# Green Infrastructure Statement

Prepared by: Arthian Ltd.

For: Asgard Renewables Ltd.

Site: Crugmore Farm, Penparc, Cardigan

Date: 24/02/2025

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Issue-1.0

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# Quality Assurance

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**Staff Detail**

| Initials | Name | Position | Signature |
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# 1. Introduction

## 1.1 Background and Development Overview

1.1.1 This Green Infrastructure Statement has been prepared by Arthian Ltd. (Arthian (formerly Mabbett)) on behalf of Asgard Renewables Ltd. (the Applicant) in support of an application seeking full planning permission for the proposed siting of two storage lagoons, maturation tank and associated construction access and drainage infrastructure on land adjacent to Asgard Renewables Ltd. - Food Waste Recycling Plant in Penparc, Cardigan.

1.1.2 The description of the Proposed Development is as below:

*"Expansion of Existing AD Facility for Proposed Siting of Two Covered Storage Lagoons, Maturation Tank and Associated Infrastructure at Crugmore Farm, Penparc, Cardigan."*

1.1.3 The Proposed Development includes the formation of two fully lined lagoons (circa 6,450m$^3$ capacity each) and associated maturation tank on land adjacent to existing Asgard Renewables Plant at Crugmore Farm in Penparc. The proposed lagoons will expand the biofertiliser storage capacity of the applicant's existing Anaerobic Digestion (AD) plant, and subsequently allow the conversion of its existing biofertiliser storage tank into a functioning digester tank.

1.1.4 The Proposed Development would comprise of key elements including:

- 2 Storage Lagoons;
- Maturation Tank;
- Site Access, Service track, and Parking;
- Drainage Infrastructure;
- Security Fencing; and
- Landscaping.

1.1.5 The Applicant has a Natural Resources Wales (NRW) Permit (EPR/AB3097FU) to operate the existing AD plant with an annual throughput of 36,500 tonnes of waste input, however the plant has not yet utilised this full capacity. This is primarily due to the size of the existing 2 nos. digester tanks and their limited biological capacity. To utilise the full tonnage capacity of the plant, the Applicant proposes (as envisioned during original conception) to convert the existing biofertiliser store into a functioning digester tank to provide the necessary biological capacity shortfall.

1.1.6 The addition of two proposed lagoons will allow for sufficient digestate storage capacity to meet the requirements under Nitrate Vulnerable Zones (NVZ) and Water Resources Regulations, and to allow the potential for conversion of the existing large tank (biofertiliser store) into a functioning digester tank in the future.

1.1.7 Further details of the Proposed Development and its compliance to relevant planning policies is provided in the Planning Design and Access Statement (*reference: 314766 Planning - Design & Access Statement 1.0*) accompanying the Planning Application.

1.1.8 A pre-application enquiry was made to Ceredigion County Council (CCC) in June 2024. The pre-application advice received on 3rd June 2024 (Appendix A) identified that a green infrastructure statement would be necessary with any full planning application, to detail the ecological enhancements and the information below:

- *Description of existing green infrastructure on site*
- *Description of surrounding green infrastructure*
- *Description of how the step-wise approach has been applied*
- *Long-term management plan*
- *Details of net biodiversity enhancement*

1.1.9 The Proposed Development takes into account the existing green infrastructure on site and incorporates measures to ensure that there is no adverse impact from development, while delivering biodiversity enhancement. It is supported by a Preliminary Ecological Assessment – Extended Phase 1, to assess any potential impact on biodiversity and protected species, and to identify measures to deliver biodiversity enhancement.

1.1.10 The step-wise approach shown in Figure 1 has been taken into consideration in the assessment of green infrastructure.

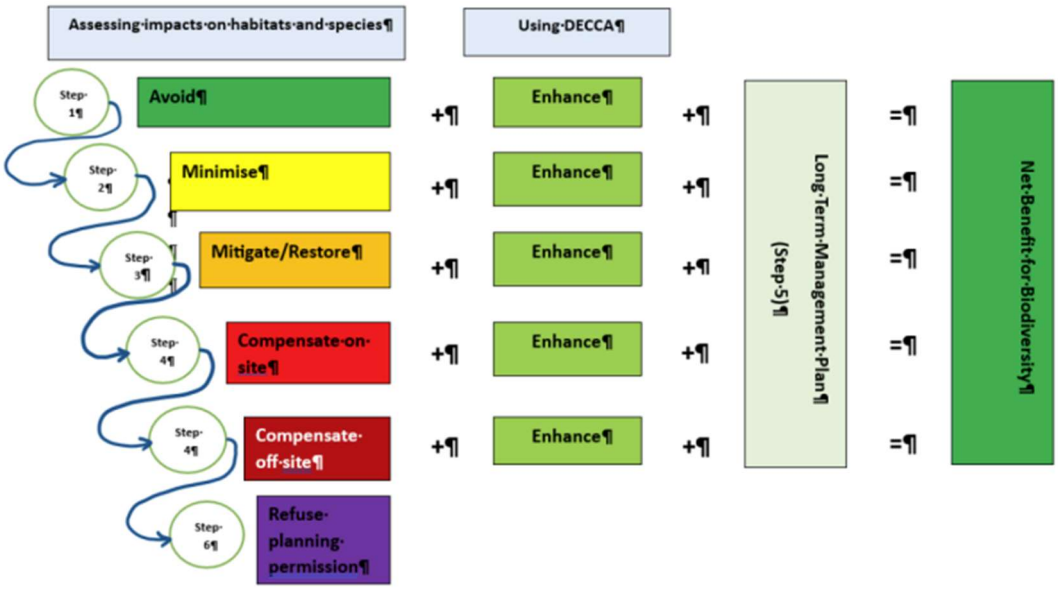


**Figure 1 Step-wise Approach for Assessment**

## 1.2 Green Infrastructure

1.2.1 In the 'Green Infrastructure An integrated approach to land use'[1], The Landscape Institute defines Green Infrastructure as:

*"the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect villages, towns and cities. It is a natural, service-providing infrastructure that is often more cost-effective, more resilient and more capable of meeting social, environmental and economic objectives than 'grey' infrastructure."*

1.2.2 It has been defined by Natural Resources Wales[2] as:

*"a term that's sometimes used to describe a wide range of natural and semi-natural features, spaces, rivers and lakes including parks, fields, allotments, hedgerows, roadside verges and gardens, not to mention entire ecosystems such as wetlands, waterways and mountain ranges."*

1.2.3 The 'Ceredigion: A Strategy for Greening 6 Towns'[3] published by the Ceredigion City Council states that:

*"Green and Blue Infrastructure (GBI) refers to the network of green and blue spaces that surround our towns and cities and weave through them. Just as a transport network connects people across an area through a network of roads, rail or pavements – GBI helps connect people, wildlife and nature.*

*GBI can include large green spaces like National Parks, Country Parks, farmed landscapes or river corridors. It can also include private gardens, allotments, hedges, street trees, roadside green verges, or footpaths."*

[1] Landscape Institute. "Green Infrastructure: An Integrated Approach to Land Use." March 2016. Available online: https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2016/03/Green-Infrastructure_an-integrated-approach-to-land-use.pdf.

[2] Natural Resources Wales. "Develop and Improve Urban and Rural Green Infrastructure." Available Online: https://naturalresources.wales/about-us/what-we-do/strategies-plans-and-policies/area-statements/north-east-wales-area-statement/develop-and-improve-urban-and-rural-green-infrastructure/?lang=en#:~:text=%27Green%20infrastructure%27%20is%20a%20term,wetlands%2C%20waterways%20and%20mountain%20ranges.

[3] Ceredigion County Council. "Ceredigion: A Strategy for Greening 6 Towns." 2022. Available Online: https://lucmaps.co.uk/CeredigionGBIDigitalReport/overview-of-strategy/.

# 2. GI Assessment

## 2.1 Existing Green Infrastructure at the Application Site

2.1.1 The Application Site is located in the southwestern outskirts of the settlement of Penparc, Ceredigion in Wales as identified in Volume 2b of the Ceredigion Local Development Plan[4]. Existing Asgard AD Plant is situated immediately to the East of the Application Site.

2.1.2 The land gradates down to the South and is currently laid in ryegrass dominated improved grassland. The land for locating the proposed maturation tank is laid in marshy grassland.

2.1.3 The Applicant is committed to preserving the overall well-being and health of the community and the environment by enhancing biodiversity on site and encouraging the use of green infrastructure.

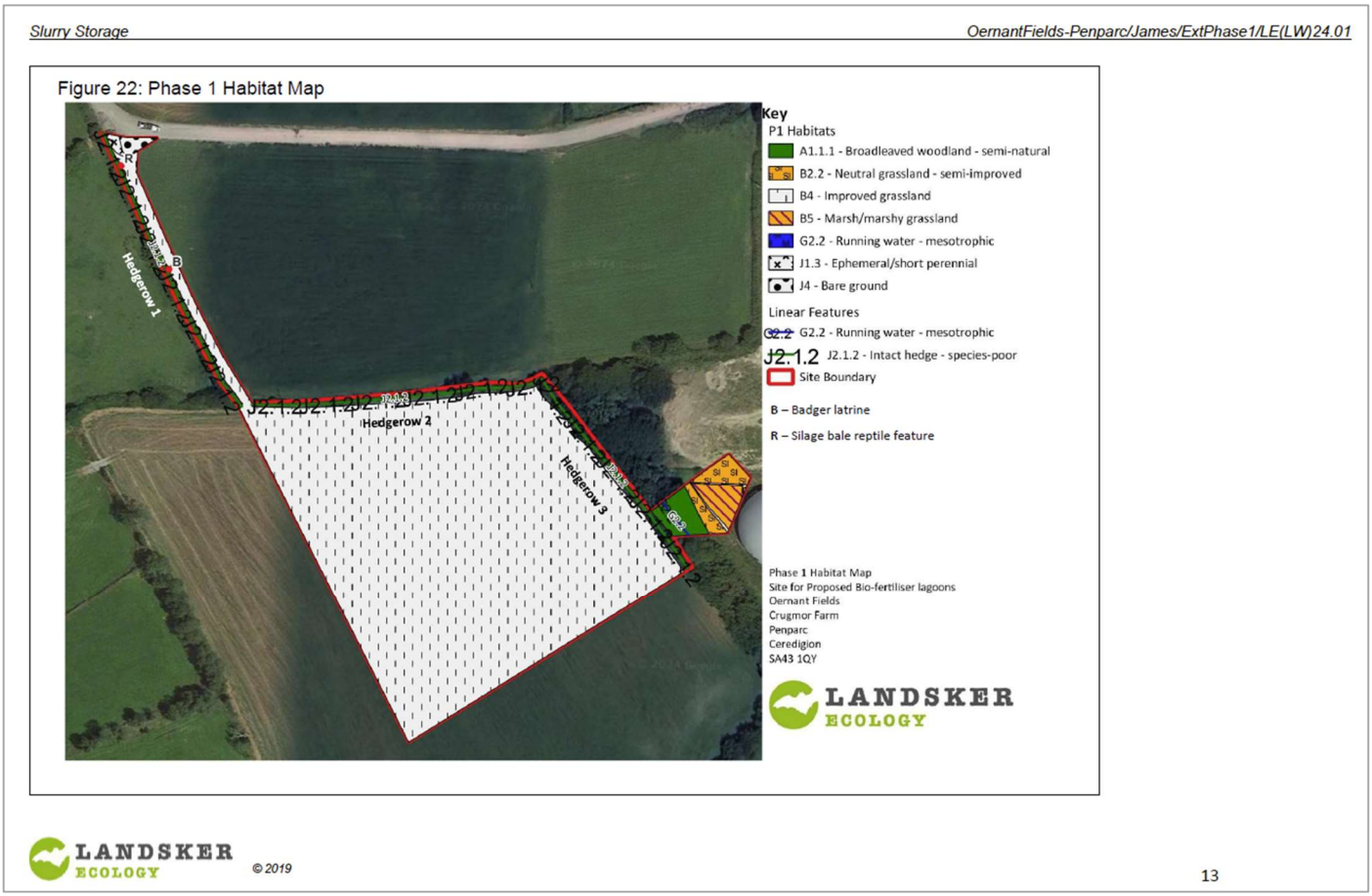


**Figure 2 Extract from PEA Extended Phase 1**

[4] Ceredigion County Council. (2013). *Ceredigion Local Development Plan 2007-2022*. Available Online: The Current Ceredigion Local Development - Ceredigion County Council

2.1.4 A Preliminary Ecological Assessment – Extended Phase 1 was undertaken for the Proposed Development. It identified the below green infrastructure features at the Application Site:

- Hedgerows
- Streams
- Improved Grassland
- Ephemeral/Short perennial
- Semi-improved Neutral Grassland
- Marshy Grassland
- Semi-natural Broadleaved Woodland
- Bare Ground

2.1.5 The PEA provides the below summary:

| Existing Green Infrastructure Features | Summary |
|---|---|
| Hedgerows | Hedgerows include:<br>• Hedgerows 1 and 2 are both dominated by blackthorn with occasional gorse present. Other woody species within these hedgerows include grey willow and hawthorn.<br>• Both of these hedgerows are growing on hedgebanks with the ground flora consisting of species such as ivy, cleavers and wood dock.<br>• Hedgerow 3, running alongside the woodland, is mostly composed of English elm with other woody species present including gorse, blackthorn, hawthorn and sessile oak with a ground flora that includes species such as barren strawberry, hart's-tongue fern and false brome. |
| Streams | There is a small stream that runs from north to south through the strip of woodland ultimately flowing into a stream to the south. This stream is not marked on OS maps and potentially dries out in dry periods. |
| Improved Grassland | The field within which the proposed bio-fertiliser lagoons will be situated and the field within which the access trackway will be constructed are dominated by Italian and perennial rye-grass and show very limited species diversity. |
| Ephemeral/Short Perennial | There is an area of this habitat located where the entrance to the proposed access track will be. This is where a mound of soil and gravel have been deployed. A wide range of species are present here including fumitories. The species present can be expected to appear anywhere where there is disturbed soil in the local area. |

| | |
|---|---|
| Semi-improved Neutral Grassland | There are bunds adjacent to the existing Anaerobic Digester (AD) plant that have been constructed to prevent contamination of local water courses from the AD plant. These bunds now host strips of SI neutral grassland with the dominant species being Yorkshire fog with a range of other species being present including bristly oxe-tongue. |
| Marshy Grassland | The area where the proposed tank will be installed adjacent to the AD plant was damp underfoot at the time of survey and has been mapped as marshy grassland. The most abundant species is Yorkshire fog with other damp-favouring species present including soft rush, bog stitchwort and marsh bedstraw. |
| Semi-natural Broadleaved Woodland | The area of semi-natural woodland is dominated by a canopy of English Elm with other woody species present including sessile oak, ash, and grey willow. Most of the trees present have trunks that are small in diameter but there are several large-trunked, mature oak and ash trees within the woodland. |
| Bare Ground | The is an area of bare gravel at the proposed entrance trackway to the proposed site. |
| **Other species** | |
| Bats | The hedgerows, woodland and stream corridor on the site will provide foraging and commuting habitat for bats.<br><br>The large mature trees within the broad-leaved woodland contain cracks, holes and crevices that would be suitable for use as roosting sites by bats. |
| Badgers | A badger latrine was noted, together with several snuffle holes adjacent to hedgerow 1. No burrows were noted within that hedgerow and it is likely that the latrine is a territorial boundary marker. |
| Breeding Birds | A number of bird species were noted during the survey including great tit, blue tit, song thrush, dunnock, chaffinch (in woodland), chiffchaff (in woodland), blackcap (in woodland), wren, robin, goldfinch (flying over field), blackbird, pied wagtail (AD plant) & heron (flying over). Of these, dunnock, chaffinch and heron are amber listed in Birds of Conservation Concern (BoCC) (Wales). 4<br><br>Other Birds of Conservation Concern (BoCC 4 - amber or red listed), that are relevant to the locality and will likely be using the hedgerows and woodland on site for foraging and breeding include: song thrush, mistle thrush, fieldfare (winter visitor only), redwing (winter visitor only), bullfinch, willow warbler. |
| Other species | The hedgebanks offer suitable habitat for reptiles e.g. slow worm and lizards as well as amphibians.<br><br>An old, collapsed silage bale adjacent to Hedgerow 1 potential provides habitat for reptiles and amphibians. |
| Invasive non-native species | None. |

**Table 1.1 Existing Green Infrastructure Summary**

## 2.2 Existing Green Infrastructure in the Surrounding Landscape

2.2.1 The Application Site is set within a landscape of pastures, lined with low hedgerows to the north, south and west and adjacent to a large recycling plant to the east.


**Figure 3 Aerial image**

2.2.2 The Application Site is identified within the National Landscape Character Area - NLCA40 Teifi Valley, known for raised bog landscapes. Due to the low-lying nature and modest scale of the Proposed Development, it would integrate into the surrounding context and is not anticipated to have any significant adverse impact on the landscape and its setting.

2.2.3 LANDMAP[5] is a comprehensive landscape resource for Wales, managed by Natural Resources Wales. It provides a detailed, GIS-based baseline of landscape information, which is used to support sustainable decision-making and natural resource planning. A review of the LANDMAP dataset is provided in Figures 4 and 5.

[5] Natural Resources Wales. "LANDMAP - the Welsh landscape baseline." Natural Resources Wales, Available Online: https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/landmap-the-welsh-landscape-baseline/?lang=en.

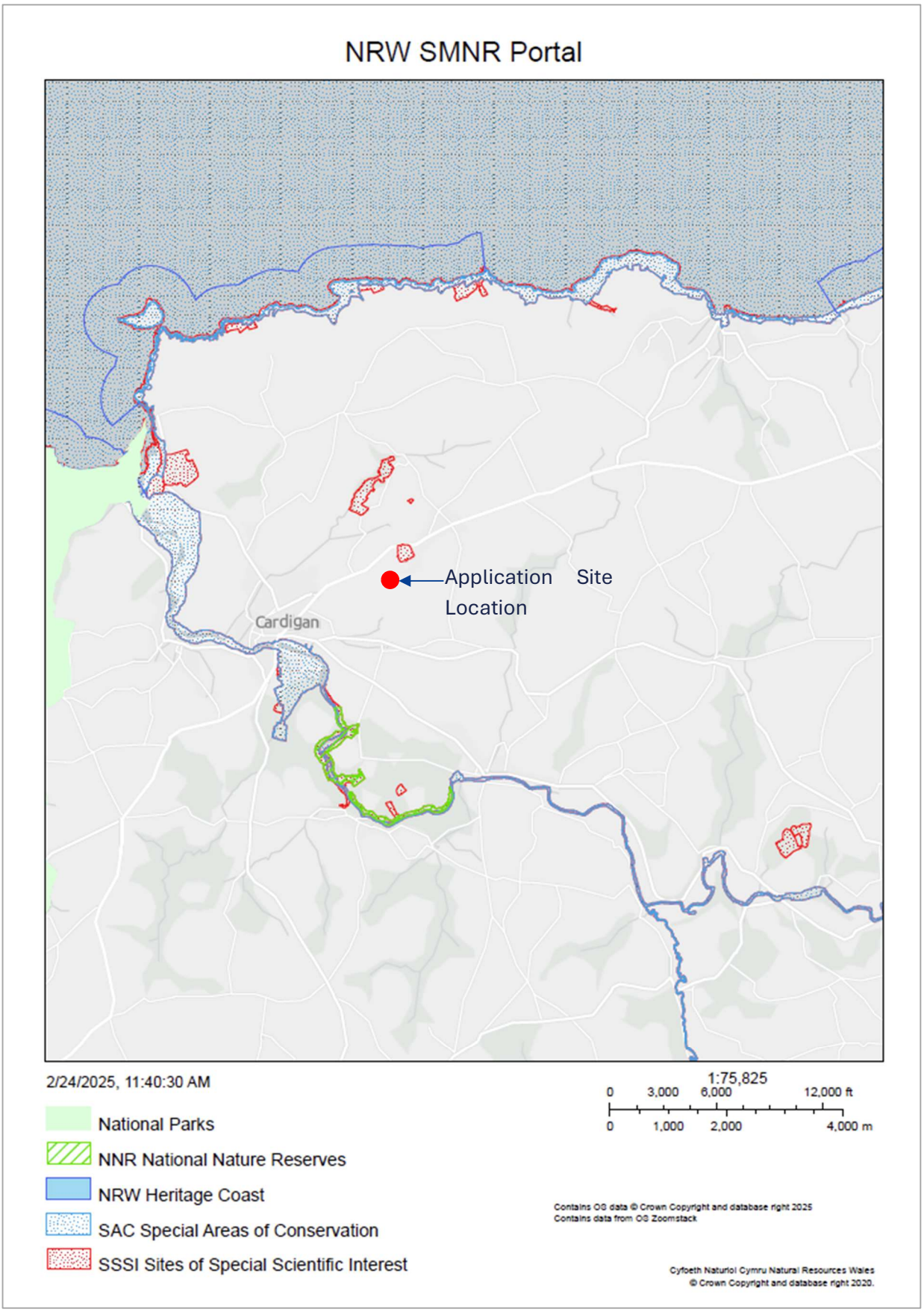


**Figure 4 Extract from LANDMAP - Designated Sites**

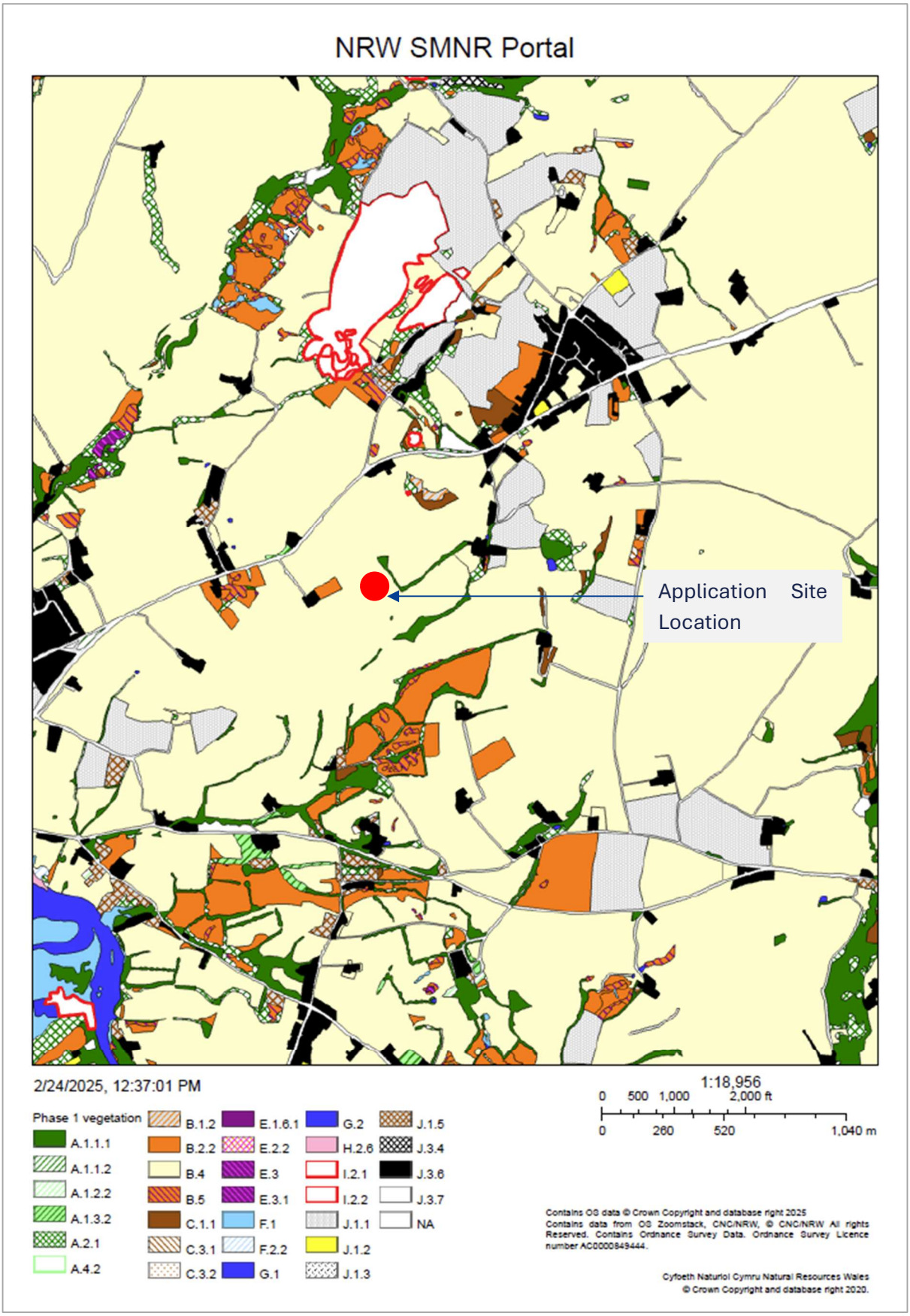


**Figure 5 Extract from LANDMAP - Surrounding GI**

2.2.4 As summarised in the PEA – extended Phase 1, the wider surrounding area around the Application Site comprises of the below designated sites:

Designated Sites:

- Afon Teifi SAC 1.7km SW
- Banc y Mwldan SSSI: 1km NW
- Banc y Warren SSSI: 250m NE & 1.2km NE
- Afon Teifi Estuary Woodlands and Marshes SSSI 1.7km SW

2.2.5 With reference to Figure 5, GI features immediately surrounding the Application Site primarily comprise of:

- A stream that feeds into the Nant Rhyd-y-fuwch is located on the southern perimeter of the survey area. The Nant Rhyd-y-fuwch feeds into the Afon Teifi some 2.3km downstream from the stream on site.
- Semi-improved neutral Grasslands (B2.2)
- Improved Grasslands (B4)
- Semi-natural Broadleaved plantation (A1.1.1)
- Accessible green spaces approximately 930m to the northeast
- Category 2 Public right of way (Route code: 78/37) located approximately 70m to the south

## 2.3 Use of Step-Wise Approach

2.3.1 This section discusses how the step-wise approach has been applied in the design process of the Proposed Development.

**Avoid**

2.3.2 The Proposed Development aims to avoid the loss of any prime agricultural land, and is primarily identified within land classified as Class 5, with a small section of the access situated within land under Class 3b. It is not known for any prime agricultural significance. The locational need for the proposal is evident with the existing well established AD plant adjacent to the Application Site. If the development is to proceed, the loss of circa 1.7ha of improved grassland cannot be avoided. However, as this habitat is of low ecological value and widespread in the local area and wider region, it is considered that this loss will have a negligible impact on the ecology of the local and wider area.

2.3.3 For the most part the loss of hedgerows and trees will be avoided by the Proposed Development, and any impact is limited to the loss of 12.5m section of hedgerow to allow for the creation of site access gates.

2.3.4 The existing stream habitat would be retained, and any potential impact would be avoided.

2.3.5 By avoiding any artificial lighting, the Proposed Development would prevent disturbance to foraging bats which will use the hedgerow and associated woodland to the south for foraging and commuting.

**Minimisation**

2.3.6 Hedgerows affected by the development are limited to the access points only. This minimises the loss of hedgerow to a section of approximately 12.5m of hedgerow.

2.3.7 A CEMP (reference: 314766 CEMP (1.0, 12 Feb 25)) has been prepared in support of the Planning Application to mitigate and minimise any construction effects on the environment.

**Mitigation/ Restoration**

2.3.8 Mitigation will take the form a new hedge running along a south and west boundaries of the development site. This will create approximately 285m of new plant hedgerow. To compensate for the loss of hedgerow at a planting ration of 3:1, 37.5m of new plant hedgerow would be required (see the next section below). This gives a remainder of 247.5m of new plant hedgerow.

2.3.9 Using the DECCA (**D**iversity, **E**xtent, **C**ondition, **C**onnectivity, **A**daptability to change) framework as given in paragraph 6.4.10 of Planning Policy Wales 12, this provides biodiversity enhancement in terms of an increase in the **Extent** of native hedgerow on the site. The range of species planted will provide enhancement by increasing the **Diversity** of native species on the site and, by linking the eastern hedgerow (referred to as Hedgerow 3 in the ecology report) and the northern hedgerow (referred to as Hedgerow 2 in the ecology report), the **connectivity** of the area is increased through the creation of a wildlife corridor that links to the wider network of hedgerows, the broad-leaved woodland to the east and the network of woodlands in the local area.

2.3.10 The increased meterage of hedgerow, once mature, will provide more nesting opportunity for birds, more foraging and commuting habitat for a range of species, including birds, bats and mammals. It will provide an increased opportunity for refugia/hibernacula for small mammals, amphibians and reptiles. Flowers produced by the hedgerow species will provide forage for pollinators and an increase in invertebrate species in general. This in turn will provide more food availability for vertebrate species higher up the food chain.

2.3.11 The **Condition** of the hedgerows, both new plant and existing, will be improved in terms of biodiversity by a suitable management scheme. This will mean restricting any hedgerow cutting to biennial or triennial cutting, alternating sections or sides to retain sections with constant two or three year-old wood. This will allow the permanent presence of flowering and fruiting of hedge shrub and species. It will provide enhanced, permanent, annual provision of foraging and nesting for invertebrates, birds and small mammals and their predators. Bats have been shown

to benefit significantly from this type of hedge structure/ composition. This will also keep the hedgerows healthy.

2.3.12 The new plant stretches of hedgerow will also provide a visual screen for the lagoons for users of the footpath approximately 70m to the south.

**Compensation on site**

2.3.13 To compensate for the loss of approximately 12.5m of hedgerow at a planting ratio of 3:1, 37.5m of new plant hedgerow would be required. This will be incorporated into the new plant hedgerow along the southern and western boundaries of the site.

2.3.14 To compensate for the loss of approximately 1.7ha of ecologically-poor improved grassland, the banks of the lagoon will be seeded with a locally-sourced wildflower meadow seed-mix. In this way the area of grassland well be less than currently exists but the quality, in terms of biodiversity, of the grassland will be much increased through providing a greater abundance of pollinating flowers and an increase in the structural diversity of the grassland. This grassland will be managed in such a way as to benefit wildlife i.e. allowing all plants to flower and set seed before cutting/mowing (i.e. no cut in mid-summer but a cut in late summer/early autumn). Using the DECCA framework, this will provide enhancement through increasing the **diversity** of the site both in terms of having a greater number of species than are currently present but also increasing the structural diversity of the grassland sward. The **condition** of the grassland will be improved by a management regime that is better for biodiversity.

## 2.4 Long-term management plan

2.4.1 The CEMP submitted in support of the Planning Application provides details on the management of the construction phase, in accordance with environmental management best practice and legal/regulatory requirements.

2.4.2 In terms of the operational phase, the management regime for the hedgerows as detailed in the PEA includes restricting any hedgerow cutting to biennial or triennial cutting, alternating sections or sides to retain sections with constant two or three year-old wood.

2.4.3 This would keep the hedgerows healthy and allow the permanent presence of flowering and fruiting of hedge shrub and species. It would also provide enhanced, permanent, annual provision of foraging and nesting for invertebrates, birds and small mammals and their predators. Bats have been shown to benefit significantly from this type of hedge structure/ composition.

## 2.5 Net biodiversity enhancement

2.5.1 As discussed in earlier sections, the Proposed Development seeks to minimise any impact on the existing natural environment. The impact is limited to the loss of improved grasslands and the removal of a section of hedgerows for the formation of site access.

2.5.2 Biodiversity enhancement would be delivered by:

- Additional planting of hedgerows/tress of native species along the southern and western site boundaries. This would provide biodiversity enhancement and connections to existing hedgerow and woodland wildlife corridors.
- Banks of the lagoon seeded with a locally-sourced wildflower meadow seed-mix, to increase pollinating flowers and increasing structural diversity of the grasslands.
- Provision of management regime to enhance the health of existing hedgerows and to allow the presence of flowering and fruiting shrub and species.

# 3. Conclusion

## 3.1 Summary

3.1.1 The Proposed Development seeks planning permission for the formation of two fully lined lagoons (circa 6,450m3 capacity each) and associated maturation tank on land adjacent to existing Asgard Renewables Plant at Crugmore Farm in Penparc.

3.1.2 The Proposed Development demonstrates that the design and mitigation proposals have been designed to protect and reinforce green infrastructure on the Application Site and in the surrounding area. The proposals would integrate into the existing landscape and the AD Plant located adjacent to the Application Site.

3.1.3 In consideration of the Step-wise approach, the design has considered avoiding adverse impact on the environment where possible, paying due regard to the potential for continued long term maintenance and management of retained areas to benefit biodiversity. The proposals ensure that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species and ensuring that the favourable conservation status of local species populations is maintained.

# Appendices

# Appendix A Pre-Application Response

# Cyngor Sir CEREDIGION County Council

**Russell Hughes-Pickering**
**Swyddog Arweiniol Corfforaethol : Economi ac Adfywio**
**Corporate Lead Officer : Economy and Regeneration**

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| | |
|---|---|
| Dyddiad / Date | 29-07-2024 |
| Gofynnwch am / Please ask for | Sian Holder |
| Llinell uniongyrchol / Direct Line | 01545 572574 |
| Fy nghyf / My ref | Q240104 |
| Ebost / Email | Sian.Holder@ceredigion.gov.uk |

Dear Sir / Madam,

**Town and Country Planning Act 1990**
**Re: Pre-Application Advice: Crugmor Farm, Cardigan, SA43 1QY**

Thank you for your pre-application form received on the 03-06-2024. The pre-application submitted is for the proposal to expand the existing AD facility to provide two covered storage lagoons, maturation tank and associated infrastructure.

**Relevant Planning History**

The planning history of the land is outlined below:

- A230824 - NMA - amendments to application A120564 (Amendments to site levels, compost pad and lagoon positions and geometries and location of planting. Approved 15-02-2024
- A190023 - Variation of condition 6 of planning permission A140756 volume of feedstock. Approved subject to conditions 13-06-2019
- A181127 - Variation of condition 2 of planning permission A130627 to accommodate alterations to the proposed scheme. Approved subject to conditions 15-02-2019
- A150985 - NMA - amendments to application A130627 (proposed installation of an additional CHP engine within the existing building). Approved 03-12-2015
- A150654 - NMA - amendments to weighbridge, log cabin office, toilet & staff room. Part Approved 16-09-2015
- A140756 - Variation of Condition 2 of Planning permission A130627 to accommodate alterations to the proposed scheme. Approved subject to conditions 12-11-2014
- A130627 - Construction and use of an anaerobic digestion facility and associated works. Approved subject to conditions 12-12-2013
- A120564 - Construction of inert waste recycling and green waste composting facility and associated works. Approved subject to conditions 18-04-2018

**Legislation**

Section 38 (6) of the Planning and Compulsory Purchase Act 2004 requires an application for planning permission to be determined in accordance with the development plan unless material considerations indicate otherwise.

The development plan for Ceredigion consists of Future Wales: The National Plan 2040 (Future Wales) and the Ceredigion Local Development Plan 2007-2022 (LDP) as a Strategic Development Plan (SDP) has not been adopted for the Mid Wales region. Whilst the Ceredigion LDP has reached its plan end date, it remains the statutory development plan until its replacement with a new adopted plan.

In line with the Planning and Compulsory Purchase Act 2004, should a policy in Future Wales conflict with a policy within the Ceredigion LDP, then the conflict should be resolved in favour of the Policy contained within Future Wales. This is due to Future Wales being the latest document to become part of the development plan.

**National Planning Policy and Guidance**

The following national planning policy and guidance documents are considered relevant to the proposal:

- Future Wales: the national plan 2040
- Planning Policy Wales (edition 12, February 2024)
- Technical Advice Note (TAN) 5: nature conservation and planning
- Technical Advice Note (TAN) 6: Planning for Sustainable Rural Communities
- Technical Advice Note (TAN) 12: Design
- Technical Advice Note (TAN) 18: Transport
- Technical Advice Note (TAN) 21: Waste Development
- Technical Advice Note (TAN) 23: Economic Development

**Relevant Development Plan Policies**

On the 25th April 2013 the Council resolved to formally adopt the 'Ceredigion Local Development Plan' (LDP). The LDP can be inspected on the website via the following link; https://www.ceredigion.gov.uk/index.cfm?articleid=4761

The following development plan policies will be considered during the assessment of your proposal:

- S01 Sustainable Growth
- S04 Development in Linked Settlements and Other Locations
- LU25 Renewable Energy Generation
- LU31 Resource Recovery and Waste Management Facilities
- LU32 Development and the Waste Hierarchy
- DM03 Sustainable Travel
- DM04 Sustainable Travel Infrastructure as a Material Consideration
- DM06 High Quality Design and Placemaking
- DM10 Design and Landscaping
- DM11 Designing for Climate Change
- DM13 Sustainable Drainage Systems
- DM14 Nature Conservation and Ecological Connectivity
- DM15 Local Biodiversity Conservation
- DM17 General Landscape
- DM20 Protection of Trees, Hedgerows and Woodlands
- DM22 General Environmental Protection and Enhancement

**Relevant Supplementary Planning Guidance**

The following Supplementary Planning Guidance documents are applicable and should be considered:

- Transport Assessment SPG
- Nature Conservation SPG
- Built Environment and Design SPG

For further information regarding planning policies please follow this link:http://www.ceredigion.gov.uk/ldp

**Initial Assessment of Proposal**

The site refers to the existing Asgard Anaerobic Digestion Facility - Food Waste Recycling Plant, which is located to the south of the A487, just to the south-west of the village of Penparc. The development is proposed on land to the west of the existing facility, and includes two covered and fully lined lagoons measuring 60m in length, 35m in width, and a depth of 3m (circa 6,450m3 capacity each) and associated maturation tank. The maturation tank would be a steel panel 'slurry store' type construction, circular with a 14m diameter and 6m high, with the capacity of 950m3. The lagoons will be used for the storage of digestate before it is spread over nearby agricultural fields as a biofertiliser. The lagoons will connect to the infrastructure of the existing AD Plant through a proposed maturation tank sited adjacent to its digester tanks located on site.

The proposed lagoons will expand the biofertiliser storage capacity of the AD plant, and subsequently allow the conversion of its existing biofertiliser storage tank into a functioning digester tank. The development is aimed at supporting the ongoing operations of the AD plant, allowing an increase in its waste processing capacity, although the increase will be within the 36,500 tonnes limit already consented under the existing NRW permit. The development is required due to the recent introduction of the Nitrate Vulnerable Zone (NVZ) legislation.

It is proposed to re-use the existing private access and junction from the A487 road which currently serves the AD Plant facilities. An additional construction and maintenance access will be formed from this private track to serve the new lagoon development, by upgrading an informal track to a 6m wide road.

Landscaping works will include grass-seeded bunding around the lagoons, with post-wire fencing around the application site

boundary and the lagoons.

**Waste Development**

It is understood from the information provided that the material to be stored in the proposed lagoons would be PAS 110 standard digestate (i.e a 'product'), and therefore it is agreed that the proposed operations would not be a waste operation, and therefore the proposal would not require a waste planning assessment, as required under TAN 21 for waste development. If the digestate does not meet the PAS 110 standards, it would be classified as waste, and thus a waste planning assessment will be required. This will need to be made clear as part of a formal planning application with some form of formal confirmation from NRW and / or the applicant that the digestate meets the PAS110 standards.

**Major Development**

The information provided states that the application site is 1.6ha in size, and would therefore be classified as major development. Subsequently, a pre-application consultation will need to be undertaken prior to the submission of a formal planning application, and a report of the findings of the consultation submitted as part of a formal planning application.

**EIA Development**

Section 4 of the Planning Statement (PS) refers to EIA Regulations and notes that the development would fall under the following Schedule 2 categories:

- Class 3 (a) - industrial installations for the production of electricity; and
- Category 13 (b) â€“ changes and extensions

The PS provides a review of the various factors to determine if the proposed development would have any adverse impacts on the natural environment, and anticipates that the proposal will not result in any significant effect on the environment, with any impact expected to be limited and confined to the local area.

The pre-application enquiry does not request a screening opinion from the LPA as to whether the development is EIA development. The information does not include available results of environmental assessments carried out - for example, it notes that a Transport Assessment, Odour and Ammonia Assessment, Phase 1 Habitat Assessment and Drainage Impact Assessment will be undertaken, however no further information is provided.

This pre-application response does not therefore constitute the LPA's formal screening opinion as to whether the proposal is EIA development. A formal screening request will need to be submitted to the LPA should you wish for the LPA to adopt a formal screening opinion.

**Principle of Development**

For the purpose of local planning policy, the application site lies outside of any defined settlement and is therefore within Other Locations as identified within the Local Development Plan (LDP). Development within Other Locations is strictly controlled in the interest of sustainable development and protecting the countryside. LDP Policy S04 states that development within Other Locations will be permitted where (of relevance) it accords with the requirements of TAN 6. TAN 6 notes that operations, including renewable energy, are likely to be appropriate uses, for farm diversification.

Planning Policy Wales (PPW) states that planning authorities should adopt a positive approach to diversification projects in rural areas, noting that small business activities can often be sustainably located on farms, and can strengthen the rural economy and bring additional employment and prosperity to communities. It recognises that diversification activities come in many forms, and can also include renewable energy proposals such as anaerobic digestion facilities, and that these schemes should be supported where there is no detrimental impact on the environment and local amenity. Figure 11 demonstrates the waste hierarchy, and given that the digestate meets the PAS110 standards and is considered a product, it could be considered a recycling operations in terms of how the AD Plant deals with the waste.

LDP Policy LU25 sets out a positive policy approach to the expansion of renewable energy capacity, noting that such development will be permitted, subject to meeting the criteria set out.

LDP Policy LU31 aims to ensure that sufficient land is available in appropriate locations to meet regional and national waste plans and strategies. Criterion 4 permits composting and the maturation of digestate arising from Anaerobic Digestion facilities on agricultural land, with Criterion 5 permitting the co-location of facilities at or alongside waste producers to minimise and manage the waste that they generate at source and where practicable to recover energy from the remaining residual waste.

LDP Policy LU32 seeks to maximise the opportunities for waste to be minimised and managed effectively in accordance with the principles of the waste hierarchy.

The agricultural field has a predictive grade of 5 - the lowest possible.

The application site adjoins an existing and well established AD Plant and given that the development would be designed to store digestate from the existing Plant, it is considered appropriate to locate the development close to the existing AD Plant so that the digestate would only need to be pumped a short distance.

In view of the above, it is considered that the principle of development can be viewed favourably.

**Visual Impact**

LDP Policy DM06 requires development to be of a high-quality design that contributes positively to the context of its location. LDP Policy DM17 requires development to not have a significant adverse effect on the general landscape.

The proposed development would expand the existing AD Plant further west, into currently agricultural field. The maturation tank, which will be 6m high, will be located immediately adjacent to the existing tanks, and is therefore unlikely to result in any additional adverse visual impact on the surrounding landscape. The proposed lagoons cover a large area, however, due to their nature, they will be low-lying and will be mainly screened by the grass-seeded bunding. As a result, they are unlikely to have a significant adverse visual impact on the surrounding landscape, and would be read in the context of the existing site.

The widening of the existing track to 6m, and the creation of an access and turning area will introduce additional hardstanding, and I would advise that soft planting (i.e. trees/hedgerows) should be planted alongside the existing track - particularly along the west facing boundary. Additionally, further soft planting should be provided along the outer boundary of the site i.e. alongside the proposed post and rail fencing. This will help to provide additional screening, particularly to occupiers of nearby properties (as discussed further below), whilst also contributing positively to enhancing biodiversity (as discussed further below).

**Residential Amenity**

LDP Policy DM06 seeks to protect the amenity of nearby occupied from significant harm caused by new development.

The proposed development would see the existing site being expanded close to the residential properties to the north-west and south-west. It is important therefore that the proposal does not cause significant harm to their amenity. The comments noted above about additional soft planting along the access track and outer boundaries of the site will help to provide further screening of the development from these properties.

It will also be important to demonstrate as part of a formal planning application that the proposal will not result in adverse smell, noise or any other pollution, that would cause significant harm on their amenity.

LDP Policy DM22 also seeks to ensure that new development does not negatively impact water, air and soil and does not lead to increased light and noise pollution.

The PS notes that an odour assessment will be submitted as part of a formal planning application. Such an assessment will need to include an assessment of the following criteria:

- baseline odour conditions
- locality and sensitivity of receivers
- sources of odour
- control / mitigation techniques
- the predicted impact of any fugitive odour with the use of modelling tools either predictive or empirical.

The assessment should also provide a conclusion.

It is also advised that, regardless of the findings of any odour impact assessment, an odour management plan which formalises and describes how odour issues will be managed on site during normal operation, going into further detail in relation to controls already specified such as the proposed HDPE cover (maintenance plan, schematics), should also be submitted as part of a formal planning application.

In terms of dust and noise, it is unlikely that there would be any adverse impact on residential amenity during normal operational use, however this may be a concern during the construction phase. As a result, a Construction Environmental Management Plan (CEMP) will need to be submitted as part of a formal planning application. This shall include rudimentary details of construction plans (such as details of noise generating plant to be used and timescales for completion) in order for appropriate conditions in relation to noise and dust suppression to be considered as part of the formal planning application.

A formal planning application will be subject to consultation with members of the public and any representations received which raises material planning considerations will be considered as part of the determination of the application

**Public Rights of Way**

A Public Rights of Way footpath runs to the east / south of the proposed development. It will be important that the footpath remains open and safe for users throughout.

**Highways**

The Welsh Government Highway Authority (Trunk Road) has requested further information on how the increased waste processing capacity would impact site generated traffic movements (including HGV movements). They have also advised that a Construction Traffic Management Plant (CTMP) will be required.

The Local Highway Authority has advised that the internal access road and servicing facilities are acceptable to serve the proposed development.

In view of the comments from Welsh Government, I would advise that a Transport Assessment and CTMP will need to be submitted as part of a formal planning application.

**Ecology**

The development is within 5km of three European protected sites:

- Cardigan Bay SAC (4.1km)
- West Wales SAC (4.6km)
- Afon Teifi SAC (1.75km)

In accordance with Regulation 63 of the Conservation of Habitats and Species Regulations 2017, as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, any development that is likely to have a significant effect on a European protected site must be subject to a Habitats Regulations Assessment. The development poses two hazards to the sites listed above: ammonia and phosphates.

Ammonia
The proposed development will cause ammonia to be released into the atmosphere. Ammonia can have a significant effect on human health and the environment. In order to be able to assess the impact that ammonia emissions released by the development will have on nearby protected sites, an ammonia modelling report will be required to accompany any full planning application that is made. The ammonia modelling must be applied to all protected sites within a given distance of the installation (this includes the Banc-y-Warren and Banc-y-Mwldan Sites of Special Scientific Interest). Further information on screening distances and what is required can be found on NRWâ€™s webpage Ammonia assessments for developments that require a permit or planning permission.

**https://naturalresources.wales/guidance-and-advice/business-sectors/farming/ammonia-assessments/ammonia-assessments-for-developments-that-require-a-permit-or-planning-permission/?lang=en**

Phosphate
On the 21st January 2021, NRW published an evidence package outlining phosphorus levels for all river SACs across Wales. As part of this package, they issued a Planning Position Statement, in which they advised that any proposed development that might increase the amount of phosphate (or phosphorus) within a river SAC catchment could lead to damaging effects to the SAC. Therefore, such proposals should be screened through a Habitats Regulations Assessment (HRA), to determine whether they are likely to have a significant effect on the SAC.

Presently, the tidal section of the Afon Teifi SAC is not considered to be at risk from elevated levels of phosphate. The proposed development is within the catchment area of this tidal section. Based on the available evidence this would likely mean that, in terms of the HRA, the development can be screened out from having a detrimental impact on the Afon Teifi SAC. However, this situation could change in terms of new evidence that comes available or in terms of new guidance pertaining to other nutrients or chemicals. It is therefore recommended that the latest version of the NRW planning guidance is consulted prior to a full planning application being brought forward, in order to inform what information is required to be submitted with the application.

**https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/our-role-in-planning-and-development/advice-to-planning-authorities-for-planning-applications-affecting-phosphorus-sensitive-river-special-areas-of-conservation/?lang=en**

Other matters
There are unlikely to any other direct impacts on the qualifying features of the Afon Teifi SAC, such as otters, as there are

donâ€™t appear to be any water courses near the proposed development location and the landscape is agricultural with few habitat features that would encourage otter. Likewise, aside from ammonia, there are presently no other impact pathways between the development and the Cardigan Bay SAC and the West Wales Marine SAC (though see note above about new evidence becoming available).

The proposed development area is >0.1 hectares which indicates the requirement of a Preliminary Ecological Assessment. Page 8 of the Planning Statement states that Further detailed application will be supported by a Phase 1 Habitat Assessment (bullet point 3).

Any ecological assessment should include a walkover of the site to check for protected species, specifically badger which are known to use boundaries of agricultural land (banks, hedgerows etc) to make their setts. The tree line to the east of the site specifically should be checked. If evidence of badgers is recorded then an appropriate mitigation plan will need to be submitted and potentially a licence obtained from NRW. Any ecological consultant that is employed to carry out the ecological surveys will be able to advise further. Measures to prevent mammals such as badgers and otters from entering any excavations and being unable to escape will also be required.

Planning Policy Wales (PPW) 12 (6.4.5) sets out that â€œplanning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means that development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversityâ€, and green infrastructure. This policy responds to the Section 6 Duty of the Environment (Wales) Act 2016 which states that all public bodies to maintain and enhance biodiversity in the exercise of functions. A Green Infrastructure Statement that includes details of ecological enhancements should be submitted with any full planning application. It is not appropriate to seek this information retrospectively by way of a condition and it must be provided as part of the planning application process.

The GI Statement will need to include the following information, as a minimum:

1. Description of existing green infrastructure on site
2. Description of surrounding green infrastructure
3. Description of how the step-wise approach has been applied
4. Long-term management plan
5. Details of net biodiversity enhancement

LDP Policy DM06 requires development to retain important natural features along with ensuring the use of good quality hard and soft landscaping and embracing opportunities to enhance biodiversity and ecological connectivity. Policy DM10 requires the submission of a landscape scheme for proposals that would have an impact on the landscape. LDP Policy DM20 sets a presumption in favour of the retention of existing trees, hedgerows and woodlands.

The comments above regarding planting along the internal access road and the outer boundary of the site will help to ensure that the proposed development meets the requirements of PPW, in terms of providing net biodiversity enhancement.

These comments have been made using the information provided in the pre-application â€“ the information included is by no means exhaustive and should not be used as solid evidence for the presence/absence of species/habitats. If recommended an ecological appraisal will look for this information.

**Surface Water**

The proposed development will need to include a sustainable drainage system (SuDS) to deal with the increase in surface water drainage, in line with LDP Policy DM13 and national planning guidance.

There is useful guidance within the Council's adopted Built Environment and Design SPG.

All new developments of more than 1 dwelling house or where the construction area is 100 square metres or more will require SuDS approval from the Council's Sustainable Development Authority Body (SAB) prior to the start of works on site. This is separate to the planning process.

**Other Comments**

I would advise that the following information should be confirmed as part of a formal planning application:

- Confirmation / evidence that the proposal does meet the PAS110 standards.
- How much extra electricity power the development would produce. This would help provide further justification, particularly in relation to the transport movements.
- Size of the excavation and how much of the cut materials will be required for fill - will the material excavated be sufficient to build the banks of the lagoons, or will material need to be imported. Imported material will need to meet the required BS standards, BS3882 and WLGA guidance â€“ Requirements for the Chemical Testing of Imported

Materials for Various End Uses. (Requirements for the Chemical Testing of Imported Materials for Various End Uses and Validation of Cover Systems.pdf)

- If there would be an excess of material from the cut then conformation on where would this material go. If this is the case, I would advise that it is utilised on site for landscaping.

**Guidance on Submitting an application**

Should you wish to proceed with a planning application, full planning permission will be required for the proposed development. The items listed below will need to be submitted as part of a full planning application.

- Full planning application form
- Location plan 1:2500, 1:1250 scale with land in ownership outlined in blue and development area outlined in red.
- Block plan 1:200 scale with land in ownership outlined in blue and development area outlined in red.
- Proposed Site Plan, to an identified scale
- Proposed Elevations, Sections and Site Levels, to an identified scale
- Pre-Application Consultation Report
- Transport Assessment
- Construction Traffic Management Plant
- Odour Assessment
- Odour Management Plan
- Ammonia Assessment to include modelling report
- Ecology Assessment
- Tree Survey (if any trees are proposed to be removed)
- Construction Environmental Management Plan
- Landscaping Plan to include future maintenance plan for the landscaping
- Green Infrastructure Statement
- Drainage Details
- Confirmation / evidence that the proposal does meet the PAS110 standards
- Confirmation of additional electricity power the development would produce
- Clarification on excavated materials
- Requisite Fee

Please note that this is the informal opinion of an Officer, given on the basis of the information currently available to the Officer in relation to your query. The opinion is given on a without prejudice basis and is not binding upon the Council. All planning applications will be subject to formal determination based upon consideration of the merits of each application, current planning policy, legislation, relevant consultation responses and other material planning considerations.

For further information regarding planning policies please follow this link:http://www.ceredigion.gov.uk/ldp

Yours sincerely

Sian Holder
Arweinydd Tim Rheoli Datblygiad (De) / Development Management Team Leader (South)
Ar ran Economi ac Adfywio / On behalf of Economy and Regeneration