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UNITED ENVIRONMENTAL SERVICES

Ecological Impact Assessment

At

Ewloe Barn Industrial Estate
Mold Road
Alltami
Flintshire
CH7 6LG

NGR: 327785 366065

For

Thorncliffe Building Supplies
c/o Oaktree Environmental Ltd

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Approved by:	Toby Hart, UES Managing Director
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Contents

1. Introduction

This report (UES01444.002) presents the results of an ecological impact assessment (EcIA).

The objective of an EcIA is to identify the possible impacts to habitats and species arising as a result of implementing the construction and operational phases of the proposed new building at the Ewloe Barn Industrial Estate.

The EcIA describes the methods used to assess the baseline conditions currently existing at the site and surroundings, the potential direct and indirect impacts of the development, the mitigation measures required to prevent, reduce or offset the impacts, and the residual impacts. It has been written by Stewart Bradshaw UES Assistant Ecologist.

The site is currently in use as a recycling facility, breaking down mixed inert waste materials into different types which are then re-used. The proposed construction of a new building will affect areas of existing hard-standing and compacted bare ground within an existing industrial site. The development may also involve the loss of a low number of trees and a small area of grassland at the southern edge of the site.

The proposed works should have no direct impact on the Deeside and Buckley newt sites Special Area of Conservation (SAC). Although the Deeside and Buckley newt sites SAC is within close proximity to the site, the use of previously developed land for a purpose similar to that already in operation on the site should pose no greater risk to the protected sites and their resident species than at present.

Adjoining land within 1km of the site boundary has been considered during this assessment. The immediate surrounding area includes Mold Road (A494) to the north, open countryside (currently grazed pastures) to the east and west, and an area of marshy grassland formed on capped, former landfill site to the south. There are components of the Deeside and Buckley newt sites SAC to the north of Mold Road and to the south of the site (within 80m of the red-line boundary).

The EcIA has identified various impacts up to a local level due to the presence, or potential presence, of protected or priority species / habitats within and immediately adjacent to the site boundary, notably; Great crested newts, bats, breeding birds and reptiles. No impact is anticipated on the Dee and Buckley newt sites SAC.

Provided that the mitigation and compensation measures detailed in section 7 are implemented, it is considered that the proposed development will be compliant with all relevant legislation and policy and that the completed site, is likely to support the same species in similar numbers. In summary, the mitigation and compensation measures are as follows:

- **Amphibians** – A method statement detailing the necessary non-licenced reasonable avoidance measures and suitable mitigation and compensation measures should be produced to ensure that the risk to individual amphibians is minimised during and after the works. The MS will include suitable "soft buffer" planting between the site and the SAC.

- **Bats** – If any trees are to be removed then further surveys will be required to assess the suitability of the trees for use by roosting bats, and their presence or absence.

- **Breeding birds** – In order to prevent any potential impact on breeding birds, any tree removal or vegetation clearance should be undertaken outside of the recognised breeding bird season (March to August inclusive). If this is not possible then a breeding bird survey should be carried out or an ecological clerk of works appointed to oversee the works.

- **Reptiles** – A method statement detailing the necessary reasonable avoidance measures and suitable mitigation and compensation measures should be produced to ensure that the risk to individual reptiles is minimised during and after the works. The MS will include suitable "soft buffer" planting between the site and the SAC.

This EcIA should be read in conjunction with the following reports:

- UES01444.001 – Preliminary ecological appraisal

2. Legislation

Of relevance to this ecological impact assessment are the provisions of the following Statutory Instruments and Acts of Parliament:

- Wildlife and Countryside Act 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2010 (as amended);
- Countryside and Rights of Way (CRoW) Act 2000; and
- Natural Environment and Rural Communities Act 2006.

2.1 Amphibians

2.1.1 Great crested newts

Great crested newts (GCN) and their habitat (aquatic and terrestrial) are afforded full protection by the Wildlife and Countryside Act 1981 (as amended) (Section 9, Schedule 5).

In addition to the above protection, GCN are listed on Annex II and Annex IV of the Conservation of Natural Habitats and Wild Fauna and Flora (the Habitats [and species] Directive). This is transposed into UK law by the Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations).

If both national and international legislation are taken together, it is an offence to:

- intentionally or deliberately kill, disturb, injure or take;
- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- intentionally / deliberately or recklessly damage or disturb while it is occupying a structure or place which it uses for that purpose;
- possess or control any live or dead specimen or any derivative;
- deliberately take or destroy the eggs;
- damage or destroy a breeding site or resting place

GCN are also protected by the Protection of Animals Act 1911, which prohibits cruelty and mistreatment. Releasing a GCN in such a way as to cause undue suffering may be an offence under the Abandonment of Animals Act 1960. In addition to the above, there are various statutory provisions relating to the transport of animals, designed to ensure their welfare.

2.1.2 Other amphibians

The more common British amphibians, i.e. Common frog *Rana temporaria*, Common toad *Bufo bufo*, Smooth newt *Triturus vulgaris* and Palmate newt *Triturus helveticus* are protected only by Section 9(5) of the Wildlife and Countryside Act 1981. This section prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy and is not relevant to this situation.

2.2 Bats

In the United Kingdom, all species of bat and their roosts are afforded full protection under The Conservation of Habitats and Species Regulations 2010; this makes it an offence to:

- intentionally or recklessly kill, injure or take a bat;
- intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection;
- intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (even if the bat is not present at the time);
- keep, transport, sell or exchange, or offer for sale or exchange any live or dead bat or any part or anything derived from a bat.

2.3 Breeding birds

The Wildlife and Countryside Act 1981 (as amended), states that all wild birds ('wild' being defined as species which are visitors or migrants to the United Kingdom, but not generally game birds) are legally protected. In relation to development, it is an offence to intentionally or recklessly:

- kill;
- injure or take any wild bird or to take;
- damage or to destroy its nest, young or eggs:
- disturb any such bird when it is building its nest or while it is in or near a nest containing dependant young; or
- disturb the dependant young of any such bird.

The recent Countryside and Rights of Way Act 2000, has made it an offence to intentionally or recklessly disturb Schedule 1 species as above, and also an offence to intentionally or recklessly take, damage or destroy the nest of any wild bird or its eggs or dependent young.

2.4 Reptiles

All native reptiles (snakes and lizards) are protected under the Wildlife and Countryside Act 1981 (as amended). It is illegal to intentionally kill or injure Common lizard *Zootoca vivipara*, Slow worm *Anguis fragilis*, Adder *Vipera berus* and Grass snake *Natrix natrix*.

Under The Conservation of Habitats and Species Regulation 2010 (Schedule 2), the Sand lizard *Lacerta agilis* and Smooth snake *Coronella austriaca*, also have European protection status.

3 Planning policy guidance

3.1 Planning policy Wales

Guidance on nature conservation and planning policy is provided in Planning Policy Wales (Edition 7) Chapter 5.

The Welsh Government sets out in paragraph 5.1.2 of the Planning Policy Wales the following objectives for the conservation and improvement of the natural heritage:

- promote the conservation of landscape and biodiversity, in particular the conservation of native wildlife and habitats;
- ensure that action in Wales contributes to meeting international responsibilities and obligations for the natural environment;
- ensure that statutorily designated sites are properly protected and managed; and to
- safeguard protected species
- promote the functions and benefits of soils, and in particular their function as a carbon store.

3.2 Local planning policy

Flintshire's local planning policy pertaining to wildlife and biodiversity is set out in chapter 8 of the Flintshire County Council Unitary Development Plan (UDP) (2000 – 2015 adopted 28th September 2011). Policies relevant to the proposed development at the Ewloe Barns Industrial Estate are listed within chapter 8 of the UDP (wildlife and biodiversity).

3.2.1 Introduction

8.1 In addition to protecting natural landscapes, another key role of this plan is its contribution towards protecting and enhancing geological (geodiversity) and biological diversity (biodiversity). Adopting a biodiversity-centred approach to the natural environment acknowledges the complex interaction between species and their habitats. It should be emphasised that both commonplace and rare species, play an important part in natural systems. A hierarchy of designations at international, national and local levels exists in Flintshire and the local planning authority must have regard to the relative significance of these designations when making planning decisions, taking into account the integrity of natural systems as well as the presence or absence of notable species and habitat.

3.2.2 Flintshire context

8.4 There are two key ways in which the UDP can contribute to the promotion of biodiversity in Flintshire. Firstly through protection of designated statutory and non-statutory wildlife sites, and secondly by applying general environmental considerations to all forms of development proposals. Flintshire contains many habitat types and nature conservation designations, with the Dee Estuary and Floodplain being a key strategic habitat type.

8.5 The UDP seeks to ensure that biodiversity is maintained and enhanced in the interests both of existing residents and of future generations. To this end, policies contained in this chapter support the protection of designated sites, and also conservation of undesignated features of ecological importance such as wildlife corridors. Detailed site surveys will often be required in association with development proposals where the Council considers that there may be a significant effect on wildlife, habitat or areas of other scientific interest.

8.6 In addition to these protective policies, the plan also seeks to enhance the nature conservation value of sites where a development proposal would provide an opportunity to incorporate such measures. It should also be noted that the following policies support the Flintshire Biodiversity Action Plan (FBAP).

3.2.3 Policies

WB1 Species protection

Development which would have a significant adverse effect on important species or their habitats will not be permitted unless appropriate measures are taken to secure their long term protection and viability.

8.7 The presence of an important species is a material consideration in deciding a planning application. Important species or habitats are those protected by law, identified as a priority species or habitat in the UK Biodiversity Action Plan or the FBAP. Examples of protected species occurring in Flintshire include bats, badgers, barn owls, great crested newts, otters and some orchids. These have statutory protection under a range of international and national legislation including: the Wildlife and Countryside Act 1981; and the Conservation (Natural Habitats &c.) Regulations 1994, both of which play a key role in maintaining biodiversity.

8.8 Where development is permitted the Local Planning Authority must be satisfied that the ecological interest of a site can be adequately safeguarded by means of appropriate planning conditions and/or obligations. Before development affecting a European protected species can occur, conditions contained in the Habitats Regulations must be met, that is the development is required for preserving public health, safety, or for other reasons of overriding public interest. Additionally it must be demonstrated that there is no satisfactory alternative nor should there be a detrimental effect on the maintenance of the species population at a favourable conservation status. If these tests are met the Welsh Assembly Government can issue a licence to enable development to proceed.

8.9 This policy seeks to protect species with regard to the development and use of land and does not override the statutory requirements for species protection as contained in Acts of Parliament or through European Law. Where the Council require mitigation or compensatory provision to be made either on site or on adjacent land, conditions will be attached or obligations required to facilitate species survival, minimise disturbance or as a last resort provide suitable alternative habitat to ensure that species are safeguarded.

WB2 Sites of international importance

Development will not be permitted unless:-

a) it is demonstrated that it will not have a significant adverse effect on any Ramsar Site or Natura 2000 site (including SPAs, potential SPAs, SACs, candidate SACs); or
b) it is demonstrated, following appropriate assessment, that it will not adversely affect the integrity of any Ramsar or Natura 2000 site.

8.10 This policy is directed at sites which have, or may be identified as having, ecological value of international significance. In Flintshire the Dee Estuary has several such designations and these are shown on the proposals map. It has been designated as a Ramsar site under the Convention on Wetlands of International Importance and a Special Protection Area (SPA) under the European Community Birds Directive (79/409/EEC) due to its importance as a wintering site for significant populations of migratory waders and wildfowl. The Dee Estuary has also been designated a Candidate Special Area of Conservation (SAC) under the Habitats Directive (92/43/EEC). These designations are intended to promote conservation and the wise use of wetlands and stem the progressive loss of internationally important habitats.

8.11 The purpose of an appropriate assessment as required by the Habitats Directive and Regulations, is to ascertain, in view of the sites conservation importance, whether development would have an adverse effect on the integrity of the designated site. The integrity of a site is considered to be the coherence of its ecological structure and function that allows it to sustain the species, habitat or complex of habitats for which it was classified. Proposals may have a significant effect on the ecological value of a site either individually, or as a result of cumulative developments. Detailed guidance in respect of internationally important sites is given in a table contained in Planning Guidance Wales – Technical Advice Note 5.

8.12 Where the County Council, in consultation with the Countryside Council for Wales (CCW), suspect that the impact of a development on a designated area is likely to be damaging, planning applications should be accompanied by suitable supporting environmental impact information. An Environmental Impact Assessment will be required in certain instances, which is the process by which information about the likely significant environmental effects of certain types of development is collected, assessed and taken into account in deciding whether planning permission should be granted.

8.13 Where in the view of the Local Planning Authority proposed development will adversely affect the integrity of the site in a manner which cannot be overcome by planning conditions or obligations, planning permission should only be granted in exceptional circumstances for reasons of over-riding public interest, including those of a social or economic nature which must be sufficient to over-ride the ecological importance of the designation. In such circumstances it will be necessary to secure compensatory measures to protect the community wide network of SPAs and SACs.

Other key policies:

- HSG1 New housing development proposals
- HSG2A North west of garden city

- EM1 General employment land allocations
- EM3 Development zones and principal employment areas

WB3 Statutory sites of national importance

Sites of Special Scientific Interest (SSSI) will be protected. There will be a presumption against development either within or in the vicinity of a site which would have a significant adverse effect on the nature conservation interest of the site.

8.14 SSSI's are nationally important and statutorily designated for their biological and geological interest. Some SSSI's in Flintshire are also of international importance and for this reason have additional designations conferred on them. SSSI's are shown on the proposals map.

8.15 The key importance of sites designated for nature conservation interest means that development proposals in or likely to affect them must be subject to special scrutiny. Where a specific proposal would impact directly or indirectly upon a SSSI it must be demonstrated that the site features meriting designation would not be detrimentally affected. Government guidance notes that SSSI's may be seriously damaged by developments outside their boundaries.

8.16 Consequently within SSSI's planning permission should only be granted where the Local Planning Authority is satisfied that the nature conservation value of the SSSI will not be compromised as a result of the proposed development, or where in accordance with national planning guidance, other material factors are sufficient to override nature conservation considerations. Where development is permitted, the Council will consider the use of conditions or planning obligations to ensure the protection and enhancement of the site's nature conservation interest.

WB4 Local sites of wildlife and geological importance

Wildlife Sites and Regionally Important Geological Sites will be protected. Planning permission will not be granted for development that is likely to have a significant adverse effect on their nature conservation or geological value.

8.17 In addition to statutory designated sites there are many habitats and important geological features of local interest which make a vital contribution to the County's biodiversity and geodiversity. The County Council keep an up-to-date register of these non-statutory local sites.

8.18 Many of these are subject to pressures for change, and can be destroyed by development either on, or in the vicinity of the site. Nature conservation interest will therefore be a consideration where a development proposal may impact upon a site of local wildlife or geological importance. However, planning permission will not be refused if where in accordance with national policy guidance other material factors are sufficient to override nature conservation interests. Conditions or planning obligations can be applied to prevent significant adverse impacts on wildlife, habitats or important physical features. In the case of larger developments this may involve the integration of features and habitats of value into proposals.

WB5 Undesignated wildlife habitats

Development will be permitted only if it will not have a significant adverse effect on wildlife and habitats of local importance.

8.19 There are many undesignated sites which have considerable nature conservation value and represent vital elements in the County's biodiversity. Examples include natural watercourses, streams or rivers and their banks, unimproved grasslands, wetlands, heather moorland and woodlands (particularly those of ancient semi-natural origin). Some of these habitats may be comparatively rare in the plan area, and considered to be of value on a very local basis, for example the last remaining pond close to a particular town or village. Developers will often be required to undertake detailed surveys of flora and fauna to enable the Council to ascertain whether a proposal would be acceptable.

8.20 Such sites may be valuable in their own right or may serve an important function in relation to adjacent areas. A feature may, for instance, form a wildlife corridor, linking areas that are vital for certain species. In addition to areas in the countryside, urban sites may be of value for wildlife. In particular, green corridors in built up areas, which may be under significant pressure, should be safeguarded. Their development may have serious implications beyond the site in question. Even brownfield sites, despite their often degraded appearance, may have significant ecological interest.

8.21 However planning permission will not be refused, where in accordance with national policy guidance, other material factors are sufficient to override nature conservation interests. Conditions and agreements will be used to mitigate any harmful effects to nature conservation interests.

WB6 Enhancement of nature conservation interests

The incorporation within development proposals of measures which improve the nature conservation value of an area will be permitted by the Local Planning Authority.

8.22 This policy recognises that, in addition to protecting habitats, opportunities will arise to increase biodiversity and geodiversity within Flintshire. Although land-take for development has gradually eroded wildlife habitats, opportunities exist to enhance ecological value through careful design of development proposals.

8.23 Proposals which improve the nature conservation value of sites will be encouraged. Where new development is carried out, sensitive landscaping and planting, the creation, maintenance and management of landscape features important to wildlife, and the skilled adaptation of derelict areas can provide extended habitats. The County Council will support proposals to establish local nature reserves in suitable locations. Larger scale developments will be required to consider how existing features can be enhanced, taking a strategic view of the site.

4 Approach

4.1 Assessment methodology

This section describes the details of the consultation, desk study and field surveys that have been undertaken to inform the baseline conditions. The assessment of impacts has been carried out in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) guidelines for ecological impact assessment.

4.2 Consultation and review of data

In order to determine the geographical scope of the search area, a desk study was undertaken. The following sources were used:

- National – Using the Multi-Agency Geographical Information for the Countryside (MAGIC) website, information relating to statutory and non-statutory designated wildlife sites was obtained. Statutorily protected sites were scoped to a distance of 10km and non-statutorily protected sites to within 2km of the application site.

- Local – An ecological record search of the site and surrounding area was undertaken using COFNOD, the local records centre.

4.3 Field surveys (including scoping out and reasons for exclusion)

4.3.1 Preliminary ecological appraisal

A preliminary ecological appraisal (UES01004.001) was undertaken by UES on 10th February 2015, the results of which are detailed in section 5 of this report. The PEA maps the habitats within the whole site boundary, however the assessment of likely impacts and mitigation measures relates to the red line development boundary within the Ewloe Barns Industrial Estate site only.

The results of the surveys combined with the results of the desk study highlighted the requirement for further mitigation and / or surveys in relation to the following habitats or species: amphibians, bats, breeding birds and reptiles.

4.3.2 Amphibians

The desk study and record search identified the site and surrounding area as being adjacent to the Deeside and Buckley newt sites SAC. The closest part of the protected site is within the ownership of our client approximately 80m to the south of the red line development boundary.

The record search identified numerous records of GCN locally, including a pond 80m from the site boundary. For the purposes of this report it is assumed that

GCN are present in this pond and on suitable areas of habitat in the surrounding area.

The PEA also identified areas of suitable habitat and features which could be used by sheltering amphibians.

As the presence of the species in known in the area and as the development is on an existing area of compacted ground and hard-standing, and no aquatic habitats are to be affected, no further GCN (pond surveys) are considered necessary.

4.3.3 Bats

There are no buildings on site suitable to support roosting bats. Numerous mature trees on site have potential to support roosting bats. This is particularly true of the mature and semi-mature Oak *Quercus robor* and Ash *Fraxinus excelsior* trees on the site boundaries.

4.3.4 Breeding birds

As part of the PEA, numerous bird species were recorded on site. There is little value in commissioning further breeding bird surveys as this is not likely to yield any results different from those of the initial walkover survey.

4.3.5 Reptiles

The local record search found records of reptiles within 1km of the site including Grass snake *Natrix natrix* and Adder *Vipera berus*.

The PEA also identified areas of suitable habitat and features which could be used by sheltering reptiles.

4.4 Significance criteria

Several stages of evaluation and application of significance criteria are involved in the process of an ecological assessment. "Valuing ecological features and resources is a complex and subjective process making it impossible to provide definite guidance about how value should be determined". The approach adopted in the case of this report broadly follows that of an EcIA and is set out below.

The categories of nature conservation value used, which are based on those set out in NPPF, are as follows:

- International – sites, habitats and species of significance in a European / global context.
- National – sites, habitats and species of significance in the context of Wales.
- County – sites, habitats and species of significance in the context of Flintshire.
- Local – sites, habitats and species of significance in the context of Alltami.

- Low – habitats and species of less than local significance, but of some value.
- Negligible or no conservation value – not significant.

4.4.1 Evaluation of the significance of impacts and residual impacts

The significance of an impact is a matter of professional judgement, but can be described in general terms as being a product of the ecological or nature conservation value of a site, and the magnitude of the predicted impact. The more ecologically valuable a site and the greater the magnitude of the impact, the higher the significance of that impact is likely to be.

The magnitude of an impact depends upon the nature and sensitivity of a receptor and the range of potential effects arising from the implementation and operation of a proposed development. For the purposes of this assessment, the nature of the effects on a specific receptor is described in the impacts section, and then the magnitude of these combined effects is summarised as being in one of the categories 'negligible', 'low', 'medium' or 'high', depending upon the extent of the areas of population deemed likely to be affected by the development.

Table 1 below provides an indication of the terms in which the significance of ecological impacts is considered in this chapter.

Table 1 - Generalised impact significance matrix

Ecological value of site or feature	*Magnitude of potential impact*			
	High	**Medium**	**Low**	**Negligible**
International	Critical	Critical	Major	Minor
National	Critical	Major	Moderate	Minor
County	Major	Moderate	Minor	Minor
Local	Moderate	Minor	Minor	Not significant
Low	Minor	Minor	Not significant	Not significant
Negligible or more	Not significant	Not significant	Not significant	Not significant

4.5 *Assumptions / limitations*

None.

5 Baseline conditions

5.1 Introduction

This section presents a description of the ecological baseline conditions, based upon the results of the consultation exercise, the preliminary ecological appraisal and additional species specific surveys.

5.2 Desk study

A desk study was conducted for the proposed development site and surroundings. Statutorily protected sites were scoped to a distance of 10km and non-statutorily protected sites to within 2km of the application site. Further results of the desk study can be found at Appendix 5 of the PEA (UES01444.001).

5.2.1 Statutorily protected sites

The statutorily protected sites listed below are within 2km of the site:

- Deeside and Buckley Newts Site SAC
- Buckley Claypits and Commons SSSI
- Connahs Quay Ponds and Woodlands SSSI
- Maes Y Grug SSSI

The sites are primarily designated as a protected area for Great crested newts and there are large populations of GCN present locally.

The statutorily sites listed below are between 2km and 10km from the site;

SPA
- The Dee Estuary

RAMSAR
- The Dee Estuary

SAC
- The Dee Estuary
- Alyn Valley Woods
- Halkyn Mountain
- Deeside and Buckley Newt Sites
- River Dee and Bala Lake

SSSI
- The Dee Estuary
- Inner Marsh Farm
- Alyn Valley Woods and Alyn Gorge Caves
- Buckley Claypits and Commons
- Cefn Meadow
- Chwarel Cambrian / Cambrian Quarry, Gwernymynydd
- Coed Talon Marsh

- Comin Helygain a Glaswelltiroedd treffynnon / Halkyn Common and Holywell Grasslands
- Connahs Quay Ponds and Woodlands
- Maes y Grug
- Shotton Lagoons and Reedbeds
- Mynydd y Fflint / Flint Mountain
- Tyddyn y Barcut
- Pen y Cefn Pasture
- Afon Dyfrdwy
- Bryn Alyn

The sites identified during the desktop study were cross referenced with the survey area relevant to this report. The site is within 80m of the Deeside and Buckley newt sites SAC. As the development works are on an area of hard-standing within an existing industrial site it is considered unlikely that the proposed works will directly or indirectly impact on the SAC or any other designated sites.

5.2.2 Non-statutorily protected sites

There are no non-statutorily protected sites within 2km of site.

5.3 Habitats

The results of the preliminary ecological appraisal are shown at Appendix 1 of the PEA (UES01444.002). Habitats are colour-coded in accordance with the phase 1 standard.

The following principle habitat types were characterised locally. In summary, the phase 1 habitat types are as follows:

- A2.2 Scrub, scattered
- A3.1 Parkland / scattered trees, broad-leaved
- B4 Improved grassland
- B5 Marshy grassland
- C3 Tall ruderal vegetation
- G1 Standing water (off site)
- G2 Running water
- I2.2 Artificial exposure and waste, spoil
- J1.3 Ephemeral / short perennial vegetation
- J2.1 Intact hedgerow
- J2.4 Fence
- J2.5 Wall
- J3.6 Buildings and hard-standing

5.3.1 A2.2 Scrub, scattered

There are areas of scattered scrub on site, the majority of the scrub is concentrated in areas to the south of the red line development boundary in areas which are not currently used as a part of the operation of the site.

Scrub has developed on the grassland slopes to the south of the site and in the SSSI area, with the greater concentrations being towards the eastern and western site boundaries. Species present include; Goat willow *Salix caprea*, Silver birch *Betula pendula,* Hawthorn *Cratageous monogyna*, Hazel *Corylus avellana* and Oak *Quercus robor.*

5.3.2 A3.1 Parkland / scattered trees, broad-leaved

There are a number of mature and semi-mature trees on site, both within the red line boundary and on land immediately adjacent to the site boundaries. Trees are concentrated along the eastern and western boundaries of the site.

Species present include; Oak, Sycamore *Acer pseudoplatanus*, Alder *Alnus glutinosa*, Elder *Sambucus nigra*, Hawthorn and Ash *Fraxinus excelsior.*

The trees vary in age and height, the larger trees present are approximately 15m in height with stem diameters >60cm. Some of the trees are covered with Ivy *Helix hedera.*

5.3.3 B4 Improved grassland

Land to the east and west of the site is cattle grazed improved pasture.

5.3.4 B5 Marshy grassland

The area to the south of the site is dominated by marshy grassland. The marshy grassland has a higher concentration of bryophytes in some areas which resemble flush vegetation, however marshy grassland is dominant. The habitat has most likely formed as a result of the materials used to cap the landfill, and water running over and through the surface soils and clays.

Species present include; Tufted hair grass *Deschampsia cespitosa,* Crested dog's-tail *Cynosaurus cristatus,* Creeping bent *Agrostis stolonifera*, Fescue sp *Festuca* sp, Sedges *Carex sp,* Hard rush *Juncus inflexus,* Silverweed *Argentina anserina*, Thistle sp *Cirsium sp*, Ribwort plantain *Plantago lanceolata*, Common mouse ear *Cerastium fontanum*, Common dock *Rumex obtusifolius* and Black knapweed *Centaurea nigra.*

5.3.5 C3 Tall ruderal vegetation

There are areas of tall ruderal vegetation on site, these are mainly concentrated around the site boundaries in the un-used areas of the site. Although there are smaller pockets of ruderal vegetation within the grassland area to the south of the site. Species present include; Rosebay willowherb *Epilobium angustifolium*,

Bramble *Rubus* sp, Stinging nettle *Urtica dioica*, Thistle sp and Mugwort *Artemisia vulgaris.*

5.3.6 G1 Standing water

There is a pond on the western site boundary with adjacent farmland approximately 80m from the site boundary. The pond is outside of the development site area and will not be directly affected by the planned works. At the time of survey the pond was approximately 40m x 10m and had a number of sections split by willow encroachment. The different sections provide different depths of water which is more than 2m deep at some points.

The pond is partially over-shaded by surrounding trees, and has deep leaf litter in some areas, at the time of survey there were no emergent macrophytes visible and water quality was poor, however this may well change as the season progresses.

The pond is fed from a ditch to the south and overflows into a ditch running north on the western site boundary.

5.3.7 G2 Running water

There is a drainage ditch on the western site boundary which runs north from the higher ground to the south of the site.

5.3.8 I2.2 Artificial exposure and waste, spoil

The site is currently operated as a recycling facility which sorts through various types of inert waste. The waste is off-loaded on site and is then sorted into the different types of materials in order to be recycled and re-used.

The materials stored and sorted on site are kept in piles in different areas of the site which have been marked on the attached plan as spoil.

5.3.9 J1.3 Ephemeral / short perennial vegetation

The majority of the active area of the site is compacted bare ground or concrete hardstanding, however there are pockets of ephemeral and short perennial vegetation in areas of the site which are less disturbed by vehicle movements.

Species present include; Rosebay willowherb, Common dandelion *Taraxacum officinale agg,* Bristly ox tongue *Helminthotheca echioides*, Common bent *Agrostis capillaris*, Creeping bent, Tufted hair grass, Cocks foot, Perennial rye grass *Lolium perenne,* Annual meadow grass *Poa annua*, Ribwort plantain, Gorse *Ulex europaeus*, Hard rush, *Carex* sp and Stinging nettle.

5.3.10 J2.1 Intact hedgerow

There is an intact Hawthorn hedgerow on the western site boundary with adjacent farmland. The hedgerow is gappy in places and has been stock proofed with post and wire fencing.

5.3.11 J2.4 Fence

The site boundaries are marked by galvanised steel mesh fencing, steel palisade fencing, and post and wire fencing.

5.3.12 J2.5 Wall

There are a series of concrete walls on site which are used to divide up the different types of materials, which are being sorted and recycled.

The walls are constructed of concrete sections and form an almost continuous barrier across the southern section of the site, from the buildings on the western side of the site to the area where the new building is planned.

5.3.13 J3.6 Buildings and hard-standing

There are a number of buildings on the site including steel framed Dutch barns with open fronts and corrugated steel cladding, brick buildings with steel frames and corrugated steel roofs, temporary Portakabins, and steel shipping containers.

No permanent buildings will be affected by the works, Portakabins and other non-permanent buildings will be moved from the site area affected by the planned works.

The majority of the active area of the site is set on concrete hard-standing or compacted hardcore and rubble. The proposed new building will be built on an area of compacted hard core and compacted soil.

5.4 Species

5.4.1 Amphibians

The site ownership includes a section of the Buckley Claypits and Commons SSSI which is a component of the Deeside and Buckley newt sites SAC.

The SSSI is on the southern boundary of the site approximately 80m from the proposed development boundary.

There is a pond on the western site boundary approximately 80m from the proposed development boundary, which is a known Great crested newt breeding pond (GR SJ 2766 6594). The pond is located in a treeline on the western site boundary and has connectivity along the treeline and drainage ditch from north to south.

There are numerous records of GCN further south on the adjacent landfill site and the SSSI area.

There is another section of the SSSI and further records of GCN to the north of the A494 however the road is considered to be a barrier to movement.

There are no aquatic features on site which will be directly affected by the proposed development works. The majority of the active site area is compacted bare ground which is not typically favoured by amphibians. Piles of materials within the site could be used by sheltering amphibians.

The marshy grassland, scrub and ruderal areas at the southern end of the site provide suitable terrestrial habitat for foraging and sheltering amphibians.

5.4.2 Bats

The area in general presents good quality habitat for roosting, foraging and commuting bats, and bats have been recorded within 1km of the site.

A number of the trees on site have holes or cavities present which could be suitable for use by roosting bats. A number of trees may be removed on the western site boundary in order to facilitate the development.

5.4.3 Breeding birds

There are numerous habitats on and surrounding the site which present good opportunities for breeding birds, namely; mature trees, dense scrub and tall ruderal vegetation.

Although a targeted breeding bird survey was not conducted, numerous species were found on site. Of the species found, some are of conservation concern.

Bird species recorded on or local to site include: Magpie *Pica pica*, Blackbird *Turdus merula,* House sparrow *Passer domesticus,* Mallard *Anas platyrhynchos,* Dunnock *Prunella modularis*, Wren *Troglodytes troglodytes,* and Great tit *Parus major.*

The conservation status of bird species recorded within or close to the site boundary are defined as follows:

- No species with special legal protection under Annex 1 of the EU Birds Directive.
- No species with special legal protection under Schedule 1 of the Wildlife & Countryside Act.
- 2 species listed under Section 42 of the Natural Environment and Rural Communities Act 2006: House sparrow and Dunnock.

- 3 species on the RSPB 'red / amber list' of high / medium conservation concern: House sparrow, Dunnock, Mallard.

- 2 UK BAP priority bird species: House sparrow and Dunnock.

The loss of an area of previously developed land is not significant in terms of breeding birds. The carrying capacity of the total site footprint is likely to remain unchanged and areas surrounding the site will to remain as ecologically diverse green space. There are no ground nesting birds or waders associated with the bare ground habitats to be lost. Any displacement of birds is likely to be in the short term.

5.4.4 Reptiles

Reptiles including Grass snakes and Adders have been recorded within 1km of the site.

Reptiles typically favour rough land and pastures often close to a standing body of water. The habitats to the south of the active site are considered to be more suitable for reptiles than the heavily disturbed areas within the site, and it is likely that reptiles are present within suitable habitats locally.

6 Impact assessment

This section provides an assessment of the significance of predicted impacts on the valued ecological habitats and species with specific reference to the proposed development. Only those habitats and species of more than local value are considered at this point. It should also be considered that the site is currently an active recycling facility, and as such the site and its surrounding habitats and species are subject to a level of disturbance at present.

Local planning authorities are not likely to consider ecological features of parish value or lower as a material planning consideration. The predicted impacts are described in the absence of mitigation and consider both the construction and operational phases of the development.

6.1 Construction

Construction activities that have the potential to impact ecological receptors include temporary land take, noise disturbance, vibration, visual disturbance, surface water run-off and dust.

6.1.1 Great crested newts

Site clearance prior to the construction of the new building could involve the loss of features which are suitable for use by sheltering terrestrial amphibians. Without suitable mitigation this could lead to direct harm to individual GCN.

In the absence of mitigation, construction works are likely to have a low impact on GCN at a local level, and therefore is of low significance.

6.1.2 Bats

Site clearance and setting out may involve the direct loss of mature trees with potential to support roosting bats.

In the absence of mitigation, construction works will potentially have a high impact on bats at a local level, and therefore is of moderate significance.

6.1.3 Breeding birds

Site clearance and setting out may result in the direct loss of nests and associated young, as well as the potential loss of available nesting territories including trees, dense scrub and tall ruderal vegetation.

In the absence of mitigation, construction works are likely to have a high impact on breeding birds at a local level, and therefore is of moderate significance.

6.1.4 Reptiles

Site clearance prior to the construction of the new building could involve the loss of features which are suitable for use by sheltering terrestrial reptiles. Without suitable mitigation this could lead to direct harm to individual reptiles.

In the absence of mitigation, construction works are likely to have a low impact on reptiles at a local level, and therefore is of low significance.

6.1.5 Summary

Table 2 – Summary of construction impacts

Species	Ecological value of site or feature	Magnitude of potential impact	Significance
GCN	Local	Low	**Low**
Bats	Local	High	**Moderate**
Breeding birds	Local	High	**Moderate**
Reptiles	Local	Low	**Low**

6.2 Operation

During operation, activities that could give rise to ecological impacts include lighting and disturbance from increased human and vehicle activity although the level of disturbance on site (post development) is likely to be no higher than at present.

6.2.1 Great crested newts

The ongoing operation of the site should have no greater impact on the adjacent protected site or on individual amphibians than at present. It is accepted that due to the close proximity of the site to the SAC individual amphibians may be present on site, and so impacts on individual GCN are to some degree inevitable.

In the absence of mitigation, the continued operation of the site is likely to have a low impact on GCN at a local level, and therefore is of minor significance.

6.2.2 Bats

Likely significant human influences include the use of external lighting which may disturb foraging and commuting routes.

The proposed development site is already subject to moderate levels of disturbance, therefore it is unlikely that the continued operation of the site will result in any increased impact on bats locally.

In the absence of mitigation, the operation of the site is likely to have a low impact on bats at a local level, and therefore is of minor significance.

6.2.3 Breeding birds

The loss of an area of previously developed land is not significant in terms of breeding birds. The carrying capacity of the total site footprint is likely to remain unchanged as a large proportion of the site is to remain as ecologically diverse green space. There are no ground nesting birds or waders associated with the bare ground habitats to be lost. Any displacement of birds is likely to be in the short term.

The proposed development site is already subject to moderate levels of disturbance, therefore it is unlikely that the continued operation of the site will result in anything other a negligible impact on breeding birds locally.

In the absence of mitigation, the operation of the site is likely to have a negligible impact on breeding birds at a local level, and therefore is not significant.

6.2.4 Reptiles

The ongoing operation of the site should have no greater impact on reptile habitat or on individual reptiles than at present. It is accepted that due to the close proximity of the site to suitable areas of habitat, individual reptiles may be present on site, and so impacts on individual reptiles as a consequence of the operation of the site, are to some degree inevitable.

In the absence of mitigation, the operation of the site is likely to have a low impact on reptiles at a local level, and therefore is of minor significance.

6.2.5 Summary

Table 3 – Summary of operation impacts

Species	Ecological value of site or feature	Magnitude of potential impact	Significance
GCN	Local	Low	Minor
Bats	Local	Low	Minor
Breeding birds	Local	Negligible	Not significant
Reptiles	Local	Low	Minor

7 Mitigation measures

This section describes the measures which are required to mitigate any significant environmental impacts.

7.1 Construction

7.1.1 Great crested newts

Non-licenced reasonable avoidance measures should be used when clearing the construction area and during the construction phase. Measures could include, briefing the site workers prior to the start of works, hand search of the area by a suitably licenced ecologist, removal of any materials which could be used by sheltering amphibians, storage of materials on pallets or in suitable skips and containers in order to avoid creating areas suitable for sheltering GCN.

7.1.2 Bats

If any trees are to be removed more detailed inspections involving endoscopes and potentially an aerial inspection may be required. Surveys should be carried out as per Natural England and Bat Conservation Trust (BCT) guidelines and by a suitably qualified ecologist.

7.1.3 Breeding birds

Due to the potential presence of nesting bird species within the application site, any tree works, shrub removal and vegetation clearance (including enabling works) should be carried out outside of the breeding bird season of March to August inclusive. If this is not possible, a targeted breeding bird survey should be conducted prior to start on site.

7.1.4 Reptiles

Reasonable avoidance measures should be used when clearing the construction area and during the construction phase. Measures could include, briefing the site workers prior to the start of works, hand search of the area by a suitably licenced ecologist, removal of any materials which could be used by sheltering reptiles, storage of materials on pallets or in suitable skips and containers in order to avoid creating areas suitable for sheltering reptiles.

7.2 Operation

7.2.1 Great crested newts

Soft buffer planting such as hedgerow or tree planting between the SAC and recycling plant may help to divert individual amphibians from moving onto the active areas of the site. The creation of hibernacula / habitat piles in areas away from the site could also prevent individual GCN from seeking shelter on the site.

7.2.2 Bats

The abundant standing water, marshy grasslands and trees close to the site are likely to support good insect numbers and provide good quality foraging and commuting habitat for bats.

If any external lighting is planned consideration will be given to the commuting and dispersal routes potentially used by bats. External lighting will be directed away from the tree lines on the site boundary.

7.2.3 Breeding birds

The mosaic of habitats surrounding the site are likely to provide important habitats for foraging and breeding birds locally.

The small number of trees which may be lost to the proposed works should only constitute a minor negative impact on breeding birds and their habitat locally. As such no specific compensation for the loss of breeding bird habitat is proposed or considered necessary.

7.2.4 Reptiles

Soft buffer planting such as hedgerow or tree planting between the SAC and recycling plant may help to divert individual reptiles from moving onto the active areas of the site. The creation of hibernacula / habitat piles in areas away from the site could also help to deter individual reptiles from seeking shelter on the site.

No further mitigation or compensation is considered necessary as the completed development should pose no greater risk to individual reptiles than at present levels.

7.3 Completed development

Enhanced landscape features and appropriate management of vegetation will maximise the nature conservation value of the site as a whole. The carrying capacity of the site and its surrounding areas are likely to remain unchanged or be improved by the proposed compensation measures.

8 Residual impacts

8.1 *Great crested newts*

After mitigation the construction works and operation of the site are likely to have a low impact on GCN at a local level, and therefore is of minor significance.

The creation of a hedgerow or other tree planting linking the eastern and western site boundaries and the provision of hibernacula should provide an improvement in connectivity across the site and provide additional areas of shelter for amphibians.

The residual impact of the completed and operational development therefore is anticipated to be a **minor positive change at a local level.**

8.2 *Bats*

After mitigation the construction works and operation of the site are likely to have a negligible impact on bats at a local level, and therefore is of minor significance.

Mitigation measures are required on site subject to the removal of mature trees. If any suitable trees are to be removed further survey work will be undertaken and reasonable avoidance measures implemented on site as required.

The residual impact of the completed and operational development therefore is anticipated to be a **neutral change at a local level.**

8.3 *Breeding birds*

After mitigation the construction works and operation of the site are likely to have a negligible impact on breeding birds at a local level, and therefore is not significant.

Reasonable avoidance measures will be implemented on site during any vegetation clearance works to ensure that there are no impacts on nesting birds.

The residual impact of the completed and operational development therefore is anticipated to be a **neutral change at a local level.**

8.4 *Reptiles*

After mitigation the construction works and operation of the site are likely to have a low impact on reptiles at a local level, and therefore is of minor significance.

The creation of a hedgerow or other tree planting linking the eastern and western site boundaries and the provision of hibernacula should provide an improvement in connectivity across the site and provide additional areas of shelter for reptiles.

The residual impact of the completed and operational development therefore is anticipated to be a **minor positive change at a local level.**

8.5 Summary

Table 4 – Summary of residual impacts

Species	Significance of construction impacts (prior to mitigation)	Significance of operation impacts (prior to mitigation)	Significance (after mitigation)	Residual impact
GCN	Low	Low	Low	Neutral
Bats	High	Low	Minor	Neutral
Breeding birds	High	Negligible	Not significant	Not significant
Reptiles	Low	Low	Not significant	Not significant

9 Conclusion

The site is currently in use as a recycling facility, breaking down mixed inert waste materials into different types which are then re-used. The proposed construction of a new building will affect areas of existing hard-standing and compacted bare ground within an existing industrial site. The development may also involve the loss of a low number of trees and a small area of grassland at the southern edge of the site.

The proposed works should have no direct impact on the Deeside and Buckley newt sites Special Area of Conservation. Although the Deeside and Buckley newt sites SAC is within close proximity to the site, the use of previously developed land for a purpose similar to that already in operation on the site should pose no greater risk to the protected sites and their resident species than at present.

The EcIA has identified various impacts up to a local level due to the presence, or potential presence, of protected or priority species / habitats within and immediately adjacent to the site boundary, notably; Great crested newts, bats, breeding birds and reptiles. No impact is anticipated on the Dee and Buckley newt sites SAC.

Provided that the mitigation and compensation measures detailed in section 7 are implemented, it is considered that the proposed development will be compliant with all relevant legislation and policy and that the completed site, is likely to support the same species in similar numbers. In summary, the mitigation and compensation measures are as follows:

- **Amphibians** – A method statement detailing the necessary non-licenced reasonable avoidance measures and suitable mitigation and compensation measures should be produced to ensure that the risk to individual amphibians is minimised during and after the works. The MS will include suitable "soft buffer" planting between the site and the SAC.

- **Bats** – If any trees are to be removed then further surveys will be required to assess the suitability of the trees for use by roosting bats, and their presence or absence.

- **Breeding birds** – In order to prevent any potential impact on breeding birds, any tree removal or vegetation clearance should be undertaken outside of the recognised breeding bird season (March to August inclusive). If this is not possible then a breeding bird survey should be carried out or an ecological clerk of works appointed to oversee the works.

- **Reptiles** – A method statement detailing the necessary reasonable avoidance measures and suitable mitigation and compensation measures should be produced to ensure that the risk to individual reptiles is minimised during and after the works. The MS will include suitable "soft buffer" planting between the site and the SAC.