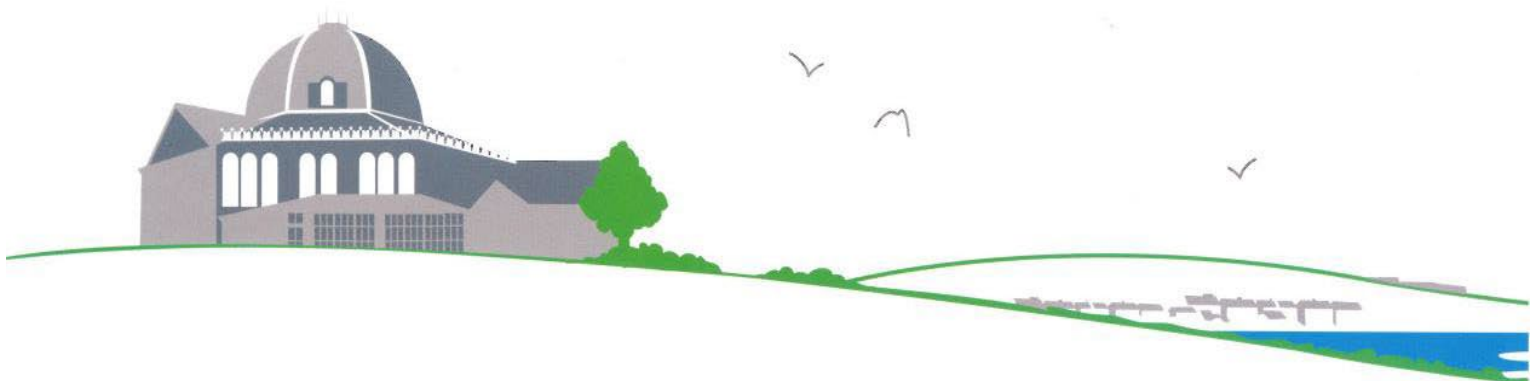




WREXHAM COUNTY BOROUGH COUNCIL

MAES Y CAPEL

EXTENDED PHASE 1 HABITAT SURVEY AND
PRELIMINARY ROOST INSPECTION FOR BATS



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January 2023

This project has been undertaken in accordance with PAA policies and procedures on quality assurance.

Signed: _____



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1 Preliminary Ecological Assessment Map

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1. INTRODUCTION

- 1.1 Penny Anderson Associates (PAA) was commissioned by Wrexham County Borough Council to undertake an extended Phase 1 habitat survey and preliminary roost inspection for bats at Maes Y Capel, Wrexham (nearby postcode LL11 3UF). The site boundary covers a recently vacated nursing home and associated grounds.
- 1.2 This report details the methods and results of the surveys as well as making any further recommendations as necessary.

Legislative Context

- 1.3 A range of international and national legislation has been established in the UK to protect important nature conservation sites and priority species. At the international level, European Union (EU) Directives require individual member states to implement their conservation provisions nationally for the benefit of Europe as a whole. These Directives have been transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (amended).
- 1.4 Other international conventions include: the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979), which requires the maintenance of populations of wild flora and fauna, giving particular protection to endangered and vulnerable species; and the Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979), which requires the protection of migratory species throughout their entire range. The above conventions are implemented in England and Wales via the Wildlife and Countryside Act (WCA), 1981 (as amended) and Countryside and Rights of Way (CROW) Act 2000. This legislation also protects important habitats and sites such as Sites of Special Scientific Interest (SSSI).
- 1.5 Section 6 under Part 1 of the Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (the S6 duty) for public authorities in the exercise of functions in relation to Wales. The S6 duty requires that public authorities must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems.
- 1.6 Section 7 goes on to deal with biodiversity lists and duty to take steps to maintain and enhance biodiversity. This section replaces the duty in Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 in Wales. The Welsh Ministers publish, review and revise lists of living organisms and types of habitat in Wales that they consider are of key significance to sustain and improve biodiversity in relation to Wales. These are known as Priority Species and Priority Habitats¹.
- 1.7 Finally, Planning Policy Wales (PPW 2021²) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes³ (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales.
- 1.8 The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and

¹ <https://www.biodiversitywales.org.uk/environment-wales-act>

² https://gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf

³ <https://gov.wales/technical-advice-note-tan-5-nature-conservation-and-planning>

cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation.

1.9 The Environment (Wales) Act 2016 also introduces the Sustainable Management of Natural Resources (SMNR) and sets out a framework to achieve this as part of decision-making. The relevant key features of the SMNR approach to which the planning system can contribute are:

- Improving the resilience of ecosystems and ecological networks;
- Halting and reversing the loss of biodiversity;
- Maintaining and enhancing green infrastructure based on seeking multiple ecosystem benefits and solutions; and
- Ensuring resilient locational choices for infrastructure and built development, taking into account water supplies, water quality and reducing, wherever possible, air and noise pollution and environmental risks, such as those posed by flood risk, coastal change, land contamination and instability.

Invasive Species

1.10 Certain non-native species that have been introduced into the UK are regarded as being a threat to native biodiversity. Legislative measures have, therefore, been put in place to prevent the spread of these invasive species in the wild.

1.11 Under section 14 of the WCA, 1981 (as amended), it is illegal to introduce plants listed under Part II of Schedule 9 of the WCA into the wild or sell these species. Offences include causing the spread of viable plant material or neglecting to contain or appropriately manage non-native species.

1.12 Commonly introduced Schedule 9 species include non-native cotoneaster species, specifically, small-leaved cotoneaster⁴ (*Cotoneaster microphylla*) and wall cotoneaster (*C. horizontalis*), Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Reynoutria japonica*).

⁴ Plant species names follow Stace 2019

2. METHODS

Desk Study

- 2.1 A request for details of protected and notable species and locally designated sites within 2km of the centre of the site was made to Cofnod with data returned in January 2023. Additionally, the Multi-Agency Geographic Information for the Countryside (MAGIC⁵) website was consulted for details of statutory designated sites and Priority Habitats within a 2km search area from the centre of the site. The desk study was compiled by Assistant Ecologist Stephen Griffith⁶.
- 2.2 It is important to note that the desk study results provide an indication of the species present in and around the site, and do not confirm current presence or absence of any species. Protected species are often under-recorded in county wildlife databases.

Extended Phase 1 Habitat Survey

- 2.3 An extended Phase 1 habitat survey was undertaken by Senior Ecologist Rob Lamb⁷ on 4th January 2023.
- 2.4 The survey was carried out in accordance with the methodology in the *Handbook for Phase 1 Habitat Survey* (JNCC 2010). This entailed mapping, describing and collating plant species lists for habitats within the site boundary. The broad habitat types were mapped, with each habitat type coded according to the standard JNCC Phase 1 habitat survey procedure.
- 2.5 Each plant species was assigned abundance codes within each habitat. This was done using the 'DAFOR' scale (where: d = dominant; a = abundant; f = frequent; o = occasional; r = rare), which provides an indication of the relative abundance of each plant species present within a particular habitat. Common names and scientific names according to Stace (2019) are provided in the species list (Appendix 1) but common names only are referred to in the text.
- 2.6 The survey was 'extended' (Institute of Environmental Assessment 1995) to include notes on fauna and habitats which could potentially support protected or notable species. The presence of, or potential for, protected or notable species was noted on the field map and in the written target notes (TN) during the survey.

Preliminary Bat Roost Inspection

- 2.7 The built structure on site was subject to a detailed inspection to assess potential to support roosting bats. This was completed by Senior Ecologist Rob Lamb (Accredited Agent of Dr Sarah Ross' Natural Resources Wales Bat Survey Class 1 Licence S088922/1) on 4th January 2023 following standard methodologies. This included using a high-powered torch and binoculars, making detailed notes and taking photographs (Appendix 2) in accordance with survey guidance (Collins 2016).
- 2.8 Structures were inspected using close-focussing binoculars and a high-powered torch to search for potential roost features (PRF) that could be used by bats, such as small holes and crevices in soffits or beneath roof coverings, and also potential access points for bats to enter/exit internal

⁵ <https://magic.defra.gov.uk/MagicMap.aspx> (last accessed [28th February 2022])

⁶ Qualifying member of Chartered Institute of Ecology and Environmental Management (CIEEM)

⁷ Associate member of CIEEM

areas such as cavity walls. A search was also made for any evidence of bat presence, such as accumulations of droppings and feeding remains or sightings of the animals themselves.

- 2.9 Each PRF was categorised either as Low, Moderate or High potential for roosting bats and, using this data, the structure as a whole was assigned to one of the same categories based on its most suitable feature, or Negligible where no suitable features were present.
- 2.10 The habitats within the site and immediately adjacent areas were also considered for their general suitability for commuting and foraging bats in order to place the site in the context of its surroundings, as this can have a bearing on the likelihood of a roost being present.
- 2.11 The assessment of suitability was based on the broad criteria outlined in Tables 1 and 2 (Collins 2016), combined with the professional judgement and experience of the surveyor in recognising suitable habitat features and field signs of bats.

Table 1 Building Assessment Criteria

Suitability	Description of Roosting Habitats
Negligible	No features likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically, but does not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats. A tree of sufficient size to contain potential roost features but none seen from the ground or only those with very limited suitability.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost type of high conservation significance (i.e. suitable for day roosting but unsuitable for maternity or hibernation roost.)
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. (i.e. suitable for maternity and/or hibernation roost.)
Confirmed Roost	A structure or tree with evidence of bat presence, i.e. droppings, feeding remains, audible bat calls heard during daytime survey or sightings of the animals themselves, existing (reliable) record of bats roosting at the location.

Table 2 Bat Habitat Suitability Assessment Criteria

Suitability	Description of Commuting/Foraging Habitats
Negligible	No habitat features likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.

Limitations

- 2.12 The habitats within the site were fully accessible. However, internal access to the building was not available due to the structure being currently subject to a period of asbestos removal. The lack of internal survey, particularly for inspection of the loft space, was taken into consideration when assessing the overall bat roost potential of the structure, taking a more precautionary approach as necessary.
- 2.13 The seasonal timing of the survey means that some plant species may have been under-recorded or unrecorded. However, the habitats were surveyed sufficiently to map the broad habitat types present within the site.

3. RESULTS

Desk Study

- 3.1 The desk study utilised data obtained from Cofnod in January 2023, searching within a 2km radius of the site centre. The MAGIC search engine was also used to obtain additional data on European Protected Species (EPS) licences and Priority Habitats, as well as designated and non-designated sites within 2km of the site centre.

Statutory Protected Sites

European Sites

- 3.2 European protected sites include Special Areas of Conservation (SAC), Special Protection Areas (SPA), RAMSAR wetland sites, possible SAC, potential SPA and proposed RAMSAR sites.
- 3.3 One SAC was present within the 2km search area: Berwyn and South Clwyd Mountains SAC (1.4km west of site boundary). Annex 1 habitats that are the primary reason for the selection of this site include:
- 4030 European dry heaths. Berwyn contains the largest stands of upland European dry heath in Wales. The dry heath is characteristic of Berwyn's more easterly location and less oceanic climate than the other major Welsh uplands, and consists principally of NVC type H12 *Calluna vulgaris* – *Vaccinium myrtillus* heath, with frequent crowberry (*Empetrum nigrum*) and occasional cowberry (*Vaccinium vitis-idaea*). Other heath vegetation present includes areas of H18 *Vaccinium myrtillus* – *Deschampsia flexuosa* heath and in some areas stands of damp H21 *Calluna vulgaris* – *Vaccinium myrtillus* – *Sphagnum capillifolium* heath. These latter heaths occur in an intermediate position between the drier heaths and blanket mire and support occasional plants of lesser twayblade (*Listera cordata*).
 - 7130 Blanket bogs (* if active bog) * Priority feature. Berwyn supports the most extensive tract of near-natural blanket bog in Wales. Much of the blanket bog vegetation is dominated by NVC type M19 *Calluna vulgaris* – *Eriophorum vaginatum* blanket mire, with crowberry and an often extensive hypnoid moss cover; within this community cloudberry (*Rubus chamaemorus*) is found close to the southernmost limit of its British range. On deeper peats, there are smaller stands of M18 *Erica tetralix* – *Sphagnum papillosum* mire, some of which exhibit distinctive surface patterning. The mire vegetation shows transitions to heather (*Calluna vulgaris*)-dominated dwarf-shrub heath.

Sites of Special Scientific Interest

- 3.4 SSSI represent a selection of this country's best wildlife and geological sites and cover approximately 7% of the terrestrial area of the country (with over 4,000 separate sites in England).
- 3.5 One SSSI is located within the 2km search area: Ruabon/Llanysilio Mountains Wrexham and Minera (1.6km south-west of the site boundary). The site is notified firstly on biological grounds, for its heather moor, limestone and neutral grassland habitats and for its species interest comprising a range of upland breeding birds, rare and uncommon plants and the use of mines and caves by bats. The site is also notified on geological grounds as it contains three sites of special interest within its boundaries.

National and Local Nature Reserves

- 3.6 No national or local nature reserves are present within the 2km search area.

Non-Statutory Protected Sites

- 3.7 A number of Local Wildlife Sites (LWS) are present within the 2km search area. The details of these sites are displayed in Table 3.

Table 3 Wildlife Sites

Local Wildlife Site	Distance from Site (m)	Size (ha)	Description
Afon Gwenfro	740	16.5	A reclaimed coal site with grasslands, scrub, a small wetland, and a broadleaved woodland plantation.
Big Wood	1377	32.6	The wood along the River Clywedog is a mixture of conifer plantation, beech plantation and patches of semi-natural broad-leaved woodland.
Cae Penymynydd	1589	2.2	An east facing field of semi-improved neutral grassland adjacent to an SSSI, with a marshy patch dominated by sharp-flowered rush.
Cae Plas Mostyn Bach	1141	-	-
Glascoed Wood	1964	38.2	A large ancient broad-leaved woodland along the Glascoed valley with rich ground flora and a diverse neutral grassland field.
Graig Fawr, Minera [Candidate]	1229	3.1	-
Higher Berse Marsh	1783	9.5	Two areas of marshy grassland with small patches of open water and swamp.
Nant Mill - Grasslands	1941	5.9	-
Nant Mill Bat Sites	1435	<0.1	
New Brighton	711	31.3	A disused mine and quarry colonised by a mosaic of birch scrub, heather, gorse, bracken and soft rush - a good area for birds.
Pen-Y-Nant, Minera	1407	-	-
Plas Mostyn Mawr	648	3.3	A moderately sloping field of semi-improved neutral grassland with gorse scrub and several marshy patches.
Roseburn Fields	489	1.8	Three fields of semi-improved neutral grassland.
The Smelt	218	11.9	The Smelt is a complex area along the river Clywedog, with broad-leaved woodland, scrub, neutral grassland and some very small patches of calcareous grassland along the riverbanks. There is also a species rich marshy grassland on a slope on the east side of the river.

Priority Habitats

- 3.8 Many records of Priority Habitat ancient woodland are present within the 2km search area. The closest of these records is located 0.3km west of the site boundary.
- 3.9 Three records of Priority Habitat traditional orchards are present within the 2km search area. The closest of these records is located 0.7km south-east of the site boundary.

- 3.10 One record of Priority Habitat lowland dry acid grassland is present 0.9km south of the site boundary.
- 3.11 A large area of Priority Habitat upland heathland is present as part of the Berwyn and South Clwyd Mountains SAC, 1.4km west of the site boundary.
- 3.12 Two records of Priority Habitat lowland heathland are present closer to the site boundary, with the nearest 0.9km south-west of the site boundary.
- 3.13 A number of Priority Habitat upland flushes, fens and swamps records are present, associated with the Berwyn and South Clwyd Mountains SAC.
- 3.14 Three records of Priority Habitat lowland fens and reedbeds are present within the 2km search area, with the closest record located 1.85km east of the site boundary.
- 3.15 Two records of Priority Habitat - purple moor-grass (*Molinia caerulea*) and rush (*Juncus*) pastures are present within the 2km search area, with the closest record located 1.85km east of the site boundary.

Protected and Notable Species

Granted European Protected Species Licence Applications

- 3.16 No granted EPS licence applications were returned within the 2km search area

Badger

- 3.17 Twenty-nine records for badger (*Meles meles*) were returned from the 2km data search, dating from 1999 to 2022. Twenty of these records were for badger setts. The closest of these records is located 460m from the site boundary. Due to the confidential nature of this information, exact locations cannot be disclosed.

Otter

- 3.18 Seven records for otter (*Lutra lutra*) were returned from the 2km data search, dating from 1997 to 2020. The closest of these records was located 940m south of the site boundary, at the River Clywedog.

Water Vole

- 3.19 No records for water vole (*Arvicola amphibius*) were returned from the 2km data search.

Bats

- 3.20 Three records for bat roosts were returned from the 2km data search, dating from 2014 to 2018. These records are listed in Table 4. The closest of these records was for a brown long-eared bat (*Plecotus auritus*) roost, and a natterer's (*Myotis nattereri*) roost, both dating from 2018.
- 3.21 A number of other bat records were also returned from the 2km data search. Species recorded included Brandt's bat (*Myotis brandtii*), common pipistrelle (*Pipistrellus pipistrellus*), lesser horseshoe bat (*Rhinolophus hipposideros*) and soprano pipistrelle (*Pipistrellus pygmaeus*).

Table 4 Bat Roost Records

Common Name	Scientific Name	No. of Records	Closest Record (approximate distance and direction from site boundary)
Bat species	Chiroptera	1	1.10km SE
Brown long-eared bat	<i>Plecotus auritus</i>	1	620m S
Natterer's bat	<i>Myotis nattereri</i>	1	620m S

Other Mammals

- 3.22 Three records for brown hare (*Lepus europaeus*) were returned from the 2km data search, dating from 2012 to 2018. The closest of these records is located 1.5km south-west of the site boundary at Berwyn and South Clwyd Mountains SAC.
- 3.23 Thirty-six records of hedgehog (*Erinaceus europaeus*) were returned from the 2km data search, dating from 2005 to 2022. The closest of these records was located 350m north-west of the site boundary, with the remaining records widespread in all directions.
- 3.24 Two records for polecat (*Mustela putorius*) were returned from the 2km data search, dating from 2005 to 2015. The closest of these records was located 1.4km south-east of the site boundary.

Birds

- 3.25 All nesting birds, their nests and eggs are protected from harm under the WCA, 1981 (as amended). In addition, species listed under Schedule 1 of the WCA are further protected against disturbance when breeding.
- 3.26 A number of bird species are listed under Section 41 in the NERC Act (2006, amended) as species 'of principal importance for the purpose of conserving biodiversity'. These species are often known as the 'S41 species'. There is a legal requirement for a public body to 'have regard to' these species in relation to maintaining biodiversity. The S41 list overlaps somewhat with the UK BAP species, with national or local targets to maintain and enhance populations.
- 3.27 Furthermore, the Birds of Conservation Concern (BoCC) report lists those bird species that are classed as being of High (Red listed) and Medium (Amber Listed) conservation concern based on population monitoring (Stanbury *et al.* 2021). This Red and Amber classification helps guide the assessment of bird species of conservation interest on or near to a site, alongside legislative and policy requirements.
- 3.28 A small number of Schedule 1 species, including barn owl (*Tyto alba*), brambling (*Fringilla montifringilla*), fieldfare (*Turdus pilaris*), goshawk (*Accipiter gentilis*), hen harrier (*Circus cyaneus*), hobby (*Falco subbuteo*), kingfisher (*Alcedo atthis*), merlin (*Falco columbarius*), osprey (*Pandion haliaetus*), peregrine (*Falco peregrinus*), red kite (*Milvus milvus*) and redwing (*Turdus iliacus*) were recorded within the 2km search area; these records are classed as confidential. All other protected and notable bird species records within the 2km search area are listed in Table 3 along with their conservation status.

Table 5 Bird Species of Principal Importance

Common Name	Scientific Name	Amber ⁸ Listed	Red Listed	Section 42 Priority Species ⁹
Black grouse	<i>Lyrurus tetrix</i>		x	x
Black-headed gull	<i>Chroicocephalus ridibundus</i>	x		x
Bullfinch	<i>Pyrrhula pyrrhula</i>	x		x
Cuckoo	<i>Cuculus canorus</i>		x	x
Curlew	<i>Numenius arquata</i>		x	x
Dunnock	<i>Prunella modularis</i>	x		x
Golden plover	<i>Pluvialis apricaria</i>			x
Grasshopper warbler	<i>Locustella naevia</i>		x	x
Hawfinch	<i>Coccothraustes coccothraustes</i>		x	x
Herring gull	<i>Larus argentatus</i>		x	x
House sparrow	<i>Passer domesticus</i>		x	x
Kestrel	<i>Falco tinnunculus</i>	x		x
Lapwing	<i>Vanellus vanellus</i>		x	x
Lesser redpoll	<i>Acanthis caberet</i>			x
Linnet	<i>Linaria cannabina</i>		x	x
Marsh tit	<i>Poecile palustris</i>		x	x
Pied flycatcher	<i>Ficedula hypoleuca</i>	x		x
Red grouse	<i>Lagopus lagopus</i>			x
Reed bunting	<i>Emberiza schoeniclus</i>	x		x
Skylark	<i>Alauda arvensis</i>		x	x
Song thrush	<i>Turdus philomelos</i>	x		x
Spotted flycatcher	<i>Muscicapa striata</i>		x	x
Starling	<i>Sturnus vulgaris</i>		x	x
Tree sparrow	<i>Passer montanus</i>		x	x
Turtle dove	<i>Streptopelia turtur</i>		x	x
Yellowhammer	<i>Emberiza citrinella</i>		x	x

⁸ The UK's birds can be split in to three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green.

⁹ Species of Principal Importance under Section 42 of the NERC Act 2006.

Amphibians

- 3.29 Four records of great crested newt (*Triturus cristatus*, GCN) were returned from the 2km data search, dating from 1992 to 2013. The closest of these records was located at a pond 1.4km south-west of the site boundary, adjacent to Berwyn and South Clwyd Mountains SAC.
- 3.30 Four records of smooth newt (*Lissotriton vulgaris*) were returned from the 2km data search, dating from 1992 to 2021. The closest of these records was located 1.4km south-west of the site boundary.
- 3.31 Two records of common toad (*Bufo bufo*) were returned from the 2km data search, dating from 1998 to 2008. The closest of these records was located 1.4km north-east of the site boundary.
- 3.32 Four records of common frog (*Rana temporaria*) were returned from the 2km data search, dating from 1986 to 2022. The closest of these records was located 1.8km east of the site boundary.

Reptiles

- 3.33 Forty-three records of slow-worm (*Anguis fragilis*) were returned from the 2km data search, dating from 1996 to 2016. The majority and closest of these records were located 880m south-west of the site boundary at Minera Lead Mines Country Park.
- 3.34 Twelve records of common lizard (*Zootoca vivipara*) were returned from the 2km data search, dating from 1998 to 2018. The majority and closest of these records were located 880m south-west of the site boundary at Minera Lead Mines Country Park.
- 3.35 Three records of adder (*Vipera berus*) were returned from the 2km data search, dating from 1990 to 2015. The closest of these records was located 1.2km south of the site boundary, adjacent to the River Clywedog.
- 3.36 Three records of grass snake (*Natrix helvetica*) were returned from the 2km data search, dating from 1981 to 2009. The closest of these records was located 950m south of the site boundary.

Invertebrates

- 3.37 A number of records for notable invertebrate species were returned from the 2km data search. These are listed in Table 6. The closest of these records was for a small heath (*Coenonympha pamphilus*), located 700m south-west of the site boundary.

Table 6 Notable Invertebrate Species

Common Name	Scientific Name
Autumnal rustic	<i>Eugnorisma glareosa</i>
Broom moth	<i>Ceramica pisi</i>
Brown-spot pinion	<i>Anchoscelis litura</i>
Buff ermine	<i>Spilosoma lutea</i>
Cinnabar	<i>Tyria jacobaeae</i>
Dingy skipper	<i>Erynnis tages</i>
Feathered gothic	<i>Tholera decimalis</i>
Ghost moth	<i>Hepialus humuli</i>
Grayling	<i>Hipparchia semele</i>
Red carpet	<i>Xanthorhoe decoloraria</i>

Common Name	Scientific Name
Rosy rustic	<i>Hydraecia micacea</i>
Sallow	<i>Cirrhia icteritia</i>
Small emerald	<i>Hemistola chrysoprasaria</i>
Small heath	<i>Coenonympha pamphilus</i>
Small pearl-bordered fritillary	<i>Boloria selene</i>
Small phoenix	<i>Ecliptopera silaceata</i>
Wall	<i>Lasiommata megera</i>
White ermine	<i>Spilosoma lubricipeda</i>

White-clawed Crayfish and Notable Fish

- 3.38 No records of white-clawed crayfish (*Austropotamobius pallipes*) or notable fish species were returned from the 2km data search.

Notable and Invasive Non-Native Plant Species

- 3.39 Records for four notable plant species were returned from the 2km data search. These are listed in Table 7. The closest of these records was for common mouse-ear, located 390m west of the site boundary.
- 3.40 Records for eight Invasive Non-Native Species (INNS) of plants were returned from the 2km data search. These are listed in Table 8. The closest record was for Himalayan balsam, located 320m south-west of the site boundary.

Table 7 Notable Plant Species

Common Name	Scientific Name
Bluebell	<i>Hyacinthoides non-scripta</i>
Common mouse-ear	<i>Cerastium fontanum</i>
Frog orchid	<i>Coeloglossum viride</i>
Maidenhair spleenwort	<i>Asplenium trichomanes</i>

Table 8 Invasive Non-Native Plant Species

Common Name	Scientific Name
Himalayan balsam	<i>Impatiens glandulifera</i>
Himalayan cotoneaster	<i>Cotoneaster simonsii</i>
Japanese knotweed	<i>Fallopia japonica</i>
Japanese rose	<i>Rosa rugosa</i>
Montbretia	<i>Crocsmia pottsii</i> x <i>aurea</i> = <i>C. x crocosmiiflora</i>
New Zealand pigmyweed	<i>Crassula helmsii</i>
Nuttall's waterweed	<i>Elodea nuttallii</i>
Variegated yellow archangel	<i>Lamium galeobdolon</i> subsp. <i>argentatum</i>

Phase 1 Habitat Survey

- 3.41 A detailed map of the site is provided in Figure 1. A species list is provided as Appendix 1, along with photographs in Appendix 2.
- 3.42 As well as the built structure of the recently vacated nursing home within the centre of the site, (Photograph 1) the following habitat types were present:
- Hardstanding car park, footpaths and adjacent roads;
 - Compartments of mown amenity grassland (Photograph 2). The grassland was dominated by perennial rye-grass, interspersed with forbs typical of amenity mown grassland;
 - Introduced shrub compartments in the south-west of the site;
 - Ephemeral/short perennial vegetation present in paving cracks and at the foot of the building; and
 - A small number of scattered trees in the south of the site.

Invasive Non-Native Species

- 3.43 A small stand of wall cotoneaster was recorded within the site (located at Target Note 1, Figure 1). The species is listed as an INNS on Schedule 9 of the WCA, 1981 (as amended).

Preliminary Roost Inspection and Bat Habitat Assessment

- 3.44 The single built structure within the site is a two-storey, recently vacated nursing home.
- 3.45 The structure is red brick-built. Brickwork and mortar was in solid condition throughout. Decorative vertical tiling is frequently present underneath uPVC windows (Photograph 3). PRF for bats were present where vertical tiling was raised, cracked or loose. This was present in a number of locations around the buildings, at heights favourable for discoverability by bats. The PRF were assessed to be suitable only as crevice features typically used by pipistrelle species (*Pipistrellus* sp.). Security lighting was fixed below these PRF, facing downwards and, therefore, unlikely to dissuade use of the PRF by bats.
- 3.46 Strips of lead flashing were present on the underside of the uPVC windows. Some small gaps were present where flashing had come loose, however, there was generally insufficient to provide PRF.
- 3.47 The soffit overhang present on the underside of the roof of the structure was fixed closely to the top bricks. No locations where access to within the soffit or loft space were noted around the structure.
- 3.48 The structure featured a pitched roof, however, internal access to the loft space was unavailable at the time of survey. Externally, roof and ridge tiles on the roof appeared in good condition and closely fixed without any PRF present. No obvious entrance points to the loft space were noted externally during the survey.
- 3.49 A balcony area on the first floor in the south-west was also present (Photograph 4).
- 3.50 A review of desk study data obtained revealed records for at least six species of bat within 2km of the site. The immediate surrounding area was assessed to have moderate foraging habitat suitability for bats.
- 3.51 Overall, the structure was assessed to have Low potential to support roosting bats. No trees within the site boundary were of sufficient age or size to support roosting bats.

Other Protected Species

- 3.52 Some of the trees and shrubs within the site held potential to support nesting birds during the breeding season (March to August inclusive).
- 3.53 The habitats present were limited and it was considered that the site held negligible potential to support other protected species.

4. DISCUSSION AND RECOMMENDATIONS

- 4.1 The vegetated habitats within the site were of limited value. The site was assessed to be of low ecological value overall.

Bats

- 4.2 The building within the site was assessed to have Low potential to support roosting bats, due to the wide availability of potential crevice roost features associated with raised vertical tiles around the structure.
- 4.3 Therefore, as per best practice guidelines (Collins 2016), a single activity survey is recommended to ascertain presence/absence of roosting bats on the structure. Bat activity surveys are completed during the active survey season (typically May to August inclusive) under suitable weather conditions.
- 4.4 In the outcome that bat roost(s) are confirmed, further survey may be recommended in preparation for applying for a Natural England licence to disturb/destroy roosts.

Breeding Birds

- 4.5 Some of the trees and shrubs within the site have potential to support nesting birds during the breeding season (March to August inclusive).
- 4.6 Vegetation clearance of trees and shrubs should be avoided during the breeding season. If this cannot be achieved then an ecologist should perform a check on the vegetation to confirm absence of nesting birds within 48 hours prior to its removal.

Invasive Non-Native Species

- 4.7 Wall cotoneaster is a listed INNS as per Schedule 9 of the WCA, 1981 (as amended). It is, therefore, illegal to allow the intentional spread of the species onto adjacent land.
- 4.8 If stands of the species, or nearby soil, is to be moved or disturbed then methods should be implemented to facilitate its safe removal from the site by a registered waste carrier and disposal at a specially licenced waste disposal facility.

Enhancements

- 4.9 The site is currently of low ecological value. The development of the site presents an opportunity to enhance outcomes for biodiversity. Recommendations are detailed further in a separate Biodiversity Enhancement Plan document.

Survey Validity

- 4.10 The findings of the survey should be considered valid for a period of 48 months from the date of surveys (January 2023). If works have not commenced by January 2025 then the surveys should be updated to ensure the ecological advice given is based on up-to-date information.

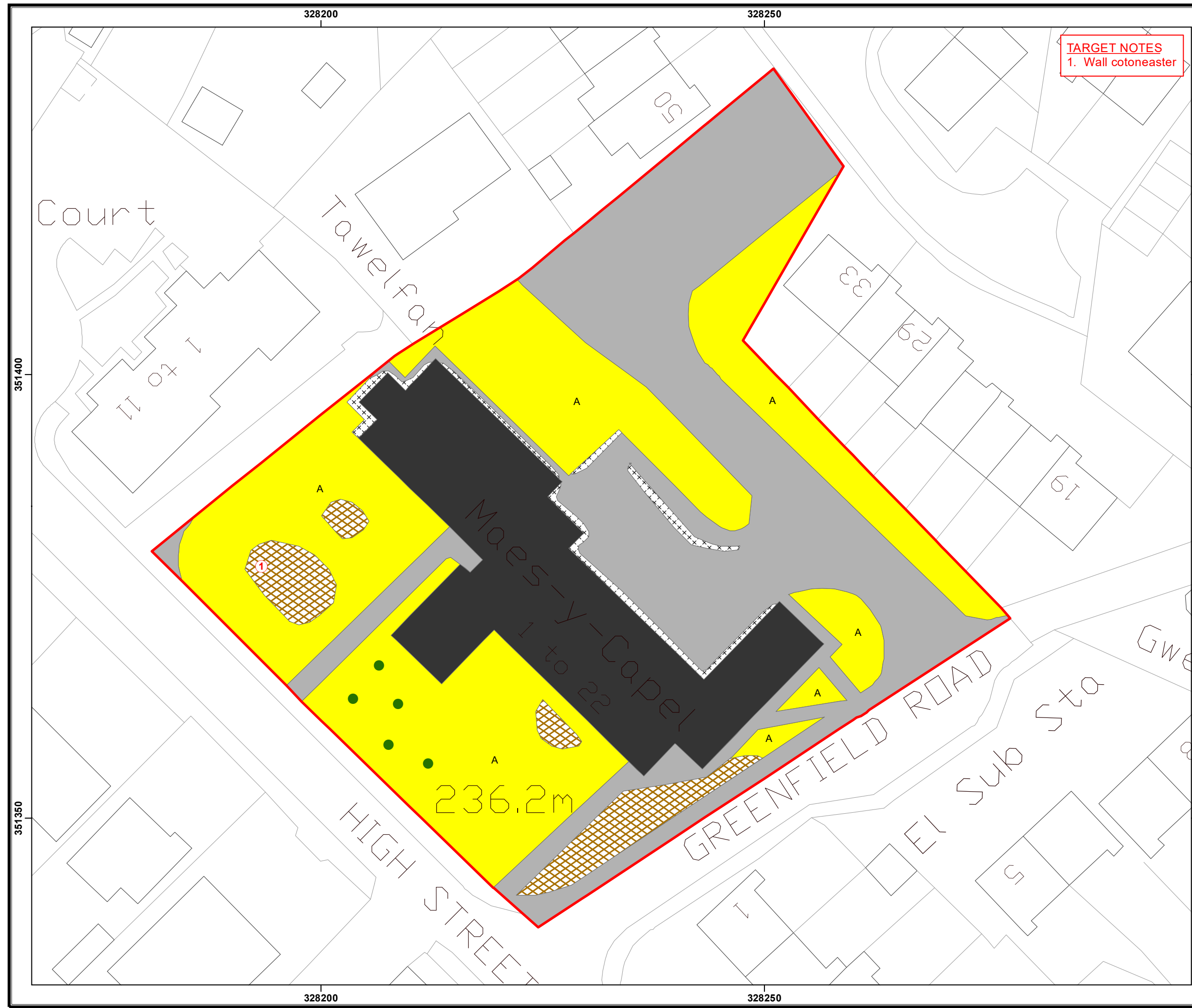
5. REFERENCES

- Collins, J. (ed.), 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn.)*. The Bat Conservation Trust.
- Institute of Environmental Assessment, 1995. *Guidelines for Baseline Ecological Assessment*. E & F.N. Spon, an imprint of Chapman & Hall.
- JNCC, 2010. *Handbook for Phase 1 habitat survey: a technique for environmental audit*. Revised reprint, JNCC.
- Stace, C., 2019. *New Flora of the British Isles. Fourth Edition*. C & M Floristics.
- Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. 2021. Birds of Conservation Concern 5: The Status of All Regularly Occurring Birds in the UK, Channel Islands and Isle of Man. *British Birds*. **114**: 723-747.

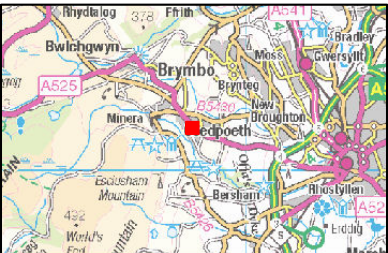
6. ABBREVIATIONS

BoCC	Birds of Conservation Concern
CIEEM	Chartered Institute of Ecology and Environmental Management
CRoW	Countryside and Rights of Way
EPS	European Protected Species
EU	European Union
GCN	Great Crested Newt(s)
INNS	Invasive Non-native Species
JNCC	Joint Nature Conservation Committee
LWS	Local Wildlife Site(s)
MAGIC	Multi Agency Geographic Information for the Countryside
NERC	National Environment and Rural Communities
PAA	Penny Anderson Associates Ltd
PPW	Planning Policy Wales
PRF	Potential Roost Feature(s)
SAC	Special Area(s) of Conservation
SMNR	Sustainable Management of Natural Resources
SPA	Special Protection Area(s)
SSSI	Site(s) of Special Scientific Interest
TN	Target Note(s)
WCA	Wildlife and Countryside Act

FIGURE



TARGET NOTES
1. Wall cotoneaster



Legend

- Survey area
- Phase 1 Habitats**
- J1.2, Amenity grassland
- J1.3, Ephemeral/short perennial (over hardstanding)
- J1.4, Introduced shrub
- J3.6, Building
- J5, Hardstanding
- Scattered trees
- Target note

British National Grid
Projection: Transverse Mercator
False Easting: 400000.000000
False Northing: -100000.000000
Central Meridian: 2.000000
Scale Factor: 0.999601
Latitude Of Origin: 49.000000

ISO A3

0 2.5 5 10 15 Metres



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Telephone 01298 27086

Project Name
Maes-y-Capel

Discipline
Ecology

Title:
**PRELIMINARY
ECOLOGICAL
ASSESSMENT MAP**

Scale: **1:400**

Drawn By: **CC** | Originator: **RL** | Date: **16/01/2023**

Grid Ref.: **328,233 351,385** | Revision: **1.0**

Drawing No.: **Figure 1**

APPENDICES

APPENDIX 1

Botanical Species List

Appendix 1 Botanical Species List

Common Name	Scientific Name	Scattered Trees	Introduced Shrub	Amenity Grassland	Ephemeral/ Short Perennial
Woody Species					
Alder	<i>Alnus glutinosa</i>		R		
Ash	<i>Fraxinus excelsior</i>		R		
Blackthorn	<i>Prunus spinosa</i>		R		
Box	<i>Buxus sempervirens</i>		R		
Cherry laurel	<i>Prunus laurocerasus</i>		O-LA		
Cherry species	<i>Prunus</i> sp.	O	R		
Cypress species	<i>Chamaecyparis/Cupressocyparis</i> sp.		R		
Cotoneaster species	<i>Cotoneaster</i> sp.		O		
Franchet's cotoneaster	<i>Cotoneaster franchetii</i>		O		
Holly	<i>Ilex aquifolium</i>		F		
Japanese barberry	<i>Berberis japonica</i>		F		
Pear	<i>Pyrus communis</i>		R		
Scots pine	<i>Pinus sylvestris</i>	R			
Silver birch	<i>Betula pendula</i>	O			
Viburnum species	<i>Viburnum</i> sp.		O		
Wall cotoneaster**	<i>Cotoneaster horizontalis</i>		O		
Willow-leaved cotoneaster	<i>Cotoneaster salicifolius</i>		O		
Herbs, Grasses, Ferns and Mosses					
Cock's-foot	<i>Dactylis glomerata</i>				R
Common chickweed	<i>Stellaria media</i>				R
Common mouse-ear	<i>Cerastium fontanum</i>			R-LF	R
Common ragwort	<i>Jacobaea vulgaris</i>			R-LF	
Daisy	<i>Bellis perennis</i>			O-LF	
Dandelion	<i>Taraxacum officinale</i> agg.			R	
Herb-Robert	<i>Geranium robertianum</i>				R
Ivy	<i>Hedera helix</i>		R		
Thread-moss species	<i>Bryum</i> sp.				F
Mullein species	<i>Verbascum</i> sp.		O		
Perennial rye-grass	<i>Lolium perenne</i>			D	O
Ribwort plantain	<i>Plantago lanceolata</i>			R	
Sage	<i>Salvia officinalis</i>		F-LA		
Sedge species	<i>Carex</i> sp.		R		
Springy turf-moss	<i>Rhytidiadelphus squarrosus</i>			O	O
Willowherb species	<i>Epilobium</i> sp.		O		O
Yarrow	<i>Achillea millefolium</i>			O-LF	

KEY

** - Invasive Non Native Species (listed on Schedule 9 of the Wildlife and Countryside Act 1981, as amended)

D - Dominant

A - Abundant

F - Frequent

O - Occasional

R - Rare

L - Locally

APPENDIX 2

Photographs



Photograph 1
The building and car park
from the north of the site



Photograph 2
The building and grassland
from the south



Photograph 3
Example of raised vertical
tiles and view of soffit box
and brickwork



Photograph 4
The balcony area on the
south-west of the building

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