

Preliminary Ecological Appraisal



Pilsworth South Landfill Site, Pilsworth Road,
Pilsworth, Lancashire, BL9 8QZ
Grid Ref: Sd 8225 0900

June 2023

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Quality Management

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1 Introduction

1.1 Background to the scheme

Environmental Business Solutions was originally instructed in May 2023 to carry out a Preliminary Ecological Appraisal (PEA) for the proposed construction of a Materials Recovery Facility (MRF) at Pilsworth South Landfill Site, Pilsworth Road, Pilsworth, Lancashire, BL9 8QZ (grid Ref: SD 8225 0900). The site was visited in June 2023.

1.2 Site context

The site is located at National Grid Reference Sd 8225 0900 and forms part of the overall landfill site. The project site is approximately 0.80ha (see Figure 1).

The site consists completely of bare ground and is currently a working area within the main landfill site used as a plant repair area / storage area. There are 4 water bodies within 500m of the proposed and part of the greater working landfill site, these ponds were subjected to Great Crested eDNA breeding surveys, all showed negative results.

The Application Site is surrounded by ongoing work areas and hard standing.

Figure 1: Proposed area for Site



Figure 2: Proposed layout of building (MRF)

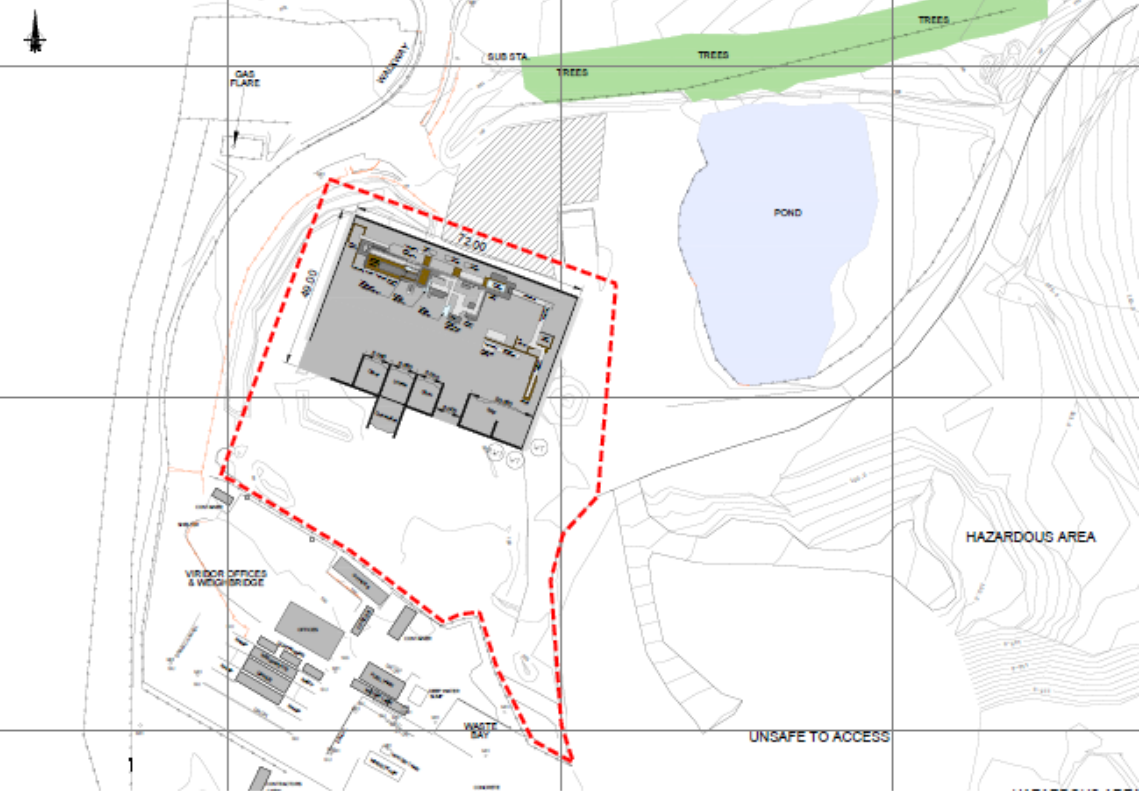


Fig 3. Site in wider context.



1.3 Purpose of this report

This report has been produced to set out the methods, results, and conclusions of a Preliminary Ecological Appraisal (PEA). This will inform the need for any further ecological surveys as required in order to fully assess the impacts of the proposals.

For the purposes of this study, the term 'protected and notable species' is defined in Appendix 1 along with full information on legal protection of those species which are formally protected are also defined in Appendix 1.

2 Methods

2.1 Desk study

Sources of information used in the desk study are presented in Table 2.1 below.

Table 2.1 – Desk study sources of information

Source	Date latest consulted	Information sought
MAGIC website www.magic.gov.uk	06/23	Locations of statutorily-designated wildlife sites within 1km of the site boundary
Natural England https://designatedsites.naturalengland.org.uk/	06/23	Relevant SSSI citations
JNCC http://jncc.defra.gov.uk/	06/23	Information on European wildlife sites Details of relevant Section 41 species and habitats
Greater Manchester Ecology Unit (GMEU)	06/23	Locally designated wildlife sites within 1km of site boundary Records of protected and notable species within 1km of the site boundary
OSmaps online www.ordnancesurvey.co.uk	06/23	Ponds and waterbodies within 250m of the site.

2.2 Field survey

The site was subject to a field survey on 18th and 19th June 2023. The weather conditions were dry with good visibility. All surveys were supervised by Bill Gaudie.

Bill Gaudie BSc hons (Wildlife Conservation), MCIEEM is an ecologist and has 16 years' experience in undertaking ecological surveys including Preliminary Ecological Appraisals.

The methods were based on the standard 'Phase 1' habitat survey technique (JNCC 2010), which was extended (IEA 1995) to include any relevant information on evidence or suitability for use by protected or notable species.

3 Results

3.1 Desk study

There is 1 statutory site within 1km of the proposed development site.

- Hollins Vale Local Nature Reserve (LNR) is located approximately 600m south west of the site and separated by the M66 motorway.

There are 3 Sites of Biodiversity Importance (SBIs) present within 1km of the proposed development site.

- Pilsworth SBI is located approximately 670m south east of the the site.
- Hollins Vale SBI is located approximately 600m south west of the site and separated by the M66 motorway.
- Hollins Plantation SBI is located approximately 800m south west of the site and separated by the M66 motorway.

In addition, the desk study highlighted a number of protected species within the search area. None are associated with the site none are thought to be affected by the development. Due to sensitive records and copyright restrictions, these records are not for public viewing. A copy is available to the local authorities ecologist upon request.

3.2 Field survey

3.2.1 Habitats off site which require consideration.

The habitats on site, and accompanying Target Notes are presented in Appendix 3, and described in more detail below.

The whole of the site consists of bare ground with areas of hard standing.

3.2.1 Habitats off site which require consideration

Part of the proposed site is bordered by young willow trees and ruderal vegetation. The majority of the immediate surrounding areas consists of heavy plant working area.

A number of water bodies are found within 500m of the site. All were subjected to eDNA testing and found to be negative. See Appendix 4 for details.

3.2.2 Species and species groups which may be present

None.

3.2.3 Species and species groups which are unlikely to be present

Table 3.2.4 indicates the species, species groups, designated sites and habitats that are highly unlikely to be present and aren't given further consideration in the appraisal due either to the lack of suitable habitat or the lack of an effect caused by the development.

Table 3.3 Species and species groups which are not given further consideration

Species / species group	Field evidence	Rationale for exclusion from the appraisal
Bats Species	None	No features to support bat roosts.
Breeding Birds	None	No Features to support breeding birds
Reptiles	None	Site is small and isolated. Limited foraging.
Great Crested Newt.	None	Negative results in GCN eDNA testing.
Badger	None	No suitable habitat within site for foraging and or sett building.
Dormouse	None	No suitable habitat on or adjacent to site .
Water vole (<i>Arvicola amphibius</i>)	None	No suitable water bodies within immediate area of the site. No records of water voles within search area
Otter	None	No suitable water bodies within immediate area of the site. No records of water voles within search area

3.2.4 Effects on Statutory and Non-Statutory Sites.

Statutory Sites.

Due to the size of the project no Statutory Sites are thought to be affected.

Non-Statutory Sites.

Due to the size of the project no Non-Statutory Sites are thought to be affected.

3.3 Constraints to the survey

The following constraints applied to the field survey:

- None.

4 Recommendations

4.1 Protected and notable species

Based on the findings of the PEA, no additional surveys or mitigation are required.

4.2 General mitigation and opportunities for enhancement

Suggestions for biodiversity enhancement include the provision of bat and bird nesting boxes (if possible), and the creation of habitats through planting of native trees and hedgerows.

All construction activities should comply with general environmental best practice measures including;

- the measures set out in the Environment Agency's Pollution Prevention Guidelines;
- excavations should be sealed overnight or should have at least one shallow-sloping side allowing animals to escape should they fall in;
- an ecologist should be contacted for advice should any protected species be discovered during construction;
- appropriate measures to suppress dust should be put in place during hot, dry, or windy weather.

5 Summary

A desk-based study and a field study were conducted in order to identify habitats and determine the suitability for any 'protected and notable' species to occur on site.

The site consists of a hard standing area used for heavy plant and machinery storage. There is no vegetation present. The area is not suitable to support Protected Species.

6 References

IEA (1995). Guidelines for Baseline Ecological Assessment. E & F Spon.

JNCC (2010). Handbook for Phase One Habitat Survey – 2010 Edition. England Field Unit, Nature Conservancy Council, reprinted JNCC.

Appendix 1 – **WILDLIFE LEGISLATION & SPECIES INFORMATION**

BADGERS

Badgers and their setts are protected under the Protection of Badgers Act 1992 (as amended) against damage or destruction of a sett, or disturbance, death or injury to the badgers. The Act defines a sett as "any structure or place which displays signs indicating current use by a badger". The definition of current use is subject to considerable debate. Natural England have produced guidance on the definition of current use. (*Badgers and Development – A guide to best practice and development. Natural England 2011*). Given the ambiguity surrounding the definition in all circumstances we would recommend an assessment of current use is always undertaken by a qualified ecologist. Natural Resources Wales (NRW) have a slightly different definition of current use. Please see the NRW website for further information. Penalties for offences against badgers or their setts include fines of up to £5,000 and/or up to six months in prison.

Disturbance of badgers could be caused by any digging activity or scrub clearance within 30 metres of an occupied sett and therefore every case needs to be assessed individually. Felling of trees close to a badger sett may also cause disturbance in some situations. Some activities such as pile driving may cause disturbance at even greater distances, and should be discussed with Natural England or NRW .

Licences are issued by Natural England (or NRW in Wales) to allow the disturbance of badgers, and the destruction of their setts in certain circumstances, in relation to development. Full planning permission must be obtained before a licence application will be considered. Although licences can be applied for at any time of year, disturbance of badgers or exclusion of badgers from a sett can only take place between 1 July and 30 November, to avoid the breeding season when dependant young may be

underground. This restriction may be relaxed in some cases where a sett is seasonal and badgers can be shown to be absent from a sett at that time of year.

This report contains information of a confidential nature relating to the location of badger setts. Public access to this data should be restricted to those who have a legitimate need to assess the information and to know the exact situation of the setts rather than simply that badgers are present.

BATS

All 17 species of bat known to breed in England and Wales, and their roost sites, are protected under the Conservation of Habitats and Species Regulations 2017 , known as the 'Habitats Regulations'. This makes it an offence to deliberately kill or injure a bat, or to deliberately disturb a bat such that its ability to hibernate, breed or rear young, or such that the species' distribution, were significantly affected. It is also an offence to damage or destroy any breeding site or resting place. Intentional or reckless disturbance of bats in their resting places, and damage to or obstruction of resting places are also

offences under the Wildlife and Countryside Act 1981 (as amended). Under UK law a bat roost is “any structure or place which any wild [bat]...uses for shelter or protection”. As bats tend to reuse the same roosts, legal opinion is that the roost is protected whether or not the bats are present at the time. Penalties for offences against bats or their roosts include fines of up to £5,000 and/or up to six months in prison.

As a result, development works which are likely to involve the loss of or alteration to roost sites, or which could result in killing of or injury to bats, need to take place under licence. Works which could disturb bats may also be licensable, though this needs to be assessed on a case by case basis, as bats’ sensitivity to disturbance varies depending on normal background levels, and the definition of disturbance offences under the Habitats Regulations is complex. In practice this means that works involving modification or loss of roosts (typically in buildings, trees or underground sites) or significant disturbance to bats in roosts are likely to be licensable.

Licences can be obtained from Natural England or the Welsh Government to permit works that would otherwise be illegal, provided it can be demonstrated that the proposed works are needed to protect public health or safety, or for other reasons of overriding public interest including social and economic reasons. It is also necessary to demonstrate that there is no satisfactory alternative to the proposed works, and that the conservation status of bats in the area will be maintained. Appropriate mitigation and post-construction monitoring are therefore a requirement of all licences.

AMPHIBIANS

Great Britain supports seven native amphibian species. The four most widespread species; smooth and palmate newts, common frog, and common toad, receive partial protection under the Wildlife and Countryside Act 1981 (as amended) which prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy. The great crested newt, pool frog and natterjack toad are also fully protected in England and Wales under the Conservation of Habitats and Species Regulations 2017. Penalties for offences against amphibian species include fines of up to £5,000 and/ or up to six months in prison.

Four amphibian species (great crested newt, pool frog, common toad, natterjack toad) are listed as priority species under the UK Biodiversity Action Plan, and are therefore considered to be Species of Principal Importance in England and Wales (excluding the pool frog, which does not occur in Wales) under the Natural Environment and Rural Communities (NERC) Act 2006. All public bodies including local and regional authorities have a duty under this legislation to have regard for the conservation of biodiversity.

GREAT CRESTED NEWTS

Great crested newts are protected in England and Wales under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations'. This makes it an offence to deliberately kill or injure a great crested newt, or to deliberately disturb a great crested newt such that its ability to hibernate, breed or rear young, or such that the species' distribution, were significantly affected. It is also an offence to damage or destroy any breeding site or resting place for great crested newts. Intentional or reckless disturbance of great crested newts in places of shelter (ponds or terrestrial refuges), and damage to or obstruction of places of shelter are also offences under the Wildlife and Countryside Act 1981 (as amended). Penalties for offences against great crested newts include fines of up to £5,000 and/or up to six months in prison.

As a result, development works which are likely to involve the loss of ponds or terrestrial habitat, or which could result in killing of or injury to great crested newts, need to take place under licence. Works which could disturb great crested newts may also be licensable, though this is rarely the case unless loss of great crested newt habitat is also proposed, and should be assessed on a case by case basis. In practice this means that works involving any removal of or significant modification to ponds or terrestrial habitats (typically rough grassland, scrub, hedgerow bases and woodland) supporting great crested newts are likely to be licensable.

Licences can be obtained from Natural England or the Welsh Government to permit works that would otherwise be illegal, provided it can be demonstrated that the proposed works are needed to protect public health or safety, or for other reasons of overriding public interest including social and economic reasons. It is also necessary to demonstrate that there is no satisfactory alternative to the proposed works, and that the conservation status of great crested newts in the area will be maintained. Appropriate mitigation and post-construction monitoring are therefore a requirement of all licences.

REPTILES

All six native reptile species receive protection under the Wildlife and Countryside Act 1981 (as amended). The four more common species (common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix natrix*) receive partial protection which makes it an offence to intentionally kill or injure a reptile. The two other reptile species (smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis*), both of which are rare with very restricted UK ranges receive full protection under the Conservation of Habitats and Species Regulations 2017. Penalties for offences against reptile species include fines of up to £5,000 and/or up to six months in prison.

Works such as site clearance or topsoil stripping which could result in killing or injury of reptiles could be considered result in an offence unless

measures are taken to minimise the risk of this occurring. Any inadvertent impacts on common reptile species despite these mitigation measures being in place would be considered an 'incidental result of an otherwise lawful operation' which 'could not reasonably have been avoided' and therefore not an offence. Works which could affect smooth snakes or sand lizards, or their habitats, would need to take place under licence from Natural England or Natural Resources Wales. However sites supporting smooth snakes or sand lizards are very rarely affected by development proposals.

In practice, mitigation for impacts of development on common reptiles generally comprise one or more of the following techniques: displacement, in which reptiles are encouraged to move to suitable retained habitat by changing the management of areas affected by development; exclusion, where reptile-resistant fencing is provided between a development site and suitable retained habitat allowing reptiles to be trapped from the development footprint and released elsewhere on the site; and translocation, where animals are trapped from a development site and released on another suitable site nearby. Reptile mitigation proposals, particularly those involving translocation of animals, should be agreed in advance with the local planning authority.

BIRDS

All British birds, their nests and eggs (with certain exceptions) are protected under the Wildlife & Countryside Act 1981 (as amended) which makes it an offence to: intentionally kill, injure or take a wild bird; intentionally take, damage or destroy nests which are in use or being built; intentionally take or destroy birds' eggs; or possess live or dead wild birds or eggs. A number of species receive additional protection through inclusion on Schedule 1 of the Wildlife and Countryside Act; for these it is also an offence to intentionally or recklessly disturb birds while nest building, or at a nest containing eggs or young, or to disturb the dependant young of such a bird. Penalties for offences against bird species include fines of up to £5,000 and/or up to six months in prison.

General licences for control of some bird species are issued by Natural England and Natural Resources Wales in order to prevent damage or disease, or to preserve public health or public safety, but it is not possible to obtain a licence for control of birds or removal of eggs/nests for development purposes. Consequently if nesting birds are present on a development site when works are programmed to start it is usually necessary to delay works, at least in the areas supporting nests, until any chicks have fledged and left the nest. It is usually possible, once chicks have hatched, for an experienced ecologist to predict approximately when they are likely to fledge, in order to inform programming of works on site.

OTTERS

Otters and their holts are protected in England and Wales under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations'. This makes it an offence to deliberately kill or injure an otter, or to deliberately disturb an otter such that its ability to breed or rear young, or such that the species' distribution, were significantly affected. It is also an offence to damage or destroy any breeding site or resting place. Intentional or reckless disturbance of otters in their holts, and damage to or obstruction of holts are also offences under the Wildlife and Countryside Act 1981 (as amended). Penalties for offences against otters or their holts include fines of up to £5,000 and/or up to six months in prison.

Any development works which are likely to involve the loss of holts, or which could result in killing of or injury to otters (which are only likely to occur extremely rarely), need to take place under licence. Works which could disturb otters may also be licensable, though this is also rarely the case as the majority of developments on watercourses and coastal areas where otters are present can be carried out in a way which avoids significant disturbance.

Where it is necessary, licences can be obtained from Natural England or the Welsh Government to permit works that would otherwise be illegal, provided it can be demonstrated that the proposed works are needed to protect public health or safety, or for other reasons of overriding public interest including social and economic reasons. It is also necessary to demonstrate that there is no satisfactory alternative to the proposed works, and that the conservation status of otters in the area will be maintained. Appropriate mitigation and post-construction monitoring are therefore a requirement of all licences.

WATER VOLES

Water voles *Arvicola amphibius* receive protection under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to: intentionally kill, injure, or take a water vole; intentionally or recklessly disturb a water vole whilst in its place of shelter; intentionally or recklessly damage, obstruct or destroy a water vole's place of shelter; or intentionally or recklessly obstruct access to a place of shelter. Penalties for offences against water voles include fines of up to £5,000 and/or up to six months in prison.

Works such as watercourse re-profiling, installing culverts, or topsoil stripping close to watercourses and ponds which could result in destruction or obstruction of burrows could be considered reckless, and/or could be considered intentional if water voles are killed or injured, unless measures are taken to minimise the risk of this occurring. Any inadvertent impacts on water voles despite these mitigation measures being in place would be considered an 'incidental result of an otherwise lawful operation' which 'could not reasonably have been avoided' and therefore not an offence.

In practice, mitigation for impacts of development on water voles generally comprise one or more of the following techniques: displacement,

in which water voles are encouraged to move to suitable retained habitat by changing the management of areas affected by development; exclusion, where water vole-resistant fencing is provided between a development site and suitable retained habitat allowing animals to be trapped from the development footprint and released elsewhere on the site; and translocation, where animals are trapped from a development site and released on another suitable site nearby. Water vole mitigation proposals, particularly those involving translocation of animals, should be agreed in advance with Natural England or Natural Resources Wales.

INVERTEBRATES

A number of invertebrates are protected in England and Wales under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations' including:

- large blue butterflies (eggs, caterpillars, chrysalises and adults)
- Fisher's estuarine moths (eggs, caterpillars, chrysalises and adults)
- little ramshorn whirlpool snails

A number of other invertebrates are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) from intentional killing, injuring or taking any wild animal.

PLANNING POLICY IN RELATION TO BIODIVERSITY

The National Planning Policy Framework (NPPF), was published in March 2012 and revised in July 2018. Additional guidance can be found online at - <http://planningguidance.planningportal.gov.uk/blog/guidance/>. The NPPF simplifies and collates a number of previous planning documents and outlines the government's objective towards biodiversity.

The NPPF identifies ways in which the planning system should contribute to and enhance the natural and local environment (Paragraph 170), including:

- (a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- (b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- (d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- (e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should,

wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

- (f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate. protecting and enhancing valued landscapes, geological conservation interests and soils;

It also emphasises the importance of conserving biodiversity and areas covered by landscape designations (Paragraph 172):

Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads.

When determining planning applications, the NPPF states that local planning authorities should aim to conserve and enhance biodiversity (Paragraph 175) by applying principles including:

- (a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- (b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on the special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
 - (c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶ and a suitable compensation strategy exists; and
- (d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

The following should be given the same protection as habitats sites:

- (a) potential Special Protection Areas and possible Special Areas of Conservation;
- (b) listed or proposed Ramsar sites⁷; and
- (c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

There is a general presumption in favour of sustainable development within the NPPF. It is noted in Paragraph 177 that this presumption does not apply where the plan or project is likely to have a significant effect on a habitat site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

The Natural Environment and Rural Communities Act (2006) states that a public authority must, "in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat". DEFRA issued further guidance on implementation of this act in the document; Guidance for Local Authorities on Implementing the Biodiversity Duty (May 2007), which notes that "Conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them".

ECOLOGICAL ENHANCEMENTS

The Natural Environment and Rural Communities Act (2006) states that a public authority must, "in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat". DEFRA issued further guidance on implementation of this act in the document; Guidance for Local Authorities on Implementing the Biodiversity Duty (May 2007), which notes that "Conserving biodiversity can include restoring or enhancing a population or habitat" ".

In England, the National Planning Policy Framework (NPPF), issued in July 2018, states that the planning system should contribute to *"minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; . It also states that "opportunities to incorporate biodiversity in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity*

".

UK BIODIVERSITY ACTION PLANS

The UK Biodiversity Action Plan (UK BAP) 2011 is a policy first published in 1994 to protect biodiversity and stems from the 1992 Rio Biodiversity Earth Summit. The policy is continuously revised to combine new and existing conservation initiatives to conserve and enhance species and habitats, promote public awareness and contribute to international conservation efforts. Each plan details the status, threats and unique conservation strategies for the species or habitat concerned, to encourage spread and promote population numbers.

Species or habitats identified as priorities under the UK Biodiversity Action Plan receive some status in the planning process through their identification as Species/Habitats of Principal Importance in England and Wales, under the Natural Environment and Rural Communities (NERC) Act 2006 (as amended).

Current planning guidance in England, the National Planning Policy Framework, does not specifically refer to Species or Habitats of Principal Importance, though it includes guidance for conservation of biodiversity in general. Supplementary guidance is available online at -

<http://planningguidance.planningportal.gov.uk/blog/guidance/> and this guidance indicates that it is 'useful to consider' the potential effects of a development on the habitats or species on the Natural Environment and Rural Communities Act 2006 section 41 list.

PROTECTED PLANTS

All wild plants receive some protection under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence for any unauthorised person to intentionally uproot any wild plant. Additionally, certain rare species of plants listed on Schedule 8 of the Act are given greater protection. For these species, it is an offence to intentionally pick, uproot or destroy them, or to possess or sell them (live or dead), or anything derived from them. Penalties for offences under this legislation include fines of up to £5,000 and/ or up to six months in prison.

Schedule 8 of the Act is reviewed every 5 years, but currently it includes 185 species or sub-species of vascular plants, bryophytes (mosses, liverworts and hornworts), lichens and stoneworts (see www.jncc.gov.uk for current list), all protected due to their rarity and/or restricted distributions.

Works which could result in uprooting or destruction of plants listed on Schedule 8 of the Act could result in an offence being committed, unless measures are taken to minimise the risk of this occurring. Any inadvertent impacts on Schedule 8 plants despite these mitigation measures being in place, and impacts on other plant species during development works, would be considered an 'incidental result of an otherwise lawful operation' which 'could not reasonably have been avoided' and therefore not an offence.

In practice, the mitigation measures required on the very rare occasions when Schedule 8 plants are affected by development proposals will be determined by the ecological requirements of the species concerned, and any mitigation strategy should be agreed in advance with Natural England or Natural Resources Wales.

THE HEDGEROWS REGULATIONS

In England and Wales the Hedgerows Regulations (1997) as amended confer a level of protection on hedgerows (though hedgerows within or bordering domestic gardens are excluded), particularly those hedgerows classified as 'Important' under the legislation. The Regulations require those wishing to remove hedgerows to submit a Hedgerow Removal Notice to the Local Planning Authority (LPA), which will then determine whether the hedgerow affected is classified as 'Important' under the Regulations. If it is, the LPA will either approve the proposed hedgerow removal, or issue a retention notice. It is an offence to remove or destroy a hedgerow which is subject to a retention notice, or to remove one without a removal notice.

Routine management of hedgerows, removal of hedgerows for development which has been granted planning consent, and certain other situations are allowed under the Regulations, which also specifically exclude hedgerows within or bordering domestic gardens. Determination of whether a hedgerow should be classified as 'Important' is based on a number of criteria including assessment of its likely historic value (e.g. old parish boundary or part of an ancient monument), ecological value (e.g. presence of protected

species, and/or diversity of tree/shrub species in the hedgerow), and landscape value (e.g. associated with a public footpath, or being associated with hedgebanks, ditches, hedgerow trees etc).

Ancient and species-rich hedgerows are listed as a priority habitat in the UK Biodiversity Action Plan (2011)

Appendix 2 – GMEU Data Report – Summary

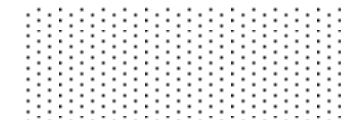
Due to sensitive data this information is not for public circulation.

A copy is available to the Local Authority Ecologist upon request.

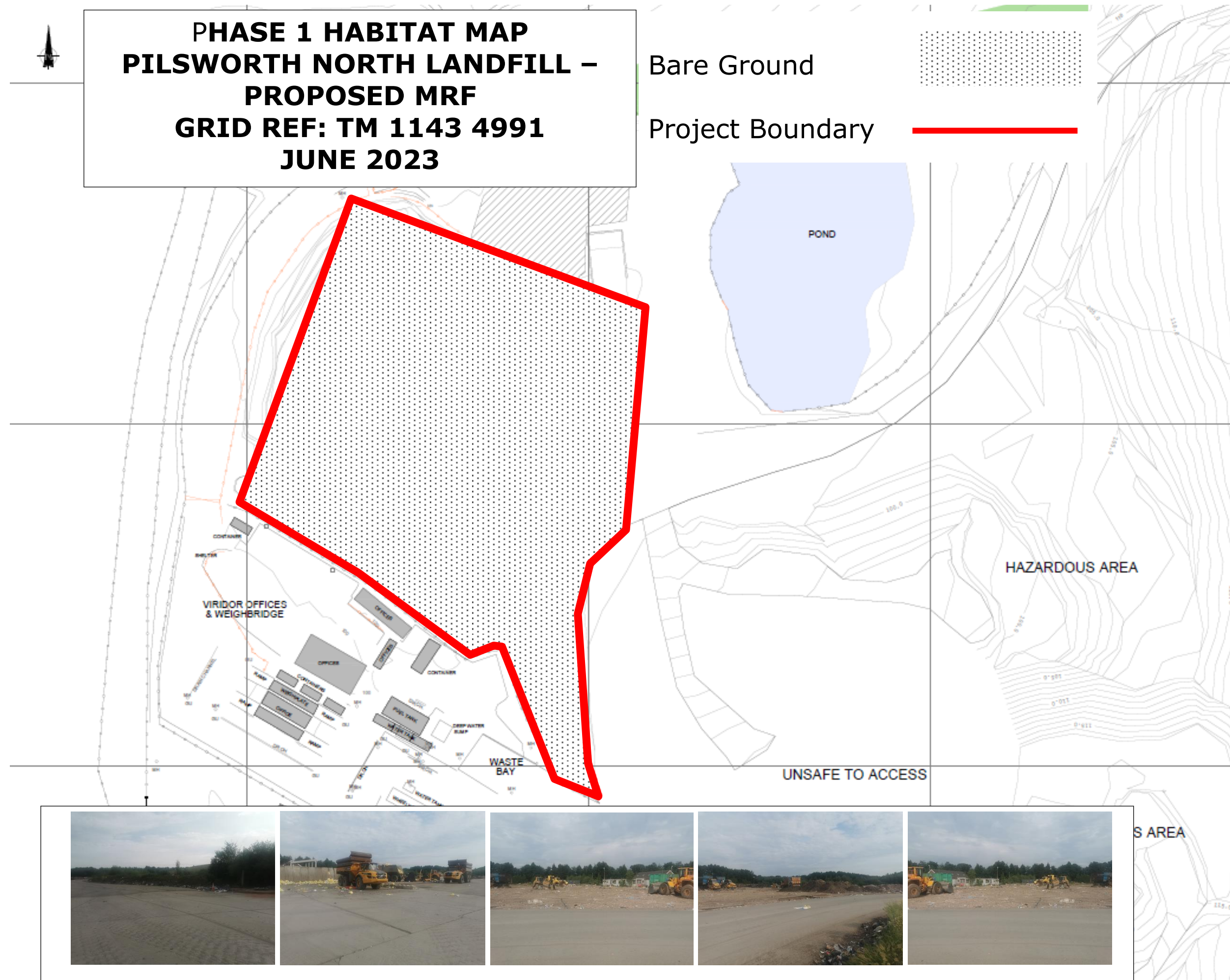
Appendix 3 – Habitat Map and Target Notes

PHASE 1 HABITAT MAP
PILSWORTH NORTH LANDFILL –
PROPOSED MRF
GRID REF: TM 1143 4991
JUNE 2023

Bare Ground



Project Boundary



Appendix 4 – eDNA Great Crested Newt Results

Folio No: E18156
 Report No: 1
 Purchase Order: PWSGCN001
 Client: EBS
 Contact: Bill Gaudie

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS (TRITURUS CRISTATUS)

SUMMARY

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

RESULTS

Date sample received at Laboratory: 20/06/2023
 Date Reported: 27/06/2023
 Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
4175	Pilsworth Landfill South - Pond 1	SD 8236 0905	Pass	Pass	Pass	Negative	0
4179	Pilsworth Landfill South - Pond 2	SD 8223 0880	Pass	Pass	Pass	Negative	0
4180	Pilsworth Landfill South - Pond 3	SD 8221 0872	Pass	Pass	Pass	Negative	0
4183	Pilsworth Landfill South - Pond 4	SD 8220 0867	Pass	Pass	Pass	Negative	0

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com



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 Company Registration No. 08950940

Reported by: Chris Troth

Approved by: Jennifer Higginbottom

METHODOLOGY

The samples detailed above have been analysed for the presence of GCN eDNA following the protocol stated in DEFRA WC1067 'Analytical and methodological development for improved surveillance of the Great Crested Newt, Appendix 5.' (Biggs et al. 2014). Each of the 6 sub-sample tubes are first centrifuged and pooled together into a single sample which then undergoes DNA extraction. The extracted sample is then analysed using real time PCR (qPCR), which uses species-specific molecular markers to amplify GCN DNA within a sample. These markers are unique to GCN DNA, meaning that there should be no detection of closely related species.

If GCN DNA is present, the DNA is amplified up to a detectable level, resulting in positive species detection. If GCN DNA is not present then amplification does not occur, and a negative result is recorded.

Analysis of eDNA requires scrupulous attention to detail to prevent risk of contamination. True positive controls, negative controls and spiked synthetic DNA are included in every analysis and these have to be correct before any result is declared and reported. Stages of the DNA analysis are also conducted in different buildings at our premises for added security.

SureScreen Scientifics Ltd is ISO9001 accredited and participate in Natural England's proficiency testing scheme for GCN eDNA testing. We also carry out regular inter-laboratory checks on accuracy of results as part of our quality control procedures.

INTERPRETATION OF RESULTS

SIC:	Sample Integrity Check [Pass/Fail] When samples are received in the laboratory, they are inspected for any tube leakage, suitability of sample (not too much mud or weed etc.) and absence of any factors that could potentially lead to inconclusive results.
DC:	Degradation Check [Pass/Fail] Analysis of the spiked DNA marker to see if there has been degradation of the kit or sample between the date it was made to the date of analysis. Degradation of the spiked DNA marker may lead indicate a risk of false negative results.
IC:	Inhibition Check [Pass/Fail] The presence of inhibitors within a sample are assessed using a DNA marker. If inhibition is detected, samples are purified and re-analysed. Inhibitors cannot always be removed, if the inhibition check fails, the sample should be re-collected.
Result:	Presence of GCN eDNA [Positive/Negative/Inconclusive] Positive: GCN DNA was identified within the sample, indicative of GCN presence within the sampling location at the time the sample was taken or within the recent past at the sampling location. Positive Replicates: Number of positive qPCR replicates out of a series of 12. If one or more of these are found to be positive the pond is declared positive for GCN presence. It may be assumed that small fractions of positive analyses suggest low level presence, but this cannot currently be used for population studies. In accordance with Natural England protocol, even a score of 1/12 is declared positive. 0/12 indicates negative GCN presence. Negative: GCN eDNA was not detected or is below the threshold detection level and the test result



should be considered as evidence of GCN absence, however, does not exclude the potential for GCN presence below the limit of detection.



