

Flintshire Local Development Plan 2015-2030

Statement of Common Ground
HN1.9 Wrexham Road, Hope

February 2021

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Appendix 1 Further Ecological Report Oct 2019

1. Introduction

1.1 This Statement of Common Ground (SoCG) has been prepared by Flintshire County Council (FCC) in conjunction with the agent for the landowner. It has been prepared to assist and inform the Examination of the Flintshire Local Development Plan (LDP) in respect of the housing allocation HN1.8 Wrexham Road, HCAC. The purpose of the document is to determine the matters agreed between the parties as well as any matters yet to be resolved.

2. Site Context

2.1 The site is located on the western side of the A541 Wrexham Road at Abermorddu which is one of four settlements, which together comprise the Tier 2 Local Service Centre of Hope / Caergwrle / Abermorddu / Cefn y Bedd (HCAC). It adjoins residential development and Abermorddu School to the south and is opposite housing development along the eastern side of the A541. The western edge of the site forms the lower slopes of Hope Mountain. The site comprises 3.5ha of land which was submitted as candidate site HCAC004.

3. Current Planning Status

3.1 In the adopted Flintshire Unitary Development Plan (UDP) the site is located outside of but adjoining the settlement boundary of HCAC. However, the site was recommended for allocation in the UDP Inspector's Report, but not included in the adopted UDP.

3.2 Planning permission was granted (052895) on 12/01/15 for a vehicular access onto Wrexham Rd. An outline planning application for up to 80 dwellings was withdrawn on 24/08/18.

4. Background and Technical Studies

4.1 The allocation of the site is informed by a number of background and technical studies undertaken and prepared by the site promoters:

- Agricultural Land Classification 2019 [LDP-EBD-HN1.9.1](#)
- Preliminary Ecological Appraisal 2016 [LDP-EBD-HN1.9.2](#)
- Further Ecological Assessment 2016 [LDP-EBD-HN1.9.3](#)
- Further Ecological Assessment 2019 (Appendix 1)
- Flood Consequences Assessment 2017 [LDP-EBD-HN1.9.4](#)
- Hydraulic Modelling Report 2017 [LDP-EBD-HN1.9.5](#)

- Surface Water Drainage Strategy 2017 [LDP-EBD-HN1.9.6](#)
- Landscape and Visual Impact Assessment 2017 [LDP-EBD-HN1.9.7](#)
- Topographical Survey [LDP-EBD-HN1.9.8](#)
- Transport Assessment 2017 [LDP-EBD-HN1.9.9](#)
- Transport Technical Note 2017 [LDP-EBD-HN1.9.10](#)
- Tree Survey 2016 [LDP-EBD-HN1.9.11](#)

5. Development Parameters

5.1 The site is allocated for 80 units which represents a density of 23 units per hectare. The lower density reflects the need to avoid and buffer ecological features within and adjacent to the site.

5.2 The site falls within the South Border Local Housing Market Area as defined in the Flintshire Local Housing Market Assessment which, in conjunction with the Viability Study, requires the provision of 30% affordable Housing. The Affordable Housing Background Paper 7 identifies 24 affordable units being delivered on the site. In terms of size of units, the Local Housing market Assessment identifies that 45.6% of need is for smaller 1-2 be units, 28.3% for 3 bed general needs, 12% for 4 bed or more and 14.1% for older persons.

5.3 In accordance with the findings of the LHMA the development should comprise a mix of housing by type and size. Table 5.7 of the Local Housing Market Assessment (Update) identifies the following breakdown for open market dwellings which represents a guide to the likely mix of dwellings by type and size within the development:

Table 5.7 Open market dwelling stock and preferences			
Dwelling type/size summary	% Profile of new dwelling stock based on:		
	Current stock	Like	Expect
House 1/2 Beds	12.7	11.7	20.2
House 3 Beds	43.0	26.2	28.8
House 4 or more Beds	22.3	26.7	17.9
Bungalow	17.2	29.6	24.5
Flat	4.2	5.7	8.2
Other	0.7	0.0	0.3
Total	100.0	100.0	100.0
<i>Base</i>	53,825	8,738	7,628

Source: 2014 Household Survey

6. Development Trajectory

- 6.1 Recent discussions have taken place between the landowner and agent in order to secure an option with a preferred developer, Castlegreen Homes Ltd. Following formal acceptance of the developers offer for the land by the vendor earlier in 2021 the developer has completed legal negotiations and have engrossed documents. It is the intention to enter an Option for the land imminently.
- 6.2 The developer is fully committed to developing the site without delay. The site is greenfield land and there are no abnormal site features or conditions that will prevent an early commencement of development, subject to conditions and legal obligations. The developer anticipates commencing on site following the grant of permission (subject to the discharge of conditions and any S106 obligations) and aims to build out the scheme to a similar delivery schedule to developments at Bryn-y-Baal and Penyffordd.
- 6.3 The development of the site, as detailed in the trajectory in Background Paper 10 Housing Land Supply has been amended slightly as set out in the second column below (as per the Council's revised Housing Land Supply Background Paper to be submitted ahead of Examination Sessions). The third column represents the developers forecast completions based on their intention to submit an early planning application (subject to the LDP process). The site is clearly capable of delivery at the rate in the Council's revised trajectory, and possibly earlier.

Year	Completions	Revised Completions	Developer Revised Completions
2022-23	23		10
2023-24	30	20	30
2024-25	30	30	30
2025-26		30	13

The developer considers that a start on site can be achieved in 2022, subject to confirmation of the allocation within the Inspectors Report. Anticipated first completions would be recorded at April 2023. The bulk of the site would then be built over the next two years, with any final completions coming the year after. It may be with a faster build rate that the development will be completed before 2025-26. Even accounting for a degree of slippage, it is a reasonable projection that the entire development would be delivered within 5 years of adoption of the LDP.

7. Infrastructure

Highways

- 7.1 The development of the site will be accessed off Wrexham Rd by a single vehicular access.

Links to Active Travel / Public Transport

- 7.2 The development should embrace the concepts of Active Travel. The Council's Active Travel 'South' Map and Integrated Network Map Schedules identify a strategic route 'F9' which runs from Mold to Wrexham although this is referenced as 'Requires feasibility study. Precise route not defined' and programmed as a longer-term route. There are proposals in the INM Schedule (HOP1) to improve linkages between Caergwrle and Hope via Sarn Lane and to provide a link to the more strategic route (F8) linking Penyffordd – Hope – Llay. The development should incorporate walking and cycling routes which facilitate links with the adjacent school and with local services and facilities and improve linkages to the Active Travel Routes.

Education

- 7.3 The Infrastructure Plan (Background Paper LDP03 provides a commentary in respect of Education. The Local Education Authority has not formally objected to the proposed development. The LDP continues the approach adopted in the UDP and existing SPG23 Developer Contributions to Education in seeking financial contributions whereby new development places pressure on the capacity of existing schools. Utilising this methodology the Local Education Authority presently seeks a financial contribution of £199,789 to Abermorddu County Primary School and £258,566 to Castell Alun High School. However, this will need to be reviewed in the light of up-to-date information at the time of planning application.

Public Open Space / Green Infrastructure

- 7.4 The development will deliver a high-quality green infrastructure framework for the site, comprising:
- 4,200, sqm play and recreation space including:
 - An equipped play area
 - Signage / seating / picnic tables / litter bins
 - Either free standing or combined with existing Llys Clark play area

- Structural landscaping
- Retention of an attractive pedestrian route through the site providing access onto the hillside.

8. Other Matters

Placemaking

- 8.1 The development should embrace the Placemaking principles embodied with PPW10 in order to deliver a sustainable high quality living environment.

Indicative Layout

- 8.2 The previous planning application included an indicative site layout, but this will be revisited in the light of more recent ecological assessment.
- 8.3 The developer is working on an updated masterplan and layout for the site. This will include a revised masterplan and layout, which will be designed to take account of the local context and technical reports. This has yet to be finalised, but it builds on the previous planning application for the site and the comments received from statutory consultees.
- 8.4 The developer acknowledges the western boundary of the site offers an attractive area of useable green space around its unusual topographical and ecological features. Therefore, it is proposed to maintain an ecological buffer between the development and the western edge creating a useable area of public open space that will remain open and accessible to all upon completion of development.

Noise

- 8.2 Noise survey to determine noise attenuation measures for the site and individual dwellings will be undertaken.

SuDS

- 8.4 A SuDS based approach to the surface water drainage of the site will be required in accordance with the Flood Water Management Act 2010. The scheme should be designed in accordance with the Statutory SuDS Standards and capable of being adopted by the SuDS Approval Body (SAB) which is FCC.

Ecology

8.5 The site is bounded to the north and west by the Caeau Abermorddu wildlife site. The allocated site features semi-improved and unimproved grassland of ecological value with overgrown, ancient, species rich hedges, and two streams which merge at the south western corner of the wet woodland and flows to the south eastern boundary. The development should retain and strengthen, wherever possible, existing hedgerows and trees which are both ecological and landscape features. Where the loss of such existing features is unavoidable, compensatory planting will be required. The development of the site will need to buffer and protect the adjacent Wildlife Site and the species rich grassland as well as the streams and marshy area. The earlier Ecological Appraisals and a more recent Ecological Assessment (October 2019 – Appendix 1 [omitted in error from Submission documents]) provide the basis to formulate a masterplan approach to the site layout which encompasses appropriate avoidance and mitigation measures. The site promoter will continue to work with the Council's Ecologist to devise a layout which overall, will enhance biodiversity on the site.

Trees

8.6 Mature trees on the site will need to be retained and protected. Hedgerows should also be retained but where required to be removed they shall be replanted using indigenous species. Further advice is contained in adopted SPG4 Trees and Development.

Parking

8.7 Parking provision shall be made within the development in line with the current parking standards in SPG11 Parking Standards.

Space Around Dwellings

8.8 The development will ensure adequate separation distances between existing and proposed dwellings and adequate private amenity spaces in dwellings in line with existing SPG2 Space Around Dwellings to ensure that adequate living standards or amenity is established.

9. Conclusion

9.1 The Council and the landowner consider that the allocation is sustainable, viable and deliverable.

Andrew Roberts Andrew Roberts, Service Manager Strategy, Environment Directorate,
FCC 19/02/21



Nial Casselden, Fisher German, Agent on behalf of
Landowners 19/02/21



Land at Wrexham Road, Abermorddu

Further Ecological Assessment Reptile, Breeding Bird and Botanical Survey

7th October 2019

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1 Introduction

1.1 Background

Kingdom Ecology have carried out further ecological surveys of an area of agricultural land located on the western edge of the village of Abermorddu near Wrexham. The further surveys have been completed to build upon the findings of initial ecology surveys carried out at the site January-July 2016.

Further surveys undertaken in 2019 have comprised of reptile surveys, update badger surveys, bird survey and further botanical surveys of grassland habitats at the site.

Surveys previously undertaken at the site in 2016 have included an initial site walkover survey/phase 1 habitat survey plus presence/absence survey of a pond located within 500m of the site using egg search, torch, bottle trap and eDNA techniques plus a suite of bat activity surveys.

Further field surveys have been carried out from March to July 2019. Surveys were carried out by Richard Roe (BSc, MSc, MIEEM, CEnv). Richard has extensive experience of undertaking habitat and protected species surveys as a professional ecological consultant with over eighteen years' experience.

1.2 Purpose of Report

This report provides and outlines the findings of the additional reptile surveys, badger, bird survey and further botanical surveys carried out at the site in 2019.

The report evaluates the conservation importance of identified species assemblages, identifies habitat features within the site which may be of importance to the species concerned and goes on to make recommendations for further works, mitigation and additional ecological enhancement measures where relevant.

1.3 Protected Species Legislation

1.3.1 Badgers

Badgers are afforded protection under the Protection of Badgers Act (PBA) 1992; this act was introduced on welfare grounds. The Act is based primarily on the need to protect badgers from baiting and deliberate harm or injury. Badgers are not considered to be a species of any conservation concern. However the Act contains restrictions that apply more widely and can have implications were badgers and development come into conflict.

All the following are considered criminal offences:

- to wilfully kill, injure, take, possess or cruelly ill-treat a badger;
- to attempt to do so; or
- to intentionally or recklessly interfere with a sett.

Sett interference includes damaging or destroying a sett, obstructing access to a sett, and disturbing a badger whilst it is occupying a sett. It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no badger is disturbed and the sett is not damaged or obstructed.

1.3.2 Birds

All wild birds in England and Wales are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird, or take, damage or destroy the nest (whilst being built or in use) or its eggs.

1.3.3 Reptiles

All native reptiles are protected in the UK under the Wildlife and Countryside Act 1981 (as amended). The law makes it an offence to intentionally kill, injure, sell or advertise to sell any of the six native species.

The smooth snake and the sand lizard are afforded further protection under the 1981 Act, by making it an offence, to possess, handle, capture or disturb them.

1.3.4 Environment (Wales) Act 2016

Section 6 of the Environment (Wales) Act 2016 places a legal obligation on public bodies in Wales to 'maintain and enhance biodiversity' whilst carrying out their functions.

Section 7 of that Act requires Welsh Ministers to publish and maintain lists of species and types of habitats in Wales that are regarded as of 'principal importance' for the purpose of maintaining and enhancing that biodiversity.

This section of the Act replaces the biodiversity duty originally outlined in Section 42 of the NERC Act 2006.

The presence at any proposed development site, of any priority habitat or priority species identified on these lists is of importance within the local authority planning process.

2 Field Survey Methods

2.1 Survey Aims and Objectives

Further field surveys have been carried out in 2019 to:

- to determine whether the site supports a significant reptile population (common reptiles have been recorded within habitats within the wider locality)
- confirm the continued absence of badger setts from the site;
- determine and assess bird assemblages using woodland and scrub habitats within the site and around the site boundaries;
- to further appraise the botanical value of grassland habitats at the site.

These field surveys were largely undertaken in conjunction with one another with the badger, reptile, breeding bird and botanical surveys carried out at the same time over multiple site visits. Methodologies for each of these assessments are provided below.

The findings of the assessments will be used to inform the proposed layout of new housing at the site and to inform any further ecological mitigation/compensation measures.

2.2 Further Surveys

2.2.1 Reptiles

Reptile surveys were carried out during the 2019 field season comprising of artificial refugia searches and visual surveys. Surveys were carried out following methods described in the Herpetofauna Workers' Manual (JNCC, 2003) and Froglife Advice Sheet 10, 'Reptile Surveys' (Froglife 1999).

Artificial Refugia Survey

Reptiles must bask in the morning and evening before becoming active. Artificial refugia surveys take advantage of this need by providing artificial basking and sheltering habitat. The artificial refugia used for this survey comprised of black corrugated roofing sheets measuring 0.5m x 0.5m.

50 artificial refugia were deployed on the 30th March 2019 in suitable locations and habitats across the site. The survey focused on boundary habitats with refugia deployed alongside a drainage ditch and scrub along the eastern boundary and on the edges of scrub habitats located around the northern and western boundaries of the site. These locations offered suitable basking locations adjacent to suitable areas of cover.

The refugia were allowed to bed down for 1 week before being checked for the presence of reptiles. The refugia survey was carried out between 08:00-11:00 and 16:00-20:00. Survey was carried out on 7 dates from the 6th April up until the 25th May 2019. Survey took place during periods of sunshine with temperatures recorded between 12 and 16°C. Survey avoided taking place during wet or windy weather conditions.

Visual Survey

Visual surveys were undertaken in conjunction with and in addition to the artificial refugia checks. These surveys involved slowly walking across the study area during suitable weather conditions, watching for basking reptiles and searching beneath other refugia such as logs, stones, discarded corrugated sheeting etc for sheltering reptiles.

2.2.2 Badger Assessment

The site boundaries of the site were repeatedly walked as part of the further ecological site visits carried out March-May 2019.

All linear features such as hedgerows, fence lines and drainage ditches were and searched for evidence of badgers. Suitable sett habitat such as scrub and woodland were also actively searched for badger field signs, where accessible. Badger field signs include prints, latrines, foraging signs, snagged hair or badger setts.

2.2.3 Breeding Bird Assessment

Bird surveys were undertaken in conjunction with the reptile surveys, therefore the surveys were carried out mid-morning and early evening. Eight survey visits were undertaken in total between the 30th March and the 25th May 2019. Surveys were carried out under suitable calm, dry weather conditions with unrestricted visibility.

The surveys comprised of walked transects around the boundaries of the site.

Observations of birds within and adjacent to the site comprising of song, call or sighting were recorded and were marked on a habitat map of the site. The surveyor was aided with binoculars.

From the survey data, a list of bird species recorded at the site was drawn up along with an evaluation regarding the value of various habitats at the site for the bird assemblages present.

2.2.4 Further Botanical Assessment

Habitats recorded during the original 2016 surveys were revisited during the April/May 2019 site visits with a further visit undertaken in mid-August. The survey produced an updated botanical description of key habitats. This assessment focused on the grassland habitats at the site.

3 Results

3.1 Site Description

The study area is located adjacent to Wrexham Road on the western edge of the village of Abermorddu, near Wrexham, LL12 9DG (Ordnance Survey Grid SJ 308568). The site measures approximately 3.5ha in area.

Wrexham Road runs along the eastern boundary of the site. The playing fields of Abermorddu CP School are located immediately to the south of the site. Further agricultural land lies to the north and west of the site. A small unnamed brook flows along part of the site's western boundary and passes through the site.

The site largely comprises of two grassland fields with associated boundary features. The site slopes down from the west towards Wrexham Road on the site's eastern boundary.

The site is managed as grazed pastureland but is also used regularly by local dog walkers.

Wider habitats comprise of the village of Abermorddu and further pasture. The River Alyn is located approximately 300m to the east of the study site. The site location is shown on Figure 1 in the Appendix.

3.1.1 Caeau Abermorddu Local Wildlife Site

The non-statutory designated Caeau Abermorddu Local Wildlife Site (LWS) runs along the western and northern boundary of the study site with a small part of the LWS located within the study site itself (See Figure 1).

The LWS is 4ha in size and has been designated for the habitats present which include pasture/meadow, marsh, scrub and wet woodland.

The complete site description is as follows:

'Elongated, narrow site along a hillside with semi-improved acid grassland, marshy grassland, wet woodland and semi-improved neutral grassland. The marshy grassland at the bottom of the slope next to the Wrexham Road is dominated by sharp-flowered rush, creeping bent, lesser pond sedge, Yorkshire fog with oval sedge and ragged robin. Above this marshy grassland is a slope with acid grassland dominated by common bent and frequent heath bedstraw, bitter vetch, creeping soft grass, sweet vernal-grass and sheep's fescue. The small patch of alder dominated woodland comprises elder and holly in the shrub layer and yellow archangel, opposite-leaved golden saxifrage, bramble and meadowsweet. Next to the wood is a stand of blackthorn scrub. At the southern end of the site is a semi-improved neutral grassland with cat's-ear, black knapweed, autumn hawkbit, harebell, mouse-ear hawkbit, ribwort plantain and sweet vernal-grass'.

3.2 Field Survey

3.2.1 Reptile Survey

Surveys were undertaken on various dates between the 30th March and the 28th May 2019. Survey dates and conditions for each survey date are provided in Table 1 in the Appendix.

50 reptile refugia were deployed on the scrub/grassland interfaces around the site boundaries (refugia locations shown on Figure 3 in the Appendix) In summary, no reptiles were recorded at the site whatsoever. Small numbers of toads (maximum count of 4 toads on the 6th and 16th May 2019) were infrequently recorded under the reptile mats.

Habitats at the site are not considered to be of optimal value for reptiles. The bulk of the site comprises of open, closely grazed pasture however suitable refuge habitat is offered within scrub habitats around the fringes of the site with suitable basking location offered near the scrub/grassland interfaces.

3.2.2 Badgers

No badger setts or badger field signs were identified during the site survey.

3.2.3 Bird Survey

Bird surveys were undertaken in conjunction with the deployment of reptile mats and the completion of reptile surveys.

Thirty bird species were recorded at the site or passing through the site. Recorded species and the habitats in which they were identified are shown in Table 2 in Appendix.

Usage of habitats at the site can be summarised as follows:

- The open grassland habitats at the site offer limited nesting or refuge habitat however these areas were occasionally used by foraging corvids and starlings.
- The housing along Wrexham Road supports several colonies of house sparrow. House sparrows were observed to regularly use the hedgerow and bramble scrub habitats along Wrexham Road as well as intermittently using other areas of scrub/trees at the site boundaries and along the central watercourse.
- The tall woody scrub around the site's northern and western boundaries was used by a variety of birds including several warbler species (black cap, chiffchaff, lesser white throat and whitethroat). Displaying males were recorded on multiple survey visits suggesting that these species are likely to be breeding within these habitats. The boundary scrub plus the block of woodland on the western boundary are considered to be the features of greatest value to breeding birds at the site.

- The woodland along the site's western boundary supports common woodland bird species including green woodpecker, chiffchaff, blackcap and Treecreeper.
- The wooded stream that passes through the centre of the site supports common woodland/garden bird species.
- Robin, blackbird, wren, dunnock and common tits were ubiquitously recorded within scrub and hedgerow habitats at the site.

3.2.4 Further Botanical Survey

Further botanical surveys of the grassland habitats were undertaken in conjunction with the other field surveys completed at the site. This allowed species to be recorded in mid-Spring through to early summer. An additional visit to the site was also undertaken in August 2019.

The site comprises of a large open grassland field which occupies the central, northern and eastern parts of the site (Target Note 1 on Figure 2). A smaller pasture field is located in the site's southwest corner and is divided from the remaining larger field by a tree-lined brook (Target Note 2 on Figure 2).

The land slopes down from the west towards Wrexham Road, with an area of wetter ground near the northeast corner of the site (Target Note 3). The site is currently grazed by a small herd of cattle (10-15 animals).

The grassland habitats are considered to be relatively species-rich albeit heavily grazed. With the greatest richness considered to be within the northern half of the large pasture field (Target Note 1) where plant species present within the dry grassland habitats in the adjacent Local Wildlife Site (LWS) have extended into the study site itself.

The dry, neutral grassland within the adjacent LWS (Target Note 5) includes frequent sweet vernal grass, red fescue, field wood-rush, pignut, bulbous buttercup and bluebell with occasional, rough meadow-grass, soft brome, cock's foot and soft meadow-grass.

Within the study site, the grassland species within the larger north field (Target Note 1) are similar in composition to the unimproved neutral grassland present within the LWS albeit less diverse and more intensively grazed.

The grassland at Target Note 1 comprises of frequent Yorkshire fog, creeping bent, sweet vernal grass and rough meadow grass with occasional red fescue, field wood-rush, soft brome, crested dog's tail and cock's foot. Sedges and rushes are more frequent within the wetter eastern half of the field and include occasional common yellow sedge, oval sedge, hairy sedge, soft rush, and hard rush.

Forbs present within the grassland include frequent marsh thistle, tormentil, common sorrel and creeping buttercup plus occasional germander speedwell, bird's foot trefoil, yarrow, red clover, white clover, common mouse-ear, pignut, cuckoo flower, bluebell, bulbous buttercup, meadow buttercup, common ragwort, broadleaved dock and creeping thistle.

There is a small area of marshy grassland habitat located at the north east corner of the site (Target Note 3) which supports frequent tufted hair-grass, creeping buttercup, Yorkshire fog, meadow sweet, marsh thistle with occasional cuckoo flower, marsh valerian, sharp flowered rush and soft rush.

The smaller field at the southwest corner of the site (Target Note 2) supports a greater frequency of species indicative of agricultural improvement with perennial rye-grass found throughout and fewer forbs with rare red clover, common sorrel, meadow buttercup and bulbous buttercup. This field is more intensively grazed than elsewhere at the site.

Between the small field and Wrexham Road, the grassland supports a greater density of ruderal herbs with frequent creeping thistle plus common ragwort and broadleaved dock (Target Note 4). There are larger stands of encroaching bramble scrub with nettle which has developed alongside the adjacent stream, and the eastern hedgerow.

Recorded habitats are shown on Figure 2 in the Appendix. Photographs of the grassland habitats are also shown in the Appendix.

An additional species list for the site has been provided by Amanda Davies of Flintshire County Council. This list includes species recorded at the site in 2011 and 2018. The 2018 species list is comparable with the species recorded in 2019. A copy of the 2018 species list is provided in Table 3 in the Appendix.

4 Summary and Recommendations

4.1 Summary and Evaluation

4.1.1 Badgers

No evidence of badger has been recorded at the site during either the 2016 or 2019 surveys. Nevertheless, badgers are known to be present in the surrounding countryside.

It is recommended that further badger sett surveys are conducted immediately in advance of any development of the site.

4.1.2 Reptiles

The reptile survey did not identify any reptiles at the site. As no reptiles were recorded, it is considered unlikely that a significant population of reptiles is present. However, small numbers of reptiles may occasionally use habitats at the site.

The adjacent LWS supports good quality reptile habitat within areas of marsh, south facing slopes, bracken and less intensively grazed grassland. Therefore, any reptiles within the adjacent LWS could occasional use habitats around the edges of the study site albeit in low numbers.

4.1.3 Breeding Birds

Birds recorded at the site were generally commonly occurring woodland and garden bird species however some birds listed as Birds of Conservation Concern (BoCC) were recorded at the site. This included house sparrow, starling and song thrush on the BoCC Red List; plus dunnock, mallard, swift and tree creeper recorded from the BoCC amber list.

The site is considered to support a moderately diverse range of relatively common bird species which are likely to breed and forage within habitats at the site.

Habitats of greatest value are considered to be the scrub, woodland and hedgerow habitats around the site's boundaries.

4.1.4 Further Botanical Surveys

The grassland habitats are considered to be relatively species-rich albeit with some organic enrichment due to cattle grazing. The greatest species richness is considered to be within the northern half of the larger pasture field at the site (Target Note 1) where plant species present within the adjacent Local Wildlife Site extend into the study site itself.

The grasslands are considered to grade from high-quality, unimproved neutral grassland within the adjacent Local Wildlife Site, through to moderately diverse semi-improved grassland within the north half of the site, through to species-poor, semi-improved grassland habitats at the southwest corner of the site.

4.2 Recommendations

4.2.1 Habitats

It is considered that the grassland habitats within the northern half of the site are those of greatest biodiversity value and that these offer opportunities to provide biodiversity enhancement.

This area of grassland is moderately diverse and has not suffered the ill effects of intensive agriculture. This grassland could be relatively easily restored and managed to provide further unimproved neutral grassland habitats of a similar quality to that offered within the adjacent Local Wildlife Site.

It is recommended that any development seeks to retain a significant area of the ecologically valuable grassland habitats within the northern half of the site and that these are managed to enhance their biodiversity value. The retention and ecological improvement of an appropriate area of land would provide suitable mitigation for the loss of less valuable grassland habitat to any development.

In order to endure the protection and appropriate management of the mitigation grassland, the retained area of habitat could be gifted to the local Wildlife Trust (or other appropriate local conservation organisation) or offered on a long-term lease with the organisation paid a commuted sum at the start of the development to fund the long-term management of the grassland habitats (e.g. to provide a minimum of 30 years of habitat management). This would allow the potential expansion of the adjacent Caeau Abermorddu Local Wildlife Site to encompass the grassland mitigation area.

A suitable habitat management plan would need to be produced for the grassland area. This could be undertaken in collaboration with the potential conservation management organisation and could comprise of managing the field as a hay meadow or allowing low intensity grazing of the field for certain periods of the year.

Other areas of biodiversity value include the boundary features, woodland and scrub along the northern and western boundaries of the site; the hedge, ditch and scrub along the site's eastern boundary with Wrexham Road; and the tree lined brook that runs through the centre of the site.

As well as being of conservation value in their own right, these features provide refuge, breeding and foraging habitat for a variety of local wildlife including a moderately diverse assemblage of common bird species. These features also form an unbroken network of wildlife habitats forming potentially important dispersal corridors around and through the site.

It is recommended that any development seeks to retain these features where practicable with an appropriate buffer area retained between the retained features and any development (including the gardens of any housing).

The proposed development will need to ensure that there are no negative impacts on habitats surrounding the site, particularly within the adjacent Local Wildlife Site.

Potential impacts could include alterations to drainage and hydrology which could impact upon the adjacent wetland habitats immediately to the north of the site.

It is therefore recommended that an appropriate drainage plan is produced. This could include the directing of rain water from building roofs towards the wetland areas and could include the capture and management of untreated water from vehicle driveways and areas of hardstanding to avoid pollution.

Measures should also be put in place to avoid the spread of non-native flora from residential gardens or the inappropriate disposal of garden waste in to areas which could impact the adjacent Local Wildlife Site habitats.

This can be achieved by the careful design of the site layout; maintenance of an appropriate buffer area between key site boundaries and the development and avoiding locating rear gardens of properties directly onto the Wildlife Site or the adjacent buffer area.

Further recommendations have already been provided within previous ecological reports for the site and these are considered to still be appropriate (See Kingdom Ecology Report: '*Land at Wrexham Road, Abermorddu, Further Ecological Assessment (Bat Activity and Great Crested Newt), 9 July 2016*' and Kingdom Ecology Report: '*Wrexham Road, Abermorddu, Preliminary Ecological Appraisal, 27 January 2016*'

Recommendations within these previous reports include the provision of bat and bird boxes at the site, the timing of vegetation clearance works to avoid the nesting bird season, the retention of appropriate buffers around boundary features, the production of a bat friendly lighting plan and a requirement to undertake further bat assessments of any mature trees should their removal be envisaged.



5 Appendix

Table 1- Survey Dates and Weather Conditions

Visit Date	Temperature °C	Weather
30/03/19	12	Calm, dry, sunny with high cloud.
06/04/19	12	Calm, dry, sunny with high cloud.
09/04/19	12	Light breeze, 50% cloud, sunny spells, dry.
19/4/19	14	Light breeze, sunny, clear, dry.
06/05/19	12	Calm, 50% cloud, sunny spells, dry.
16/05/19	15	Calm, dry, sunny, clear.
25/05/19	16	Light breeze, 60% cloud, sunny spells, dry.
26/05/19	16	Light breeze, 60% cloud, sunny spells, dry.

Table 2- Bird Survey Results

Species	BoCC Status	Where recorded
blackbird		Scrub and woodland habitats
blackcap		Scrub and woodland habitats
blue tit		Scrub habitats
buzzard		Over site
carrion crow		Foraging in grassland
chaffinch		Scrub habitats and along brook
chiffchaff		Scrub habitats
coal tit		Woodland
duncock	Amber	Scrub habitats and bramble
goldcrest		Scrub at north of site
goldfinch		Along brook and east hedge
great tit		Scrub and woodland habitats
green woodpecker		Woodland

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Species	BoCC Status	Where recorded
house sparrow	Red	Mainly in hedgerow on east boundary
jackdaw		Foraging in grassland
Jay		Woodland
lesser whitethroat		Scrub on western boundary
long-tailed tit		Scrub and hedgerow
magpie		Woodland
mallard	Amber	Over site
robin		Scrub and woodland habitats
song thrush	Red	Woodland
sparrow hawk		Over site
starling	Red	Hedgerows on east boundary and foraging in grassland
swallow		Over site
swift	Amber	Over site
tree creeper	Amber	Woodland
whitethroat		Scrub on western boundary
wood pigeon		Scrub and woodland habitats

Table 3- Abermorddu Species List June 2018 (provided by Flintshire County Council)

Latin name	Common name	DAFOR
Grassland plus Ditch and Hedge margins		
<i>Achillea millefolium</i>	Yarrow	O
<i>Acer psuedoplatanus</i>	Sycamore	Hedges
<i>Adjuqa reptans</i>	Bugle	R
<i>Agrostis stolonifera</i>	Creeping Bent	F
<i>Angelica sylvatica</i>	angelica	R
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	F
<i>Anthriscus sylvestris</i>	Cow parsley	O
<i>Bromus hordeaceus</i>	Soft Brome	O
<i>Cardamine pratensis</i>	Cuckoo flower	R
<i>Carex hirsuta</i>	Hairy sedge	O
<i>Centaurea nigra</i>	Black knapweed	R
<i>Cerasteum fontanum</i>	Mouse eared chickweed	O
<i>Cirsium arvense</i>	Creeping thistle	LF
<i>Cirsium palustris</i>	Marsh thistle	F
<i>Conopodium majus</i>	Pignut	O
<i>Crataegus monogyna</i>	Hawthorn	H
<i>Cynosurus cristatus</i>	Crested dogs tail	R

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Latin name	Common name	DAFOR
<i>Dactylis glomerata</i>	Cocks foot	R
<i>Dryopteris felix maas</i>	Male fern	R
<i>Epilobium hirsutum</i>	Great Willowherb	Ditch
<i>Festuca rubra</i>	Red Fescue	R
<i>Filipendula ulmaria</i>	Meadowsweet	O
<i>Galium aparine</i>	Cleavers	O
<i>Galium palustre</i>	Common Marsh bedstraw	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Holcus lanatus</i>	Yorkshire fog	F
<i>Hyacinthoides non scriptus</i>	Bluebell	O
<i>Juncus acutiflorus</i>	Sharp flowered rush	O
<i>Juncus effuses</i>	Soft rush	F
<i>Juncus inflexus</i>	Hard rush	R
<i>Lolium perenne</i>	Ryegrass	Southern Field - A
<i>Lotus corniculatus</i>	Birds foot trefoil	F
<i>Luzula campestris</i>	Field Wood-rush	R
<i>Lychnis flos-cuculi</i>	Ragged robin	R
<i>Mentha aquatica agg</i>	Water mint	D
<i>Poa pratensis</i>	Smooth meadow grass	O
<i>Poa trivialis</i>	Rough meadow grass	F
<i>Plantago lanceolata</i>	Ribwort plantain	O
<i>Potentilla anserina</i>	Silverweed	R
<i>Potentilla erecta</i>	Tormentil	F
<i>Pteridium aquilinum</i>	Bracken	LA
<i>Ranunculus acris</i>	Meadow buttercup	R
<i>Ranunculus bulbosus</i>	Bulbous buttercup	R
<i>Ranunculus repens</i>	Creeping buttercup	F
<i>Rubus fruticosus agg</i>	Bramble	LA
<i>Rumex acetosa</i>	Common sorrel	F
<i>Rumex sanguineus</i>	Wood dock	R
<i>Sambucus nigra</i>	Elder	Hedges
<i>Senecio jacobaea</i>	Ragwort	R
<i>Silene dioica</i>	Red Campion	O
<i>Taraxacum agg</i>	Dandelion	R
<i>Trifolium repens</i>	White clover	O
<i>Trifolium pratense</i>	Red clover	O
<i>Urtica dioica</i>	Stinging nettle	LA
<i>Veronica beccabunga</i>	Brooklime	Ditch
<i>Veronica chamaedrys</i>	Germander speedwell	F
<i>Veronica officinalis</i>	Heath Speedwell	R
Also recorded in 2011		
<i>Lathyrus pratensis</i>	Meadow Vetchling	
<i>Dactylorhiza fuchsii</i>	Common spotted orchid	
<i>Eupatorium cannabinum</i>	Hemp agrimony	
<i>Rhinanthus minor</i>	Yellow rattle	
<i>Stellaria graminea</i>	Lesser Stitchwort	

PHOTOGRAPHS

Photograph 1 - Bluebells at northern half of site grassland looking towards northeast corner of site (May 2019)



Photograph 2- Grassland at southwest corner of Site (May 2019)



Photograph 3 - Grassland and ruderal herb Southeast at corner of site, looking north (August 2019)



Photograph 4- Northern half of Site, looking north (August 2019)



Photograph 5 - Grassland habitats in LWS (May 2019)



Photograph 6- Wetland habitats in adjacent LWS (May 2019)





