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Wildwood Ecology Ltd

VALE OF GLAMORGAN COUNCIL

OAKFIELD PRIMARY SCHOOL, BARRY

PRELIMINARY ECOLOGICAL APPRAISAL

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Client:	Vale of Glamorgan Council
Site/Job:	Oakfield Primary School, Barry
Report title:	Preliminary Ecological Appraisal
Report reference:	WWE140110/PEA

Grid Reference:	ST 11924 69346
Date(s) of survey(s):	13/02/2014; 12/08/2014
Surveyed by:	Dr Matthew Davies; Dr Alexandra Pollard; Ms Laragh Smyth
Architect/Agent:	Ms Kelly Williams
Planning reference:	-

VERSIONING

V	Status	Changes	Author	Position	Date
1	Draft	-	Matt Davies	Ecologist	11/02/14
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	Name	Position	Date
Reviewed by:	Richard Dodd	Principal ecologist	26/02/14
Approved for issue:			
Issued to client:			

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The evidence which we have prepared and provided is true, and has been prepared and provided in accordance with the guidance of The Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

EXECUTIVE SUMMARY

- Wildwood Ecology was commissioned by the Vale of Glamorgan Council (the *Client*) to undertake a Preliminary Ecological Appraisal (*PEA*) – required in relation to the submission of an outline planning application for the construction of a new school building (the *Development*) – on an area of land within the boundary of Oakfield Primary School and Ysgol Gwaen-y-Nant, Gibbons Down, Barry (the *Site*).
- Habitats surveyed included Amenity grassland, Broad-leaved parkland/scattered trees, Scrub and Running water.
- Faunal use of the *Site* was also considered including potential use by nesting birds, reptiles and bats.
- The on-site trees and scrub provide potential habitat for breeding birds. **If any clearance work has to be undertaken during the nesting season, a breeding bird survey would be required** and must be carried out by a suitably qualified person.
- The *PEA* identified a tree with bat roost potential close to the *Site* boundary in the north eastern corner. This tree is to be removed. Further survey revealed that the tree had two potential roost features and whilst no bats were found, they could support small numbers of bats. **This tree must therefore be inspected immediately prior to felling and felled in sections under the guidance of a licenced bat ecologist.**
- The small number of local records, together with the limited amount of reptile habitat on-site means that **a presence or likely absence survey for reptiles will not be recommended in this instance.**

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1.0 INTRODUCTION

1.1 Wildwood Ecology was commissioned by the Vale of Glamorgan Council (the *Client*) to undertake a Preliminary Ecological Appraisal (*PEA*) – required in relation to the submission of a full planning application for the construction of a new school building (the *Development*) – on an area of land within the boundary of Oakfield Primary School and Ysgol Gwaen-y-Nant, Gibbons Down, Barry (the *Site*) centred on Grid Reference ST 11924 69346 (see Figure 1, below).

Site description

1.2 The *Site* consisted of an area of land (hard standing school playground, paths, lawned areas and trees) positioned east of two existing school buildings (Oakfield Primary School and Ysgol Gwaen-y-Nant). The north eastern and eastern main school boundaries are defined by lines of well-established broad-leaved trees. In addition, running parallel with the majority of the eastern boundary is small brook ('Cold Brook') which changes direction and continues south eastwards, away from the *Site*. The northern 'construction zone' boundary runs along a curved pathway immediately to the north. To the west, the 'construction zone' boundary cuts across the lawned areas and hard standing school playgrounds found to the east of the existing school buildings.

Figure 1 - Aerial image of the *Site*. NB Image used under licence (© Google 2014).

1.3 Immediately to the south of the *Site*, the remainder of the main school site consists of managed grassy areas with an unmanaged, scrubby section in the southernmost corner. To the east of this 'scrubby' section, are a number of small fields dissected by two arms of the small brook ('Cold Brook') already mentioned above. The brook is heavily tree lined.

1.4 In the wider environment, the *Site* is surrounded on all sides by the residential housing of Gibbons Down (a housing estate to the north east of Barry), Merthyr Dyfan and Cadoxton (north eastern suburbs of Barry) and Barry town itself. In addition there are gardens, parks and areas of woodland in a range of sizes and types.

Development description

1.5 The on-site building is currently used by two school facilities – Oakfield Primary School (English medium) and Ysgol Gwaun-y-Nant (Welsh medium). Historically, the building housed only Oakfield Primary School, however, approximately 10 years ago it was converted in order to accommodate Ysgol Gwaun-y-Nant.

1.6 The *Development* – this will be the construction of a new school building which will be the new facility for Oakfield Primary School. The original building will then revert to a single school facility solely for the use of Ysgol Gwaun-y-Nant.

Scope of the survey

1.7 The *PEA* aims to categorise ecological interest of the *Site* in relation to the habitats present and determine if any are protected or able to support protected species (e.g. bats, reptiles, nesting birds, badger and otter).

1.8 The tree assessment aims to establish and categorise any potential roost features within a tree.

1.9 Where required, further surveys may be recommended to fully inform any reasonable avoidance, mitigation or compensation measures, so as to safeguard any significant existing ecological interest within the *Site*.

1.10 Where appropriate, opportunities for ecological enhancement are proposed (including landscape design or retention), with reference to national and local Biodiversity Action Plans (*BAP*s).

2.0 PLANNING POLICY AND LEGISLATION

2.1 The following local and national planning policy and both primary and European legislation relating to nature conservation and biodiversity status are considered of relevance to the current proposal.

Planning and biodiversity

2.2 Local Authorities have a requirement to consider biodiversity and geological conservation issues when determining planning applications under the following planning policies.

Planning Policy Wales (2014) and Technical Advice Note 5 (2009)

2.3 Planning Policy Wales (Edition 7, July 2014) sets out the land use planning policies of the Welsh Government, with Chapter 5 dealing with Conserving and Improving Natural Heritage and the Coast. The advice contained within Planning Policy Wales (PPW) is supplemented for some subjects by Technical Advice Notes (TAN's).

2.4 TAN 5 (Welsh Government, 2009) specifically provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN provides advice for local planning authorities on the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and development affecting protected and priority habitats and species.

2.5 Under Section 2.4 within the TAN 5, 'when deciding planning applications that may affect nature conservation local planning authorities should':

- Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective;
- Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment;
- Promote the conservation and enhancement of statutorily designated areas and undeveloped coast;
- Ensure that appropriate weight is attached to designated sites of international, national and local importance;
- Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;
- Ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation;
- Ensure that the range and population of protected species is sustained;
- Adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered;

Legislation and biodiversity

2.6 Certain species of animals and plants found in the wild in the UK are legally protected from being harmed or disturbed. These species are listed in the Wildlife and Countryside Act 1981 (as amended) or are named as European Protected Species (EPS) in the Conservation of Habitats and Species Regulations 2010 (as amended). These two main pieces of legislation have been consulted when writing this report and are therefore described in detail within this section.

2.7 Other relevant legislation and policy documents that have been consulted include - The Countryside and Rights of Way Act 2000; Natural Environment and Rural Communities Act 2006; The Hedgerow Regulations 1997; Biodiversity Action Plans, both UK-wide (UKBAP) and Local plans (LBAPs), and The National Planning Policy Framework (NPPF).

2.8 There is also legislation that legally protects certain animals - for example, the Protection of Badgers Act (1992) protects badgers and their setts, and the Deer Act (1991) places restrictions on actions that can be taken against deer species.

Wildlife & Countryside Act 1981 (as amended)

2.9 The Wildlife & Countryside Act 1981 (as amended) [WCA] is the primary legislation for England and Wales for the protection of flora, fauna and the countryside. Part I within the Act deals with the protection of wildlife.

2.10 Most European Protected Species offences are now covered under the Conservation of Habitats and Species Regulations (see below), but some 'intentional' acts are still covered under the WCA, such as obstructing access to a bat roost.

2.11 The WCA prohibits the release to the wild of non-native animal species listed on Schedule 9 (e.g. Signal Crayfish and American Mink). It also prohibits planting in the wild of plants listed in Schedule 9 (e.g. Japanese Knotweed and Rhododendron ponticum) or otherwise deliberately causing them to grow in the wild. This is to prevent the release of invasive non-native species that could threaten our native wildlife.

2.12 The provisions relating to animals in the Act only apply to 'wild animals'; these are defined as those that are living wild or were living wild before being captured or killed. It does not apply to captive bred animals being held in captivity.

2.13 There are 'defences' provided by the WCA. These are cases where acts that would otherwise be prohibited by the legislation are permitted, such as the incidental result of a lawful operation which could not be reasonable avoided, or actions within the living areas of a dwelling house.

2.14 Licensing: certain prohibited actions under the Wildlife and Countryside Act may be undertaken under licence by the proper authority. For example scientific study that requires capturing or disturbing protected animals can be allowed by obtaining a licence – e.g. bat surveys.

Conservation of Habitats and Species Regulations 2010 (as amended)

2.15 The Conservation of Habitats and Species Regulations 2010 (as amended) (which are the principal means by which the EC Habitats Directive is transposed in England and Wales) update the legislation and consolidate all the many amendments which have been made to the Regulations since they were first made in 1994.

2.16 These regulations provide for the:

- protection of European Protected Species [EPS] (animals and plants listed in Annex IV Habitats Directive which are resident in the wild in Great Britain) including bats, dormice, great crested newts, and otters;
- designation and protection of domestic and European Sites - e.g. Site of Special Scientific Interest [SSSI] and Special Area of Conservation [SAC]; and
- adaptation of planning controls for the protection of such sites and species.

2.17 Public bodies (including the Local Planning Authority) have a duty to have regard to the requirements of the Habitats Directive in exercising their function – i.e. when determining a planning application.

2.18 There is no defence that an act was the incidental and unavoidable result of a lawful activity.

2.19 Licensing: it is possible for actions which would otherwise be an offence under the Regulations to be undertaken under licence issued by the proper authority. For example, where a European Protected Species has been identified and the development risks deliberately affecting an EPS, then a 'development licence' may be required.

Species protection

2.20 The following protected species information is relevant to this report. Legislation is only discussed in relation to planning and development; other offences may exist.

Bats

2.21 All British bats are classed as European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2010 (as amended), making it an offence inter alia to:

- Deliberately kill, injure or capture a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place of a bat.

2.22 In addition, all British bats are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:

- Obstruct access to any structure or place which any bat uses for shelter or protection; or
- Disturb any bat while occupying a structure or place which it uses for that purpose.

2.23 If proposed development work is likely to destroy or disturb bats or their roosts, then a licence will need to be obtained from Natural Resources Wales, which would be subject to appropriate measures to safeguard bats.

Birds

2.24 In the UK, the provisions of the Birds Directive are implemented through the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 (as amended). All wild birds, their nests and eggs are protected it an offence to:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any such bird whilst it is in use or being built; or
- take or destroying an egg of any such wild bird.

2.25 The law covers all species of wild birds including common, pest or opportunistic species.

2.26 Special protection against disturbance during the breeding season is also afforded to those species listed on Schedule 1 of the Act.

Reptiles

2.27 Adders, slow worms, grass snakes and common lizards are protected against killing and injuring under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it illegal to intentionally kill or injure a common reptile. As a result, reptiles must be removed from areas of development and relocated onto suitable release sites before any site works can commence.

2.28 Smooth snakes and sand lizards are European Protected Species under schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). This makes it illegal to carry out the following activities:

- Deliberately or recklessly disturb, capture or kill these animals;
- Deliberately or recklessly take or destroy eggs of these animals;
- Damage or destroy a breeding site or resting place of such a wild animal; or
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal, or any part of, or anything derived from such a wild animal.

3.0 METHODOLOGY

3.1 The methodology used for this survey consisted of a desktop study, habitat survey and faunal survey.

Desktop study

3.2 Information on wildlife habitats and ecological statutory designations has been obtained from the Natural Resources Wales (*NRW*) online Protected Sites Map. This includes:

- statutory designations - Sites of Special Scientific Interest (*SSSI*s) or Special Areas of Conservation (*SAC*s); and
- non-statutory designations - Sites of Importance for Nature Conservation (*SINC*s) and Wildlife Trust Sites (*WTS)*.

3.3 In order to compile background information on the *Site* and its immediate surroundings, the South East Wales Biodiversity Records Centre (*SEWBReC*) was consulted and a data obtained within an approximate 2000m radius.

Habitat survey

3.4 This was carried out by Dr Matthew Davies on 13th February 2014, following the Chartered Institute of Ecology and Environmental Management (*CIEEM*) Preliminary Ecological Appraisal (2012) guidelines and standard Phase 1 Habitat Survey protocol (*JNCC*, 2010).

3.5 The tree assessment was undertaken by Dr Alex Pollard (a licenced bat ecologist: Natural Resources Wales licence # 51783: OTH: CSAB: 2014) on the 12th August 2014, following the Bat Survey Guidelines (Hundt, 2012).

3.6 All habitats within and immediately adjacent to the *Site* were classified and mapped. All habitats with the potential to support rare, protected, or otherwise notable species of flora or fauna (together with any direct signs) were noted. A habitat map was drawn up incorporating target notes used to highlight features of particular ecological interest.

3.7 Plant species included in Schedule 9 of the Wildlife and Countryside Act (1981), as amended, were searched for during the Survey. Examples of plants that appear in the schedule include invasive species such as Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*). It is an offence under the Act to spread or cause the spread of these species. The presence of other highly invasive plant species, such as Himalayan balsam (*Impatiens glandulifera*), was also investigated during the survey.

Tree assessment

3.8 Each tree was inspected for features that could potentially be exploited by bats including hollows in the trunk or branches, heavy or dense ivy growth (i.e., a matrix effect), cracks and splits or loose bark within the main trunk and/or limbs. The inspection was aided by the use of close-focusing binoculars and a high-powered torch (a video-scope was available, however this was not required). Any potential features identified were inspected, as far as was practicable from the ground, for evidence of use by bats. This might include staining (e.g., grease marks from natural oils on the bat's fur, or from urine), noise/vocalisations, or smoothing of timber as a result of repeated emergence and re-entry.

3.9 The trees were classified according to the features they presented, as outlined in Table 1, below.

Faunal survey

3.10 Habitats and features with potential to support protected and/or notable conservation priority species of fauna, plus any associated field signs, were recorded.

3.11 In the context of this report, protected or notable conservation priority fauna species were those considered to meet any of the following criteria:

- Species protected by UK or European legislation;
- UK Post 2010 UK Biodiversity Framework priority species or Local Biodiversity Action Plan (*LBAP*) species;
- Nationally rare or nationally scarce species;
- Species of Conservation Concern (e.g. JNCC Red List, RSPB/BTO Red or Amber Lists).

Survey Limitations

3.12 The data enquiries and ecological survey will not produce a comprehensive list of plants and animals as this will be limited by factors that influence their presence (e.g. activity and dormancy periods). An assessment can however be made of the habitats within the survey area as to their nature conservation value and potential to support protected or priority species.

3.13 Trees were assessed only from the ground during a visual daytime assessment.

3.14 Cavities or potential roost features obscured from visual survey by foliage or branches higher up the trees may be present.

3.15 No other limitations were encountered during the course of either the desk study or the daytime field survey and it is considered that with the access gained and recording undertaken an accurate assessment of the *Site*'s ecological value could be made.

Table 1 - classification of trees to be affected by arboricultural work (Hundt, 2012)

Category	Description	Survey recommendations	Felling mitigation
Roost	Known or confirmed bat roost	Dusk/dawn surveys required to collect data in order to inform EPS licence application.	The tree can legally only be felled (or managed/pruned in some instances) under a European Protected Species licence, following the installation of equivalent habitats as a replacement.
1*	Trees with multiple highly suitable features capable of supporting larger roosts	Further survey required. Inspection with video scope from ground and/or climbing inspection. Dusk/dawn surveys may be required to confirm/refute if bats present.	N/A – reclassified to Roost or category 2 following survey
1	Trees with definite bat potential, supporting fewer suitable features than 1* trees or with potential for use by single bats	Further survey required. Inspection with video scope from ground and/or climbing inspection. Dusk/dawn surveys may be required to confirm/refute if bats present.	N/A – reclassified to Roost or category 2 following survey
2	Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats	No further survey required. Avoid disturbance where possible.	Trees may be felled taking reasonable avoidance measures. Stop works and seek advice in the event bats are found.
3	Trees with no potential to support bats	No further survey required	No mitigation/conditions for bats required.

4.0 RESULTS

4.1 Searches of the area (within 5km diameter), using the Natural Resources Wales (*NRW*) online Protected Sites Map, identified statutory designations of nature conservation interest within the local area together with designations of international nature conservation importance found in the wider area.

Statutory designations

4.2 There are no statutory designations on the *Site* itself. There are 5 statutory designations of nature conservation interest within a 5km diameter of the *Site*. All are *SSSI*s (see Table 2, below for further details).

Non-statutory designations

4.3 There are no non-statutory designations of nature conservation interest either on the *Site* itself or within a 5km diameter.

Table 2- Ecological designations on or near the *Site*, statutory and non-statutory

Site name	*Designation*	Description	Distance & direction from *Site*
Barry Island	*SSSI*	Designated for its **geological interest**. Rocks formed as a lake, playa and beach sediments from 205 to 209 million years ago sitting on top of older limestone from 350 million years ago.	2.72km S
Cliff Wood – Golden Stairs	*SSSI*	Special features: **Semi-natural broadleaved woodland** (Ash, Pedunculate Oak, Field Maple and Yew); **Purple Gromwell** (a plant of woodland edges, found on areas of limestone); **True Service Tree** (a deciduous broad-leaved tree with small pear-shaped fruit).	3.22km SW
Barry Woodlands	*SSSI*	Special features: **Semi-natural broadleaved woodland**, consisting of two related sections of woodlands. To the west of Barry, in the valley of the River Waycock, is a group which extends from *Lidmore Wood* in the north to *Welford **and Middleton Woods*** in the south. About 3 kilometres away, to the north of Barry, are *Coed yr Argae* and *Pencoedtre Wood*. They are found on wet, clay soils and all have Ash as one the main trees.	1.25km NEbN
Cog Moors	*SSSI*	Special features: **Species-rich neutral grassland** (now very rare, rich in plant life, supporting up to 30 species per square metre and in turn many species of insects, birds and mammals); **Bulbous Foxtail** (a nationally scarce grass, named for its swollen stem bases); **Pepper Saxifrage** (a delicate yellow-flowered plant of the parsley family, typical of damp, unimproved neutral grassland).	3.67km E
Hayes Point to Bendrick Rock	*SSSI*	Designated for its **geological interest** – *Rock exposures* (a series of lake deposits, stream sediments and remains of soils from 225 million years ago) and Dinosaur footprints & tracks (preserved in some of the siltstones & fine sandstones that were once lake-shore deposits, also 225 million years ago).	2.38km SEbS

4.4 An additional data search using the South East Wales Biodiversity Records Centre (*SEWBReC*) produced records of a number of priority and protected species, other species of conservation

concern and species of local conservation concern. These were recorded within approximately 404-4004m of the *Site* between 1892 and 2013.

4.5 There were 345 records of *protected and priority* species:

Bird species [Barn Owl, *Tyto alba*; Bar-tailed Godwit, *Limosa lapponica*; Bearded Tit, *Panurus biarmicus*; Black Redstart, *Phoenicurus ochruros*; Black Tern, *Chlidonias niger*; Black-headed Gull, *Chroicocephalus ridibundus*; Black-necked Grebe, *Podiceps nigricollis*; Black-throated Diver, *Gavia arctica*; Brambling, *Fringilla montifringilla*; Cetti's Warbler, *Cettia cetti*; Cirl Bunting, *Emberiza cirlus*; Common Bullfinch, *Pyrrhula pyrrhula*; Common Cuckoo, *Cuculus canorus*; Common Goldeneye, *Bucephala clangula*; Common Grasshopper Warbler, *Locustella naevia*; Common Greenshank, *Tringa nebularia*; Common Kestrel, *Falco tinnunculus*; Common Kingfisher, *Alcedo atthis*; Common Linnet, *Carduelis cannabina*; Common Scoter, *Melanitta nigra*; Common Starling, *Sturnus vulgaris*; Corn Bunting, *Emberiza calandra*; Dark-bellied Brent Goose, *Branta bernicla subsp. bernicla*; Eurasian Curlew, *Numenius arquata*; Eurasian Hobby, *Falco subbuteo*; Eurasian Tree Sparrow, *Passer montanus*; Eurasian Wryneck, *Jynx torquilla*; European Nightjar, *Caprimulgus europaeus*; European Turtle Dove, *Streptopelia turtur*; Firecrest, *Regulus ignicapilla*; Garganey, *Anas querquedula*; Great Bittern, *Botaurus stellaris*; Great Northern Diver, *Gavia immer*; Greater Scaup, *Aythya marila*; Green Sandpiper, *Tringa ochropus*; Hedge Accentor, *Prunella modularis*; House Sparrow, *Passer domesticus*; Leach's Storm-petrel, *Oceanodroma leucorhoa*; Lesser Spotted Woodpecker, *Dendrocopos minor*; Little Bittern, *Ixobrychus minutus*; Little Gull, *Hydrocoloeus minutus*; Little Tern, *Sternula albifrons* ; Long-tailed Duck, *Clangula hyemalis;* Marsh Tit, *Poecile palustris;* Mediterranean Gull, *Larus melanocephalus;* Northern Lapwing, *Vanellus vanellus;* Northern Pintail, *Anas acuta;* Peregrine Falcon, *Falco peregrinus;* Pied Flycatcher, *Ficedula hypoleuca;* Red-throated Diver, *Gavia stellata;* Redwing, *Turdus iliacus;* Reed Bunting, *Emberiza schoeniclus;* Ringed Plover, *Charadrius hiaticula;* Roseate Tern, *Sterna dougallii;* Ruff, *Philomachus pugnax;* Sky Lark, *Alauda arvensis;* Slavonian Grebe, *Podiceps auritus;* Song Thrush, *Turdus philomelos;* Stone-curlew, *Burhinus oedicnemus;* Tree Pipit, *Anthus trivialis;* Tundra Swan, *Cygnus columbianus;* Whooper Swan, *Cygnus cygnus;* Wood Warbler, *Phylloscopus sibilatrix;* Yellow Wagtail, *Motacilla flava* and Yellowhammer *Emberiza citronella*]

Mammal species [Common Pipistrelle, *Pipistrellus pipistrellus;* Eurasian Badger, *Meles meles;* Noctule Bat, *Nyctalus noctula;* Pipistrelle, *Pipistrellus;* Unspecified Bat, *Chiroptera* and West European Hedgehog, *Erinaceus europaeus*]

Amphibian species [Common Frog, *Rana temporaria;* Common Toad, *Bufo bufo;* Great Crested Newt, *Triturus cristatus;* Palmate Newt, *Lissotriton helveticus* and Smooth Newt, *Lissotriton vulgaris*]

Insect species [Bog hoverfly, *Eristalis cryptarum;* Bombus (Thoracobombus) humilis, *Bombus (Thoracobombus) humilis;* Bombus (Thoracobombus) muscorum, *Bombus (Thoracobombus) muscorum* and Bombus (Thoracobombus) ruderarius, *Bombus (Thoracobombus) ruderarius*; Grayling, *Hipparchia semele;* Small Blue, *Cupido minimus* and White-letter Hairstreak, *Satyrium w-album*]

Reptile species [Slow-worm, *Anguis fragilis*]

Fish species [European Eel, *Anguilla Anguilla*]

Plant species []Bluebell, *Hyacinthoides non-scripta;* Field Eryngo, *Eryngium campestre;* Perennial Centaury, *Centaurium scilloides;* Red Hemp-nettle, *Galeopsis angustifolia;* Rough Marsh-mallow, *Althaea hirsuta;* Strapwort, *Corrigiola litoralis* and Wavy Meadow-grass, *Poa flexuosa*]

4.6 There were 18 *research only* species recorded.

4.7 There were 292 records for *other species of conservation concern* (consisting of records for 59 separate species).

4.8 There were 220 records for *species of local conservation concern* (consisting of records for 50 separate species).

Habitat survey

Flora

4.9 The distribution and extent of habitats observed both within and adjacent to the *Site* is illustrated in the *PEA* survey plan (see Appendix II). An accompanying species list (including scientific names) can be found in Appendix IV.

4.10 The habitats present on *Site* are described in detail below using the standard Phase 1 survey habitat classification hierarchical alphanumeric reference codes (*JNCC*, 2010).

Amenity grassland (J1.2)

4.11 There were several areas of *Amenity grassland* (J1.2) within the *Site* boundary. These consisted of intensively managed and regularly mown lawn. Species present included Annual Meadow Grass (*Poa annua*), Daisy (*Bellis perennis*), Moss spp. (*Sphagnum spp.*) and Thistle sp. (*Cirsium sp.*).

Boundaries

4.12 Running close to the north eastern boundary of the 'construction zone', along the main school site boundary, was a line of *Broad-leaved parkland scattered trees* (A3.1) with residential gardens and housing beyond. Species present included Ash (*Fraxinus excelsior*), Bramble (*Rubus fruticosus*), Field Maple (*Acer campestre*), Hawthorn (*Crataegus monogyna*) [predominant], Norway Maple (*Acer platanoides*) and Ivy (*Hedera helix*). Beyond the tree line to the south, and within the construction zone there was a line of *Scattered Scrub* (A2.2) consisting of a line of small Hawthorn trees.

4.13 The eastern boundary ran parallel to the main school site boundary, which was defined by a metal fence. Beyond the fence to the east, in a narrow corridor between the school fence and the residential garden boundaries, was a small brook, *Running water* (G2). This ran parallel with the fence along the eastern boundary, then changed direction and continued south eastwards, away from the *Site*. The brook was lined by *Broad-leaved parkland scattered trees* (A3.1) interspersed with *Scrub* (A2) and *Tall Ruderal* (C3.1) habitat and again beyond this to the east were residential gardens and housing. Species present included Ash, Bramble, Cleavers (*Galium aparine*), Common Nettle (*Urtica dioica*), Dock (*Rumex sp.*), Horsetail sp. (*Equisetum sp.*) and Willowherb sp. (*Epilobium sp.*). There was also a significant amount of fly-tipping along the brook.

Fauna

4.14 The presence of the following bird species were observed or detected around the *Site* during the survey – Blackbird (*Turdus merula*), Blue Tit (*Parus caeruleus*), Great Tit (*Parus major*), Gull sp. (Laridae) and Robin (*Erithacus rubecula*).

Tree assessment for bats

4.15 The Norway Maple found along the north-eastern edge of the Site was found to contain two potential roost features:

- a tear-out [1] wound with cavity extending upwards at approximately 3.25m (north west facing)
- a cavity beyond a limb cut at approximately 3m (east facing)

4.16 No bats or signs of bats were found.

[1] High winds can tear branches from trees, but tear-outs are usually the result of snow fall, where the weight of the snow resting within twigs on an over-stretched branch has caused it to tear from the stem (Lonsdale 1999, Thomas 2000). The branch 'heel' rips through the stem tissue taking a long strip with it, producing an open scar with a characteristic 'key-hole' shape when recent, but appearing more like an upside-down tear-drop as the woundwood heals the edges (Andrews *et al*, 2013).

5.0 INTERPRETATION, ASSESSMENT AND RECOMMENDATIONS

5.1 The *Development* will require some displacement of habitats present and disturbance to their associated features. This section concerns the assessment of ecological effects resulting from the *Development*.

5.2 Overall, the ecological value of the *Site* is assessed as low. The recommendations below (highlighted in bold) are provided to ensure full compliance with both legislation and policy as described within this report and relate specifically to bats, nesting birds, and reptiles.

Ecological designations

5.3 There are 5 statutory designations of nature conservation interest within a 5km diameter of the *Site*. All are SSSIs.

5.4 There are no non-statutory designations of nature conservation interest either on the *Site* itself or within a 5km diameter.

Potential impacts

5.5 The statutory 'off-site' designations mentioned above (and in Table 2) are sufficiently well separated from the *Site* that no direct or indirect impacts on its designated features are anticipated as a result of the *Development*.

Fauna

Nesting birds

5.6 A data search using the South East Wales Biodiversity Records Centre (*SEWBReC*) produced records of 65 priority and protected species of bird. The *PEA* also identified five species of bird within the *Site* during the time of survey.

5.7 The trees and scrub found within the north-eastern area of the site are to be removed and the *Development* and will remain in place.

5.8 All wild birds, their nests, eggs and dependent young are afforded protection under the Wildlife and Countryside Act 1981 (as amended), with the bird nesting season generally from 1st March until 31st July. It should be assumed that birds are nesting within scrub habitat, trees and possibly grassland during this time and clearance works should therefore be avoided. **If any clearance work has to be undertaken during the nesting season, a breeding bird survey would be required** and must be carried out by a suitably qualified person. Any active nests identified should be protected until the young have fledged. Where a Schedule 1 species (as defined in the Wildlife and Countryside Act - http://www.jncc.gov.uk/page-3614) is involved, mitigation for impacts, e.g., loss of nesting sites, should be devised and implemented.

Bats

5.9 A data search using the South East Wales Biodiversity Records Centre (*SEWBReC*) produced seven bat records (four Common pipistrelle, one unidentified pipistrelle, one Noctule and one unidentified bat) between 1363m and 2190m of the *Site*. During the time of survey, the *PEA* also identified a tree with bat roost potential close to the *Site* boundary in the north eastern corner (subsequently surveyed – see Para 5.15).

5.10 The trees lines and scrub along the north and eastern boundary link well to the scrub and tree line habitat immediately south and south east, however, the *Site* then becomes relatively isolated as it is surrounded on all sides by residential housing.

5.11 There are other opportunities across the *Site* for bat activity – foraging (e.g. edge habitat along the eastern boundary, around the central grassland areas and on-site trees) and commuting (e.g. edge habitat along the north eastern and eastern boundaries), along with some offsite gardens and amenity areas.

5.12 All British bats are classed as European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2010 (as amended). In addition, all British bats are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

5.13 The suitability of the cavities within the Norway Maple mean that it could feasibly be used by small numbers of bats and whilst no bats were seen, is classified as having some potential for bats following a ground based survey (category 1).

5.14 This tree must therefore be inspected immediately prior to felling and felled in sections under the guidance of a licenced bat ecologist.

Reptiles

5.15 A data search using the South East Wales Biodiversity Records Centre (*SEWBReC*) produced 7 reptile records (all for slow worm), between 1604m and 1758m from the *Site*. These were recorded between 2009 and 2013.

5.16 The amenity grassland habitat on the *Site* is intensively managed, with the grass being regularly to facilitate its use for school sports. Variable vegetation structure was therefore largely absent from the central area, however, there is some edge habitat (ecotones) on the eastern boundary near the brook area of scrub provided some differing vegetation heights. In addition, the hard standing school playground may offer opportunities for insolation. Off-site there is an area of scrub to the south that might provide reptile habitat.

5.17 Adders, slow worms, grass snakes and common lizards are protected against killing and injuring under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it illegal to intentionally kill or injure a common reptile. As a result, reptiles must be removed from areas of development and relocated onto suitable release sites before any site works can commence.

5.18 The small number of local records, together with the limited amount of reptile habitat on-site means that **a presence or likely absence survey for reptiles will not be recommended in this instance.**

Other species

5.19 The *Site* was also assessed in relation to other priority and protected species including European otter, Dormouse, Badger, Western European hedgehog, Water vole, Great crested newt and Invertebrate assemblages.

5.20 No local records were provided for the presence of European otter within 2000m of the *Site*. No otter signs (spraints, tracks etc) were found within or around the *Site* boundaries during the survey.

5.21 No local records were provided for the presence of Dormice within 2000m of the *Site*. In addition, there was no suitable habitat on the *Site* itself and the trees and scrub close to the *Site* does not link well to the wider environment.

5.22 A single local record was provided for the presence of Eurasian Badger in 2006. This was a road kill animal discovered 2109m from the *Site*. No signs of active use by Badger were observed in or around the boundaries of the *Site*. No Setts (holes used by Badger) were found within the boundaries.

5.23 Three local records were provided for Western European hedgehog within 1341m of the *Site* between 1980 and 2008. Given the scope of works, there will be limited conservation issues relating to this species at the local level.

5.24 No local records were provided for Water vole within 2000m of the *Site*. The nearest water to the *Site* is a small brook ('Cold Brook') that runs parallel with the majority of the eastern boundary of the *Site* and then changes direction continuing south eastwards, away from the *Site*. The brook is shallow and isolated and is an unsuitable habitat for Water vole.

5.25 Two local records of Great-crested newt (*GCN*) were recorded - 1733m and 2240m from of the *Site*. However, no on-site ponds were present. As mentioned previously, the nearest water to the *Site* is Cold Brook, found adjacent to the eastern boundary of the Site. There are no ponds within 500m. Although the onsite habitat could provide some places of shelter for *GCN* (e.g. grassland and hedgerows), the *Site* is relatively isolated from known water supporting *GCN* by roads. Given the distance from known water and barriers to dispersal the site is unlikely to support *GCN*.

5.26 Given the habitats present and their current condition, it is unlikely that any one species would qualify for *SINC* designation, in part or as a whole.

6.0 REFERENCES

Andrews H. *et al.* (2013) *Bat Tree Habitat Key*. AEcol Ltd, Bridgwater.

Hundt L (2012) Bat Surveys: Good Practice Guidelines, 2nd edition, Bat Conservation Trust

Institute for Environmental Assessment. (1995). Guidelines for Baseline Ecological Assessment. E & FN Spon, Hong Kong.

Institute of Ecology and Environmental Management (2012) Guidelines for Preliminary Ecological Appraisal. IEEM, Winchester.

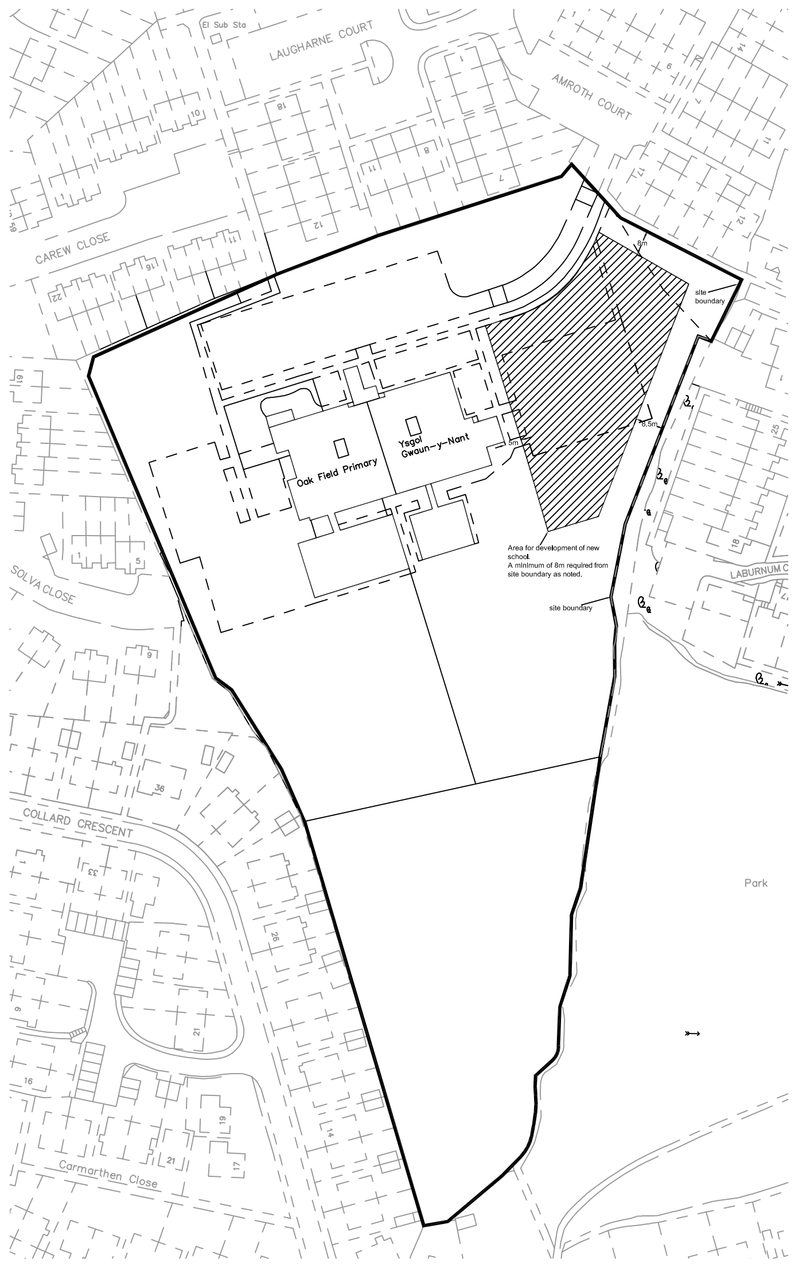
Joint Nature Conservation Committee (2010). Handbook for Phase 1 Habitat Survey - a Technique for Environmental Audit. Reprinted by JNCC, Peterborough.

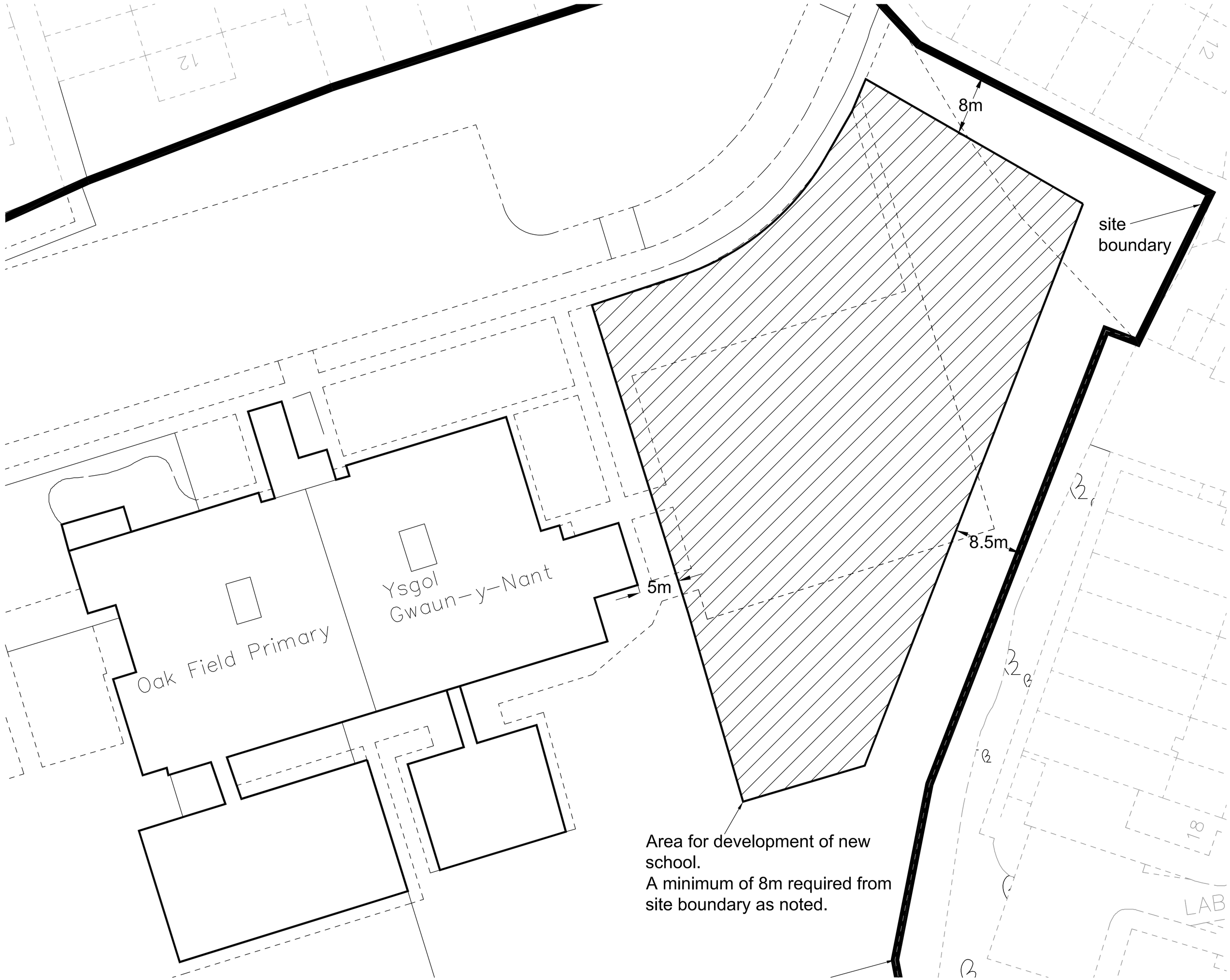
Lonsdale D. (1999) *Research for Amenity Trees No.7: Principles of Tree Hazard Assessment and Management*. Forestry Commission, London: TSO.

Thomas P 2000. *Trees: Their Natural History*. Cambridge University Press, Cambridge.

APPENDIX I: PROPOSED DEVELOPMENT PLAN

(as provided by the *Client*)





amendments (n.b. :– all amendments to be signed)
newidiadau (d.s. :– rhaid llofnodi pob newid)

A1

VALE of GLAMORGAN
BRO MORGANNWG

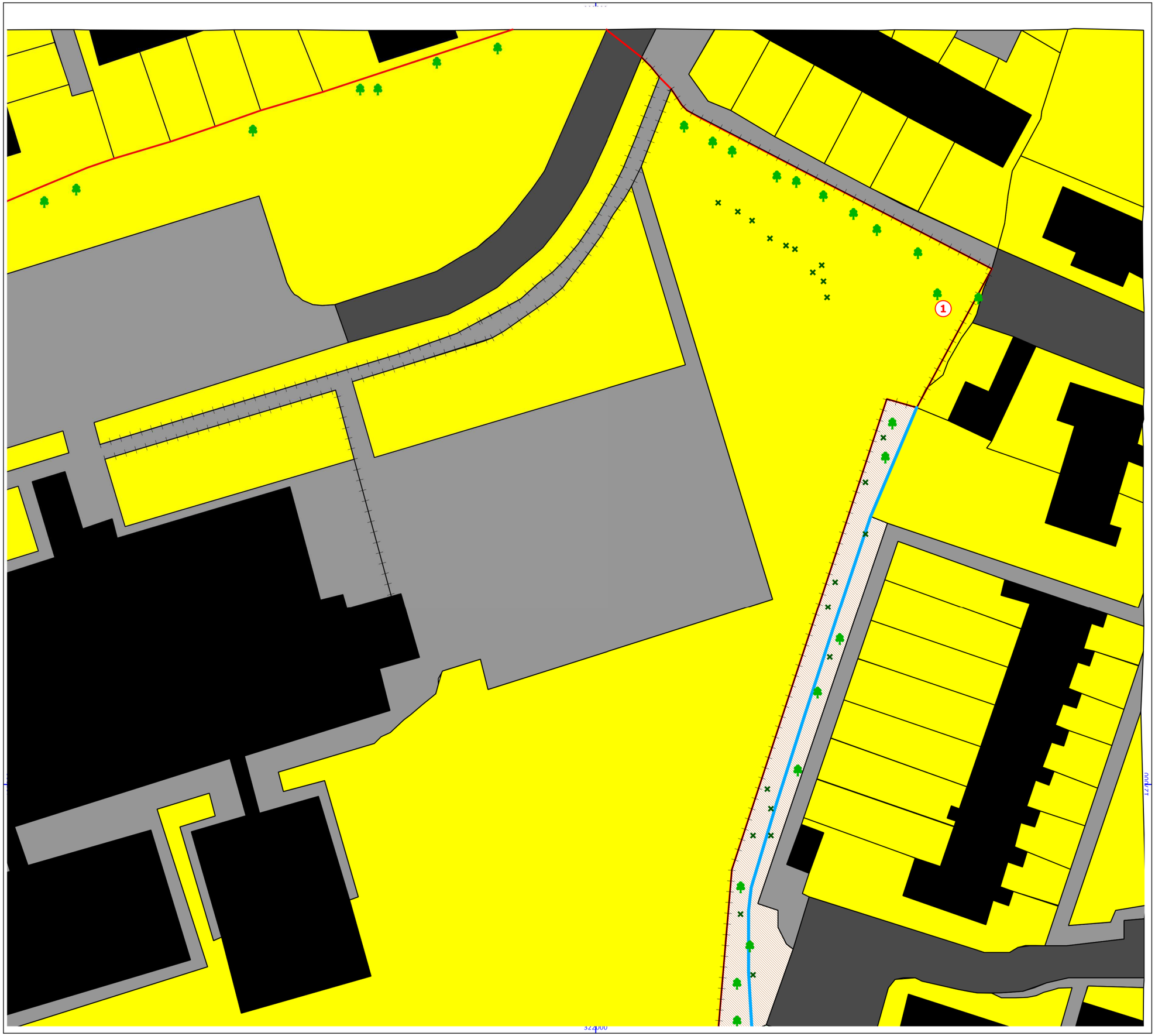
THE VALE OF GLAMORGAN BRO MORGANNWG

property name enw'r eiddo Oak Field Primary School and Ysgol Gwaun y Nant, Gibbonsdown, Barry	drawing dyluniad Proposed Building Location	checked KW gwiriwyd	job number rhif y gwaith PCW11132	amendments newidiadau
		drawn KW lluniwyd	drawing number rhif y llunlad AL(00)03	
		scale graddfa 1:250	do not scale this drawing peidiwch â graddio'r lluniad hwn	
		date dyddiad Aug '13	path llwybr path	

PROPERTY SECTION
Civic Offices, Barry, Vale of Glamorgan, CF63 4RU
Telephone (01446) 700111

YR ADRAN EIDDO
Swyddfeydd Dinesig, Y Barri, Bro Morgannwg, CF63 4RU
Ffôn (01446) 700111

APPENDIX II: PRELIMINARY ECOLOGICAL APPRAISAL PLAN



Key

- Main School Boundary
- Scattered Scrub
- Broad-leaved scattered tree
- Target note
- Brook
- Fence
- A.2.1 Scrub, dense/continuous
- C.3.1 Tall ruderal
- J.1.2 Amenity grassland
- J.3.6 Buildings
- Hard standing
- Road

PROJECT

Oak Field School, Gibbons Down, Barry

CLIENT

Vale of Glamorgan Council

DRAWING TITLE

Preliminary Ecological Appraisal Plan

SCALE (@A3): 1:261,422, DRAWN BY: MD/AP DATE: 08 Sep 2014

Wildwood Ecology Ltd

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w: www.wildwoodecology.com

APPENDIX III: SURVEY IMAGES

Figure 2 – Main site looking east, showing amenity grassland and hard standing school playground.

Figure 3 – Main site looking north, showing amenity grassland and hard standing school playground and part of the eastern boundary.

Figure 4 – North eastern boundary, looking west, showing tree and scrub habitat.

Figure 5 – North eastern boundary, looking north, showing tree and scrub habitat.

Figure 6 – Eastern boundary, looking south.

Figure 7 – Southern boundary (this cuts across existing amenity grassland and school playground, looking west.

Figure 8 – western boundary, looking south.

Figure 9 – Norway Maple with bat roost potential.

Figure 10 – Norway Maple with bat roost potential.

Figure 11 – Norway Maple with bat roost potential.

APPENDIX IV: SPECIES LIST

To be submitted to the appropriate Local Records Centre

Site Name:	Oakfield Primary School, Barry	Provided by:	Wildwood Ecology
Grid ref:	ST 11924 69346	Verified by:	Matt Davies

Common name	*Scientific Name (if known)*	Number	Comment
F L O R A			
Annual Meadow Grass	*Poa annua*		
Ash	*Fraxinus excelsior*		
Bramble	*Rubus fruticosus*		
Cleavers	*Galium aparine*		
Common nettle	*Urtica dioica*		
Daisy	*Bellis perennis*		
Dandelion sp.	*Taraxacum officinale*		
Dock sp.	*Rumex sp.*		
Field Maple	*Acer campestre*		
Hawthorn	*Crataegus monogyna*		
Horsetail sp.	*Equisetum sp.*		
Ivy	*Hedera helix*		
Lesser celandine	*Ranunculus ficaria*		
Lords and Ladies	*Arum maculatum*		
Moss sp.	*Sphagnum sp.*		
Norway Maple	*Acer platanoides*		
Ragwort	*Senecio jacobaea*		
Speedwell	*Veronica sp.*		
Sycamore	*Acer pseudoplatanus*		
Thistle sp.	*Cirsium sp.*		
Willowherb sp.	*Epilobium sp.*		
F A U N A			
Blackbird	*Turdus merula*		
Blue Tit	*Cyanistes caeruleus*		
Great Tit	*Parus major*		
Gull sp.	Laridae		
Robin	*Erithacus rubecula*		