PEAR is also intended to allow further ecological surveys needed to inform a subsequent ecological impact assessment to be identified and appropriately designed. It will, in turn, also contribute to informing site master-planning, so as to allow any significant ecological effects which might be identified to be avoided or minimised, wherever possible. The results of this Preliminary Ecological Assessment will also be used to inform the identification of opportunities for Green Infrastructure provisions to be included within the site and its immediate vicinity.

1.9 In keeping with the current published guidelines on the preparation of a Preliminary Ecological Appraisal¹, this PEA Report is not intended for issue to the local planning authority. Paragraph 1.5 of the current guidance specifically advises that:

'The primary audience for a PEAR is the client or developer and relevant members of the project team, such as the architect, planning consultant, and landscape architect. It is normally produced to inform a developer (or other client), and their design team, about the key ecological constraints and opportunities associated with a project, possible mitigation requirements and any detailed further surveys required to inform an Ecological Impact Assessment (EclA). Under normal circumstances it is not appropriate to submit a PEAR in support of a planning application because the scope of a PEAR is unlikely to fully meet planning authority requirements in respect of biodiversity policy and implications for protected species.'

2. PLANNING POLICY & LEGISLATION

2.1 This section of the PEAR deals with those national and adopted local planning policies relevant to ecological considerations for this site. It also addresses relevant legislation.

National Planning Policy and Guidance

2.2 *Planning Policy Wales*, Edition 9, of November 2016 (PPW), deals with the topic of 'Conserving and Improving the Natural Heritage and the Coast' at Chapter 5. The content of paragraphs 5.2.9 and 10, under the sub-heading 'Trees and woodlands', is of relevance to the context of the site at Little Mill:

'5.2.9 Trees, woodlands and hedgerows are of great importance, both as wildlife habitats and in terms of their contribution to landscape character and beauty. They also play a role in tackling climate change by trapping carbon and can provide a sustainable energy source. Local planning authorities should seek to protect trees, groups of trees and areas of woodland where they have natural heritage value or contribute to the character or amenity of a particular locality. Ancient and semi-natural woodlands are irreplaceable habitats of high biodiversity value which should be protected from development that would result in significant damage.'

5.2.10 Local planning authorities should, as appropriate, make full use of their powers to protect and plant trees to maintain and improve the appearance of the countryside and built up areas.'

2.3 *Technical Advice Note 5: Nature Conservation and Planning (TAN5)*, September 2009, supplements PPW. Section 3.3 provides specific advice in respect of the preparation and review of local development plans. Paragraph 3.2.2 is of relevance to the site at Little Mill, noting *inter alia* that 'where relevant, local development plans should include policies that:

- *Protect ancient woodlands, veteran trees and other trees of nature conservation value;*

¹ *Guidelines for Preliminary Ecological Appraisal*; Second Edition, December 2017; Chartered Institute of Ecology and Environmental Management

- *Encourage the conservation and management of features of the landscape of major importance for wild flora and fauna;*
- *Give local expression to the protection and, where possible, enhancement of species and their habitats, especially those with legal protection and those of principal importance for biodiversity conservation in Wales.'*

Local Development Plan Policies

2.4 Pre-Application Planning advice provided by Monmouthshire County Council in September 2017 advised that the following planning policies from the *Monmouthshire Adopted Development Plan, February 2014*, relevant to ecological assessment should be taken into consideration: S13: Landscape, Green Infrastructure and the Natural Environment; EP1: Amenity and Environmental Protection; NE1: Nature Conservation and Development; and GI1: Green Infrastructure.

2.5 **Policy S13 – Landscape, Green Infrastructure and the Natural Environment** states that:
'Development proposals must:

1. *Maintain the character and quality of the landscape by:*

- (i) identifying, protecting and, where appropriate, enhancing the distinctive landscape and historical, cultural, ecological and geological heritage, including natural and man-made elements associated with existing landscape character;*
- (ii) protecting areas subject to international and national landscape designations;*
- (iii) preserving local distinctiveness, sense of place and setting;*
- (iv) respecting and conserving specific landscape features, such as hedges, trees and ponds;*
- (v) protecting existing key landscape views and vistas.*

2. *Maintain, protect and enhance the integrity and connectivity of Monmouthshire's green infrastructure network.*

3. *Protect, positively manage and enhance biodiversity and geological interests, including designated and non-designated sites, and habitats and species of importance and the ecological connectivity between them.*

4. *Seek to integrate landscape elements, green infrastructure, biodiversity features and ecological connectivity features, to create multifunctional, interconnected spaces that offer opportunities for recreation and healthy activities such as walking and cycling.'*

2.6 **Policy EP1: Amenity and Environmental Protection** states that:

'Development, including proposals for new buildings, extensions to existing buildings and advertisements, should have regard to the privacy, amenity and health of occupiers of neighbouring properties.

Development proposals that would cause or result in an unacceptable risk/harm to local amenity, health, the character/quality of the countryside or interests of nature conservation, landscape or built heritage importance due to the following will not be permitted, unless it can be demonstrated that measures can be taken to overcome any significant risk:

- *Air pollution;*
- *Light pollution;*
- *Noise pollution;*
- *Water pollution;*
- *Contamination;*

- *Land instability;*
- *Or any identified risk to public health or safety.'*

2.7 Policy NE1 – Nature Conservation and Development states that:

'Development proposals that would have a significant adverse effect on a locally designated site of biodiversity and/or geological importance, or a site that satisfies the relevant designation criteria, or on the continued viability of priority habitats and species, as identified in the UK or Local Biodiversity Action Plans or Section 42 list of species and habitats of importance for conservation of biological diversity in Wales, will only be permitted where:

- a) the need for the development clearly outweighs the nature conservation or geological importance of the site; and*
- b) it can be demonstrated that the development cannot reasonably be located elsewhere.*

Where development is permitted, it will be expected that any unavoidable harm is minimised by effective avoidance measures and mitigation. Where this is not feasible appropriate provision for compensatory habitats and features of equal or greater quality and quantity must be provided.

Where nature conservation interests are likely to be disturbed or harmed by development proposals, applications must be accompanied by an ecological survey and assessment of the likely impact of the proposal on the species /habitats, and, where necessary, shall make appropriate provision for their safeguarding.

Development proposals shall accord with nature conservation interests and will be expected to:

- i) Retain, and where appropriate enhance, existing semi-natural habitats, linear habitat features, other features of nature conservation interest and geological features and safeguard them during construction work;*
- ii) Incorporate appropriate native vegetation in any landscaping or planting scheme, except where special requirements in terms of purpose or location may dictate otherwise;*
- iii) Ensure the protection and enhancement of wildlife and landscape resources by appropriate building design, site layouts, landscaping techniques and choice of plant species;*
- iv) Where appropriate, make provision for on-going maintenance of retained or created nature conservation interests.'*

2.8 Policy GI1 – Green Infrastructure states that:

'Development proposals will be expected to maintain, protect and enhance Monmouthshire's diverse green infrastructure network by:

- a) Ensuring that individual green assets are retained wherever possible and integrated into new development. Where loss of green infrastructure is unavoidable in order to secure sustainable development appropriate mitigation and/or compensation of the lost assets will be required;*
- b) Incorporating new and /or enhanced green infrastructure of an appropriate type, standard and size. Where on-site provision of green infrastructure is not possible, contributions will be sought to make appropriate provision for green infrastructure off-site.'*

This policy is also now supported by the Monmouthshire Green Infrastructure Supplementary Planning Guidance (SPG), adopted by the Council in April 2015.

2.9 In accordance with the provisions of the Green Infrastructure SPG – and as referred to in the MCC Pre-Application Written Advice² received - this PEAR is accompanied by a *Preliminary Green Infrastructure Assets and Opportunities Plan*, prepared jointly by Anthony Jellard Associates LLP, the appointed landscape architects for this site, and John Campion MCIEEM. This plan is included in the Figures section of this Report.

Legislation

2.10 **The Environment (Wales) Act 2016** sits alongside both the Planning (Wales) Act 2015 and the Well-being of Future Generations (Wales) Act 2015, in promoting the sustainable use, management and development of Welsh resources. The Environment (Wales) Act introduces new legislation for the environment and provides an iterative framework which ensures that managing Wales' natural resources sustainably will be a core consideration in decision-making. The Act also requires Welsh Government to produce a Natural Resources Policy that sets out the priorities, risks and opportunities for managing Wales' natural resources sustainably.

2.11 This legislation has addressed the matter of decline in biodiversity in Wales. The 2016 Act introduces a new biodiversity duty, which highlights biodiversity as an essential component of ecosystem resilience. In relation to Wales, this new duty replaces the biodiversity duty in section 40 of the Natural Environment and Rural Communities Act 2006 (referred to as the NERC Act) which required that public authorities must have regard to conserving biodiversity. Local authorities are also required to meet the new biodiversity and resilience of ecosystems duty. Doing so can help them in discharging their duties in the Well-being of Future Generations Act.

3. METHODOLOGY

Desk Study

3.1 The desk study was used to understand the basic characteristics of the site and its context, including the locations and dispositions of habitat features within, around and linking into the site. The 1:25000 scale Ordnance Survey Map of the locality was used as well as aerial photographs on the Google Earth website. In addition, the government's DEFRA 'MAGIC' website was used to locate the position of designated sites in the context of the site and the wider locality.

3.2 This published information was supplemented by detailed information on habitats and species obtained through a biological records data search, commissioned from the South-East Wales Biological Records Centre (SEWBREC). The data search used different radii for data capture in relation to different designations and species, as follows:

- Up to 5km for international and national designations;
- Up to 2kms for local designations, protected and priority species (recent records);
- Up to 1km for other species of conservation concern, locally important species, Schedule 9 of the Wildlife & Countryside Act and other alien/invasive species, and habitats.

3.3 The data search was commissioned on 13th February and the information was provided by SEWBREC in a report dated 27th February 2018. This document is attached as an Appendix to this report.

² *Pre-Application Advice – Written Response*; Monmouthshire County Council Development Control Services (Ref No MC/2017/ENQ/00639); 7th September 2017 - Green Infrastructure Officer's Response; paragraph 3

3.4 We are not aware of any previous ecological studies of this site or the vicinity having been undertaken.

Field Survey

3.5 A walkover survey was undertaken by John Campion MCIEEM on 16th February 2018. The surveyor has over 25 years' experience of undertaking and reporting on habitat surveys and hedgerow surveys.

3.6 The boundaries were inspected so as to note the characteristics of existing trees, hedgerows, hedgebanks, ditches and fences, examining their potential for use by protected species, as well as looking for any field signs of badger activity. In addition, the grassland was walked over by carrying out a series of traverses, so as to gain some insight into the nature and composition of the sward and surface water drainage, since the ground was very wet, following recent periods of heavy rainfall. Notable features were photographed.

3.7 Due to seasonal limitations, and the heavily grazed nature of the great majority of the short grassland sward, undertaking a more detailed botanical survey was not considered to be appropriate during this site inspection.

4. RESULTS

Designated Sites

4.1 Within the 5km radius of data search, the following *international and national designated sites* were recorded:

- Cilwrgi Quarry Site of Special Scientific Interest (SSSI);
- Cwm-ton Glascoed SSSI;
- Llandegfedd Reservoir SSSI;
- Priory Wood SSSI;
- River Usk (Lower Usk) SSSI and Special Area of Conservation (SAC).

A map showing the disposition of these designated sites in relation to the site is included in the *Appendix to this report*.

4.2 The Cwm-ton, Glascoed SSSI was designated in 1986 for its geological interest. It is 0.3 ha. In extent and is situated around 1.24kms from the site boundary at its closest point.

4.3 The River Usk (Lower Usk) SSSI is an extensive riverine site designated in 1996 for its flora and fauna and acts as an important wildlife corridor along a wide floodplain with a complex and active system of meanders, cut-off and back channels which contribute to the biological interest and diversity of the site. Its nearest stretch lies around 1.87kms to the north-east of the closest part of the site boundary. This site also has the European designation of SAC, reflecting its rarity and the presence of a significant number of protected aquatic species.

4.4 The Llandegfedd Reservoir SSSI was designated in 1971 and 1982 primarily for its ornithological interest, with particular emphasis on its large numbers and variety of over-wintering wildfowl. It is a large site, extending to some 230.7ha. and is located around 2.35kms to the south of the nearest part of the site boundary.

4.5 The Priory Wood SSSI was designated in 1971 and 1983 for its botanical interest. It is an ancient semi-natural woodland site of around 4.45ha. located above the eastern bank of the River Usk, at some 3.6kms distant to the north-east from the nearest part of the site boundary.

4.6 The Cilwrgi Quarry SSSI was designated in 1976 and 1983 for its geological interest. It is 1.37 ha. in extent and lies around 4.8kms south-south-west of the nearest part of the site boundary.

4.7 The data search within the 2km radius recorded the following *locally designated* Regionally Important Geological Sites (RIGS):

- Glascoed RIGS;
- Usk Glacier Terminal Moraine.

A map showing the disposition of these local designated sites in relation to the site is included in the *Appendix to this report*.

4.8 The Glascoed RIGS was surveyed in 2010 and is located in a disused railway cutting at the edge of the Royal Ordnance Factory at Glascoed, around 1.7kms to the south-east of the nearest part of the site boundary.

4.9 The Usk Glacier Terminal Moraine RIGS covers an extensive area between Little Mill and Usk, including the whole of the site. It includes part of the eastern section of Little Mill village in the Cae Melin locality.

4.10 Within a 2km radius search area, the data search recorded the following Sites of Importance for Nature Conservation (SINCs):

- Ar-y-nant Meadow, Glascoed
- Coed Di haul**
- Coed Di-haul North**
- Craig Glaster**
- Craig y Coed**
- Goytre House Wood
- *Great Coedcae Du***
- *Hill Wood***
- Hollybush Pastures
- Jenny's Bushes
- Land west of Fairfield, Penperlleni
- Poultry Houses Wood**
- Springfield
- St Michael's Church, Glascoed
- Sunnyside, Monkswood
- The Pergoed Grasslands
- Twyn Cecil
- Twyn y Cryn**
- Tymawr Fields
- Ynys-y-pica Wood**

***Please note that SINCs that have been asterisked have been designated for Ancient Semi-Natural Woodland/Plantation on Ancient Woodland Site and currently do not have SINC summary information available.*

A map showing the disposition of these local designated sites in relation to the site is included in the *Appendix to this report*. The great majority of these SINCs lie within the 1-2km radius of search. Only 4 SINCs lie wholly or partly within the 1km radius of search.

4.11 The **Great Coedcae Du** SINC is a single block of broadleaved woodland located some 320 metres to the east-north-east of the nearest section of the site boundary. This is an ancient woodland site. It has some habitat connectivity to the site, by way of mature field boundary hedgerows and small areas of scrub woodland, which demarcate and intersperse pasture grassland.

4.12 Part of the **Hill Wood** SINC lies within the 1km radius, being some 620 metres to the south-east. It is separated from the site by the A472 road corridor, the Berthin Brook, the disused railway line between Little Mill and Usk and intervening areas of farmland. This is an ancient woodland site. There is almost no habitat connectivity to the site from this SINC.

4.13 A small **unnamed parcel of ancient semi-natural woodland** lies in the northern extremity of Coed Tynewydd, situated some 530 metres to the south-west of the site at its nearest boundary. It is separated from the site by the A472 road corridor, the Berthin Brook, the disused railway line between Little Mill and Usk and intervening areas of farmland. There is almost no habitat connectivity to the site from this SINC.

4.14 Further away to the south-west is the large **Coed Brytovey** SINC, which lies partly within Monmouthshire but predominantly within the adjacent area of Torfaen Borough. This is an extensive ancient woodland site which retains a few woodland species listed in the SINC criteria and has been mostly replanted. Species recorded in 1977 included broad leaved helleborine and yellow pimpernel. As for the Coed Tynewydd site, it is separated from the site by the A472 road corridor, the Berthin Brook, the disused railway line between Little Mill and Usk and intervening areas of farmland. There is almost no habitat connectivity to the site from this SINC.

Habitats

4.15 The site itself is dominated by pasture grassland. The biological records search indicated that the grassland is classified as improved grassland, derived from remote sensing data. The grass sward inspected during the walkover survey was generally very short and was being grazed by a small number of horses.



Grassland within the site – view north-west towards Cae Melin housing

There are some apparent variations in the sward which reflect the degree of soil moisture present and local areas which may be subject to waterlogging and surface inundation. A linear area of grassland running parallel to part of the northern site boundary has been disturbed through excavation of a shallow drainage ditch within the edge of the field. Low mounds of excavated material are present adjacent to the field side of this feature. It seems to have been created to intercept surface water flowing into the site from the land adjacent to the north. Also at the time of survey, surface water was flowing from the adjacent woodland copse at the north-eastern site boundary and running along a shallow surface depression towards the centre of the field. At another location on the eastern boundary, surface water was also flowing into the site through the hedgerow from the adjacent pasture field.

4.16 Mature field boundary hedgerows with trees align the outer side of the post and wire livestock fences which demarcate the northern and southern site boundaries. These hedgerows do not lie within land owned or managed by the client.

4.17 Along the northern site boundary, the mature mixed-species hedgerow reaches a typical height of around 4 metres along the western and central sections and appears to be substantially unmanaged. Along its eastern section, a line of mature oak trees is growing within the sparse mixed-species hedgerow line, which degenerates into a line of bramble scrub along the easternmost section linking to the small broadleaved woodland copse on the adjacent land to the east. These oak trees form an intermittent canopy along the site boundary, part of which overhangs the site.



Northern site boundary hedgerow – view east from farm track off Cae Melin



Northern site boundary hedgerow – easternmost section, viewed eastwards towards the adjacent copse and scrub

4.18 Along the southern boundary, the mature mixed-species roadside hedgerow has a significant number of multi-stemmed trees present within the line of the hedgerow fronting onto the A472. These are a mixture of ash, oak and field maple, forming a more or less continuous canopy typically rising to around 7-8 metres. There are no signs of recent hedgerow management other than trimming of the outer face adjacent to the carriageway. This hedgerow connects with the eastern boundary hedgerow at its eastern end, and with the hedgerow along the eastern side of the Cae Melin residential access road at its western end. Although this hedgerow lies at the foot of a large sloping field, with higher land situated nearby to the north and east, there is no evidence of an associated drainage ditch.



Southern site boundary hedgerow – view west towards Cae Melin

4.19 The eastern site boundary has a mature field hedgerow with very few trees beyond the post and wire boundary fence. The extreme north-eastern section of this site boundary has a nearby small broadleaved woodland copse with some adjoining scrub, into which the northern and eastern boundary hedgerows connect. The eastern hedgerow appears to have fewer woody species present and the few trees present are ash. It has a more or less continuous canopy rising typically to around 4 metres. Again, this hedgerow shows no signs of recent management, except for that part of the upper section which is crossed by the high-voltage overhead electricity line. Here, a young mature tree has been lopped to reduce the height of its canopy beneath the conductors.



*Upper section of the eastern site boundary hedgerow, viewed north-eastwards from within the site.
Note the connecting hedgerows and scrub on the adjacent land*

4.20 The western site boundary is also demarcated by a post and wire fence along its upper section, with a young hedgerow with no trees along the outer side of the fence along the lower section of fronting the existing housing area at Cae Melin. This hedgerow appears to have been recently planted and is assumed to have been part of the adjacent residential development. It is comprised almost entirely of blackthorn, with an even canopy of around 2 metres high, with only an occasional field maple growing within the hedge line. Sections of it are apparently unmanaged and one length, opposite several houses along Cae Melin which face towards the site, has been recently cut down to an even height of around 1.2 metres.



*Western site boundary hedgerow along the eastern road
boundary of the Cae Melin residential access road*

4.21 The adjoining land to the north and north-west of the site is agricultural grassland, bounded by mixed-species hedgerows - some with trees - connecting beyond to blocks of broadleaved woodland habitat and to the linear woodland alongside the main railway line to the north of Little Mill. There is a small group of informal livestock shelters and cabins and a caravan, with associated fenced enclosures, on the neighbouring land immediately adjacent to the central section of the northern boundary. To the east and north-east of the site is a further tract of agricultural grassland with mature field boundary hedgerows, connecting to scrub and broadleaved woodland habitats further to the east, including the Great Coedcae Du SINC ancient woodland site. To the south of the A472 road is a substantial area of pasture grassland straddling the river corridor of the Berthin Brook,

with its linear riparian woodland, and rising up to the linear woodland along the disused Little Mill to Usk railway line corridor. Beyond are the extensive linked woodland areas around the very large Glascoed Royal Ordnance Factory site.

4.22 Any species-rich hedgerows and the broadleaved woodland copse abutting the site are priority habitats for nature conservation under the UK Biodiversity Action Plan. These are also listed as being habitats of principal importance for the purpose of maintaining biodiversity in Wales, under section 7 of the Environment (Wales) Act 2016.

Species and Species Groups

4.23 From a combination of desk study and field observations, the following section of the report provides an description of the likely use of the site by important species, i.e. national or local conservation priorities or protected species.

Plants

4.24 The grassland is likely to provide a habitat for no important plant species. Remote sensing for Phase 1 Habitat Survey has classified the site as being improved grassland. Further field survey during the appropriate season will substantiate this classification.

4.25 The mature field boundary hedgerows may contain important plant species. Further field survey during the appropriate season will establish whether the mixed-species hedgerows can be classified as species-rich, which would mean that they are habitats of principal importance for the purpose of maintaining biodiversity in Wales, under section 7 of the Environment (Wales) Act 2016.

Amphibians and Reptiles

4.26 The site does not contain any habitats conducive to use by great crested newt or reptiles. There are no recent records for either great crested newts or amphibians within the 2km radius search area. There is a single record for grass snake at Glascoed dating from May 2011. This site is around 1.5kms from the nearest edge of the site and is separated from it by the Berthin Brook watercourse and the main A472. It is therefore highly unlikely that grass snake would move between the recorded site and the Little Mill site.

Birds

4.27 Within the 1km search radius, there are recent records for barn owl, coal tit, dunnoek, goldcrest, house sparrow, long-tailed tit and starling. These species would have potential foraging and nesting (except for barn owl) habitats within the field boundary hedgerows and the small broadleaved woodland copse adjoining the site. Foraging habitat for ground feeders is also present around a moveable livestock feeding trough and moveable water trough.

Bats

4.28 The biological records data search revealed that there are clusters of recent records for several species of bat within the 2km search radius.

4.29 Within a 1km search radius of the site, at the Little Mill settlement there are records for common pipistrelle and a single record around 450 metres to the south-east for lesser horseshoe bats – a hibernation roost. Further to the south-east, around 950 metres distant, is a single record for Natterer's bat.

4.30 Within a 2km search radius there are clusters in the Glascoed area of recent records for common and soprano pipistrelle, lesser horseshoe bat and noctule. In particular, there are records of summer roosts of lesser horseshoe bats at the Glascoed Royal Ordnance Factory site, just under 2 kms from the site. There is a good level of habitat connectivity between the Glascoed area and the area to the east of the Little Mill site for bats commuting along hedgerows and woodland edges and foraging. To the north-west and west, there are further recent records for brown long-eared bat, pipistrelles, noctule and a single record for Leisler's bat. Again, there is a good level of habitat connectivity with the Little Mill site via the linear woodland along the main railway line between Abergavenny and Pontypool, and the field boundary hedgerow and woodland linkages.

4.31 Whilst some of the mature oak trees just beyond the northern site boundary may provide summer roosts for some bat species, the site is considered to be of value only for commuting and foraging, especially along the hedgerows.

Dormouse

4.32 There are some habitat features on the periphery of the site which may be conducive to dormouse use. The southern boundary hedgerow has a significant component of hazel and good aerial connectivity along its canopy. However, the biological data search revealed no records of dormouse within the 2km search radius. It is therefore considered highly unlikely that dormouse use this site.

Water Vole

4.33 There is little or no suitable habitat on the site for water voles. However, the data search revealed a single water vole record nearby (within 500 metres) on the Berthin Brook, dating from 2009. There may be an underground culvert connection from the south-eastern extremity of the site running beneath the A472 and meeting the watercourse to the south of the road, but this has yet to be verified. It is therefore thought to be unlikely that water voles use the site.

Otter

4.34 There are recent otter records to the north and north-west, especially to the west of Penperlleni, where the Monmouthshire & Brecon Canal is a major habitat feature. It is assumed that otters are also using the Berthin Brook watercourse. There are no suitable habitat features within the site for otters and the Berthin Brook is separated from it by the busy A472 road.

5. Ecological Constraints and Opportunities

Constraints

5.1 Subject to further field survey work to establish the characteristics of the grassland and hedgerow habitats present on or abutting the site, there would appear to be no significant constraints or potential constraints to developing the site for residential use. Provided that a new road access onto the site is created off the existing Cae Melin residential access road, no site boundary hedgerow would need to be breached. This would ensure continuity of foraging and commuting habitat for bats in the wider locality. Provided that any detailed site layout and design includes the careful design of street lighting so as to minimise light pollution, these bat habitat functions would also not be compromised.

5.2 As long as the residential development does not require the encroachment of built features or sub-surface infrastructure installations within the crown spread of the line of mature oak trees

along the easternmost section of the northern boundary hedgerow, then there would be little or no adverse effect on these habitat features.

Opportunities

5.3 The technical constraint on whole site development imposed by the characteristics and alignment of the high-voltage overhead electricity line provides an opportunity to provide habitat diversification and consequent ecological enhancement through provision of an area of public open space in the southern section of the site. If this area also incorporates sustainable drainage infrastructure, such as drainage swales feeding an attenuation pond, then new habitats can be created. Meadow and wet grassland habitats could be created in some of these areas.

5.4 In addition, the need to properly take account of incoming surface water from the adjoining land to the north, north-east and east of the site will necessitate the construction of land drainage ditches. These will be required along the eastern and central sections of the northern boundary and along the whole of the eastern boundary. These features could be constructed within a peripheral landscape zone, incorporating an informal footpath route, which would protect the canopies and root zones of the nearby trees and hedgerows. Meadow and wet grassland habitats could also be created in some of these areas. In addition, further woodland and scrub planting could enhance the existing woodland copse abutting the north-eastern site boundary and provide an enhanced wildlife corridor along the eastern edge of the site.

6. Recommendations for Further Surveys

6.1 The following additional surveys are recommended in order to provide more detailed ecological information to support the proposed residential allocation for this site:

- Extended Phase 1 Habitat Survey, in accordance with the *Handbook for Phase 1 Habitat Survey* (JNCC), to establish the characteristics of the grassland habitat(s);
- Hedgerow Survey of the boundary hedgerows, using the DEFRA standard procedure (*Hedgerow Survey Handbook*; 2nd Edition, 2007), to establish which, if any, can be classified as species-rich;
- Visual Inspection of mature trees in adjacent land ownership along part of the northern site boundary for the bat habitat potential (in accordance with section 4.3 of the Good Practice Guidelines *Bat Surveys for Professional Ecologists*; 3rd Edition, 2016; Bat Conservation Trust).

6.2 These surveys could be undertaken during April-May (hedgerow survey and visual inspection of trees for potential bat habitat) and May-June for the grassland habitat.

7. Conclusions

7.1 There are no international, national or locally designated nature conservation sites which would be likely to be adversely affected by the carefully considered development of the site for residential use.

7.2 There are no protected or priority species or habitats which are likely to be adversely affected by the carefully considered development of this site for residential use, provided that the recommended additional surveys are undertaken at the appropriate season and their findings do not indicate that this assertion is not supportable.

7.3 The proposed allocation for residential development, if carefully considered and informed by this PEA Report and the findings of the recommended further surveys, would not conflict with either national or local planning policy or related planning guidance.

7.4 Subject to the provisions of the above paragraphs, there would be no significant ecological constraints to the careful development of this site for residential use.

7.5 The carefully considered development of the site for residential use could provide opportunities for habitat enhancement and diversification, both within and around the periphery of the site.

8. References

Guidelines for Preliminary Ecological Appraisal; Second Edition, December 2017; Chartered Institute of Ecology and Environmental Management;

Guidelines for Ecological Report Writing; Second Edition, December 2017; Chartered Institute of Ecology and Environmental Management;

Planning Policy Wales, Edition 9, of November 2016;

Technical Advice Note 5: Nature Conservation and Planning (TAN5), September 2009;

Monmouthshire County Council Adopted Development Plan, February 2014;

Monmouthshire *Green Infrastructure Supplementary Planning Guidance*, adopted by the Council in April 2015.

Pre-Application Advice – Written Response; Monmouthshire County Council Development Control Services (Ref No MC/2017/ENQ/00639); 7th September 2017;

Environment (Wales) Act 2016;

Handbook for Phase 1 Habitat Survey (JNCC); 2003

Hedgerow Survey Handbook; 2nd Edition, DEFRA, 2007;

Bat Surveys for Professional Ecologists - Good Practice Guidelines; 3rd Edition, 2016; Bat Conservation Trust.

9. FIGURES

(Attached as separate documents)

- **Site Location Plan**
- **Preliminary Green Infrastructure Assets & Opportunities Plan**

10. Appendices

(Attached as separate documents)

- SEWBREC Biological Records Data Search Report for John Campion Associates Ltd, 27th February 2018
- Little Mill, Habitats Plot
- Little Mill, Monmouthshire Ancient Woodland Plot
- Little Mill, Monmouthshire International & National Sites Plot
- Little Mill, Monmouthshire Local Sites Plot
- Little Mill, Monmouthshire Species Plot